WHEAT STUDIES

of the FOOD RESEARCH INSTITUTE

VOL. XVI, NO. 8 (Price $.75) MAY 1940

WORLD WHEAT SURVEY AND OUTLOOK MAY 1940

V. P. Timoshenko and Holbrook Working

Surprising changes in Argentine and Australian crop estimates since January have left statistics of total world wheat supplies for 1939–40 little altered, but indicate a greater concentration of the world's surplus in remote Australia than was earlier expected. Shipments from there to Europe have been small despite a British purchase in January of over 60 million bushels of Australian wheat. Prospects for European harvests of 1940 suffered from an extraordinarily severe winter, a late spring, shortage of farm workers owing to mobilization, and recent military operations; but in North America favorable weather improved prospects for both winter and spring wheat.

The unexpectedly low level of recorded international wheat shipments since August has led to lower forecasts of the total for the crop year. In contrast, official statistics of exports indicate that international trade in wheat has been larger than expected, apparently owing principally to large Italian and German takings. Prior to the German invasion of Belgium and Holland we set the probable total of "world" exports for 1939–40 at 575–600 million bushels, 20–25 million higher than we estimated in January. Military developments now in progress may result in a total nearer our January estimate.

Wheat prices in Canada were extraordinarily stable from January to mid-May, apparently owing largely to the circumstances under which sales were made to the United Kingdom. At Chicago, price movements reflected wide divergence of traders' opinions, and preoccupation with prospects for the European war. The price outlook as of mid-May is obscure. Existing prospects for the largest world carryover in history and record or near-record world wheat supplies for 1940–41 suggest very low prices if the war should end soon. But if expectations of a long war should again predominate, prices in North America might recover to the levels of early May.

STANFORD UNIVERSITY, CALIFORNIA

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Entered as second-class matter February 11, 1925, at the Post Office at Palo Alto, Stanford University Branch, California, under the Act of August 24, 1912.

Published eight times a year by Stanford University for the Food Research Institute.

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In terms of statistics of total supplies, the international wheat situation changed little during January–May. The world will carry over into the new crop year on August 1 some 200 million bushels more than last year, and the largest amount on record. In particular aspects, however, there have been significant changes in the wheat situation. It appears that more of the surplus than previously expected will lie in Australia, remote from the chief import area. Strain on ocean transport facilities has increased, and ocean freight rates have risen to new high levels. European importers, meanwhile, have been taking wheat at an unexpectedly rapid rate, building up substantially increased reserves. Prospects for next year's crops have apparently deteriorated on the whole, damage to European crops from an exceptionally severe winter seeming more than to offset the improvement in promise for winter and spring wheat in North America and the increases in estimates of Indian production.

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The course of wheat prices appears to have been strongly influenced by the ideas and market operations of governmental agencies on both sides of the market. The situation has been one unique in the modern history of the international wheat market, with a high degree of concentration of both buying and selling, but without arbitrary price fixing. Early in January the British purchasing agency came to agreement with representatives of Canada and Australia, and large sales were consummated. Additional large British purchases of Canadian wheat have been made at intervals since, and at varying prices, but the price variation has been slight. The methods and conditions under which the British purchases of Canadian wheat are being made seem to have operated as a powerful stabilizing influence in North American wheat markets. Price changes at Winnipeg since early January have been little more than partial responses to fluctuations at Chicago. This unprecedented tendency to price stability at Winnipeg has doubtless tended also to restrain price movements in the United States.

At Chicago, prices tended downward during January in a normal reaction from the previous advance, and then for two months were peculiarly erratic, moving with little systematic regard to the daily news. The chief influences seem to have been changing appraisals of European war prospects, and these influences, difficult to trace, operated in a market easily unsettled owing to extreme divergence of price judgments among traders. Prices at Antwerp and Buenos Aires moved chiefly under the influence of a great increase in ocean freights in February, but Argentine markets developed independent strength in April as heavy shipments and a further British purchase reduced her free supplies of wheat.

Net exports of wheat and flour from the principal exporting regions during August–March were no smaller than in the corresponding months of 1938–39; December–March exports were heavier this year, while August–November exports had been lighter. Winter shipments from Canada, mainly from United States ports, were unusually large this year. Argentine winter shipments also ran rather heavy in the face of her extremely small new crop, and they increased notably in March–April. Danubian exports in August–March exceeded last year's, but the Australian and American continued small.

Wheat imports into the northwestern neutral countries surrounding Germany from August through January–February averaged larger than in the same period last year. Germany and Italy obtained large quantities from the Danube, while British imports from numerous sources rose greatly from their low level last October, and have apparently exceeded current requirements in recent months. Oriental imports were probably above their 1938–39 level during the first half of the current crop year, but last year an unusually large fraction of the year's takings was imported during the latter half of the crop year.

Before the German invasion of Belgium and the Netherlands it appeared that the development of trade during recent months suggests a higher estimate of total crop-year net exports than seemed in prospect last January. With Belgium and Holland free to import from overseas, a range of 575 to 600 million bushels seemed probable. The latest war developments, however, introduce so much uncertainty that any quantitative appraisal seems unwarranted. Yet even now it is hardly possible that exports will fall below our January forecast of 550–580 million bushels. Such exports would be some 11–15 per cent under those of 1938–39. Exports during the first nine months of the current crop year were about equal to last year's for the same period; but war developments may result in small May–July shipments in contrast with the high level of shipments during the corresponding months of 1938–39, when practically all European governments were feverishly building up wheat reserves. Nor is last year's late-season increase of exports to the Orient likely to be repeated. Yet while the war lasts, Europe will strive to take as much wheat as is possible, and if one route should be closed the flow of wheat may be re-routed elsewhere. Europe may draw a greater proportion of her supplies than we expected in January from the nearest sources—the Danube basin and North Africa—and Argentina also may export more than seemed likely in January. Australian exports, however, may not reach our earlier expectations. Canadian exports depend so much on developments of the war that they seem unpredictable.

With larger exports to Europe, old-crop stocks there on August 1, 1940 will probably be larger than last year's. Carryovers will also be much larger in North America. A heavy increase of August 1 stocks in Australia will be more than offset by reduction of stocks in Argentina. World total year-end stocks promise to have increased more than 200 million bushels by the end of the crop year; yet world wheat utilization may not fall much below the record level of 1938–39.

The 1940 wheat crop of the Northern Hemisphere does not promise to be as large as that of 1939. Somewhat smaller crops seem in prospect both in North America and in Europe. But a moderate decline in the world wheat crop would not create a tighter supply position in the second year of the war than in the first, since the stocks of wheat carried into 1940–41 seem certain to be much larger than those carried into 1939–40.

Price movements during the second half of May, at least, will depend mainly on the course of the war in Europe. An early termination of the war would put wheat prices under the pressure of a surplus comparable with that of the summer of 1939, and with European buying power greatly diminished. If the opinion comes again to prevail that the war will not be a short one, prices in North America may recover to about the levels of early May. In that event, Winnipeg prices might again be relatively stable, and prices of Chicago futures might hold generally above $1.00 per bushel until at least the end of August, possibly rising sharply higher temporarily if serious crop damage should threaten in the United States.

Wheat Supplies

Present appraisals of the world wheat crop of 1939 differ little from those of January last, since the most important revisions of crop estimates, the Australian and Argentine, offset each other. It still appears some 340 million bushels below the huge crop of 1938; but world wheat supplies are some 150 million bushels above last year's record because of the much larger initial stocks of 1939–40.

The second official crop estimate brought the Argentine crop to 118 million bushels, some 30 million below the January estimate

and far below the crop of 1935, previously the smallest in postwar years. Even with the unprecedentedly large inward carryover, the crop is so small that total Argentine supplies of 1939–40 fall much below those of 1938–39, the more so because of the poor quality of the new crop, of which a considerable amount is light unmerchantable wheat.[1]

The Australian crop estimate, on the other hand, was revised upward by some 25 million bushels to 211 million, only slightly below the previous record crop in 1932. So large a crop from a small reported acreage might suggest that the acreage is considerably underestimated, were it not for the fact that the Commonwealth Statistician has stated positively that the size of the crop is due entirely to exceptional yields per acre.[2] Trade comments indicate that threshing results point to a still larger outturn, and some commercial estimates, unconfirmed officially, set the crop as high as 250 million bushels.

Though there has thus been little net change in appraisals of the Southern Hemisphere crop, the supply position has become less favorable from the point of view of European importing countries. Under war conditions, the increased supply of wheat in distant Australia can hardly replace the reduction of the more readily available Argentine supply. The result in Australia will be an outward carryover of wheat larger even than appeared probable last January.

The only other significant change in crop estimates is the revision upward of the Turkish crop by about 11 million bushels. Turkish supplies, however, seem unimportant for the international market because only small exports of Turkish wheat have been reported since the beginning of the war. The minor crop revisions in some European countries made practically no net change either in importing or exporting countries. Estimates of North American crops were not changed.

Visible supplies.—"World" visible supplies of wheat are no longer published. But the principal components of the world visible, including Australian stocks, are published regularly. Moreover, last January statistics for the Argentine visible again became available, though only for new-crop wheat. From these statistics, supplemented by rough estimates of the missing components, it seems clear that the world visible would have continued on a record high level through April if data on stocks afloat to Europe and in United Kingdom ports had been available to complete the total (Chart 1, p. 368).

During January–March, stocks in North America declined somewhat more slowly than during the same period in 1939, reflecting slower decline of the United States visible. In contrast, through April the Canadian visible declined more rapidly than last year. This was due entirely to the very rapid disappearance in export of Canadian wheat from United States ports; visibles within Canada did not fall before April as rapidly. The slower decline of the United States visible supply, as compared with last year, was caused partly by this year's small exports, and partly by the heavier receipts of wheat at primary markets beginning in February and becoming particularly heavy in March and April, reflecting sales of wheat under federal loan before the final date of redemption on April 30. The United States visible showed no decline in April and even rose slightly in the first week of May, because of receipts at primary markets unusually heavy for so late in the season.

The decline of North American visible stocks, though slower this year than last, was more rapid than in 1931–32, when the previous record winter high for the North American visible was established. By March, stocks in North America had fallen somewhat below the 1931–32 level (see Chart 1). The Australian visible, however, rose during January and early February to a new postwar high, exceeding the 1931–32 level by a margin that was much greater than was the decline of North American stocks in March below the 1931–32 level. This seems to indicate that in March also world visible supplies moved at a record high level, though it must be kept in mind that an unusually large fraction of these supplies was in Australia.

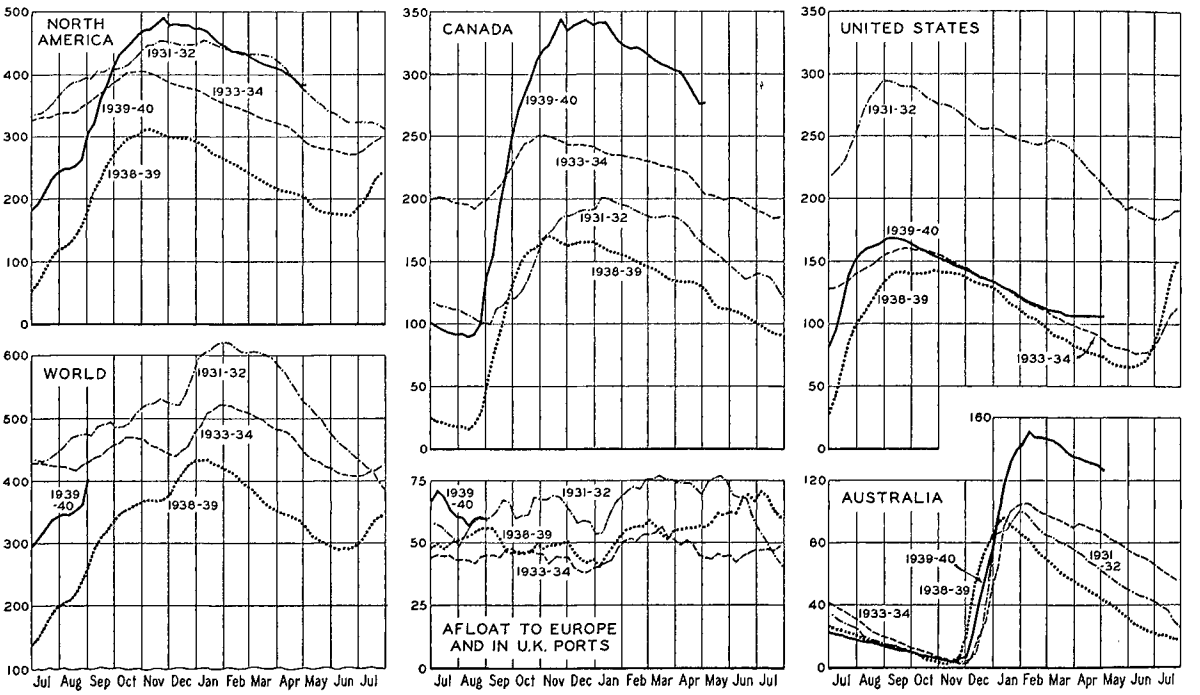
[1] The United States Agricultural Attaché at Buenos Aires reported that about 13 million bushels or more cannot be regarded as marketable grain. *Foreign Crops and Markets*, Mar. 30, 1940, p. 372.

[2] *Corn Trade News*, Apr. 3, 1940.

The Australian stocks reached a peak on February 10, and then declined relatively slowly. The course of the Australian visible during the current year resembles that of 1933–34, when visible stocks increased until early February, but declined slowly thereafter so that on August 1, 1934 Australia held the largest carryover of wheat since 1919.

CHART 1.—WHEAT VISIBLE SUPPLIES, WEEKLY, FROM JULY 1939, WITH COMPARISONS*

(Million bushels)



* Weekly data for certain series summarized by months in Table IV. Note that scales are not uniform throughout.

Decline of the visible during February–April 1939 parallels its behavior during the same period of 1934, though on a level some 45 million bushels higher. From these developments certain conclusions can be drawn regarding Australian exports, which have not been reported since February. From February 10 to April 1 the Australian visible declined by some 15 million bushels. Wheat deliveries by growers to the Australian Wheat Board were already slow over this period and could not have much effect on the visible.[1] We may thus infer that February–March exports of Australian wheat must have been small, and could not have exceeded the 16.5 million bushels exported during the same period of 1934.

EVIDENCE ON UTILIZATION

Statistical evidence on utilization of wheat in European countries, never abundant, has become decidedly meager with discontinuance of data bearing on imports, stocks, and mill output. Even an approximate numerical appraisal of wheat disappearance in the world ex-Russia thus becomes impossible for the current crop year. But some general conclusions can be drawn concerning the direction of change in wheat utilization in major geographical areas, on the basis of analysis of existing government regulations directed

[1] According to information made public by the Chairman of the Board, wheat deliveries during the last week of February and the first week of March were 1.2 million bushels. According to the Canadian Trade Commissioner at Melbourne, they increased some 1 million bushels during the next month. See *The Land*, Mar. 15, 1940, and *Commercial Intelligence Journal*, Apr. 20, 1940.

toward economizing use of wheat, with due consideration also of the eventual effects of war on wheat requirements.

Wheat utilization in Europe ex-Danube can hardly have declined much during the first two-thirds of the current year in spite of the numerous governmental regulations designed to curtail use of wheat, of which the most important were reported in our January *Survey*.[1] In 1938–39 wheat utilization in Europe ex-Danube was not exceptionally large, since less wheat was fed to livestock than in earlier years of large wheat supplies and low prices. Only Great Britain has been in a position to economize substantially on this item; but there animals have continued in the current year to utilize a substantial portion of the home-grown wheat, and regulations limiting such use have recently been liberalized (see below). In Britain and elsewhere, possible economies in human consumption of wheat, resulting from increase in the rates of flour extraction and (in a few cases) from direct rationing of bread, have presumably been offset by the usual increase of requirements for bread under war conditions.

Wheat utilization in those countries where the volume utilized usually varies directly with the size of domestic supplies—the Danube, the Near East, British India, and French North Africa—has probably been no smaller this year than last, for wheat supplies on the whole run somewhat larger this year. It seems probable that disappearance of wheat in this area may show an increase as compared with 1938–39.

In the United States, domestic disappearance of wheat appears to have been substantially smaller during the first eight months of 1939–40 than of 1938–39, as is shown below (p. 370). But in the three other major exporters, not much change from the previous year is indicated. World utilization in 1938–39 was of record volume, though not exceptionally high in Europe ex-Danube and the four chief exporters. If any reduction in the world total occurs in 1939–40, it is likely to be small.

European importing countries.—Very few new regulations pointing toward further tightening of government control of wheat utilization have been promulgated since January, and a few changes were even in the direction of relaxing the existing restriction. The neutral countries affected by the blockade appear to have postponed the introduction of bread rationing, for which several were preparing during the early months of the war. Presumably their imports of wheat have been sufficient to make these measures unnecessary, at least temporarily. Nor has the increased cost of imported wheat always affected ultimate consumers, for in several countries the governments are assuming most of the burden of increased costs in order to check increase in the price of bread. Adoption of this policy in Britain was disclosed in debates in the House of Commons early in February, when the statement was made that the government was spending about half a million pounds sterling weekly in order to keep down the price of bread.[2] With the same objective, the Netherlands government also was expending a million dollars monthly on the difference between purchase and selling prices of imported wheat and flour.[3]

Of the new government regulations designed to economize on wheat, certain French decrees issued at the end of February require mention. Rations were introduced for bread served in restaurants with meals. A special census of population was prescribed with a view to the distribution of ration cards before April 1, when beginning of rationing was contemplated; and bakeries were ordered to prepare only a standard quality of bread.[4] The reason given for these measures was prevention of waste rather than limitation of usual consumption of bread. But the decrees were promulgated when the probability of a small new crop (because of reduced acreage sown last fall to winter wheat, and possible damage from frost) became more apparent.

Great Britain, on the other hand, experienced some shortage of feedstuffs, and in the second half of March permitted heavier use of home-grown wheat for purposes other than

[1] WHEAT STUDIES, January 1940, XVI, 212–14.

[2] *Corn Trade News*, Feb. 14, 1940.

[3] *Northwestern Miller*, Apr. 17, 1940, p. 29.

[4] For the respective decrees see *Bulletin de l'office de renseignements agricoles*, Mar. 1, 1940.

flour-milling. Buyers of domestic wheat were authorized to sell for such purposes 50 per cent of their purchases rather than the 33 per cent authorized previously. In the trade press it was also reported that some imported wheat (French) had been distributed for feeding purposes. Feed use of wheat in the United Kingdom may thus prove larger than appeared probable in January.

Few changes in flour extraction rates occurred after January. The British Ministry of Food in a new order fixed the minimum rate of extraction for mixed grist at 72 per cent instead of 73. But in its new definition of flour certain wheaten substances, which are technically flour, are excluded; and the rate of extraction is now calculated from the weight of products manufactured from the uncleaned grain.[1] The new rate thus may not mean the lowering of extraction.

On the other hand, from February 1 Hungarian rates of extraction were fixed at 75 per cent for wheat and 70 per cent for rye, with the objective of enlarging supplies of millfeeds felt to be needed to minimize shortage of domestic feedstuffs.[2] Of the important non-European wheat importers, Brazil since outbreak of war has raised the rate of flour extraction to 80 per cent, and required the addition of 16 per cent admixture, in order to economize on foreign exchange.[3]

Exporting countries.—Statistics of wheat stocks in the United States as of April 1, 1940 provide a basis for calculating wheat disposition during July–March. The pertinent data are as follows, in million bushels, with comparisons:

Item	1935–36	1936–37	1937–38	1938–39	1939–40
Initial stocks	148	142	83	153	254
New crop	626	627	876	932	755
Net trade July–March...	+ 24	+ 24	— 75	— 81	— 39
Total net supply	798	793	884	1,004	970
April 1 stocks	270	210	331	444	438
Domestic disappearance	528	583	553	560	532
Net domestic milling ..	355	361	357	363	361
Winter-wheat seed	60	69	68	56	54
Feed and errors.....	113	153	128	141	117

Total domestic disappearance during July–March appears substantially smaller than in the three preceding years, but about the same as in 1935–36. Slightly less wheat was milled for domestic retention this year than last because of the high yield of flour per bushel of wheat, and mill grindings for the whole season may run 3 to 4 million bushels smaller than last year though larger than in 1937–38 and 1935–36.[4] Seed use for the winter-wheat crop may also be calculated slightly smaller than last year and substantially smaller than in the two preceding years when the winter-wheat acreage was much larger.

The principal decline, however, appears to be in the residual item "feed and errors." Decline in feed use of wheat was already apparent last autumn, and mainly for this reason we reduced our January estimate of probable domestic utilization for the crop year to 680 million bushels, from the figure of 705 million suggested last September. Data on January 1 and April 1 stocks confirm the earlier indications of reduced feed use of wheat, though the reduction now seems likely to be somewhat smaller than we had estimated on the basis of October 1 stocks. We are now inclined to raise our residual item for the crop year (Table IX, p. 401) from 127 million bushels to 135 million, and total utilization from 680 to 685 million. The comparable standing estimate of crop-year domestic disappearance by the United States Department of Agriculture is 670 million bushels.

Estimates of wheat stocks in Canada on March 31, 1940 together with trade statistics for August–March suggest that total domestic disappearance in Canada during the first 8 months of 1939–40 was 68 million bushels as against 69 in the same months of 1938–39. But net domestic mill grindings during the same period were reported as 37 million bushels this year, as against 34 million last year and only 30 million in 1937–38.

The data yield a smaller residual for errors and domestic feed, losses, and waste this year than last. Yet the official preliminary estimate of wheat fed or to be fed to livestock and poultry during the 1939–40 crop season is 36.8

[1] *Corn Trade News*, Mar. 27, 1940.

[2] *Marktbericht des Reichsnahrstandes, Ausg. A.*, Jan. 8, 1940.

[3] Millers' National Federation, *Milling Around in Washington*, Feb. 10, 1940; *Northwestern Miller*, Mar. 27, 1940.

[4] See Table IX, p. 401.

million bushels, as compared with a revised estimate of 31.1 million for 1938–39. A comment is made concerning probable increased use of wheat for feed in the western provinces, and in view of the huge size of the Canadian wheat crop this year and the wider export outlets for Canadian livestock products in the United Kingdom, larger feed use of wheat in the western provinces seems reasonable. But this also suggests a slight discrepancy in the calculation of the residual item in disposition, which points to smaller rather than larger feed use this year.

The exceptionally small new wheat crop in Argentina and the near-record corn crop would tend toward reduced feed use of wheat in Argentina; but the poor quality of the new wheat crop and the large proportion of unmerchantable wheat (p. 367) may stimulate use of wheat for feed. Feed use of wheat may thus not be exceptionally low this year, though it may run smaller than last year when an unusual price relationship of corn more expensive than wheat prevailed for several months. The necessity of carrying a large proportion of the huge Australian crop into the next crop year under the congested condition of storage indicates that waste of wheat there will be larger than usual.[1]

International Trade

Current statistical information on international trade is even less complete now than it was last January. Import statistics of the belligerents and a few neutrals were then lacking. Switzerland discontinued publication of trade statistics in January. For later months information on the trade of several countries previously neutral will disappear since they have become involved in war. No Swedish statistics have been available since October last. At present, trade statistics are not available for countries ordinarily responsible for more than three-fourths of Europe's total wheat imports, if we include belligerents and neutrals not publishing trade data.

Trade information on non-European importers is even more incomplete and delayed than usual. Fortunately there has been less dislocation in the case of wheat-exporting countries; though no information is available on exports of French North Africa, and statistics of Australian exports are greatly delayed. Under the circumstances, discussion of current developments in world trade must be based more heavily than is our custom on export statistics.

Broomhall's data on shipments have also lost in completeness of coverage, particularly with reference to outflow from Australia and the Danube basin. A comparison of Broomhall's shipments from the Danube basin with official net exports from Hungary, Yugoslavia, Rumania, and Bulgaria during August–January of the past five years is as follows, in million bushels:

Aug.–Jan.	Net exports	Broomhall's shipments	Difference
1935–36	13.4	14.0	− 0.6
1936–37	54.9	50.8	+ 4.1
1937–38	37.2	34.8	+ 2.4
1938–39	44.7	45.2	− 0.5
1939–40	58.0	31.3	+26.7

Until the present crop year, Broomhall's shipments reflected Danubian net exports fairly well. But because war conditions evidently preclude complete reporting of trade in this area, they have this year represented only about 55 per cent of total net exports during August–January. Under such circumstances, official trade statistics, even though delayed, must be used as the basis for appraising the volume of international trade.

Volume.—If we fill gaps in official trade statistics with our own estimates, the conclusion is that world wheat exports during the first eight months of the current crop year were no smaller than those for the same period of 1938–39. Indeed, they seem to have exceeded last year's exports for the period, if we use customs statistics for Canadian exports which include wheat exported to the United States for reshipment overseas. If we use Canadian export clearances as published in the Canadian *Monthly Review of the Wheat Situation* including exports via the United States only as they move overseas, world net exports from exporting countries for August–March 1939–40 may be calculated as about

[1] Recent developments of storage conditions in Australia in connection with bulk handling of wheat are discussed in Joseph S. Davis, "Bulk Handling in Australia," WHEAT STUDIES, April 1940, XVI, 301–64.

410 million bushels as against 408 million for August–March 1938–39. This comparison takes account of Russian trade. There were net exports of 34 million bushels during this period last year, whereas recent Russian imports of 3 to 4 million bushels of American wheat from the Pacific Northwest to Vladivostok exceed the small exports reported by Broomhall prior to last November, and indicate that Russia is on a net-import basis during the current crop year.

The fact that world net exports for August–March 1939–40 about equaled those for the same period in 1938–39 indicates heavier December–March exports this year than last, for total net exports lagged somewhat before December of the present crop year. This lag occurred mainly because Canadian overseas shipments fell substantially below last year's level. Heavy Canadian shipments during the current winter were mainly responsible for the changed situation, but continuation of relatively heavy Argentine and Danubian shipments was contributory.

A more precise comparison of world trade in 1939–40 and 1938–39, applying to the six months August–January, is feasible because for this period official trade statistics for Australia and the Danube countries are available. On this basis trade during the first six months of the current crop year also ran at about the same level as in August–January 1938–39. Using official export statistics distributed by countries of destination for this shorter period, it is possible to appraise separately the volume of exports to Europe and to ex-Europe. The following tabulation, in million bushels, shows August–January gross exports from the four chief exporters distributed between Europe and ex-Europe; exports from the Danubian countries and the USSR are included in the total for exports to Europe, and net exports from Japan in the total for exports to ex-Europe. Exports from French North Africa and some of the smaller exporters are omitted; but this changes the picture little, for these exports (about 10 million bushels in August–January 1938–39) should not differ much in 1939–40 from those in 1938–39.[1] Even if exports from these countries were somewhat smaller during August–March 1939–40, say only 6 to 7 million bushels, total exports for the first half of 1939–40 were no smaller than for the same period in 1938–39.

	Total gross exports		Exports to Europe		Exports to ex-Europe	
	1939–40	1938–39	1939–40	1938–39	1939–40	1938–39
United States	28.4	49.2	14.5	34.8	13.9	14.4
Canada (*clearances*)	91.6	92.8	80.6	82.3	11.0	10.5
Argentina	92.7	32.1	72.7	12.7	20.0	19.4
Australia	29.1	41.0	12.9	21.5	16.2	19.5
Four chief exporters	*241.8*	*215.1*	*180.7*	*151.3*	*61.1*	*63.8*
Danube[a]	58.0	44.7	58.0	44.7	...	...
USSR	...	34.0	...	34.0	...	...
Japan (*net*)	5.9	6.7	...	...	5.9	6.7
Total	*305.7*	*300.5*	*238.7*	*230.0*	*67.0*	*70.5*

[a] Hungary, Yugoslavia, Bulgaria, Rumania.

The tabulation shows that the distribution of exports between Europe and ex-Europe changed little. August–January exports to Europe were somewhat larger this year, whereas exports to ex-Europe declined some 5 per cent. Such a conclusion, based on export statistics by countries of destination, would obviously be more dependable if it could have been based on import statistics.

The tabulation above also provides a measure of the extent to which the volume of international trade for 1939–40 is understated in Broomhall's shipments data. The official export statistics for August–January 1939–40 indicate that wheat exports were about the same this year and last whereas Broomhall's total shipments for the first 26 weeks of 1939–40, when adjusted for missing Australian shipments, amounted to only 248 million bushels as against 282 million for the same period in 1938–39. This decline of about 12 per cent represents the degree of understatement in Broomhall's shipments data for the current year as compared with last year on routes other than Australian; for Australian routes, export statistics were used in place of missing Australian shipments for purposes of comparison.

It must be kept in mind that the degree of

[1] Decline of exports from several small exporters during the current crop year presumably must be offset by substantially larger exports from French North Africa, with its heavy 1939 crop.

understatement of Broomhall's data varies with the routes reported. As mentioned above, understatement of Danubian exports is large. But for North American and Argentine exports, Broomhall's data may be as valuable an indicator as they were before the outbreak of war, and remain useful to a certain degree in analyzing the course of shipments during recent months. On the other hand, Broomhall's total shipments, as well as his shipments to Europe and to ex-Europe, may be so incomplete as to prove misleading with reference to month-to-month changes in the volume of trade. The lack of information on Australian shipments makes shipments to ex-Europe particularly incomplete; but if adjusted by Australian export statistics, they are more complete than shipments to Europe. So adjusted, for the first 26 weeks of 1939–40, the shipments to ex-Europe were 52 million bushels as against 56 million for the same period in 1938–39. This decline of 7 per cent is only slightly larger than the decline of 5 per cent shown by official statistics in the tabulation above (70.5 million bushels in 1938–39 to 67 million in 1939–40).

Course of shipments.—The most striking feature of the course of shipments since last January is the absence of the usual January–February increase in the total, caused by heavy shipping of the new Southern Hemisphere crop (Chart 2, p. 374). This usual January–February rise was shown even by shipments in 1939 when the restraining influence of the Argentine Grain Board's selling policy was offset by unseasonal North American shipments, particularly the large subsidized exports from the United States. This year, subsidized exports from the United States were very small in January–February. The direction of Argentine shipments was opposite to the usual seasonal movement. From the very high level reached in November–December, when Argentine shipments averaged about 4 million bushels a week in reflection of heavy selling of stocks by the Argentine Grain Board, shipments declined sharply, and in February and March averaged only slightly above 2 million bushels a week. This behavior was normal in view of the very small new crop.

Inclusion of estimates for the unreported Australian shipments gives figures indicating still a low level of total shipments for January–March (shown in upper left-hand corner of Chart 2). Recently available statistics show that Australian exports were no heavier in January than in October–November. Nor is there evidence of much increase in Australian shipments for February and March, though as yet we cannot verify this impression for March.

Exceptionally heavy counter-seasonal shipments from Canada during the winter, mainly from United States ports, failed to offset the unusual course of Argentine shipments and the low level of shipments from the United States in February–March 1940 as compared to February–March 1939. Although North American shipments increased in January and February, following the usual December low, they were still somewhat below last year's level. Not until March did heavy shipments of Canadian wheat bring total North American shipments up to an average of about 5 million bushels a week, a level substantially above that of March 1939. If unreported Australian shipments should be included, Broomhall's total shipments during March 1940 unquestionably would exceed those of March 1939; and shipments to Europe ran higher in March this year than last even without data on Australian shipments and with understatement of Danubian shipments. At the end of March and during April, Argentine shipments rose to a level strikingly high in view of the small crop. Maintenance of this rate of shipments from Argentina until August 1 would reduce stocks there to a low level.

Lack of data on Australian shipments so greatly affects figures for shipments to ex-Europe that comparison with previous years is impracticable. When adjusted for Australian exports, however, shipments to ex-Europe up to last December would move about at last year's level, but would not show a similar December–January rise. The subsequent course cannot be inferred with much confidence.

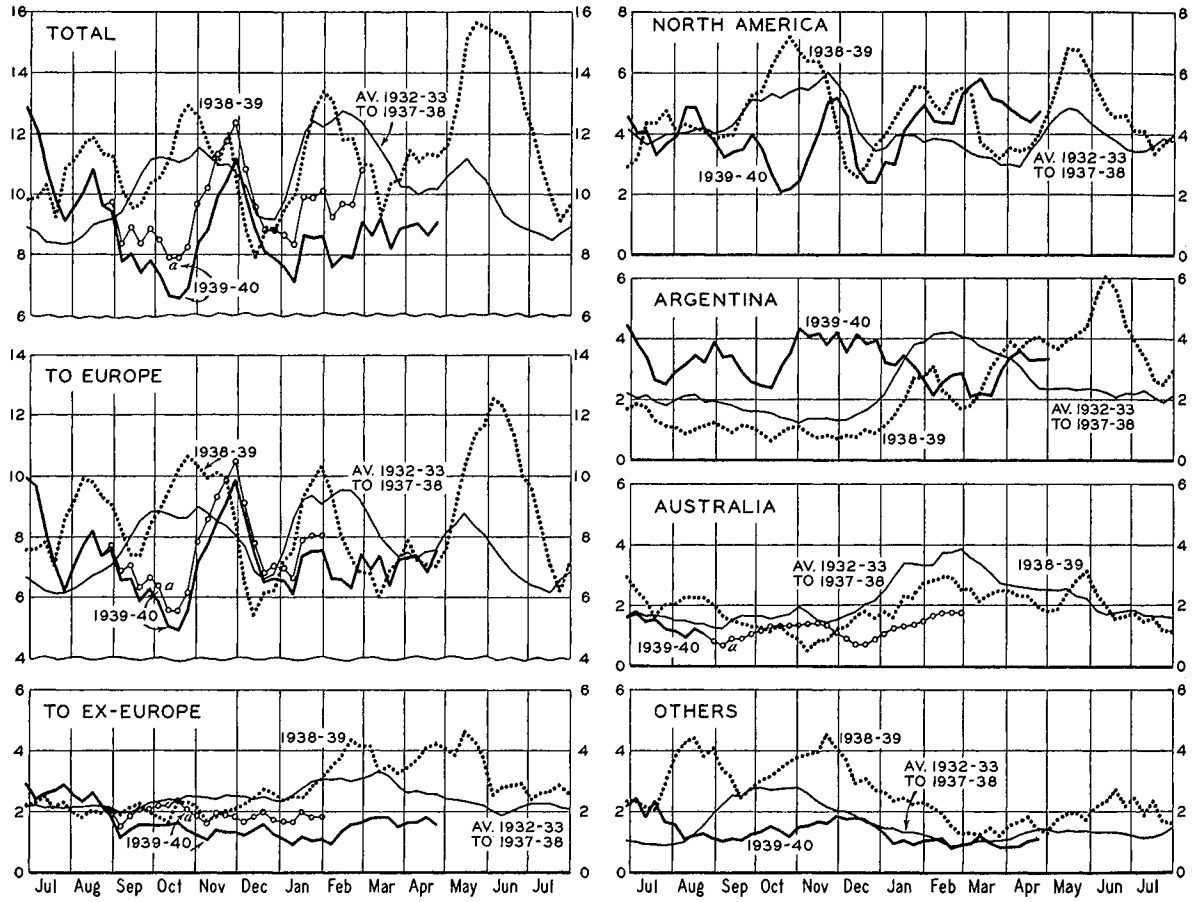
From information in the trade press, however, it is clear that no such spectacular in-

crease of shipments to ex-Europe occurred in February of this year as in 1939, in spite of the strong efforts made by the Australian Wheat Board to move part of its huge crop to the Orient. There are indications, nevertheless, that Australian wheat filled the major tries of origin appear as shown in the tabulation on the opposite page, in million bushels, with comparisons.

During the winter months, heavy shipments overseas of Canadian wheat, mainly from large stocks accumulated in the United States

CHART 2.—INTERNATIONAL SHIPMENTS OF WHEAT, WEEKLY, FROM JULY 1939, WITH COMPARISONS*

(Million bushels; 3-week moving averages)



* Broomhall's data; see Table VII.

[a] Australian monthly official exports have been distributed as three-week moving averages, and included in the total, to Europe and to ex-Europe, and shown graphically above by connected hollow circles.

portion of Oriental requirements for wheat and flour, and its low price restricted subsidized exports of American wheat and flour from the Pacific Northwest to the Orient.

Sources of exports.—The delayed and incomplete statistics make uncertain the picture of the distribution of exports by sources. Yet on filling the gaps with approximations especially for March 1940, net exports of wheat and flour in August–March 1939–40 by country of origin appear as shown in the tabulation on the opposite page, in million bushels, with comparisons.

During the winter months, heavy shipments overseas of Canadian wheat, mainly from large stocks accumulated in the United States in November–December, brought Canada once more into the leading position among the exporters. Argentina had led during August–January 1939.

The small size of the new Argentine crop and a change in the buying policy of the British government are responsible for Canada's change of position. More extensive use of Canadian wheat in Great Britain began earlier, but at the end of February the government

raised the minimum required use of Manitoba wheat by British flour mills from 40 to 60 per cent. It was apparently decided to shift more purchases of wheat to the nearest source. Purchase of more than 60 million bushels of Australian wheat in January has not as yet resulted in heavy shipments to the United Kingdom from this source. Presumably, shipments will be made gradually throughout the Southern Hemisphere crop year.

	5-year average[a]	1936–37	1937–38	1938–39	1939–40
United States	28.1	....[b]	73.0	67.6	32.7
Canada (exports)	124.7	156.4	66.2	113.5	144.4
Canada (clearances)	*119.5*	*155.6*	*67.4*	*109.0*	*129.1*
Australia	68.8	63.9	70.1	60.8	44.0[c]
Argentina	81.4	126.6	46.4	53.2	115.3
Danube	38.6	63.8	45.3	55.7	70.0[d]
USSR	20.6	3.2	36.8	34.0	....[b]
Others	31.8	34.8	34.3	27.5	20[e]
Total	394.0	448.7	372.1	412.3	426.4
Total with clearances	*388.8*	*447.9*	*373.3*	*407.8*	*411.1*

[a] For 1934–35 to 1938–39; not deducting net imports.
[b] Net import.
[c] March estimated.
[d] Exports from Yugoslavia for January estimated; in February–March shipments were used, raised about on the same proportion on which official export statistics exceed Broomhall's shipments in December–January, namely by 60 per cent.
[e] Our approximation.

The increased Canadian exports, however, did not greatly exceed the exports from Argentina. Though Argentina was relegated to second place, through March she retained by a wide margin her position as the second most important source of exports. In spite of the small new crop, hardly more than a third as large as last year's, her exports during December–March 1939–40 were substantially larger than during the same period last year. The Argentine Grain Board continued to liquidate its unprecedented inward carryover.

Through March of this year, the Danubian countries exported substantially more wheat than through March 1939 or through March of the crop year 1936–37. In these years, their wheat exports had amounted to 85 and 89 million bushels respectively. This source of wheat is now of particular importance to Germany and Italy.

In contrast, wheat exports from the United States were very light during December–March, less than a third of those in the same months of 1938–39, even with export subsidization of wheat and flour from the Pacific Northwest and resumption of the export subsidy to Europe on March 12. Shortage of ocean tonnage on the Pacific Coast and reluctance of the United States Department of Agriculture to raise the subsidy[1] prevented larger exports. In early April it was reported that a subsidy of over 35 cents per bushel would have been required to meet the price at which Australian wheat was offered to North China.[2]

Australian exports, officially reported only for August–February, were less than three-fourths of the exports for August–February 1938–39. There are indications that March exports were no larger this year than last, despite the near-record Australian crop and the vigorous efforts of the Australian Wheat Board to dispose of its wheat, particularly in the Orient.[3] According to the Canadian Trade Commissioner in Melbourne, the Board had sold nearly 96 million bushels of new-crop wheat by the middle of April. But about 63 million bushels of this quantity represents purchases of the British government. Sales to others, including domestic millers, must then have been only about 33 million bushels in four and a half months. Presumably only a small portion of the wheat sold to the British government has as yet been exported. Since the end of March trade reports have mentioned the charter of boats for moving Australian wheat to Atlantic ports in North America for transshipment to the United Kingdom, but there has been no information concerning the size of these shipments.

Imports.—The scanty information concerning imports of wheat by European countries

[1] According to the U.S. Department of Agriculture, since January 1 the average subsidy has been equivalent to 26 cents a bushel of wheat and flour combined, which is lower than it was following January 1, 1939. See *Southwestern Miller*, Apr. 16, 1940, p. 23.

[2] *Ibid.*, Apr. 9, 1940, p. 35.

[3] According to information made public by the Chairman of the Board, a special sales committee in Shanghai has been appointed to promote the sale of Australian wheat. The Board also tried to charter boats to transport wheat and flour to China. See *The Land*, Mar. 1 and 15, 1940.

relates only to a few neutral countries. Apparently, however, imports by the neutral countries surrounding Germany through January–February of this year were slightly larger on the average than in the comparable period last year. Belgium, Switzerland, and Norway imported more wheat this year than last, while imports of the Netherlands and Denmark were slightly smaller. August–January imports of Norway were nearly double those of last year, and before the German invasion she secured enough wheat to cover her consumption at a normal level to the end of the crop year and even to increase her stocks further. Evidently these stocks are no longer under Norwegian control. Danish imports before March, on the other hand, were not sufficient to provide for usual consumption to the end of the crop year; but annual requirements for imported wheat have been small during recent years. The principal Danish problem is imports of feed grain and concentrates such as oilcakes or meal. Since the beginning of the war such imports were somewhat below those of the same months of 1938–39.[1]

Of other European neutral countries still reporting trade statistics, Greece imported slightly more wheat this year than last in spite of her larger crop.

As to wheat imports by other European neutrals and belligerents whose trade statistics have not been made public since the beginning of the war, only a few indirect conclusions are possible. These must be based on statistics of exports from the wheat-exporting countries.

First, it seems clear from the large wheat exports reported this year from the Danube countries, together with a tentative distribution of these exports by countries of destination, that Italy and Germany have succeeded in importing substantial quantities of wheat during the first eight months of 1939–40. From official Hungarian trade statistics for the calendar year 1939,[2] giving exports by countries of destination, one may conclude that Italy may have imported from Hungary alone some 13 million bushels during July–December, while Germany may perhaps have imported up to 8 million. Similar conclusions may also be drawn from reports of Hungarian sales of wheat by the middle of November, as published by Broomhall.[3] Officially disclosed sales of wheat by the Rumanian government for July–December 1939[4] indicate that nearly 60 per cent of total sales were to Germany and some 15 per cent to Italy, while the rest was sold mainly to Great Britain, a little to other countries. Exports from Yugoslavia were also mainly to Germany and Italy.

All told, it may be inferred that perhaps about three-quarters of the total Danubian exports in August–March went to Germany and Italy. This means that these two countries in the first eight months of the current crop year obtained around 50 million bushels of wheat from the Danube basin, about equally divided between them. But the Danube basin was practically their only source of supply, as their receipts from overseas countries (Argentina) were only slight, and in Germany were possible only before the war began.

Practically no inferences about French imports can be drawn from statistics of the exporting countries, since the principal source of French imports, French North Africa, has not issued reports of exports. The trade press states that Danubian wheat was brought into Marseilles in execution of the British-French agreement, whereby Great Britain receives French wheat from northern French ports on returning coal boats, while corresponding quantities of Rumanian and Dominion wheat, purchased by the British government, are delivered to France.[5]

The export statistics of the chief wheat exporters, supplemented by information on British purchases of Rumanian and French wheat, warrant the conclusion that exports to Britain after October last, were sufficient to cover current British requirements for imported wheat, and in January–February exceeded requirements. Thus the British government was presumably able to replenish stocks from which it had drawn wheat supplies during the early months of the war, before the convoy system

[1] *Foreign Crops and Markets*, Apr. 6, 1940, p. 419.

[2] *Bulletin Statistique Trimestrial Hongrois*, 1939, Nos. 2 and 4.

[3] *Corn Trade News*, Jan. 24, 1940.

[4] *Ibid.*, Jan. 31, 1940.

[5] See *Journal du Commerce*, Paris, Feb. 17, 1940.

was efficiently organized. This fact that stocks had been drawn upon was officially stated by the British Minister of Food before the House of Commons in January, when he observed that "....there has been since the war started a very considerable period during which our consumption of wheat for bread exceeded the importation."[1] Exports of wheat from the chief wheat exporters with the United Kingdom as their destination were at their low during last October.

Our impression is that the allied powers have not made efforts further to increase their wheat reserves, which were very large at the beginning of the war. It seems to be different with Germany and Italy, whose considerable recent imports of Danubian wheat point—if the official estimates of 1939 crops were correct—to a further accumulation of stocks. Sales of substantial quantities of French wheat to Spain, and recently in Britain the granting of permission to make greater use of home-grown wheat for feed, indicate that the allied powers feel confidence in their ability to obtain wheat supplies.

Spanish wheat-import statistics are not published; but trade reports of considerable purchases from France and Argentina, and of shipments to Spain from Rumania,[2] suggest that her imports may be as large this year as in the two preceding years.

About the imports of non-European countries we can say little. Scanty information on some countries mainly for the first half of the crop year confirms the impression obtained from export statistics (p. 372), that on the average little change took place in ex-European imports during the first half of the current year as compared with 1938–39. Most of the Asiatic countries, including China, Manchukuo, and the Netherlands Indies, had larger imports this year than last in the early months. But last year heavy imports into China and Manchukuo came only in the second half of the crop year, while earlier imports were rather small.

[1] *Corn Trade News*, Jan. 31, 1940.

[2] *Southwestern Miller*, Apr. 9, 1940, p. 40; *Corn Trade News*, Apr. 10, 1940; *London Grain, Seed and Oil Reporter*, Apr. 5, 1940.

[3] *The Economist* (London), Mar. 2, 1940, p. 378.

Japan remained a net exporter of wheat through January, although on a somewhat smaller scale than last year. This was not because her gross imports increased, but because her gross exports declined in spite of her large wheat crop. Presumably shortage of rice imports from the colonies which harvested small rice crops this year, Chosen and Taiwan, was responsible for this development. This year's first large imports of Australian wheat appeared in Japan in February, and Japan became a net importer in that month. It is too early to determine whether Japan will be a net importer of wheat in later months also. She may perhaps use imported Australian wheat for production of flour for export to Manchukuo and China, together with certain quantities of home-grown wheat from her record-large crop as in earlier months. If so, she may stand on balance as a net exporter throughout the crop year. Reported shortage of wheat and flour in Manchukuo and the coastal cities of China, and recent news regarding monopolization of imports of cereals and flour in Manchukuo,[3] make this seem likely.

Prices and Spreads

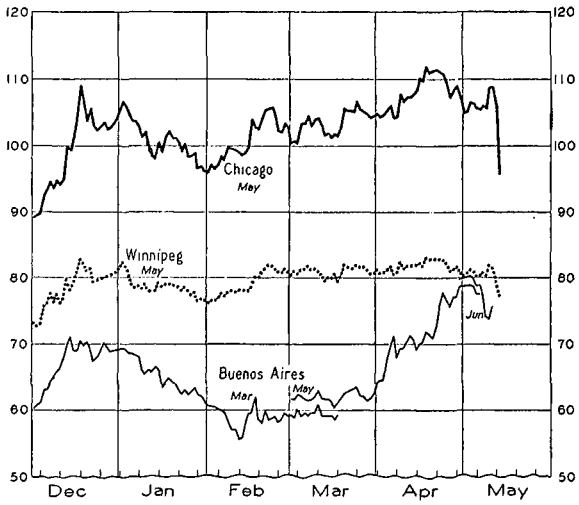
Major developments having a logical bearing on wheat prices during January–April were persistent extreme cold over the whole of Europe during the latter half of January, severely damaging winter wheat; a reduction of 29 million bushels on February 17 in the official estimate of the Argentine crop; apparent failure of the British to arrange for early shipment from Australia of wheat purchased there; the spread of war to Norway early in April; and some large changes in ocean freight rates. Worthy of mention also is the decline during January of sensitive commodity prices generally, reacting from their advance of the previous month, and the subsequent absence of sustained major change in price levels of either commodities or industrial stocks in the United States. Weather and crop developments in North America were closely watched by traders, but net changes in North American crop prospects during January–April were small.

Wheat price movements at Chicago, Win-

nipeg, and Buenos Aires during January–April (Chart 3) were diverse, and not easily explicable in terms of day-to-day news. At Antwerp, the only market affording commercial quotations on imported wheat in Europe, price changes were large (Chart 5, p. 383), and appeared to reflect chiefly changes in ocean freights in the free freight market. Changes in ocean freights appear also to have dominated price changes at Buenos Aires prior to

CHART 3.—WHEAT FUTURES PRICES, DAILY, FROM DECEMBER 1939*

(U. S. cents per bushel)



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

April. The bulk of oversea transport of wheat to Europe, however, was under governmental control, with payments to shipowners fixed with little regard to the free freight market. Moreover, British purchases at least, probably representing over half of Europe's wheat takings from overseas, cannot be assumed to have been allocated among exporting countries entirely on the basis of comparative costs of the wheat landed in Europe. The influences bearing on price relations between the various markets thus differed substantially from those to which traders have been accustomed.

A unique market situation.—Since early in the present war, wheat prices in the international market have been determined under conditions unique in the history of the modern international wheat trade. Typically, the international wheat market in the past has been an open market continuously reflecting the equilibrium of demand and supply with many buyers and sellers acting independently, thus closely approximating the conditions of an "ideal" competitive market. There have been periods during the present century, however, in which concentration of buying or selling, or both, has given the market quite a different character. During most of 1916–17, a large part of international wheat buying was concentrated in the hands of a single body—the Allied Wheat Executive—while there was no important concentration of power on the selling side. Shortly after the United States entered the war, a free market ceased to exist for the major part of the world wheat trade. Prices were fixed under international agreement among the allied powers. Since that war ended, several periods have witnessed substantial concentration of power on the selling side of the international market: in the hands of the Canadian pools, and later, of the wheat board; and, at different times, in the hands of governmental agencies in the United States and in Argentina. The present war, however, has brought to the international wheat market a condition of substantial concentration of both buying and selling power. Competition in the market has not been destroyed, but its character has been substantially changed.

Since shortly after the outbreak of the present war a single agency—the British Cereals Control Board—has controlled the buying of about one-third of all wheat moving in international trade. Of the remaining two-thirds of the buying, a large but not precisely determinable fraction has been concentrated in a few hands. Import purchases of most countries in Europe appear to have been under governmental control, and Japanese and Russian buying has been similarly controlled. Sales for export have been under centralized control in Australia and apparently in each of the countries of the Danube basin. In Argentina, completely centralized control of selling existed prior to harvest of the new crop, and since the first of January most of the export sales, we suppose, have been made by the governmental agency. The Canadian Wheat Board has at least been in a position to dominate export selling policy in the Dominion.

These market conditions, unprecedented as regards wheat, have not been without a rough parallel in other markets in normal times. The copper and rubber markets, for example, have for many years operated under conditions of considerable concentration of both buying and selling. The existing situation in the wheat market, however, includes the circumstance that the agencies in which buying and selling power has been concentrated are governmental, and subject to considerable popular political pressure. The major European buyers have been competing not only for the wheat but also for the good will of the sellers. And the course of bargaining between the chief buyer and two of the major sellers (representing the United Kingdom on the one hand and Canada and Australia on the other) has been influenced by a strong community of interest.

Intra-Empire purchases.—On January 10 the British made heavy purchases of Canadian wheat and flour, estimated at 22–25 million bushels;[1] and on the next day announcement was made of completion of an agreement for the purchase of about 62 million bushels from Australia, of which about 6 million were to be taken in the form of flour. The price on half of the wheat involved in the Australian agreement was left to be fixed later, but the transaction involved a definite sale of 30–35 million bushels at about 60 cents per bushel.[2] The Canadian sale was presumably at current market prices. On January 10 the price of the Winnipeg May future hovered around 79 cents per bushel (87 cents Canadian), and the price of No. 2 Northern at Fort William–Port Arthur was about 73 cents per bushel (81 cents Canadian).

In retrospect it seems proper to attach considerable importance to these sales and the circumstances surrounding them as a guide to interpretation of subsequent developments. The British purchase from Australia was apparently the first since shortly after the war began, and the purchase from Canada was the first since late November. In both Canada and Australia there was a strong feeling among wheat growers that they deserved favored treatment over non-Empire countries in British purchases, and the question of the prices to be paid was one of no small importance from the standpoint of Empire solidarity. It may be inferred that when these large transactions were eventually effected, it was on the basis of well-matured judgments of representatives of the governments concerned. These judgments may be supposed to have rested partly on appraisal of the international wheat situation, and partly on consideration of public opinion and of broad Empire policy.[3]

The Canadian purchase, though large, represented perhaps only about two months'[4] supply of Canadian wheat for the United Kingdom. One may infer an intent to allow later prices to be determined by possible changes in market conditions. Nevertheless, fixing the price on so large an amount of wheat may be regarded as vigorous action, reflecting a disposition of the representatives of the British and Canadian governments to take the initiative in determining the export price of Canadian wheat rather than merely to follow the market.

Though the purchase of early January represented some two months' supply of Cana-

[1] This is the range of estimates mentioned in the official Canadian *Monthly Review of the Wheat Situation* (Jan. 26, 1940, p. 1). Some estimates in the trade, apparently resting on inadequate information, were considerably lower.

[2] If the price was fixed on all of the flour involved, the total of wheat and flour was 34 million bushels, but if on just half of the flour, the total on which the price was fixed was 31 million bushels. Reports are not specific on this point. The price fixed has been somewhat differently reported in each of three reliable sources, perhaps owing to differences in the points at which the prices apply. The figures given range from 3*s.* 7*d.* (Australian) to 3*s.* 10¼*d.* per bushel for bulk wheat (58 to 62 cents). The reports agree in quoting the price for bagged wheat at 3*d.* (4 cents) per bushel over that for bulk.

[3] Reports current at the time of these purchases that the British had at the same time bought heavily from Argentina permitted the interpretation that the heavy buying from all sources was partly motivated by fear of further large price advances. But it now appears that the British bought no Argentine wheat at this time and made no substantial further purchases from Argentina until some weeks later (*Times of Argentina*, Jan. 29, 1940, p. 23).

[4] This figure is suggested on the supposition that by early January the average utilization of all Canadian wheat in the United Kingdom was close to the proportion of 60 per cent, fixed six weeks later (February 20) as the minimum percentage of Manitoba wheat (excluding Garnet) in the grind of any mill.

dian wheat for the United Kingdom, scattered purchases apparently aggregating close to 10 million bushels were made in February, an estimated 10 million bushels was bought on March 16, and 15 million on April 16. In addition some comparatively small purchases have been reported, including a few million bushels bought at the end of March and the beginning of April. Each of the major purchases was reported as providing for shipment of the wheat over a period of two months or more.

If official agencies of the British and Canadian governments have in fact chosen to exercise the influence in price determination which their buying and selling power permitted and which political considerations (using the term in its larger sense) urged, it was logical if not necessary that their influence on the market should be applied almost continuously, and not merely on the infrequent occasions on which export sales were made. This has been done, we infer, and apparently it has been done well. The Winnipeg market has evidenced neither such erratic behavior as might be expected if the influence of the governmental agencies were being exercised only spasmodically, nor such rigidity as would arise from complete domination by these agencies. The means by which this has been accomplished have not been made fully known.[1]

Chicago and Winnipeg prices.—The course of prices at Winnipeg from January to mid-May appears as practically a replica in miniature of the price fluctuations at Chicago (Chart 3, p. 378). Two circumstances during this period have weakened the connection between these two neighboring wheat markets: the practical insulation of United States markets from price influences such as are transmitted through export or import trade,[2] and—more important—the sharp curtailment of trading in Winnipeg by residents of the United States, owing primarily to restrictions on transfer of funds from Canada to the United States. It would be difficult to prove that these circumstances were not sufficient to account for the observed weakness of the responses in Winnipeg to price movements originating at Chicago; but if these circumstances were the only significant abnormalities affecting the correspondence between price movements in these markets, there should be observable also numerous examples of weakness of response at Chicago to price movements originating in Winnipeg.[3] In the three days following January 2, prices declined faster at Winnipeg than at Chicago. This decline at Winnipeg was suddenly checked at about the level at which large British purchases were completed a few days later. During the months that have ensued, every price movement of as much as one cent per bushel at Winnipeg has appeared as merely a response to a price change usually two or three times as great at Chicago. It is difficult to escape the inference that Winnipeg prices have been under a strong stabilizing influence since the basis for renewed British purchasing was reached. If such a restraining influence has operated at Winnipeg, it must have tended at least to moderate price swings at Chicago, and possibly has had an appreciable influence on the price trend there.

Winnipeg prices as shown graphically in Chart 3 are in United States cents, but conversion from quotations in Canadian currency has been made at the constant official rate of

[1] It is generally understood that the Canadian Wheat Board normally has large holdings of futures accumulated in connection with its sales of wheat to grain merchants, and that it makes these holdings available to avoid heavy buying in the futures market by way of lifting hedges on export sales to the British purchasing agent. Presumably a purchase by the British agent involves both a bargain with the grain merchant as to the basis of sale relative to the price of the future, and a bargain with the Wheat Board as to the price to be paid for the futures.

[2] Export sales, under subsidy, were small and mainly to China and Russia, outside the main channels of the international wheat trade. The possibility of substantial importations from Canada, which might otherwise have been a potent influence, was given little weight after about mid-January owing to expectation that if large importations threatened, a quota tantamount to prohibition of imports would be imposed. On January 18 Congress gave final approval to a bill (HR 7171) amending Section 22 of the Agricultural Adjustment Act to permit establishment of import quotas, as therein provided, in advance of importations rather than after their occurrence.

[3] Price movements based on reports of crop prospects in the United States would naturally find the stronger response at Chicago; but it would have been normal for some items of international crop news and of war news, and for heavy export sales of Canadian wheat, to act more strongly on Winnipeg than on Chicago prices.

exchange, thus merely lowering the curve on the chart without affecting its conformation. Prior to early April it was common to make comparisons of wheat prices in Canada and in the United States on the basis of conversions at the open-market rate of exchange, as we did in our last *Survey*. Further severe depreciation of the Canadian dollar on the free market in March,[1] however, focussed attention on the question and brought recognition that Canadian exchange regulations effectively required payment for wheat exports in funds obtained at the official rate. From the time of its application in mid-September the official exchange rate of $1.10 Canadian to $1.00 United States has been the appropriate basis of conversion for wheat price comparisons.[2]

In the Chicago market, wheat price fluctuations were rather erratic. Market commentators, undertaking to account for the larger price movements on individual days, were forced to seek the explanation in developments related to the European war more often than in weather or crop news. In retrospect, all of the larger individual price movements during January–March seem out of proportion to the significance of the associated news, and undeserving of detailed comment here.[3] This interpretation, however, itself seems significant, for it indicates a "jumpy" market, such as is reasonably to be expected when extreme divergences of opinion exist on the outlook for prices. Difference of opinion is a perennial characteristic among speculative traders, but there is much ground for believing that during January–March such differences were unusually great.

Though the temporally associated news was rarely the sole cause and may have been often but a minor influence behind individual price movements during January–March, the general tendency in this association may be significant. Most of the larger price movements were associated with news that might reasonably affect opinions on the probable scope and duration of the war. Changing opinions on war prospects probably underlay most of the price fluctuations of January–March. The downward trend through January we continue to regard as a normal reaction from the extreme price advance of the previous month rather than as a response to current news, but the trend during February and March may have been determined by the waning of hopes for an early peace. The principal weather and crop news that might have tended to support prices derived from the severe cold that gripped Europe during the latter half of

[1] Throughout the latter half of March the Canadian dollar was quoted in the free market at about 81 cents.

[2] Attention was drawn to this fact in the weekly letter of James Richardson & Sons of Apr. 3, 1940, quoted in the *Winnipeg Free Press* of April 4. The Richardson letter cited an estimate that only about 1 per cent of exchange transactions between the United States and Canada was passing through the free market.

[3] Two price movements in February, nevertheless, deserve to be singled out for special notice. They were widely recognized at the time as scarcely explicable in terms merely of the current news, and some collateral evidence favored the view that they reflected an effort at price manipulation. Subsequent events tend to controvert this interpretation, but the events stand as interesting episodes in the history of wheat prices, and the interpretation given was itself of some temporary importance. One financial service with a large clientele among grain traders published a penetrating analysis that merits quotation even though we now think that a somewhat different conclusion should be drawn:

"In the latter part of the week ending February 17, and the early part of the week ending February 24, the market made spectacular advances in the last 15 minutes of two sessions. The reason given for these advances was that a prominent speculator was short and attempted to cover.

"If a big speculator had been short and attempted to cover it is hardly probable that his name would have been mentioned and even so it is highly improbable that he would choose to cover after one o'clock in the trading session....

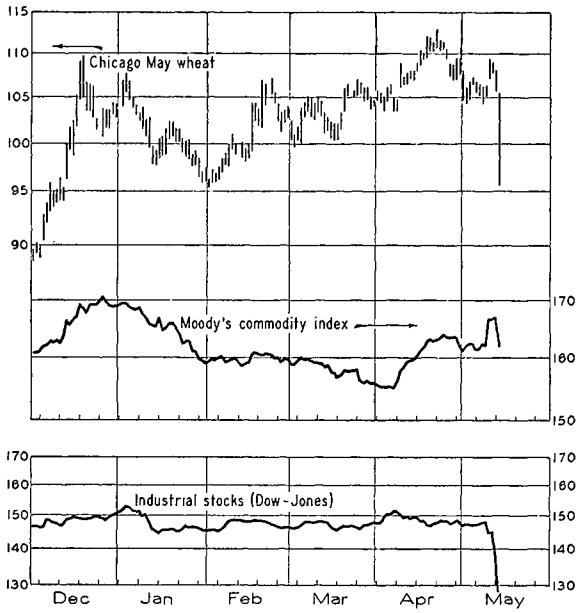
".... I was tempted to say in my bulletin of February 19 that the sharp advance at the close of the session on February 16 was probably a manipulated advance on the theory that it would continue through on Saturday and that shorts would have all day Sunday to worry over whether to stay with their short position, liquidate, or change to a long position. If the advance had come on Thursday I would not have been tempted to refer to it as manipulation.

"It was not until the advance of Tuesday, February 20, that I became convinced the buying was for the express purpose of putting the market up. At one o'clock on February 20, May wheat sold at 102¾ cents. Exactly nine minutes later it sold at 107. This advance coming in the last 15 minutes of the session of February 20 occurred two days before a holiday the same as the advance on February 16. Thus it appears to me that whatever trader or group of traders did this buying hoped that the momentum would carry through the following day with a holiday following in which dust storms or some other factor might be found to carry the advance still further."—Ralph M. Ainsworth, in a bulletin of Feb. 28, 1940.

January. This seemed to count for little as a price factor at the time, though perhaps the repeated comments during February on the probability that damage had been severe exerted a cumulative delayed influence.

CHART 4.—CHICAGO MAY WHEAT PRICES AND INDEX NUMBERS OF PRICES OF SENSITIVE COMMODITIES AND STOCKS, DAILY FROM DECEMBER 1939*

(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.

Delay in liquidation of loans on stored wheat in the United States led to much comment on the possibility that subsequent forced selling might exert a severe price-depressing influence, especially during April when loans matured most rapidly. Chiefly in consequence of hedging of such wheat as it came on the market, the open interest in Chicago wheat futures increased more than 30 million bushels during April; but this heavy hedging had no apparent tendency to depress prices except perhaps as a minor contributing factor during the last few days of the month. This increase in open interest, though an extraordinary occurrence for the spring of the year, was similar to increases that normally occur in the period of rapid marketing just after harvest. The price behavior in these circumstances seems another example of the power of the futures market to absorb tremendous selling pressure without appreciable price depression, provided the selling does not seem to indicate conditions previously overlooked or underrated.

From early April price movements at Chicago seem in more reasonable relation to the day-to-day news than during January–March. During the first week of April, news of weather in the southwestern United States dominated the Chicago market, but the German invasion of Denmark and Norway on April 9 and subsequent military and political news overshadowed all else during the next ten days and raised prices at Chicago 8 cents per bushel. Crop news, in the form of reports of improvements in prospects for winter wheat, returned as the main market factor during April 25—May 1 and the Chicago May future declined 6 cents per bushel. But from May 10 through May 14, when these sentences are written, war news again dominated the market, as it promises to do for some days or weeks to come. The German invasion of Belgium and Holland on May 10 brought a strong price advance, like previous evidences of intensification of warfare. The rapidity of the German advance, however, suggested the possibility of a quick German victory, and prices declined sharply on May 13, and on May 14 broke precipitously to the price limits, 10 cents below the previous close.

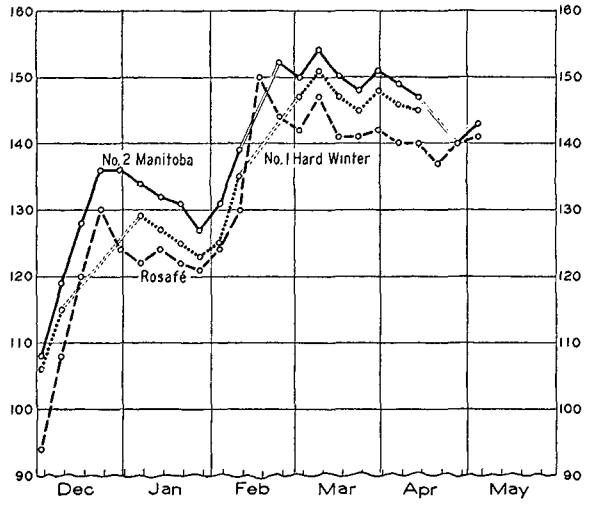
Antwerp prices.—Prices of Canadian wheat at Antwerp declined some 10 cents per bushel during January (Chart 5), partly in response to the smaller decline at Winnipeg, and apparently partly owing to some reduction in ocean freight rates on the North Atlantic.[1] Prices of Argentine wheats fell sharply at the beginning of the month when the Argentine Grain Board began offering more freely for

[1] Our information on ocean freight rates for grain in neutral vessels on the North Atlantic is fragmentary. On December 26 the *Chicago Journal of Commerce* carried the information that steamship lines had increased asking rates for heavy grain to 45 cents per bushel. On January 16 Broomhall reported sale on the previous day of a few parcels of Canadian wheat to be shipped at a rate of 36 cents per bushel.

export,[1] but declined only slightly during the rest of January.

CHART 5.—ANTWERP PRICES OF IMPORTED WHEATS, WEEKLY, FROM DECEMBER 1939*

(U. S. cents per bushel)



* Data from Table X.

During the first half of February, Antwerp prices rose some 25 cents per bushel as a result of sharp increases in costs of transportation. Quotable ocean freight rates from Argentina to Antwerp rose from about 50–55 cents per bushel near the end of January to about 80–85 cents per bushel in mid-February. Freight rates from North Atlantic ports and from Vancouver apparently rose about 20 cents per bushel during the same interval. The advance was precipitated by extension of governmental control to all vessels under the British flag, effective February 1. The British and French had also chartered many neutral vessels, and ships of several European neutral countries were apparently operating under control of their governments, leaving tonnage in the free market very scarce.

There was some slight easing of freights after the end of February, when as much as 90 cents per bushel was reported paid for freight from the River Plate to Antwerp, but at the end of March even the British government, with the great advantage of convoy to offer, was paying at the rate of nearly 80 cents per bushel for charters from Argentina to the United Kingdom.[2] By the end of April, however, the free market rate had declined to about 70 cents.

The moderate recession of Antwerp prices after early March seems partly a result of the slight easing in ocean freights, and partly a result of cheapening in costs of shipment from Canada incident on reopening of navigation on the St. Lawrence and, later, on the Great Lakes.[3] Winnipeg prices, as we have noted, changed little during this period, and Argentina had to meet the Canadian competition.

Argentine prices.—Futures prices at Buenos Aires fell about 14 cents per bushel in a fairly steady decline during January and early February (Chart 3, p. 378). Adoption of a more vigorous selling policy by the grain board early in January seems to have been a factor in the decline, and the moderate price recession at Winnipeg during January tended also to depress prices at Buenos Aires. The major influence, however, came from changes in ocean freight rates mentioned above. Firmness of rates from Argentina to the Continent in January, while rates on the North Atlantic declined, and the sharp advance of ocean freights during the first half of February, both tended to depress Buenos Aires prices relative to Winnipeg.

The reason for the price recovery of 4 cents per bushel at Buenos Aires on February 14 and 15 is not clear. The fact that the second official Argentine crop estimate, showing a drastic reduction from the low first estimate, was issued shortly afterward (February 17), aroused some suspicion in the United States that information regarding the forthcoming estimate might have leaked out in advance.[4] In any case, this price recovery at Buenos Aires seems to have helped to lay the basis for the similar price advances at Chicago late

[1] Regular f.o.b. quotations on Argentine wheat for export were resumed on January 6, after having been withheld most of the time since November 24.

[2] *Times of Argentina*, Apr. 1, 1940, p. 18.

[3] The harbor of Montreal was opened by an ice-breaker on March 17, and navigation on the upper lakes was officially declared open on April 25.

[4] We have not seen this suggestion made specifically in print, though published comments attributing the Argentine price advances to reduction in the crop estimate carry this implication unless they be interpreted as uncritical explanations that neglected the time factor.

in the session on February 16, and at Winnipeg on February 17.

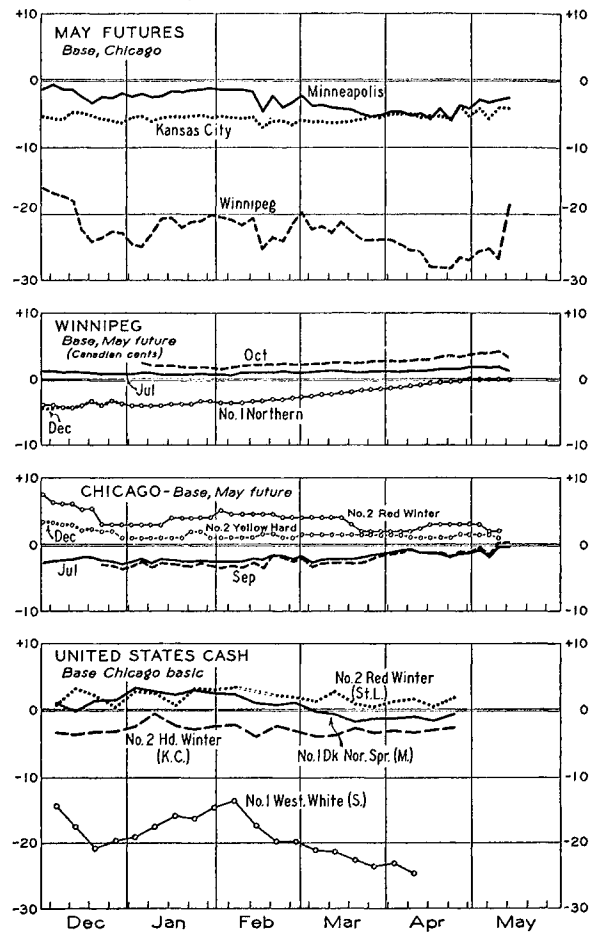
Subsequent price advances that carried the Buenos Aires May future from 61 cents per bushel in late March to 70 cents in early April and to 79 cents in early May resulted from evidence of approaching exhaustion of the Argentine surplus. The advance in early April was apparently stimulated by reports of unexpectedly large Argentine shipments, and the later advance by a large British purchase of Argentine wheat.[1] Futures prices at Buenos Aires since April 22 seem to have been above the basis at which export sales could be made to Europe. An additional British purchase of Argentine wheat (Barusso) reported by Broomhall on May 11 was said to have been made at a price equivalent to about 70 cents per bushel, whereas the June future at Buenos Aires was then at about 75 cents and f.o.b. quotations for export were at 77 cents per bushel.

North American price relations.—The price of the May future at Winnipeg, converted to United States currency at the official rate of exchange, ranged during January–April from 20 to 28 cents under the Chicago May future (Chart 6, top section). Because Winnipeg prices were relatively stable, for reasons discussed above (pp. 378–80), the changes in price spread between the two markets reflect mainly the fluctuations in Chicago prices.

The price of the May future at Minneapolis declined during March to about 5 cents per bushel under the Chicago May future, and at times in April fell slightly lower. Similar price relations had not prevailed since the winter of 1933–34. More remarkable was the fact that the price of the Minneapolis May future fell below the Kansas City May. Such a situation had not been witnessed since 1928, but it had previously occurred also in April–May 1925 and in January 1926. It is a price relation that is favored by abundance of hard red spring wheat and by abundance of protein in the supplies of hard red winter wheat. Spring-wheat supplies have not been particularly large this year,[2] but there has been an abundance of winter wheat of unusually fine quality, with protein content running so high as to be an occasional source of inconvenience. Moreover, winter-wheat flour is now more widely regarded as an acceptable substitute for spring-wheat flour than was true a few years ago. Heavy selling of spring wheat held under loan contributed to the relative weakness of Minneapolis prices in March.[3]

CHART 6.—NORTH AMERICAN WHEAT PRICE SPREADS, FROM DECEMBER 1939*

(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 Seattle, and weekly averages of all reported cash sales of the designated grades at Minneapolis, Kansas City, and St. Louis.

[1] Reported by Broomhall as made late on April 22.

[2] Comparative figures on production of wheat by classes appear in WHEAT STUDIES, December 1939, XVI, 187, Table VI.

[3] According to data of the Commodity Credit Corporation, published by the *Southwestern Miller* (Jan. 2, 1940, p. 20), 58 million bushels of wheat was recorded as under loan on December 26 in the four states, Minnesota, North and South Dakota, and Montana, of which over 41 million was in elevators.

At Winnipeg the deferred futures gradually increased their premiums over the May during February–April. At Chicago also the deferred futures advanced relative to the May, but despite large additions to the supply of free wheat from loan sales, the near future remained at a premium over the deferred futures until near mid-May.

Wheat prices at Seattle showed relative strength during January and early February, mainly in reflection of the common tendency for prices on the Pacific Coast to fluctuate less widely than prices east of the Rocky Mountains. Reinstatement on January 19 of the subsidy on wheat exports from the Pacific Coast and of the indemnity on export sales of flour to China and Hong Kong contributed to the relative strength of Pacific Coast prices. The advance of Chicago prices after early February was not followed by prices on the Pacific Coast, however, and by mid-April the Seattle price was 25 cents per bushel under that of basic cash wheat (No. 2 Yellow Hard Winter) at Chicago.

The relative weakness of prices on the Pacific Coast permitted a substantial movement of western wheat by rail to the East, with a consequent depression of prices of soft red winter wheat in eastern markets. Large sales of soft white wheat were made in mid-April for delivery at Missouri River rate points at 3–3¼ cents per bushel over the Kansas City May future, and approximately the same price applied for delivery at Duluth, whence cheap lake transportation would be available to eastern lake ports.[1]

Outlook for Trade and Carryover

During the writing of this survey, radical changes have occurred. With the German invasion of Denmark and Norway on April 9, and of Belgium and the Netherlands on May 10, the war entered an extremely critical phase. As these words are released, striking German successes have been achieved within two weeks, and the whole issue of the war is perhaps being decided. The danger of spread to new areas, including Italy, the Danube basin, and the Mediterranean, is acute. Under these circumstances, discussion of the outlook for trade cannot profitably go beyond statement of certain underlying conditions. The specific outcome will depend on developments which we cannot forecast.

Belgium and the Netherlands in the present crop year have been the largest continental European importers of overseas wheat. For the present, at least, the flow of overseas wheat to these countries—some 5 to 6 million bushels monthly—will be prevented, and new wheat supplies for the seized territory, if any are brought in, can arrive only via Germany.

Three of the countries recently overrun—Norway, Denmark, and the Netherlands—possess large fleets of merchant vessels. If time permits, most of these vessels will presumably be used under the general allied convoy system or in co-operation with it, among other things for necessary transportation of wheat. But this no longer appears of crucial importance.

The group of northwestern continental importers of wheat—Belgium, the Netherlands, Switzerland, and the Scandinavian countries—previously all neutral but now mostly involved in war, have been able during the earlier months of the crop year to obtain more wheat than they imported during the corresponding months last year in spite of the blockade, to which they were exposed more than other neutral countries, and in spite of shortage of ocean tonnage. Before the German invasion of Belgium and the Netherlands it appeared reasonable to expect that this group would obtain the 95 million bushels of crop-year wheat imports that we anticipated in January. Before April 7, indeed, the Scandinavian countries had imported nearly their full requirements for the season. It now appears probable that the crop-year imports of this group of countries may fall to or below 80 to 85 million bushels.

German and Italian crop-year imports may exceed our January forecasts, if one may judge from sales and exports made by the Danubian countries since the crop year opened (p. 376), and provided that most of the Danube countries continue to export to these destinations, as seems possible under present

[1] *Southwestern Miller*, Apr. 23, 1940, p. 35.

political conditions. The Rumanian government temporarily banned exports of wheat, anticipating the possibility of a short new crop, but in a recent report Broomhall states that the prohibition of exports would not apply to outstanding contracts.[1] No similar embargoes were reported from the other Danubian countries. Germany and Italy had presumably obtained some 50 million bushels by the end of March, and may import some 10 to 15 million bushels or even more during the remaining four months.

Lack of information on French and British imports during the past months precludes even an approximate appraisal of their crop-year imports. Yet there are some indications that France, and probably England, made no special efforts to increase reserves further. The reported sale of some 6 million bushels of French wheat to Spain[2] substantiates this impression, but it also points to larger French imports from North Africa than we expected in January. Current requirements by the United Kingdom may be covered by imports not exceeding 200 million bushels for the year, particularly if she should import corn instead of increasing the feed use of her home-grown wheat. Corn is abundant and not expensive on world markets at present, because of large American stocks and the huge new corn crop in Argentina.[3]

Substantial Spanish purchases, as reported in the trade press, indicate that she may take as much wheat during the coming months as she did during last year, and total crop-year imports may prove larger than seemed likely in January. Portuguese purchases also point to larger imports for the season. Greek imports have thus far exceeded those of last year, suggesting that imports this year may be somewhat larger than last in spite of the larger crop of 1939—in agreement with our earlier anticipations. At present, however, there is no assurance that shipping conditions will permit such imports to continue.

[1] *Corn Trade News*, Apr. 24, 1940.

[2] U.S. Department of Agriculture, Federal-State Market News Service, *Wheat Market Review*, Jan. 27, 1940.

[3] Subsidized exportation of corn from the United States, initiated May 9, may cheapen corn further.

Before the war spread to Belgium and the Netherlands, it appeared that European net imports might reach 415 to 430 million bushels, as compared with 385 to 410 million anticipated in January. After the recent developments in the war, such an increase seems improbable.

In case war should soon spread to southeastern Europe and the Mediterranean, European net imports may prove even smaller. This would affect Danubian exports, both by land and by sea; interfere with transportation of wheat from North Africa to France; and create additional difficulties for Australia, for some of her nearest European customers are in the Mediterranean area and the shortest route from Australia to Europe passes through the Suez and the Mediterranean. But even with spread of war to this area, the European wheat imports of 1939–40 can hardly prove smaller than we anticipated in January. Germany and Italy have already obtained more wheat from the Danube basin than our January estimates led us to expect for the whole crop year. The principal effects of war in southeastern Europe and the Mediterranean would not appear until the next crop year, in consequence of disappearance or great reduction of Danubian wheat supplies, which have bulked large in the supplies of Europe during the last two or three years.

Our January appraisal of probable imports by ex-Europe, 130 to 135 million bushels, still seems reasonable. Exports to ex-Europe, as reported by the chief exporting countries for the first half of the crop year, were more or less as expected (p. 372), and were only slightly below last year's level. But it seems improbable that shipments to ex-Europe during the second half of the current year will increase as greatly as they did in 1938–39, and for this reason our appraisal of probable ex-European imports for 1939–40 remains below actual imports of 1938–39 by a larger percentage than is shown by export statistics for the first half of the two seasons. This does not run counter to the opinion of the United States Commercial Attaché at Shanghai that combined import requirements of China, Manchukuo, and Japan will be approximately the same this year as last. Last year by far the

larger fraction of Oriental wheat takings—the most widely fluctuating item in total trade with ex-Europe—were imported in the second half of the crop year, while imports during the first half were small. This year exports to the Orient will apparently be distributed more evenly. Early-season imports of wheat into the Orient were much larger this year than last, according to incomplete statistics.

Sources of exports.—The impossibility under present conditions of appraising Europe's crop-year takings necessarily prevents any prediction of world total net imports or of world net exports for 1939–40. It may be expected, however, that this year there will be a larger margin than usual between these two sets of statistics because of losses of wheat on passage.[1]

During the second half of the current crop year, we do not anticipate as large an increase of exports to ex-Europe as in 1938–39, nor do we believe that May–July shipments during 1940 will account for such an unusually large proportion of the year's total as in 1939. Last year practically all European governments were feverishly building war reserves during the summer months. A similar development seems improbable this year. War developments may result in relatively light imports during the last months of the crop year.

Large exports from the Danube countries during past months indicate that they may be in a position to export substantially more wheat than last year, if war does not soon spread to this area. There is no information concerning exports of wheat from French North Africa for 1939–40, but the exportable surplus from its record crop was very large. In view of the small new crop anticipated in France and because a sizable portion of French old-crop stocks must be used for export to Great Britain and to Spain, it seems reasonable to expect the French government to transfer to France the greater portion of the North African surplus. From these near sources Europe may thus reasonably be expected to cover a somewhat larger portion of her wheat requirements than we expected in January.

United States exports now seem likely somewhat to exceed our January forecast. Resumption on March 12 of the export subsidy on wheat and flour from the Pacific Northwest to Europe pointed to a further possible increase. The level of the subsidy, however, is not high enough to offset present shortage of ocean tonnage, and further developments in the war may preclude any American exports to Europe. March exports from the United States, the largest since August, in part reflect exports to Europe from the Gulf ports, presumably on completion of earlier sales under the subsidy, and in part shipments of wheat from the Pacific coast to Vladivostok; with no export subsidy to this area the Soviet government purchased the wheat at full market price. This purchase, some 3 to 4 million bushels of the relatively expensive American wheat, was necessitated by the refusal of Canada (and presumably Australia) to export to Russia. We do not expect exports in April–June to continue on the March level, and therefore doubt if United States exports in July–June 1939–40 will much exceed 45 million bushels.

Heavy winter shipments of Canadian wheat through United States ports, and heavy movement of it to Eastern ports after the opening of navigation on the Great Lakes indicated that Canada can probably export somewhat more wheat than seemed probable in January.

[1] So far as we know, the Argentine National Grain and Elevator Commission has supplied the only direct information available on wheat losses due to sea warfare. During the first four months of the war (September–December) 18 carriers carrying 50,170 tons of Argentine wheat were lost. This amounts to about 4 per cent of Argentina's exports to Europe, if we take her total August–November exports to Europe as 1,285,480 tons. We cannot judge how closely this ratio would also represent the losses of wheat shipped from other oversea countries. The *Economist* (Mar. 16, 1940, p. 457), has published information compiled by *The Shipping World* which indicates a much smaller proportion of tonnage losses (1.3 per cent) to movement of ships in United Kingdom ports for the first six months of the war. In this calculation, however, losses of British (excluding British coasters), allied, and neutral tonnage for September–February are compared to movement of ships in the United Kingdom (net tons of cargo and ballast) for the entire year 1938. The comparison would have more meaning if six-months losses in tonnage were contrasted with movement of ships in United Kingdom ports for a similar six-month period, and would double the above percentage to 2.6. If a ratio for the same losses were figured on a cargo basis only, disregarding ballast ships, the proportion would be raised to nearly 4 per cent.

The new British milling requirements (pp. 374–75) have created larger outlets for Canadian wheat in the United Kingdom, but her further exports to Great Britain may be greatly affected by the war and are unpredictable at the present time.

Further reduction in Argentine crop estimates might suggest that her August–July exports should prove smaller than was anticipated in January. But, in view of the high level reached in the second half of March and in April, reduction seems improbable and exports may even reach a larger figure. Exports through March were 115 million bushels, and April shipments point toward an August–April total of 129 million. This indicates that Argentina's August–July exports will be larger than the 135 million bushels forecast in January. Her exports to ex-Europe alone, chiefly to Brazil, may amount to about a million bushels weekly. But even with such small late-season shipments, August 1 stocks in Argentina would fall to about 50 million bushels, a very low figure. If August–July exports from Argentina prove larger than 140 million bushels, it will mean either that inward carryover was larger than appraised in the trade press, pointing to understatement in the 1938 official crop estimate, or that the estimate of the 1939 crop is too low. War interference with Belgian and Dutch imports may affect Argentine exports more than others, since shipments to these destinations have recently constituted a large portion of total Argentine exports to Europe.

Australian exports, in spite of upward revision of the crop estimate there, may be smaller than we expected in January. Officially reported wheat exports from Australia through February amounted to only 36 million bushels, averaging about 5 million bushels per month. Reported February exports of 7 million bushels were higher than in any previous month of the season, and the trade press reports that March and April shipments exceeded this level. However, in Australia decline of visible stocks does not suggest rapid disappearance of wheat. Basing our estimates on these data, we calculate March exports to be about 8 million bushels and the August–March total to be 44 million. On the basis of our January forecast of 80 million bushels in August–July, it would be necessary for Australia to export 36 million bushels more during April–July, or 9 million bushels monthly, which is considerably above the August–February average. Even taking into account reported efforts of the Australian Wheat Board to dispose of larger quantities of wheat in the Orient, it seems unlikely that Australian exports in August–July will appreciably exceed 75 million bushels. Because of the huge crop, such relatively small exports would leave Australia with stocks of more than 125 million bushels on August 1. But stocks of this size are not unusual for Australia if we remember the situation there during 1914–18. In case war spreads shortly to the Mediterranean area, Australia may have difficulty in exporting even the quantity mentioned above.

Prospective carryovers.—For the same reasons that preclude presentation even of a rough numerical appraisal of wheat disappearance in the world ex-Russia in 1939–40—lack of information on trade and on wheat utilization in the principal European importing countries—and also because of recent war developments, the outlook for the distribution of year-end stocks is obscure.

Until very recently, it seemed reasonable to expect that stocks in Europe ex-Danube on August 1, 1940 would exceed those of August 1, 1939, and be larger than was tentatively anticipated last January. The increase of imports was dictated not by current requirements but by intentions to increase reserves. The heavy early-season Italian imports indicate that this year substantial reserves have been built up there, whereas last year, when all belligerent and many other neutral countries were accumulating stocks, Italy did so to only a limited extent. Now it appears possible that reductions in imports and drafts upon accumulated reserves may reduce European stocks below last year's level.

On the assumption that Danubian exports reach 100 million bushels, the carryover there may remain at about the same record high level of August 1, 1939. French North Africa may also have a record carryover on August 1, even if France should take 25 million bushels from this area.

Carryovers in North America will clearly be much larger than last year, though perhaps somewhat below the record carryover on August 1, 1933. If United States exports do not exceed 45 million bushels, her carryover will probably be around 280 million bushels, about 25 million larger than in 1939. The Canadian carryover will show a greater increase. Even if Canadian exports reach 210 million bushels, about 250 million bushels may still be carried into the next crop year. Presumably stocks of Canadian wheat in the United States will also be larger this year than last.

In the Southern Hemisphere, however, stocks on August 1, 1940 will presumably be smaller than last year, and their distribution will be quite different. Argentina has disposed of her huge carryover from the 1938–39 crop; with the very small new crop and satisfactory exports through April, Argentine stocks on August 1 may drop to a 25-year record low for this date, perhaps to about 50 million bushels. On the other hand, Australian stocks on August 1 may reach or even exceed 125 million bushels.

Thus, on August 1, 1940, the four chief exporters may carry old-crop stocks of wheat approaching in size the record figure of some 730 million bushels reached on August 1, 1933. The "world" wheat carryover may increase by more than 200 million bushels from last year's level, and may thus establish a new peak.

Prospects for 1940 Crops

Objective information bearing on prospects for the new wheat crop is much less plentiful than is usual in May. European advices are naturally scanty. Only a few European countries, mainly in the southeast, have reported areas sown to winter wheat, and no direct information has come from the principal European wheat producers, belligerent or neutral. Very few official reports have been published concerning damage to winter crops from the unusually severe winter in Europe.

But even the limited factual information available warrants the conclusion that the 1940 wheat crop of the Northern Hemisphere does not promise to be large, or at least not as large as that of 1939, which was surpassed only by the huge crop of 1938. Present information indicates that somewhat smaller wheat crops may be anticipated for 1940 both in North America and in Europe.

The United States winter-wheat crop, as of May 1, is forecast at 460 million bushels as against 426 million as of April 1. This substantial improvement reflects the beneficial effects of abundant precipitation during April. But a crop of 460 million bushels would be more than 100 million bushels below last year's winter-wheat crop, and more than 110 million bushels below the average for 1929–38. With heavy abandonment of winter wheat, the acreage remaining for harvest is estimated officially at 34 million acres, substantially under the 1939 harvested area of 37.8 million.

The United States spring-wheat area this year may be some 10 to 11 per cent larger than the 1939 revised estimate of 17.5 million acres, provided that farmers plant in accordance with their intentions as estimated by the United States Department of Agriculture. Backwardness of the season, however, points to a smaller increase in area. Abundant precipitation in April relieved the drought conditions which prevailed over most of the spring-wheat area until the end of March; and in the first half of May there was ample moisture for satisfactory germination and early growth. With average weather conditions in succeeding months, a satisfactory yield per acre of spring wheat may be anticipated. But with an average yield of 8.5 to 9 bushels per acre on the intended area of 19.4 million acres, the crop may not exceed 175 million bushels. In our opinion only better-than-average weather conditions would produce a larger crop of spring wheat. A winter-wheat crop as officially estimated on May 1, together with a spring-wheat crop of 175 million bushels, would bring the total crop of only 635 million bushels, some 120 million bushels smaller than in 1939, and about 50 million below the probable domestic requirements of the current crop year.

The spring-wheat area in the Prairie Provinces of Canada promises to reach a new peak this year. Official estimates of farmers' intentions to plant run 5 to 6 per cent larger than

the area sown for the crop of 1939.[1] But soil conditions are not as favorable as last year. Subsoil moisture reserves are low in some regions, particularly in the important Saskatchewan area, but also in Manitoba; and timely rains will be necessary to carry the crop along. With favorable weather, a large wheat crop is possible in Canada, though even with moderately favorable weather yield per acre will perhaps not be as high as last year. With unfavorable weather in subsequent months, a much smaller crop may be expected. At the present time, only an average yield per acre (13 bushels) may be anticipated for the Prairie Provinces. Such a yield, even on a record area of over 28 million acres, would result in a Canadian wheat crop some 120 million bushels smaller than that of 1939.

Thus, with average climatic conditions during the next months, the North American wheat crop may fall short of the 1939 crop by as much as 200 to 250 million bushels. Only exceptionally favorable weather conditions will bring it close to last year's level, and moderately unfavorable weather may result in an even smaller crop.

Several factors led to the reduction of area sown for the 1940 crop in Europe. Fall sowings in several countries were presumably reduced by shortage of labor (and horses) due to mobilization. This is true particularly of France, where very large proportions of the supply of men, horses, and vehicles were mobilized in August–September.[2] It also occurred in several neutral countries, especially in the Danube basin. Rumania and Yugoslavia officially reported their 1940 winter-wheat areas as 18 and 11 per cent smaller respectively than in 1939. The winter-wheat area in Germany and in countries under German control presumably were also reduced by mobilization (and by war in Poland). Mobilization in Germany, however, was not so sudden and so general as in France, and probably affected autumn plantings less.[3] An unusually severe winter over most of Europe has undoubtedly damaged a larger portion than usual of winter crops. Perhaps even more important is the fact that this winter-killing could not be offset by spring sowing because of unfavorable weather conditions in early spring in most of Europe.

Considerable winterkilling apparently not offset by spring sowing is indicated in France, Belgium, and Holland. Denmark has also reported that her grain crops will probably be below normal, owing to the severe winter.[4] Official reports, partly confirmed by trade information, indicate, however, that fall-sown bread grains have come through the winter fairly well in Hungary, Rumania, and Bulgaria, although it is officially recognized that in the eastern portions of Rumania and Bulgaria winterkilling was heavier than usual. This may point toward winterkilling in the adjacent winter-wheat area of the USSR, which also had an unusually severe winter. Of Germany, we may infer from information on winterkilling in surrounding countries, that there was substantial frost damage to winter crops. The winter was even more severe in Germany than to the west and south. It must be kept in mind, however, that in Germany rye accounts for nearly 70 per cent of the crop area of winter bread grains, and is more resistant to frost than wheat. An official report from Holland states that in general rye came through the winter in good condition. This leads us to expect wheat crops below average in 1940 in a large portion of Europe, partly because of the smaller areas to be harvested and partly because of the effects of the unusually severe winter and the backward spring.

In the Danube countries, the outlook seems

[1] A smaller increase of about 3 per cent is indicated by a survey made by the Canadian Pacific Railway. Backwardness of the season suggests that the smaller increase is more likely.

[2] The French press throughout February carried very pessimistic reports on the small areas sown to winter wheat, which were much below normal, particularly in the important wheat regions in northern, central, and western France. See *Journal du Commerce*, Feb. 14, 17, and 23, 1940.

[3] *The Economist* (Mar. 23, 1940, p. 519) reports that German agricultural authorities maintain that last year's autumn sowings in Germany were only slightly smaller than in 1938 and, without any exact figures on winterkilling, points out that it is not so much the extent of winter damage that will endanger the 1940 harvest as the possible shortage of labor for extensive spring sowing.

[4] See a cablegram from the United States Agricultural Attaché in London in the *Commercial Review*, May 7, 1940, p. 5.

more definite for a wheat crop smaller than in 1939. In this area smaller fall sowings were officially reported. Though official reports do not indicate as severe winterkilling as reported by the trade press, further damage was caused by serious floods in many regions, and this hampered increase in the sowing of spring wheat. A relatively large decline of the Danubian wheat crop, as compared with 1939, may also be expected because yield per acre last year was much higher than average and second only to that of 1938. With an average yield in 1940 on a crop area about 10 per cent lower than in 1939, the Danubian wheat crop would be some 100 million bushels below last year's very large crop. A yield below average, which now seems probable, would result in an even greater decline.

The situation in Europe ex-Danube is less clear, because probable reductions of wheat acreage in several countries, mentioned above, may be compensated to a certain extent by possible increases in some other areas. For instance, Spanish wheat acreage may reasonably be expected to be substantially larger than in 1939, when the civil war had reduced it some 2.5 million acres below its prewar normal. Serious efforts by the Spanish government to increase wheat acreage may lead to substantial improvement. Several belligerent and neutral countries have taken special measures to increase their crop areas, and the United Kingdom and Eire report substantial success in this direction. Greece has reported larger areas under winter wheat this year. No information has been received concerning Italian wheat acreage but there is no reason to expect it to be smaller than last year, and there are indications that it came through the winter fairly well. The wheat area in Europe ex-Danube may therefore differ little from that in 1939 unless devastation by war is extensive. Yield per acre in 1939 was only moderately above average in this region, so that an average yield per acre in 1940 would not mean a large decline of production from the 1939 level. Indeed, an average yield of 21 to 22 bushels per acre on last year's crop area of 54 million acres would produce a crop only some 60 to 120 million bushels smaller than the 1939 crop. Only with a yield per acre substantially below average would the 1940 crop fall much below last year's level. But with the information now available, it is impossible to appraise the prospects for yield per acre in Europe ex-Danube; at most, the available data suggest something below an average yield.

As to the USSR, the indirect inference can be drawn that the unusually severe winter may have caused substantial damage to winter wheat; but the facts are not clear. Sowings of spring wheat have been very much slower this spring than last. Late plantings of spring wheat, particularly in the important spring-wheat areas of the eastern USSR, are usually more endangered than early sowings by hot, dry weather during the summer.

The smaller wheat crops in North America and Europe that at present seem probable may be somewhat offset by larger crops in other areas. In British India, the first official estimate of 390 million bushels for the 1940 wheat crop—a high figure which may still be revised—already compensates for about 20 million bushels, when compared with the final 1939 estimate of 371 million. The French North African crop may be large this year. Information reported by the International Institute of Agriculture indicates that Algerian wheat sowings, on a considerably larger area than last year, were nearly completed on March 15, and crop prospects were favorable. The French government made a great effort to increase wheat acreage in all her North African possessions. But even a good crop this year in French North Africa may not exceed last year's, which was of record size.

It is much too early to formulate definite conclusions concerning the 1940 wheat crops in the Southern Hemisphere. The distribution, however, may well be different from that of 1939, when Australia harvested a record crop from an acreage somewhat below average, while Argentina obtained an exceedingly small crop. Weather conditions to date seem fairly close to normal, and continuing normal weather to harvest, together with anticipated increase of acreage at least in Argentina, might result in a larger Southern Hemisphere crop than this year.

Outlook for Prices

It is possible in the final pages of this *Survey* to take some account of developments through May 19. During the preceding week the outlook for all human life and activity over a great part of the world changed profoundly. Further great changes may impend.

One consequence of the events of the past week and of events yet to come may be that closing of wheat markets in Canada will shortly be reconsidered and in the United States will be proposed. It is not possible to judge the merits of such possible proposals in advance, for they would depend on the circumstances from which the proposals emerged; but it is pertinent to draw attention here to certain lessons of the last great war. One of the most pressing problems of a nation engaged in a modern war, or preparing actively against the threat of such a war, is that of redirection of the productive capacity of the nation. Additional labor and capital must be pressed quickly into some lines of production, and drawn out of less essential lines of production. The inducement for such changes in time of war cannot be left entirely to price incentives. Prices of commodities most pressingly needed must be controlled, lest their advance be so great as to generate an inflationary upward spiral of prices and wages. In the industries in which most rapid expansion is needed, it must be obtained through subsidies or other direct governmental intervention rather than through inducement of excessively high prices. Efficiency of production in all lines must be kept high, and labor and capital not needed in one industry must be shifted to others.

In the latter part of the last war, wheat was one of the commodities for which increase of production was needed, and price advances had to be restrained by governmental control. In the present war, however, wheat is a commodity of which the supplies and productive capacity, outside Europe, are more than abundant. The general argument for price control in wartime emergency does not at present apply to wheat. Instead there is need now in Canada, and as employment increases there may arise need in the United States, that incomes of wheat growers and of other farmers should not be so high as to deter needed shifts of labor and capital to other lines of production. This requires that wheat prices be not too high. Since governmental fixing of wheat prices would permit the focusing of political pressure for prices higher than warranted, its avoidance may now be more vital than was the fixing of wheat prices in the last great war.

If wheat prices outside Europe continue for at least some months to be determined in relatively free markets, the markets will attempt to reflect apparent prospects for the future. It is not possible now to predict the circumstances which the markets should endeavor to take into account even a week hence. One possibility is that an early termination of the war should appear in prospect. This would release a pressure of burdensome wheat surplus such as existed last August, on an international market less able than it was then to bear the pressure. Another possibility is that a war of long duration may again seem in prospect.

The following paragraphs were written about a week ago on the assumption that the war would be a long one. This now seems not a particularly well-founded assumption, but some possibility remains that the discussion in these paragraphs may prove of value for interpretation of the situation in coming months. It has accordingly been left as originally set in type except for addition of a few footnotes and a new closing paragraph.

Under the conditions of economic dislocation and of governmental regulation and supervision that war has brought, the concept of an international wheat market, always somewhat vague, becomes considerably more elusive. Nevertheless, it remains necessary in considering the outlook for wheat prices to give attention to international influences. Since the earlier sections of this study were put in type,[1] the last prominent free importing

[1] Most of the manuscript of this *Survey* went to the printer on May 7; this paragraph and the ones that follow were added in galley proof a week later; subsequent events led to revision of the section on the outlook for trade and carryover, and insertion of the foregoing paragraphs of this section in page proof on May 20.

wheat market has ceased to function, as Belgium has been struck by the devastating arm of German aggression. Of the remaining prominent free markets, that at Winnipeg promises to have the broadest international character during the next few months. United States markets seem likely to continue on an essentially domestic basis for at least several months to come. Argentine price movements have recently become erratic, as that country's exportable surplus has dwindled, and they are in any case subject to peculiar fluctuations in response to changing ocean freight rates.

Wheat prices at Winnipeg remain subject to influence by international forces of demand and supply, but the conditions under which those forces now operate are not the usual ones. Prospects for Winnipeg prices can scarcely be much illuminated by estimating the normal consequences of prospective world wheat demand and supply. If Winnipeg prices have for several months been determined primarily by the price terms on which representatives of the British and Canadian governments are able to come to agreement,[1] it may be supposed that this condition is likely to persist for at least several months to come, assuming continuation of the war. On this supposition, it seems reasonable to expect Winnipeg prices to change little during June–September unless strong pressures develop to force such a change.

A sustained decline of Winnipeg prices seems unlikely except in response to heavily increased pressure of export offers of wheat by other countries, and it is clear that no such pressure is to be expected during the next few months unless the war should come to a sudden end.[2] Some increase of buying in Canada is likely now that the Argentine surplus has been drawn so low, but since Canada promises none the less to be left with a record carryover of some 250 million bushels on August 1, competition for her surplus seems unlikely to have much price-raising effect.

There remains the possibility that severe deterioration of Canadian crop prospects might lead to a substantial price advance. More or less uncertain fears of crop shortage in Canada probably would have little influence on prices there; but if such fears should be realized, a price advance of perhaps 10–20 cents per bushel might result. Low yields in Canada would not only narrow the margin of surplus wheat fairly accessible to western Europe, but by cutting the incomes of wheat growers would strengthen their claims to need of a larger return per bushel.[3]

United States prices.—Though we judge that historical tendencies in the relation of prices to supplies are of little pertinence for appraisal of prospects for wheat prices in Canada during the next few months, such historical relations may serve as a useful guide to price prospects in the United States. Normally, prices in the United States are influenced by production and old-crop carryovers in other parts of the world as well as domestically. The causal influences involved are complex; the price significance of 100 million bushels of wheat in one part of the world is not generally the same as that of 100 million bushels in another part of the world; and the price significance of 100 million bushels in any one location outside the United States is not the same from one year to another. But these complex causal relations find fairly well-balanced expression in one simple statistical relation: that between price and the carryover in the United States on the first of the following July.[4] This relation holds reasonably well for prices as early in the crop year as September and is most pronounced for prices during December–March. Under some conditions the general international supply-and-demand situation in wheat has been the

[1] See above, pp. 378–80. We speak of representatives of the British and Canadian governments rather than specifically of the British Cereals Import Committee and the Canadian Wheat Board because we infer that the decisions are influenced by policy determinations in higher governmental circles.

[2] The sharp break in prices after this was written came not strictly as a consequence of pressure of export offers, but in recognition of the greatly increased prospect of such pressure.

[3] If yields per acre should be very low in some areas, but average to high in others, direct relief such as has previously been afforded the victims of crop disaster might be preferred to a general price advance.

[4] This is a relation which we have noted and found useful before. See WHEAT STUDIES, September 1937, XIV, 28–30; *ibid.*, January 1938, XIV, 214; and *ibid.*, January 1940, XVI, 234–35.

prime determinant of both price and carryover in the United States. In such circumstances, it may be most realistic to reason that the international situation determines price, and that price determines carryover in the United States. Under other circumstances it may be both realistic and convenient to reason that a combination of international and domestic conditions will determine the carryover, and that the prospect of a certain more or less closely predictable carryover tends to determine the price.

Circumstances at the present time suggest that on stated assumptions regarding merely the size of the wheat crop of the United States, the probable carryover on July 1, 1941 may be calculated with a likely margin of error of not many millions of bushels. It happens also that on any assumptions that now appear reasonable, the probable carryover thus computed falls within the broad range of 125–300 million bushels within which it can vary without much apparent effect on the price. Thus it seems likely that wheat supplies for 1940–41 in the United States and elsewhere can now be predicted as closely as is necessary to take adequate account of their probable effect on prices in the United States during the coming autumn and winter. This is not to say that either the supplies or the prices can now be predicted at all closely, but only that supplies will probably fall within a range affording at least a small surplus, but not a burdensome one; and that the size of the surplus, within that range, has no important bearing on price.

Present indications as to possible wheat stocks in the United States as of July 1, 1941 may be summarized as follows. If the 1940 harvest proves to be about 630–640 million bushels, as now seems indicated (p. 389), and if domestic utilization next year is close to our estimate of 685 million bushels for this year, some 50 million bushels will have to be withdrawn from stocks to supply domestic needs. In such an event, exports are likely to be small —perhaps about 30 million bushels. The total withdrawal from stocks thus may be about 80 million bushels. Since we estimate probable carryover at the end of the present crop year at 280 million bushels, this calculation suggests a carryover of about 200 million bushels for July 1, 1941. All the figures entering into this calculation are more or less uncertain forecasts, and the forecast of production especially may prove wide of the mark. It may be supposed, however, that if production diverges widely from present indications, exports will tend to be affected in the opposite direction. This tends to increase the apparent probability that the carryover on July 1, 1941 will fall at least within the range 125–300 million bushels.

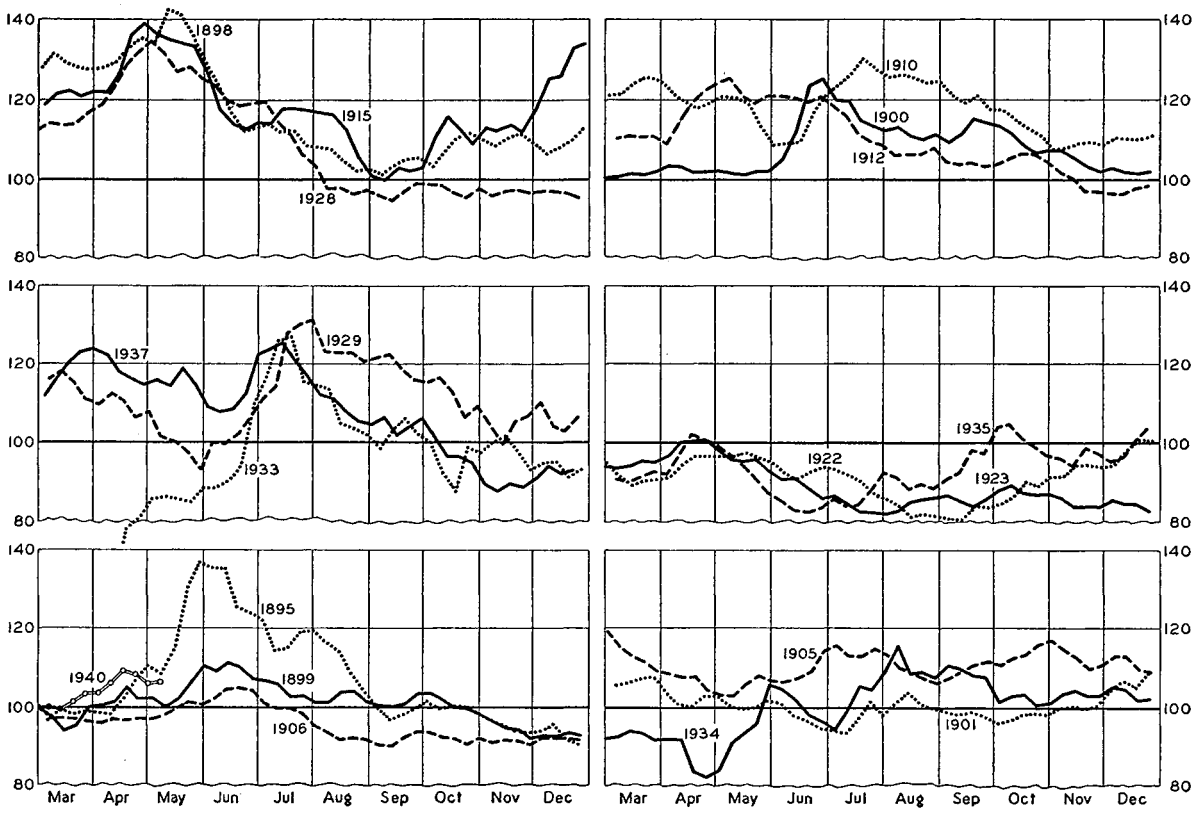
An important part of the background for the foregoing calculations are the bases for estimating exports. The estimate of 30 million bushels allows for supplying certain markets in which the United States has special competitive advantages and for additional exportation, probably aided by subsidy, from the expected surplus of the Pacific Northwest. The estimate rests in part on the supposition that prices abroad will not be high enough to attract much larger exports; that substantial imports will not occur either for lack of price incentive or because they are administratively restricted; and that the anticipated supplies will not prove so burdensome as to induce exportation on a liberal scale.

As a guide to judging the level and course of prices that might eventuate in the circumstances, the price records for the Chicago December future during March–December of 18 past years have been assembled in Chart 7 in an arrangement designed to facilitate their study. The three sections in the right half of the chart include data for all crop years since 1895 which terminated with a carryover of 125–160 million bushels on the following July 1. The three sections in the left half of the chart include data for all crop years but two since 1895 which terminated with a carryover of 160–300 million bushels. The years omitted are 1938 and 1939.[1] In 1938, supplies that provided a carryover of about 255 million bushels on July 1, 1939 depressed prices to very low levels primarily because the gen-

[1] Price curves for these years were omitted from the chart partly because it seemed quite unlikely that they would deserve consideration in judging price prospects for the summer of 1940. As of May 19, however, it seems possible that these two years may prove to be the only ones with which useful comparison can be made.

CHART 7.—DEFLATED PRICES OF CHICAGO DECEMBER FUTURES, WEEKLY, IN YEARS OF COMPARABLE DOMESTIC WHEAT SURPLUS*

(Cents per bushel at price level of May 1940)



*Weekly averages of daily prices, compiled from *Annual Reports of the Chicago Board of Trade* and from the Chicago *Daily Trade Bulletin*, deflated by dividing by the December average of the B.L.S. index number of wholesale prices of "all commodities," base 1926=125. (See footnote below). For the earlier weeks in each series, when the December future was not quoted, data are prices of the September future (in a few weeks, the July) adjusted to form a continuous series with the December. Averages for 1940 are for the September future, without adjustment.

eral international wheat situation discouraged holding in the United States. In 1939 similar conditions prevailed until commencement of the European war. For convenience of reference, we shall refer to the years included in the right half of the chart as years of small surplus, and those on the left as years of large (but not burdensome) surplus.

The prices shown on the chart are weekly averages of daily prices, adjusted for changes in the general wholesale price level to make them all roughly comparable with present quoted prices.[1] The available price averages for 1940 are included for comparison, plotted somewhat arbitrarily in the lower left section of the chart.

A little study of the chart is sufficient to reveal the surprising fact that prices averaged somewhat higher during the summer months of the 9 years of large surplus (on the left) than during the corresponding months of the 9 years of small surplus. During September–December, when the supply situation for the crop year was much clearer than in earlier months, prices averaged about the same for years of large surplus as for years of small

[1] That is, they are deflated approximately to the basis, May 1940 = 100. More precisely, the deflation is to the basis, 1926 = 125, which will be equivalent to May 1940 = 100 if the B.L.S. index number for May, on the 1926 base, turns out to be 80. At the end of April it stood at 79. The prices for all weeks in each series (except 1940) are divided by the index number for the month of December. (It is desirable to use a constant divisor, and the index for December may be preferred because that is the month of expiration of the future, and the month in which prices seem generally in best adjustment to the supply situation.)

surplus. It is noteworthy also that if exception be made of the early postwar years 1922 and 1923, there is no apparent tendency for deflated prices in postwar years to differ in level from deflated prices in prewar years.

Among the 18 years included in the chart, there were 10 in which prices averaged above $1.20 (on the deflated basis here used) during at least one week of the summer. Curiously enough, 7 of these 10 were years of large surplus. In 9 of the 10 instances the weekly average prices subsequently fell close to or below $1.00 during at least one week of September–December. The exception occurred in the year of smallest surplus, 1910, when the weekly averages declined from a peak of about $1.30 to slightly under $1.10.

This historical record does not encourage belief that wheat prices can be predicted closely from knowledge merely of the approximate surplus which the United States will carry out of the crop year. Nevertheless we find an interpretation of the record in the light of current circumstances tending to illuminate the prospects for wheat prices during coming months. Our impression of the prospects may be summarized briefly, subject to two important qualifications: that no pronounced change occurs in the general wholesale price level, and that prospects for early termination of the war do not emerge.

It is evident that, in general, circumstances which will eventuate in a large wheat surplus do not preclude a sharp price advance[1] to over $1.20 per bushel in the event of a crop scare. The possibility of an extreme price advance in the United States in the event of serious crop damage during the next two months appears to be somewhat reduced, however, by the prospect that Winnipeg prices would respond only slightly to an upward price tendency at Chicago. In any event, there is nothing in the historical record to suggest that price gains on a sharp advance could be held.

The level around which wheat prices fluctuate during the autumn of years such as are represented in Chart 7, by whatever course it is reached, may be supposed to depend largely on ideas of speculative holders on the prospects for early emergence of demand for the surplus. During recent months two conflicting lines of thought have influenced speculative holders. The lower level of Canadian prices and the size of existing world stocks argue against emergence of an active export demand for the United States surplus. On the other hand, the widespread presumption that a great war is likely to eventuate in wheat shortage, and prevalent anticipations of possible general price inflation, have tended to stimulate speculative holding of wheat. During April and early May the influences that encourage speculative holding seemed to be dominant.

Before military developments of May 14–19 shattered confidence in the views that had tended to encourage speculative holding of wheat, we thought it possible that those views might continue dominant and that the price of the Chicago September future might continue in the neighborhood of $1.00–$1.10 per bushel for some months to come, unless a crop scare should cause a temporary advance to higher levels. As of May 20, there appears to be only a remote possibility that expectations of eventual wheat shortage and of price inflation might return during June–August, and again exert as much influence as they did a week earlier.

[1] We use the phrase "sharp price advance" in the technical sense in which it was employed in Holbrook Working, "Cycles in Wheat Prices," WHEAT STUDIES, November 1931, VIII, 13–14. In terms of prices deflated as for Chart 7, it may be defined as a price advance of 16 cents per bushel or more, in terms of weekly averages, during 5 weeks or less.

On the face of the historical record, conditions which eventuate in a large wheat surplus in the United States seem actually to favor such a price advance. Perhaps one of the significant conditions which has generally tended to result in ending the crop year with a large wheat surplus has been existence of an unusually strong disposition in the United States toward speculative holding of wheat. Such a disposition might naturally favor a sharp speculative price advance on news of crop damage.

The authors are indebted to Rosamond H. Peirce, Marion Theobald, Jean Hoover Ballou, and P. Stanley King for tables and charts.

APPENDIX TABLES

TABLE I.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING AREAS, 1934–39*

(Million bushels)

Year	World ex-Russia[a]			United States	Other chief exporters[b]	Europe ex-Russia					French North Africa[g]	India	Others ex-Russia[a]	USSR
	Total[a]	Northern Hemisphere	Southern Hemisphere			Total	Northwestern[c]	Central[d]	Mediterranean[e]	Lower Danube[f]				
1934	3,489	3,045	444	526	650	1,545	498	328	470	249	97	350	321	1,117
1935	3,557	3,184	373	626	568	1,575	441	342	490	302	70	363	355	1,133
1936	3,508	3,038	470	627	620	1,480	395	327	374	384	50	352	379	1,135[h]
1937	*3,789*	*3,344*	445	876	552	*1,537*	407	318	*451*	361	72	364	*388*	1,625[h]
1938	*4,528*	*3,954*	*574*	932	852	*1,857*	559	387	*445*	466	72	402	*413*	1,494[h]
1939[i]	*4,179*	*3,772*	*407*	755	823	*1,701*	*438*	*348*	*462*	453	100	371	*429*	.....
1939[j]	*4,191*	*3,787*	*404*	755	819	*1,703*	*438*	*350*	*462*	453	100	371	*443*	.....

* 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] Canada, Australia, Argentina.
[c] British Isles, Netherlands, Belgium, France, Switzerland, Denmark, Norway, Sweden, Finland.
[d] Germany, Austria, Czechoslovakia, Poland, Estonia, Latvia, Lithuania.
[e] Portugal, Spain, Italy, Greece.
[f] Hungary, Yugoslavia, Rumania, Bulgaria.
[g] Morocco, Algeria, Tunis.
[h] Not comparable with earlier years.
[i] As of about Jan. 20, 1940.
[j] As of about May 20, 1940.

TABLE II.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING COUNTRIES, 1934–39*

(Million bushels)

Year	U.S. winter	U.S. spring	Canada	Australia	Argentina	Uruguay	Chile	Brazil, Peru	Hungary	Yugoslavia	Rumania	Bulgaria	Morocco	Algeria	Tunis
1934	438.0	88.4	275.8	133.4	240.7	10.7	30.1	7.13	64.8	68.3	76.6	39.6	39.6	43.5	13.8
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	249.2	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	184.8	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	336.2	15.5	35.5	....	98.8	111.3	177.2	79.0	23.2	34.9	14.0
1939[a]	563.4	191.6	489.6	186.5	147.0	11.0	....	....	112.8[c]	104.5	164.9	71.2	38.8	42.6	18.6
1939[b]	563.4	191.5	489.6	211.4	118.0	9.6	*30.0*	....	112.8[c]	105.7	163.6	71.2	38.8	42.6	18.6

Year	United Kingdom	Eire	France	Italy	Germany	Austria	Czecho-Slovakia	Switzerland	Belgium[d]	Netherlands	Denmark	Norway	Sweden	Spain	Portugal
1934	69.8	3.80	338.5	233.1	166.5	13.3	50.0	5.55	17.3	18.0	12.8	1.20	27.8	186.8	24.7
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	6.81	16.8	12.6	13.5	2.50	25.7	*110.0*	14.7
1938	73.3	7.40	372.9	297.3	205.0	16.2	66.7	7.81	22.0	15.9	16.9	2.64	30.2	*96.0*	15.8
1939[a]	59.7	*8.00*	*276.0*	*294.0*	205.2[e]		*40.0*[f]	6.36	*17.0*	13.3	15.1	2.55	31.4	111.8	*18.3*
1939[b]	61.6	9.52	*276.0*	293.9	206.3[e]		*40.0*[f]	6.36	13.8	13.3	15.1	2.55	31.4	111.8	*18.4*

Year	Poland	Lithuania	Latvia	Estonia	Finland	Greece	Turkey	Other Near East[g]	Egypt	Japan	Chosen	Manchukuo	Mexico	South Africa	New Zealand
1934	76.4	10.5	8.05	3.11	3.28	25.7	99.7	21.5	37.3	47.7	9.3	23.9	11.0	16.4	5.93
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	10.6	10.2	6.04
1938	79.8	9.2	7.05	3.14	9.40	36.1	156.1	27.3	45.9	45.2	10.4	34.3	11.9	17.1	5.56
1939[a]	83.4	9.2	7.30	2.96	8.34	38.3	*158.0*	29.5	49.0	61.1	12.3	32.7	*13.0*	16.0	....
1939[b]	83.4	9.4	7.30	3.13	8.34	38.3	169.3	27.8	49.0	61.1	12.6	34.5	14.8	15.8	*9.00*

* 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, 1940.
[b] As of about May 20, 1940.
[c] New boundaries.
[d] Including Luxemburg.
[e] Including the Sudeten area.
[f] Bohemia-Moravia and Slovakia.
[g] Syria and Lebanon, Palestine, Cyprus.

TABLE III.—WHEAT RECEIPTS IN NORTH AMERICA, NOVEMBER–APRIL 1939–40, WITH COMPARISONS*

(*Million bushels*)

Year	United States (13 primary markets)							Canada (country elevators and platform loadings)						
	Nov.	Dec.	Jan.	Feb.	March	Apr.	July–Apr.	Nov.	Dec.	Jan.	Feb.	March	Apr.	Aug.–Apr.
1934–35.....	9.2	7.8	5.1	3.8	4.7	6.4	141.7	23.6	12.5	3.9	8.8	8.1	6.6	200.7
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	5.6	7.9	6.1	387.0

* United States data unofficial, compiled from *Survey of Current Business;* Canadian data computed from official figures given in *Canadian Grain Statistics.*

TABLE IV.—WHEAT VISIBLE SUPPLIES, JANUARY–MAY 1940, WITH COMPARISONS*

(*Million bushels*)

Date	Total	United States grain		Canadian grain		Total North America	Afloat to Europe	U.K. ports	Total U.K. and afloat	Australia	Argentina
		United States	Canada	Canada	United States						
Jan. 1											
1935.....	447.8	91.0	1.0	230.2	27.6	349.8	25.4	16.1	41.5	45.5	11.0
1936.....	441.5	76.7	.0	226.4	34.8	337.9	20.2	10.3	30.5	68.0	5.1
1937.....	267.1	62.4	.0	81.6[a]	27.8	171.8	35.9	9.0	44.9	44.5	5.9
1938.....	283.7	94.5	1.9	49.2[a]	4.7	150.3	31.4	13.0	44.4	82.0	7.0
1939.....	430.4	128.7	.4	157.1[a]	7.9	294.1	24.7	18.4	43.1	82.8	10.4
1940.....	.....	132.8	.8	301.0[a]	38.4	473.0	....	....	....	77.0	....
May 1											
1935.....	370.1	39.5	1.0	203.9	11.9	256.3	30.1	10.8	40.9	54.5	18.4
1936.....	309.6	40.7	.0	173.3	11.9	225.9	33.2	9.8	43.0	31.5	9.2
1937.....	210.0	26.3	.0	55.9[a]	10.3	92.5	51.0	12.3	63.3	39.5	14.7
1938.....	197.4	43.2	.7	38.0[a]	.7	82.6	42.0	9.6	51.6	50.0	13.2
1939.....	335.7	74.9	.0	130.3[a]	.8	206.0	32.5	24.2	56.7	46.5	26.5[b]
1940											
Feb. 1.....	.....	119.0	.8	288.2[a]	34.2	442.2	....	....	....	143.5	....
Mar. 1.....	.....	110.8	.8	286.6[a]	27.8	426.0	....	....	....	146.5	5.5[c]
Apr. 1.....	.....	105.4	.8	281.6[a]	22.3	410.1	....	....	....	135.8	8.4[c]
May 1.....	.....	105.6	.7	259.4[a]	17.8	383.5	....	....	....	126.5	11.0[c]

* 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,* and (for stocks outside North America) Broomhall's *Corn Trade News.* Dots (...) indicate that data are not available.

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

[b] Approximate; see WHEAT STUDIES, May 1939, XV, 368.

[c] New crop only.

TABLE V.—WHEAT STOCKS IN THE UNITED STATES AND CANADA, ABOUT APRIL 1, 1935–40*

(*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.
1935.....	98.7	66.4	51.9	74.9	291.9	1.0	60.5	103.1	111.5	5.1	2.8	283.0	16.2
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.....	157.5	80.8	105.4	94.3	438.0	.8	81.2	127.9	153.6	7.1	2.2	372.0	22.3

* 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 1939–40, WITH COMPARISONS*

(Thousand barrels)

Month or period	Production						Net exports and shipments to possessions			Estimated net retention		
	All reporting mills			Estimated total								
	1937–38	1938–39	1939–40	1937–38	1938–39	1939–40	1937–38	1938–39	1939–40	1937–38	1938–39	1939–40
July	8,415	8,507	8,432	8,914	9,021	8,942	308	447	988	8,606	8,574	7,954
Aug.	8,678	9,160	9,522	9,193	9,714	10,098	430	452	698	8,763	9,262	9,400
Sept.	9,234	9,699	11,191	9,782	10,285	11,867	496	444	746	9,286	9,841	11,121
Oct.	9,446	9,634	9,428	10,006	10,217	9,997	533	572	663	9,473	9,644	9,334
Nov.	8,698	8,838	8,298	9,234	9,372	8,800	512	466	610	8,722	8,906	8,190
Dec.	8,168	8,416	8,119	8,670	8,925	8,610	510	607	464	8,160	8,318	8,146
Jan.	8,116	8,476	8,649	8,625	8,989	9,171	415	548	471	8,210	8,441	8,700
Feb.	7,572	7,757	8,025	8,047	8,226	8,510	430	698	557	7,617	7,528	7,953
Mar.	8,600	8,951	8,320	9,149	9,492	8,823	518	612	740	8,631	8,880	8,083
Apr.	7,834	8,244	....	8,334	8,742	7,883[a]	481	802	600[a]	7,853	7,940	7,283[a]
July–Apr.	84,761	87,682	....	89,954	92,983	92,701[a]	4,633	5,648	6,537[a]	85,321	87,334	86,164[a]
July–June	100,974	104,638	....	107,147	110,963	....	5,649	7,172	....	101,498	103,790	103,000[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 1940*

(Million bushels)

Week ending	Total[a]	Shipments from							Shipments to Europe				To ex-Europe		
		North America	Argentina[b]	Australia[c]	South Russia	Danube	India	Other countries	Total	United Kingdom	Orders	Continent	Total	Brazil	Others
Jan. 6	6.06	2.46	2.74	...	.00	.79	.00	.07	5.43	...	...	...	.63	...	...
13	8.15	3.25	3.65	...	.00	1.21	.00	.04	6.96	...	...	...	1.19	...	...
20	7.09	3.22	3.05	...	.00	.82	.00	.00	6.07	...	...	...	1.02	...	...
27	10.61	5.83	3.78	...	.00	.98	.00	.02	9.13	...	...	...	1.48	...	...
Feb. 3	7.93	4.62	2.38	...	.00	.93	.00	.00	7.36	...	...	...	.57	...	...
10	7.30	4.23	1.94	...	.00	1.13	.00	.00	6.12	...	...	...	1.18	...	...
17	7.54	4.42	2.00	...	.00	1.12	.00	.00	6.38	...	...	...	1.16	...	...
24	9.02	4.32	3.71	...	.00	.99	.00	.00	7.30	...	...	...	1.72	...	...
Mar. 2	7.21	4.27	2.67	...	.00	.27	.00	.00	5.34	...	...	...	1.87	...	...
9	10.90	7.37	2.09	...	.00	1.44	.00	.00	9.60	...	...	...	1.30	...	...
16	7.94	5.25	1.53	...	.00	1.16	.00	.00	5.78	...	...	...	2.16	...	...
23	8.69	4.73	2.98	...	.00	.98	.00	.00	6.77	...	...	...	1.92	...	...
30	8.09	5.40	1.87	...	.00	.82	.00	.00	6.75	...	...	...	1.34	...	...
Apr. 6	9.71	5.04	4.05	...	.00	.62	.00	.00	8.42	...	...	...	1.29	...	...
13	9.14	3.81	4.29	...	.00	1.04	.00	.00	6.79	...	...	...	2.35	...	...
20	8.24	4.70	2.64	...	.00	.90	.00	.00	6.98	...	...	...	1.26	...	...
27	8.63	4.54	2.99	...	.00	1.10	.00	.00	6.79	...	...	...	1.84	...	...
May 4[d]	10.46	4.92	4.31	...	.00	1.23	.00	.00	8.88	...	...	...	1.58	...	...
11[d]	7.60	3.55	2.75	...	.00	1.30	.00	.00	6.53	...	...	...	1.07	...	...

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

[a] Excluding Australia.

[b] Including Uruguay.

[c] Weekly data not received after September 2, 1939.

[d] Preliminary.

TABLE VIII.—NET EXPORTS AND NET IMPORTS OF WHEAT AND FLOUR, MONTHLY FROM AUGUST 1939, WITH SUMMATIONS AND COMPARISONS*

(Million bushels)

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

Month or period	United States[a]	Canada	Australia	Argentina	Hungary	Yugoslavia	Rumania	Bulgaria	Morocco	Algeria	Tunis	Turkey	India	USSR
Aug.	8.24	11.95	4.45	16.06	5.86	2.39	1.54	.48	...	...	.12	.08	.17	...
Sept.	5.32	17.45	3.67	14.10	4.78	.43	1.70	.30	...	...	.01	.01	.36	...
Oct.	3.89	18.78	5.74	14.76	5.06	1.38	2.97	.25	...	...	...	.00	.38	...
Nov.	3.29	23.18	5.93	17.00	4.78	1.04	5.86	1.12	...	...	...	.00	.62	...
Dec.	.54	38.46	3.25	17.67	4.74	1.32	4.59	.79	...	...	...	.00	.22	...
Jan.	1.88	13.59	5.66	13.39	2.07	...	2.79	.76	...	...	...	.01	.05	...
Feb.	3.22	9.10	7.52	10.81	1.03	...	2.09	...	...	...	...	.10	...	...
Mar.	6.32	11.85[b]	...	11.55	...	...	...	...	...	...	...	...	...	...
Aug.–Mar.														
1939–40[c]	32.70	144.36	44.00	115.34	30.50	9.50	24.00	5.00	...	...	...	...	...	...
1938–39	67.57	113.53	60.79	53.24	20.31	4.85	30.43	.12	3.61	.73	3.13	1.87	(.61)	34.00[c]
Average[d]	18.98	124.66	68.78	81.43	13.06	5.26	17.84	2.44	2.19	5.97	2.49	2.13	3.91	20.63

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

Month or period	United Kingdom	Eire	France[e]	Italy	Germany[f]	Bohemia-Moravia	Slovakia	Switzerland	Belgium[g]	Netherlands	Denmark	Norway	Sweden	Portugal
Aug.	20.98	1.05	...	...	...	2.80	...	1.34	2.81	3.04	.43	.72	.23	.11
Sept.	...	...	...	...	...	...	...	1.68	2.38	1.65	.29	1.12	.14	
Oct.	...	...	...	...	...	...	...	2.07	5.11	2.09	.51	1.04	...	.00
Nov.	...	...	...	...	...	...	...	2.15	5.20	2.95	.38	.99	...	.29
Dec.	...	...	...	...	...	...	...	2.29	3.59	2.32	.40	2.95	...	
Jan.	...	...	...	...	...	...	...	...	2.76	1.94	.38	1.36	...	...
Feb.	...	...	...	...	...	...	...	...	3.44	1.26	.44	1.04	...	...
Mar.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Aug.–Mar.														
1939–40[c]	...	...	...	...	...	...	...	...	28.50	17.00	3.30	10.00	...	...
1938–39	148.55	10.74	(.63)	4.67	37.17	(1.33)		11.98	22.96	19.81	3.84	5.27	1.06	2.11
Average[d]	134.78	9.77	2.87	6.97	18.90	(.61)		11.10	26.46	15.78	6.55	5.19	(.15)	.64

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

Month or period	Poland	Lithuania	Latvia	Estonia	Finland	Greece	Syria, Lebanon	Egypt	Japan	Manchukuo	China	Cuba[h]	South Africa	New Zealand
Aug.	...	.00	.00	.00	.15	1.66	(.02)	.02	(1.74)	2.82	2.84	.51		.31
Sept.	...	...	...	...	...	.92	...	.01	(1.28)	3.28	.99	.69	.18	.03
Oct.	...	...	...	...	...	.90	...	.02	(.79)	...	2.60	.29		.02
Nov.	...	...	...	...	...	.92	...	.02	(1.37)	...	.22	.24	.00	.02
Dec.	...	...	...	...	...	.66	...	.01	(.70)	...	.45	.30	...	.04
Jan.	...	...	...	...	...	.60	...	.03	(.04)	...	.57[i]	.43	...	.04
Feb.	...	...	...	...	...	.56	...	.01	.49	...	.76[i]	.45	...	.23
Mar.	...	...	...	...	...	...	...	...	(.59)	...	...	.47	...	...
Aug.–Mar.														
1939–40[c]	...	...	...	...	...	6.80	...	.15	(6.02)	...	9.20	3.38	...	.80
1938–39	(2.18)	(.94)	.49	.02	1.70	6.28	(.47)	.12	(7.50)	9.30	10.09	3.47	1.73	1.60
Average[d]	(2.75)	(.66)	(.24)	.00	2.20	9.31	(.39)	.25	(1.36)	9.27	5.51	3.30	.53	1.14

* Data from official sources and International Institute of Agriculture. Dots (...) indicate that data are not available.

[a] Includes shipments to possessions.
[b] Gross exports for April were 7.47 million bushels.
[c] Including our estimates for missing monthly data.
[d] Five years ending 1938–39.
[e] Net trade in *commerce général.*
[f] Including Austria.
[g] Including Luxemburg.
[h] Gross imports of flour from the United States.
[i] Gross imports.

TABLE IX.—WHEAT DISPOSITION ESTIMATES, ANNUALLY FROM 1934–35*

(*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)											
1934–35....	274	526	800[d]	450	82	+121	653	147	(1)[e]	(1)[e]	0	148
1935–36....	148	626	774[d]	466	88	+106	660	114	(28)[e]	(24)[e]	(4)[e]	142
1936–37....	142	627	769[d]	471	97	+141	709	60	(23)[e]	(23)[e]	0	83[f]
1937–38....	83[f]	876	959	468	95	+136	699	260	107	75	32	153[f]
1938–39....	153[f]	932	1,085	475	78	+169	722	363	109	80	29	254[f]
1939–40[g]...	254[f]	755	1,009	472	80	+127	679	330	40	...	...	290
1939–40[h]...	254[f]	755	1,009	471	79	+135	685	324	45	39	6	279
	B. CANADA (AUGUST–JULY)											
1934–35....	193	276	469	43	32	+27	102	367	165	126	39	202
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	48	35	+41	124	260	165	114	51	95
1939–40[g]...	95	490	585	48	35	+42	125	460	190	...	...	270
1939–40[h]...	95	490	585	50	35	+42	127	458	...[i]	144	...[i]	...[i]
	C. AUSTRALIA (AUGUST–JULY)											
1934–35....	84	133	217	32	13	+ 6	51	166	109	75	34	57
1935–36....	57	144	201	33	13	+10	56	145	102	74	28	43
1936–37....	43	151	194	32	15	+ 6	53	141	102	64	38	41
1937–38....	41	187	228	30	15	+ 7	52	176	126	70	56	50
1938–39....	50	155	205	34	14	+11	59	146	96	61	35	50
1939–40[g]...	50	187	237	34	13	+10	57	180	80	...	...	100
1939–40[h]...	50	211	261	34	13	+12	59	202	75	44	31	127
	D. ARGENTINA (AUGUST–JULY)											
1934–35....	118	241	359	69	17	+ 6	92	267	182	127	55	85
1935–36....	85	141	226	69	21	0	90	136	70	53	17	66
1936–37....	66	249	315	67	23	+12	102	213	162	127	35	51
1937–38....	51	185	236	71	25	+ 3	99	137	72	46	26	65
1938–39....	65	336	401	72	21	+11	104	297	122	53	69	175
1939–40[g]...	175	147	322	73	22	+ 7	102	220	135	...	...	85
1939–40[h]...	175	118	293	73	23	+ 7	103	190	140	115	25	50

*Based on official data so far as possible; see WHEAT STUDIES, December 1939, 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 1940.

[h] Estimates as of May 1940.

[i] Highly dependent on future course of the war.

TABLE X.—SELECTED WHEAT PRICES, WEEKLY FROM JANUARY 1940*

(U.S. cents per bushel)

Week ending	Futures							United States cash					
	Winnipeg[a]		Buenos Aires		Chicago			Basic cash (Chi.)	No. 2 H. W. (K.C.)	No. 2 R. W. (St. L.)	No. 1 Dk.N.S. (Mnpls.)	No. 2 Hd.A.D. (Mnpls.)	Western White (Seattle)
	May	Oct.	Mar.	May	May	July	Sept.						
Jan. 6	80	...	69	...	105	103	102	106	104	109	110	104	87
13	79	80	66	...	101	98	97	102	101	104	104	100	84
20	79	81	64	...	101	98	98	102	100	103	104	98	86
27	78	80	63	...	99	97	96	101	98	104	104	98	85
Feb. 3	77	78	61	...	97	94	93	98	95	101	100	96	83
10	78	79	58	59	99	96	95	100	98	103	102	101	86
17	79	80	58	60	101	99	98	102	98	...	103	99	85
24	81	83	59	60	105	103	103	106	103	108	106	101	86
Mar. 2	81	83	59	61	102	100	100	103	100	105	104	98	83
9	81	83	60	62	103	101	100	105	100	106	104	97	84
16	80	82	59	62	102	100	100	104	100	107	103	96	82
23	81	83	...	61	104	102	101	106	103	106	104	97	83
30	81	84	...	62	105	104	103	107	103	107	105	97	83
Apr. 6	81	83	...	67	105	104	104	106	103	108	105	97	83
13	82	84	...	70	107	106	106	108	104	110	107	97	83
20	82	85	...	71	110	109	109	111	108	112	110	100	85
27	82	85	...	76	110	108	108	111	108	113	110	101	85
May 4	81	84	...	78	107	106	106	108	105	110	109	97	...
11	81	84	...	...	107	106	106	108	105	111	108	97	...
18	68	71	...	...	90	90	90	...	...	...	...	...	...

Week ending	Antwerp sales[b]				European domestic[d]				Winnipeg[a]			Buenos Aires 78-kilo	Australian f.o.b.
	Rosafé	No. 2 Man.	No. 1 Hard Winter	No. 2 Soft Pacific[c]	Great Britain	France	Germany	Italy	Wtd. average	No. 1 Man.	No. 3 Man.		
Jan. 6	122	134	129	...	77				75	77	72	67	65
13	124	132	127	119	77	124	225	203	74	75	71	64	65
20	122	131	125	...	77	(203.5)	(206)	(148.0)	75	76	72	63	65
27	121	127	123	116	77				74	75	72	62	65
Feb. 3	124	131	125[e]	...	78				73	74	70	60	65
10	130	139	135[e]	...	79	125	227	214	74	74	71	57	65
17	150	...	...	...	79	(205.0)	(208)	(155.7)	75	76	72	57	65
24	144	152	...	...	79				77	79	75	58	65
Mar. 2	142	150	147	...	77				77	78	75	58	64
9	147	154	151[e]	...	77	120	229	214	78	79	75	59	63
16	141	150[e]	147[e]	...	77	(206.5)	(210)	(155.7)	77	78	75	60	61
23	141	148	145[e]	...	77				78	79	76	61	63
30	142	151	148	137	77				79	80	76	61	67
Apr. 6	140	149	146[e]	...	78				79	80	76	65	66
13	140	147	145[e]	...	76	113	231	214	80	81	77	69	68
20	137	...	...	...	76	(208.0)	(212)	(155.7)	81	82	78	72[f]	69
27	140	140	...	...	76				81	82	78	76[f]	69
May 4	141	143	...	...	...				80	81	76	78[f]	69
11	...	...			...				..	...	...	78[f]	69

* For methods of computation see WHEAT STUDIES, December 1939, XVI, 200-201. For Canada, prices are from *Grain Trade News* and *Canadian Grain Statistics;* Buenos Aires, *Revista Oficial,* and Broomhall's cables; United States, *Daily Trade Bulletin* and *Crops and Markets;* Belgium, *The London Grain, Seed and Oil Reporter;* Great Britain, *The Economist;* France, *Bulletin de l'office des renseignements agricoles;* Germany, *Wirtschaft und Statistik;* Italy, International Institute of Agriculture, *Monthly Crop Report* .... Dots (...) indicate no quotations.

[a] Converted at constant official exchange rates.

[b] Sales made late in the week or sometimes early in the following week. Quotations for different wheats sometimes apply to different dates, but are closely comparable.

[c] Sales of Pacific Coast wheat variously described as "white," "soft," or "red winter."

[d] Fixed prices, converted at constant official exchange rates. Data in parentheses are prices in francs, marks, and lire per quintal, respectively.

[e] Our interpolation.

[f] From April 6, f.o.b. quotations.

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