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# WHEAT STUDIES

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## WORLD WHEAT SURVEY AND OUTLOOK SEPTEMBER 1942

*Joseph S. Davis*

World net exports in 1941-42 were in the neighborhood of 400 million bushels, the smallest since 1896-97. Canada supplied some 55 per cent of the total, Argentina about 20. Aggregate wheat supplies in the world ex-Russia are this year huge beyond all precedent. Yet blockades and shipping stringency continue to limit drafts on burdensome overseas surpluses to relieve bread-grain shortages where they exist. Soviet Russia, whose food position has been seriously impaired by the Axis gains of recent months, needs more import wheat than is likely to reach her.

Phenomenal crops in North America include bumper wheat harvests in the United States and Canada, from record yields on the lowest acreage sown in many years. With enormous stocks of old-crop grain, North American wheat supplies for 1942-43 are truly colossal—over 50 per cent larger than in the depression years of superabundance. Acute storage crises have been or are being successfully met, but at heavy cost. The 1943 *carryover* in North America may exceed 1,500 million bushels, which is more than the two countries ever *produced* in any year prior to 1942.

The needs are obvious: to facilitate the fullest utilization of this abundant resource, in every possible way, at prices low compared with prices of goods that are absolutely or relatively scarce; to remove the stimuli to excessive production; and further to reduce the acreage sown to wheat. Yet in the United States, political measures still keep forcing up wheat prices and returns to growers; disposition of government-owned stocks for feed and export is hampered by the terms set by act of Congress; and acreage restriction is limited by a legal minimum already proved excessive. Such policies are clogging the war effort as well as making wheat farmers involuntary "profiteers."

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# WHEAT STUDIES

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# WORLD WHEAT SURVEY AND OUTLOOK

## SEPTEMBER 1942

Joseph S. Davis\*

War developments in May–August 1942 have seriously impaired the food-supply position of the USSR, but have not otherwise strikingly altered the complexion of the world situation in respect to wheat. Important Axis gains in southern Russia and northern Africa, and continued Axis successes in the Mediterranean and Atlantic (especially on the supply route to Arctic Russia), seem as yet less revolutionary than the Nazi conquests in the springs of 1940 and 1941, the grand push against Soviet Russia in the summer of 1941, and the Japanese victories in the Southwest Pacific in December–April last. The defeats of Japan in the Coral Sea (May), off Midway (June), and in the Solomon Islands (August) have more than offset her gain of footholds in the western Aleutian Islands. The stringency in ocean shipping, by reason of increased demands, has grown more severe despite increasingly effective defenses against submarines, improved utilization of merchant tonnage, and enlarging output of American shipyards. The fighting power of the United States is rising, but has yet to make itself felt on a truly decisive scale.

The volume of international trade in wheat and flour in 1941–42 was undoubtedly the smallest since 1896–97. We regard as too low Broomhall's estimate of 300 million bushels, and his forecast of 280 million for 1942–43. On the basis of incomplete data, we estimate that the combined net exports of the four chief exporting countries came to about 360 million bushels (Table V). If so, world net exports in the year ending last July were probably in the neighborhood of 400 million, inclusive of shipments from North Africa to Europe and

intra-European shipments across the boundaries of what were independent nations before the Nazi conquests of 1939–42.

Extraordinary harvests in North America (of other crops as well as of wheat), coupled with huge carryovers in the United States and Canada, constitute the most spectacular recent events in the world wheat situation.

For 1942–43, wheat supplies here are 53 per cent larger than they were in the three years of burdensome surplus beginning in 1930–31. August 1 stocks in Australia and Argentina are nearly equal to their 1941 crops, and current prospects for new crops there are fairly good.

In all four chief exporting countries, considerable expansion of storage facilities has failed to keep pace with the greatly increased

grain stocks of the past three years. This year's grain-storage crisis in North America is by far the gravest ever known. By strenuous co-operative efforts, the worst difficulties have now been surmounted in the hard-winter-wheat belt, and similar measures are being applied in the spring-wheat belt south and north of the border. To safeguard the mountains of wheat on or near farms, however, requires not only extensive use of all sorts of emergency storage space, but also much hurried construction and shifting of structures; and this involves abnormally heavy demands on lumber and transportation facilities that are urgently needed for war uses.

Basic influences of governmental origin are operating to force wheat prices upward, with higher loan rates in the United States and a higher minimum price for limited quantities of new wheat delivered to the Canadian Wheat Board. In this country, the inability of many farmers to get their wheat into approved storage has thus far prevented market prices of

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\* V. P. Timoshenko, Rosamond H. Peirce, and Meriam A. Clough collaborating.

most wheats from advancing all the way to the new loan levels, which are inordinately high considering the supplies on hand. Compromise legislation enacted in mid-July permits the sale of 125 million bushels of government-owned wheat for feed, at prices equal to 85 per cent of the parity price for corn; but this falls short of authorizing the freest and fullest utilization of this overabundant resource. Political insistence on at least "parity" returns to farmers, regardless of the volume produced, costs per bushel, the treasury burden, or the cost of living, is making involuntary "profiters" of wheat growers.

With record wheat crops in the British Isles, and despite another small harvest in Continental Europe, aggregate wheat supplies in the world ex-Russia are unprecedentedly great. Meanwhile, Great Britain is economizing on wheat; Continental Europe is struggling with bread shortages; Soviet Russia is threatened with hunger while fighting the Nazi legions; and India, cut off from Burma's rice surplus, faces the possibility of wheat shortage despite her own good crops of rice, wheat, and millet.<sup>1</sup>

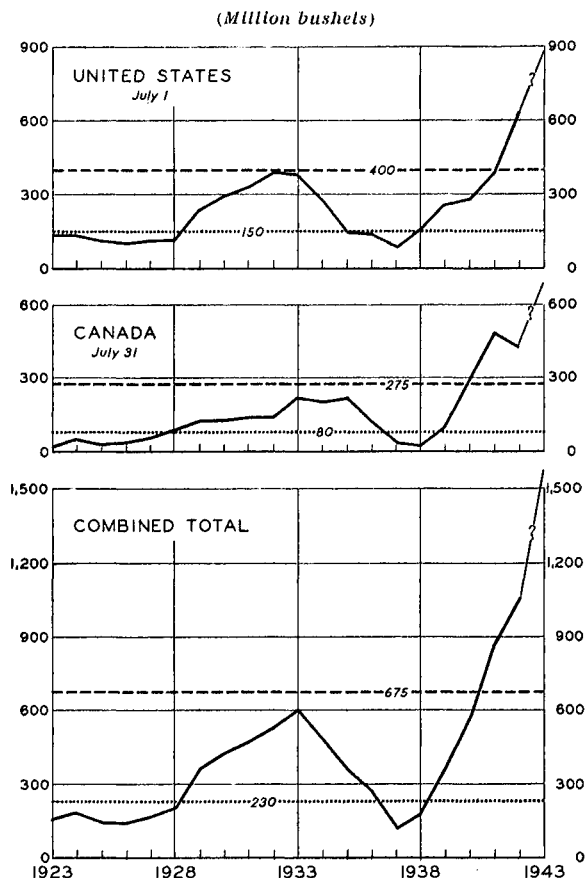
#### NORTH AMERICAN SUPPLIES

The wheat surplus in North America has grown to colossal size. The outstanding developments in the world of wheat in recent months have been the overfulfillment of forecasts of huge carryovers, and the gradual raising of earlier high estimates of the 1942 crops, in both the United States and Canada. Superlatives fail to give due emphasis to the amazing abundance of wheat on this continent. Nature is predominantly responsible, but political policies have contributed to this embarrassing accumulation.

Carryover stocks of United States wheat on July 1, 1942 are officially estimated at 633 million bushels, and those of Canadian wheat on July 31 at 424 million. The sum, shown in perspective in Chart 1, is treble the corresponding sum in 1939, and 191 million bushels larger than last year's record total. It is

roughly equal to the average annual disappearance (for domestic uses and exports) in the two countries in the past five years.

CHART 1.—NORTH AMERICAN WHEAT CARRYOVERS, 1923-42\*



\* Data for series given for recent years in Table II, with our preliminary forecasts for 1943. More conservative figures for the latter are: United States, 850; Canada, 650; combined total, 1,500. For explanation of broken and dotted lines, see below, p. 3.

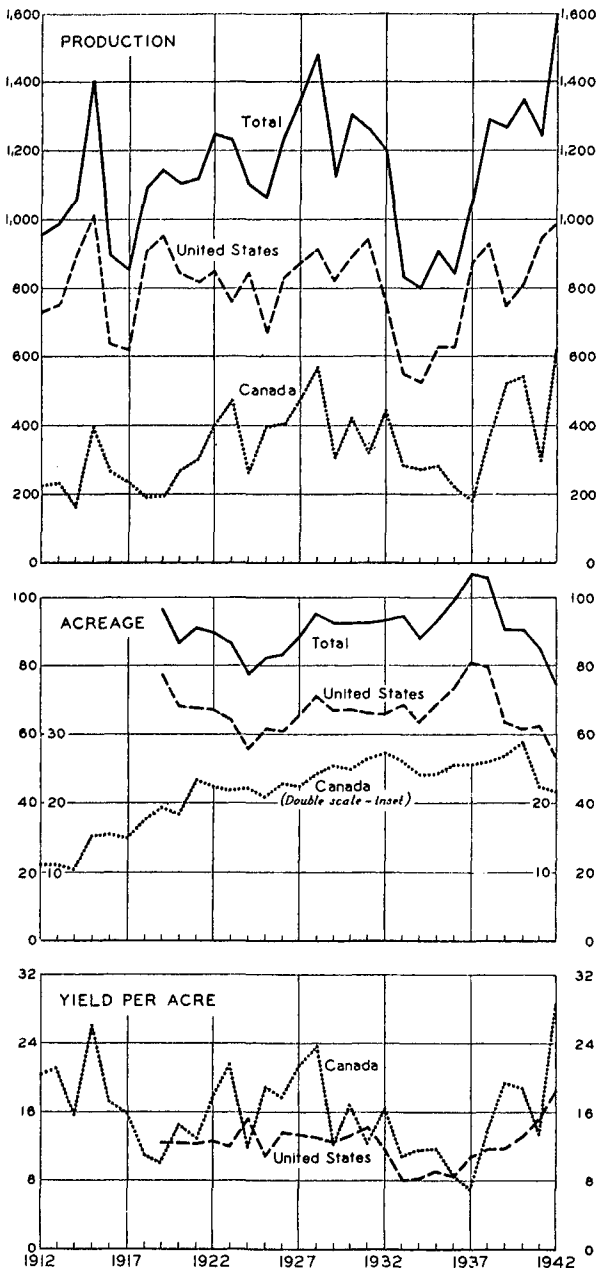
On top of these huge stocks of old wheat, nature gave such excellent yields that both countries harvested bumper new crops from the smallest sown acreage in 17 years or more (Chart 2). The United States crop, now estimated at 982 million bushels, ranks second only to the crop of 1915, for which the finally revised estimate is 1,009 million. Never before has this country averaged over 900 million bushels in three consecutive years. The first official estimate of the Canadian crop, released September 10, puts it at the record level of 615 million bushels, exceeding the

<sup>1</sup> Cf. W. I. Ladejinsky, "The Food Supply of India," *Foreign Agriculture* (U.S. Dept. Agr.), July 1942, VI, 265-81; and *Corn Trade News* (Liverpool), July 22, 1942, p. 291.

great harvests of 1928, 1939, and 1940. Never before has Canada harvested three wheat crops out of four in excess of 500 million bushels, as in 1939-42.

CHART 2.—NORTH AMERICAN WHEAT PRODUCTION, ACREAGE, AND YIELD PER ACRE, 1912-42\*

(Million bushels; million acres; bushels per acre)



\* Latest official data, including estimates as of Sept. 1, 1942. Canadian figures for 1941 have been revised upwards: production should be plotted as 312 instead of 299, and yield per acre as 14.3 instead of 13.8.

Such carryovers and crops in the two countries add up to enormous supplies. In three successive crop years of then unprecedented wheat surplus, those ending with 1932-33, North American wheat supplies maintained the extraordinary level of about 1,730 million bushels. The average for the next seven years, ending with 1939-40, was 1,339 million. In the next two years the earlier peaks were surpassed, and this year, according to the latest official estimates, the corresponding total is 2,654 million.

When world wheat stocks ex-Russia ex-Asia reached 1,400 million bushels about August 1, 1940, this was viewed as more than double any normal world carryover. With fairly liberal allowances for domestic utilization and net exports in 1942-43, the prospect is that next year's carryover in North America alone will exceed 1,500 million. Chart 1 shows how high it may be, in the perspective of 20 years of reasonably comparable totals for the United States and Canada. The peak of 600 million bushels reached in 1933 then seemed extraordinary, and the reductions in the next three years were welcomed with relief. The dotted and broken lines on the chart show the standard minimum and maximum carryovers for the two countries, as set forth in the Draft Convention that recently emerged from the Washington Wheat Meeting.<sup>1</sup> The carryovers of 1937 and 1938 were below these minimum figures, which are considerably above what the trade has regarded as reasonable working stocks to ease the transition from one crop year to another. The maximum figures represent extraordinary surpluses, yet the prospective North American total for 1943 is more than double their sum.

#### UNITED STATES

**Carryover.**—July 1 stocks of old wheat are now officially estimated at 633 million bushels (Table II), some 240 million bushels above the previous record set in 1932. Stocks in

<sup>1</sup> See below, p. 20. For the four exporting countries these are as follows, in million bushels:

	U.S. June 30	Canada July 31	Australia Nov. 30	Argentina Nov. 30
Standard				
Minimum	150	80	25	35
Maximum	400	275	80	130

most positions were at record levels, but those in city mills had been somewhat higher in 1933, when the new-crop outlook was poor, prices were rising, and heavy flour orders had accumulated in anticipation of processing taxes.<sup>1</sup> Two-thirds of this year's carryover (422.5 million bushels) was owned by or under loan to the Commodity Credit Corporation, and 11 million bushels more were held in crop-insurance reserves.<sup>2</sup> Of the estimated stocks on farms 100 million bushels were under loan and 60 million—more than is usually on farms July 1—"free." Wheat carryovers by classes, according to standing official estimates, represented the following percentages of the 1941 crop: hard red spring, 100; durum, 81; hard red winter, 75; white, 46; soft red winter, 27.<sup>3</sup>

To mitigate the shortage of soft red winters, the CCC arranged in August to exchange wheat from its stocks of this type (reported as about 9.5 million bushels) for types in less demand. Handled on a dollar-for-dollar basis, the exchanges through August 11 were made at a price differential of 5–6 cents per bushel. Similar exchanges of high-protein for low-protein hard winter wheats were arranged in September.

The long Congressional struggle over the terms of sale of government stocks of wheat and corn ended with nominal victory for the administration over the farm bloc and the American Farm Bureau Federation. The compromise incorporated in the Agricultural Appropriation Act of July 22, 1942 (Public 674) permits sales of government-owned grain for conversion to alcohol and rubber, and sales of deteriorated grain, in any amount at any price; and sales for feed in any quantity of corn and up to 125 million bushels of wheat

in 1942–43 at 85 per cent of corn-price parity. In relation to the huge wheat stocks available, the quantity thus to be sold is small and the price too high. Without any such formal restriction, however, the CCC had succeeded in selling only 36 million bushels for feed use in the six months ending with June, in addition to about 3.5 million for industrial alcohol.

On August 6 the Department of Agriculture announced a national feed-wheat program, covering all types but soft red winters.<sup>4</sup> To aid in applying the legislative principle, differentials from the national average parity price of corn were computed for the different states, counties, and markets.<sup>5</sup> State differentials were computed by averaging monthly differences between national and state average farm prices in two periods—the twenty years ending June 1942 and the five years ending June 1942, in both cases excluding months falling within the crop years 1934–35 and 1936–37.<sup>6</sup> Announced prices of feed wheat for August delivery ranged from 74 cents in parts of the Dakotas, Minnesota, and Iowa to 99 cents in New England, most of the southeastern states, and portions of the southern and western states. Prices are to rise by ½ cent per month in September and October.

These prices are about the same as under the previous CCC feed-wheat schedule in the North Atlantic states and in the Northwest, but much lower in the corn belt. Nevertheless, the rigid system of pricing imposed by Congress, the obstacles to enlisting dealers and feed manufacturers to aid in disposing of the wheat, and the growing prospects for an enormous corn crop (forecast in September at 3,016 million bushels) are seriously restricting sales. Through September 5 these amounted to only 16 million bushels. By no means all that has been or will be thus sold will be a net addition to feed use of wheat. It now seems doubtful whether the total feed use in 1942–43 will reach 150 million bushels, as compared with the latest estimate of 103 million fed in 1941–42.<sup>7</sup>

Disposition of CCC-owned wheat for production of industrial alcohol is increasing. From July 1 through September 5 some 3.3 million bushels had been sold for this purpose. By November 1 all beverage distillery capacity is

<sup>1</sup> See WHEAT STUDIES, December 1933, X, 83.

<sup>2</sup> *Statement of Loans and Commodities Owned, June 30, 1942* (U.S. Commodity Credit Corp.), and *Wheat Situation* (U.S. Dept. Agr.), July 1942, p. 6.

<sup>3</sup> Cf. *Wheat Situation*, August 1942, p. 14.

<sup>4</sup> U.S. Dept. Agr., Press Release 267–43.

<sup>5</sup> The county rates established are shown on a county map of the United States in the *Northwestern Miller* (Minneapolis), Aug. 26, 1942, pp. 20–21.

<sup>6</sup> U.S. Dept. Agr., Press Release 263–43, Aug. 5, 1942.

<sup>7</sup> Cf. *Feed Situation* (U.S. Dept. Agr.), August 1942, p. 10; *Chicago Journal of Commerce*, Sept. 11, 1942, p. 1.

to be engaged in producing industrial alcohol, and current plans call for thus processing 136 million bushels of grain during the year ending June 1943. The CCC sells wheat to processors typically at 80 cents per bushel delivered, somewhat cheaper than corn either per bushel or per pound; and it has been gradually forcing up the proportion of wheat to corn sold. Obstacles to rapid absorption of wheat include the preference of many processors for corn, some technical difficulties, the combination of plant location and transportation stringency, and the lower alcohol yields from the abundant hard wheats as compared with the scarce soft wheats. The wheat so utilized during the crop year is likely to exceed 30 million bushels, and may reach 45 million.

The Baruch Committee, appointed on August 6, recommended on September 10 "that facilities for the production of 100,000,000 gallons of alcohol be erected near the grain producing areas and accessible to water transportation" — in order to provide "enough additional alcohol to meet the increased demands of the expanded synthetic rubber program" recommended, and to be available for other purposes of higher priority if needed. Such additional capacity, when in full operation, might absorb some 40 million bushels of wheat or corn per year. The same committee recommended the later erection of another plant in or near the grain area, to come into operation early in 1944, to produce Buna S rubber by one of two grain-using processes not yet incorporated in the official rubber program.

We venture the forecast that total domestic utilization of wheat in 1942-43, including use for food, seed, feed, and conversion to alcohol, will fall short of the record level of 753 million bushels set in 1931-32,<sup>1</sup> perhaps by as much as 20 million bushels. If so, with exports not greatly different from those of the past crop year, the carryover on June 30, 1943 may be roughly forecast at 850 million bushels.

**Acreage and crops.**—Following new records in total farm production in 1940 and 1941, the Department of Agriculture last January set up goals calling for an over-all increase of 6 per cent in 1942. By and large, the growing weather for crops was the best in more

than a decade; farmers made the most of their opportunities; and the indications late in August were that actual production would be 9 per cent over that of 1941 and 25 per cent above the 1935-39 average. The final figures will be higher still, for the September official report indicates *crop* production 13 per cent above the record set in 1937 and 27 per cent above the 1923-32 average.<sup>2</sup>

Wheat production far exceeded the desired amount. As in 1939, the acreage goal was set at 55 million acres (Table VIII), the minimum permitted by standing legislation; in the absence of this limitation, it might have been set as low as 40 million in both years. West of the Mississippi, however, nature defeated "production control." Record yields per acre, sown and harvested, were made in several important wheat states and in the nation as a whole. Whereas early in May a crop of about 800 million bushels seemed in prospect, the latest official estimates total 982 million. From the smallest sown acreage in over 30 years, the crop nearly equals the record one of 1915.

The wheat acreage sown for 1942 is officially estimated at 53,427,000 acres, about 3 per cent below the specified goal.<sup>3</sup> By regions (Table VIII), the greatest reductions were made in a few midwestern states producing chiefly soft red winter wheat. There, mainly in consequence of profitable shifts of acreage to soybeans, the area sown to wheat was 16 per cent below total allotments, and the acreage harvested (with abandonment above average only in Illinois and Missouri) 36 per cent

<sup>1</sup> WHEAT STUDIES, December 1933, XV, 252.

<sup>2</sup> U.S. Dept. Agr. Press Releases, 420-43, Aug. 29, and 526-43, Sept. 11, 1942.

<sup>3</sup> There was also an exceptionally large acreage of "volunteer" wheat, the product of "shattered" grain left in 1941 on fields subsequently untilled. In Kansas, where it figured most heavily, a survey as of May 1, 1942 indicated about 2.8 million acres of volunteer wheat (sown acreage was 10.7 million), several times the previous peak registered in 1941. This high figure is officially ascribed to the most favorable soil-moisture conditions on record, throughout the season; but the restrictions on sown acreage must have been a contributory factor. Most of the volunteer acreage was pastured and plowed under, but preliminary estimates indicate that about 523,000 acres were harvested in Kansas, mostly in the western third of the state. Yields per harvested acre ranged as high as 40 bushels per acre, but averaged perhaps 20 per cent less than for seeded wheat.



below the 1930-39 average. Yields were only slightly below average in this group of states, though very poor in Indiana and poor also in Illinois and Missouri. Acreage shifts in this area were largely responsible not only for the small wheat crop there (Table VII) but also for the really short crop of soft red winter wheat shown in the table below.

UNITED STATES WHEAT PRODUCTION BY CLASSES,  
IN YEARS OF LARGE CROPS, 1919-42\*

(Million bushels)

Year	Total	Hard red winter	Soft red winter	White	Hard red spring	Durum
1919.....	952	331	357 <sup>a</sup>	90	141	33
1927.....	875	322	167	98	207	81
1928.....	914	394	127	91	203	99 <sup>a</sup>
1930.....	886	404	180	86	157	59
1931.....	942	514 <sup>a</sup>	262	71	73	22
1937.....	876	373	258	114 <sup>a</sup>	102	29
1938.....	932	389	236	107	157	43
1941.....	946	394	212	91	206	43
1942 <sup>b</sup> .....	982 <sup>a</sup>	472	165	80	221 <sup>a</sup>	43
Average						
1927-31 <sup>c</sup> .....	888 <sup>c</sup>	401	180	86	157	64
1932-41 <sup>d</sup> .....	740 <sup>d</sup>	292	204	91	125	28

\* Latest estimates of U.S. Department of Agriculture, here from *Wheat Situation*, February 1939, p. 22, and December 1941, p. 17. Corresponding estimates for 1914, 1915, and 1918 by classes are not available (but see Table VII). In no other year has production reached 875 million bushels.

<sup>a</sup> Peak production in 1919-42. These represent all-time records, except for the higher peaks registered in 1915 for all wheat and for hard red spring. <sup>b</sup> Indicated Sept. 1, 1942.

<sup>c</sup> Highest 5-year average.

<sup>d</sup> Lowest 10-year average.

In the eastern and southern states producing chiefly soft red winter wheats, the total wheat acreage sown was 19 per cent above the goal, the harvested acreage 6 per cent below the 1930-39 average, and the production of average size. In the far western states producing chiefly white wheats, the sown acreage was much below average though 5 per cent above the goal; but high yields per acre brought a crop nearly 6 per cent above the 1930-39 average. In the states producing chiefly hard red wheats, winter and spring,

sown acreage was held far below average and moderately below the goals; but abandonment was so light and yields were so exceptional that bumper crops were produced (Table VII). These were predominantly responsible for the near-record crops of hard red winter, hard red spring, and all wheat shown above.

According to official and trade analyses based on market receipts up to September 1, hard red winter wheats are excellent in both grade and milling quality, and Pacific Northwest wheats unusually good; but soft red winters are grading the lowest since 1937, and exceptionally high percentages are specially graded because tough or garlicky.

**Prices.**—Farm prices of wheat averaged \$1.06 in January, about \$1.05 (equal to the average 1941 loan rate plus 7 cents per bushel) in February-March, slightly under \$1.00 in April-May, and 94-96 cents in June-August while the great new crop was being harvested.<sup>1</sup> Cash prices of the several wheats in United States markets drifted irregularly downward into July, except that Pacific Soft White at Portland dropped to its lowest weekly average (91 cents, or 14 cents under the 1941 loan rate) before the middle of June (Table VI). Most other representative wheats touched lows in July below their respective 1941 loan rates, and still farther below the 1942 loan rates which are typically 17 cents above those for the preceding crop.

Much more new wheat was available than could find storage space, on farms or in terminals, which the Commodity Credit Corporation would approve for its collateral. This limited the extent to which growers could take advantage of the high loan rate, and "free wheat" could be marketed only at substantial discounts below loan levels. Those who were lucky or forehanded enough to have ample farm storage were very liberally rewarded in comparison with those who had to sell as fast as buyers could be found. Prices tended to strengthen as farmers, acting under this powerful stimulus, found means of storing their grain even in advance of making it eligible for loans.<sup>2</sup>

By mid-September cash prices of representative wheats had shown divergent degrees of recovery. Hard red springs, of which the har-

<sup>1</sup> Compare the chart in our May "Survey," WHEAT STUDIES, May 1942, XVIII, 341.

<sup>2</sup> Loans on farm-stored wheat cannot be secured until the grain has been in approved storage for 30 days.

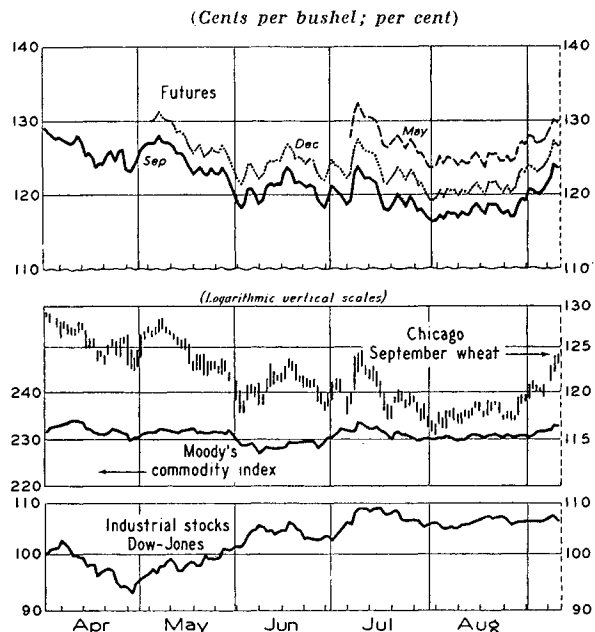
vest was latest and for which the storage problem was still most acute, had risen only a few cents above their August lows, with No. 1 Dark Northern at Minneapolis about 15 cents below the loan rate there. Hard red winters had risen somewhat more, but No. 2 Hard at Kansas City was still selling several cents below the loan rate. Soft red winters, of which the supply is short, had shown much greater strength, with No. 2 Red at St. Louis and Chicago selling above the loan rates. The greatest recovery of all was in Pacific white wheats. Despite the fact that much grain in the Pacific Northwest was still unhoused, country offerings dried up for a time after mill demands increased late in August; and the mid-September price of No. 1 Soft White at Portland was 25-30 cents above the low weekly averages of early June and within 5 cents of the loan rate.

Daily closing prices of the September future in Chicago showed a gross decline of 20 cents from their peak for the year reached on January 26 at \$1.36½. The April 28 low was \$1.22⅞, that of June 29 \$1.18⅜, and that of August 3 \$1.16½ (Chart 3). By mid-September, prices had risen above the low of late April. Even the gross drop was very moderate in view of (a) the highly artificial level of prices in January, (b) the notable enlargement of prospective North American crops during this interval, and (c) the storage crisis discussed below. The level of prices in mid-September was a little above last year's (then after an extraordinary advance), but far more excessive in view of the greater superabundance of United States and total North American supplies.

The downward drift in daily futures prices into August stands out in contrast to the stability in the level of wholesale prices of sensitive commodities in April-August, and also to the recovery in the stock market between late April and mid-July (Chart 3, lower section). Fluctuations in daily futures prices around their trends were at times heavily influenced by speculation with reference to political actions. In the first full week of July, for example, an advance of several cents a bushel in futures markets was attributed to the Senate's passage (July 7) of the Bankhead

bill (S. 2585, introduced June 8) to raise the loan rate on wheat and five other major farm products from 85 to 100 per cent of parity. This gain was lost in the following week, when it appeared that the bill might not come to a vote in the House, and would be vetoed and lost on reconsideration if the House should pass it.

CHART 3.—CHICAGO WHEAT FUTURES PRICES, AND INDEX NUMBERS OF PRICES OF SENSITIVE COMMODITIES AND STOCKS, DAILY FROM APRIL 1942\*



\* In the upper section are plotted closing prices from *Daily Trade Bulletin* (Chicago) and *Chicago Journal of Commerce*. The last figures plotted are for September 10.

In the lower section are high and low prices of the September wheat 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.

Political inflation of prices, entailing huge losses to the federal treasury as well as unjustified costs to consumers, has been still more striking in cotton. In the past three years the New York price of cotton has more than doubled, and this has contributed heavily to steep advances in wholesale prices of nearly all textiles. This cotton-price advance has been due primarily to legislation requiring higher loan rates, and to Congressional efforts to force them still higher. It has occurred in

the face of huge supplies; this year's United States carryover of cotton nearly equals a year's domestic requirements, and the new crop is the largest since 1937. Following the lead of several "cotton senators," the Southern Association of Commissioners of Agriculture unanimously voted on August 27 to urge farmers to hold the 1942 crop under government loan until the price of middling  $\frac{7}{8}$ -inch cotton at interior points reaches 21.47 cents (16 per cent above the price then), and urging that the present parity formula be replaced by another "based on present economic conditions" including labor costs.<sup>1</sup> A sizable part of the wartime advances in the general index of wholesale prices, in prices farmers pay for commodities bought, and in parity prices themselves, is directly and indirectly attributable to such political price boosting.

Some sort of halt on this road may be called shortly. In his message of September 7 to Congress, President Roosevelt demanded authorization, by October 1, "to stabilize the cost of living, including the price of all farm commodities. The purpose should be to hold farm prices at parity [for wheat, now \$1.344], or at levels of a recent date, whichever is higher." He endorsed the parity principle and the present parity formula,<sup>2</sup> and proposed to count benefit payments as well as prices "in determining whether a commodity has reached parity." For wheat, at least, the message was given a bullish interpretation, and it seems clear that the prospective "stabilization" will

be at a level far above that warranted by supply-demand conditions or wartime needs.

**Trade.**—Until official data on external trade are released, we cannot attempt to check our estimate that net exports of wheat and flour during the crop and fiscal years ending June 30, 1942 amounted to 25–30 million bushels, including shipments to possessions (Table V). Wheat-grain exports were unquestionably very small, even including lend-lease shipments. The CCC sold 20.8 million bushels for export, but probably more than half of this moved as flour under additional subsidy. Gross exports of flour milled in the United States (Table III can show only a guesstimate) probably exceeded net export of wheat and flour. Wheat imports milled in bond have continued to provide the bulk of the flour commercially exported without benefit of subsidy. Small imports for consumption came from Canada under the highly restrictive quota. When the new quota year began on May 29, 1942, the price spread between comparable wheats at Buffalo was 6 cents above the 42-cent duty, and the limit of 795,000 bushels of Canadian wheat was reached within an hour.

Exports on lend-lease account during the year ending June 30, 1942 presumably did not exceed the officially "estimated deliveries for United Nations shipment" to that date. These amounted to about 1 million bushels of wheat and another 2.7 million in the form of white flour, with trifling quantities of biscuits, cracked wheat, and macaroni.<sup>3</sup> We infer that most of these were destined for the USSR.<sup>4</sup> Late in the crop year a small flow of lend-lease shipments to Turkey began.<sup>5</sup> Shipments on lend-lease, relief, and expeditionary-forces accounts have presumably continued to increase, as yet on only a moderate scale.

In the fiscal year ending June 30, 1942, subsidized sales of flour for export totaled 2.5 million barrels, considered equivalent to 11.5 million bushels of wheat.<sup>6</sup> These were made mainly to the Americas (through December, to the Philippines also). Exports on this account continued after the close of the fiscal year, when the program lapsed for about five weeks. On August 3 the Department of Agriculture announced the resumption of the

<sup>1</sup> *New York Times*, Aug. 28, 1942, p. 24.

<sup>2</sup> Seemingly inconsistent with this was his earlier sentence: "Calculations of parity must include all costs of production, including the cost of labor."

<sup>3</sup> U.S. Dept. Agr., Press Release 269-43, Aug. 8, 1942. In this series of cumulative statements cane sugar is misleadingly included in the group called "grain and cereal products." The June 1942 deliveries in this category represented chiefly sugar and starch.

<sup>4</sup> We have found no official confirmation of the report, widely quoted in trade circles late in February, concerning a joint commitment of the United Kingdom and the United States to supply Soviet Russia with 2.5 million tons of wheat.

<sup>5</sup> *New York Times*, Aug. 7, 1942, p. 7. The number of nations entitled to receive lend-lease aid has been gradually increased to include friendly neutrals as well as the United Nations.

<sup>6</sup> U.S. Dept. Agr., Press Release 242-43, Aug. 3, 1942.

flour-export-subsidy program for 1942-43,<sup>1</sup> applicable only to exports from continental ports of the United States to any point in the Americas and adjacent islands except Puerto Rico, Alaska, and the Canal Zone, and to islands east of the Americas or west of 40° west longitude. By successive announcements the "indemnity" has since been continued at \$1.25 per barrel (roughly equivalent to 27-29 cents per bushel of wheat), the rate which had been in effect from March 9 to June 30.<sup>2</sup> Thus far it seems unlikely that subsidized exports of flour or wheat will be nearly as large in 1942-43 as they were last year, for the new Appropriation Act does not permit the CCC to sell for export at less than parity prices.

The Agricultural Marketing Administration has been buying flour for our outlying territories and possessions. Shortage in the Virgin Islands, due primarily to shipping difficulties, led to resort to flour rationing on St. Thomas and St. John on July 29, 1942, at the rate of 2 pounds per capita weekly. Exporting millers formed in August a Flour Millers' Export Association, under the Webb-Pomerene Act, hoping by careful planning and co-operation with the War Shipping Administration to see that all the Caribbean markets are supplied, with minimum disturbance to existing trade connections.

#### MEETING THE STORAGE CRISIS\*

Last spring it was plain that commercial storage facilities in the United States, despite important increases in recent years to a peak capacity of some 1,637 million bushels, would be wholly inadequate for normal handling of the new crops of grain in addition to the huge

volume that would still be in store at harvest time on farms, at country points, and at terminals. Farmers were urged to provide increased farm storage, and official moves were made to stimulate repair and construction of bins on farms.<sup>3</sup> Other steps were taken by the Commodity Credit Corporation. Before the end of March regional shippers' boards were seriously discussing the problem, and in April J. E. Wells, Jr., representing the Agricultural Marketing Administration, held a series of conferences all through the winter-wheat belt to lay the groundwork for taking essential measures. Unofficial actions were often taken in advance of official orders, thus saving valuable time. As the season advanced and crop estimates rose, the magnitude of the prospective storage crisis increased.

Transportation was not, as in some earlier years, the crux of the problem. By heavier loading and otherwise more efficient utilization of rolling stock, the railroads have ably handled much more freight with 600,000 fewer cars than in 1929. The Association of American Railroads (AAR), the Interstate Commerce Commission, and the Office of Defense Transportation have issued orders or regulations designed to aid the railways to meet the rising demands of the war economy and especially to guard against underloading, delays in unloading, and use of cars for temporary storage. The grain movement, however, has been so restricted by elevator congestion at terminals and ports that plenty of cars have been available for effective use.

One primary essential was to insure that no grain would be loaded without assurance of its being unloaded promptly at destination—terminal elevator, mill, or port. Effective April 18, the AAR required permits issued by its seaport permit offices before export freight would be accepted for shipment to the seaboard. Following similar action by the AAR in April with respect to eastbound freight to Great Lakes ports, official action was taken, effective May 15, requiring permits for shipping grain on the Great Lakes. On the advice of local grain-storage committees, railroad embargoes on shipments to specific terminals were established, and while these were in effect grain shipments for storage or export

\* Prepared, with the collaboration of Meriam A. Clough, on the basis of official documents and memoranda and reports in grain, milling, and railway journals.

<sup>1</sup> The cotton-export-subsidy program was terminated July 21, as unnecessary in view of factors arising out of the war. *New York Times*, July 22, 1942, p. 31.

<sup>2</sup> For rates effective in 1940-41, see *WHEAT STUDIES*, December 1941, XVIII, 152. Subsequent changes were an increase in October 1941 in the rate to the Philippine Islands, from 60 to 90 cents, and on Mar. 9 a 10-cent reduction in the rate to the Americas.

<sup>3</sup> See May "Survey," *WHEAT STUDIES*, May 1942, XVIII, 362.

were accepted only when accompanied by permits approved by local permit committees. Such embargo was announced May 17, effective May 20 for all markets, and permit regulations were imposed and later relaxed as conditions warranted. ICC order No. 80, effective July 22, legalized the permit system, applying it to all wheat for six leading markets. For three weeks after July 22 the embargo was applied to all grain for Chicago (including cash grain, i.e., grain not for storage, CCC or other). The voluntary embargo on cash grain to Milwaukee was in force almost as long.

The permit system and accompanying regulations insured a fairly orderly movement for grain flowing into use, export, and the limited terminal storage available, but it could do little to relieve the abnormal congestion of backed-up grain as it flowed from combines and threshing machines. To provide at least a temporary home for this new grain was the object of several other moves.

Farmers had strong financial incentives to provide additional farm bins, but many chose to await the harvest rather than build coops for chickens that might not be hatched. As it turned out, even when farmers could sell their wheat, the price obtainable was often more than 25 cents a bushel below the loan rate plus the 7 cents storage payable by the CCC on farm-stored loan wheat. What they could not sell or store, even in emergency facilities, had to be piled on the ground with grave risk of damage and loss.

To facilitate repair and construction of farm storage, as well as construction of prefabricated wooden bins, the War Production Board was persuaded to amend (effective May 28) its Construction Lumber Limitation Order No. L-121, and special measures were taken to make nails and additional lumber available. Early in July it was officially hoped that additional farm-storage space for 100 million bushels would be made available.

The CCC arranged for the construction of prefabricated wooden bins, and their delivery and sale to farmers on very easy terms, to hold up to 120 million bushels. By August 24, such bins with a capacity of 59 million bushels had been delivered at country points, and a total of 53,623 with a capacity of 106 million

bushels had been allotted. However, many farmers found these less satisfactory and more expensive than they liked, and a considerable part were used by the CCC for its owned wheat, releasing storage for wheat newly put under loan. For the same purpose the CCC moved steel bins, with a capacity of 33-50 million bushels, from the corn belt into the hard-wheat belts. The trucks that moved these bins from Iowa to Kansas took back loads of wheat for disposal under the CCC feed-wheat program (p. 4), and plans were gradually matured for moving 40-50 million bushels of such wheat to steel bins left in the corn belt. Additional fireproof facilities were constructed, up to the limit of about 15 million bushels permitted by priorities on critical materials.

In addition, farmers and local warehousemen made ingenious use of all sorts of emergency storage, including vacant hotels, stores, cabins, other buildings, and even "victory ditches." The CCC eventually made much of this wheat eligible for loan under special agreements. Even so, a great deal of wheat in some sections was temporarily piled on the ground. A special survey as of July 25 indicated that 16.8 million bushels were in this position in the western third of Kansas and another 1.6 million in central Kansas. After some damage, most of this was under cover before the middle of September.

Accelerated grinding into flour was another idea put forward, and to some extent acted upon, to relieve the pressure of grain. In the Pacific Northwest, where the congestion was hardly less acute than in the western Great Plains, the CCC arranged to have more than a million bushels of CCC-owned wheat milled and the flour sold for lend-lease shipment. Agitation originated in that area for urging housewives to buy at least a winter's supply of flour in advance. The reactions of federal scientists and the milling industry were discouraging; but late in August leading millers advertised family flour at special prices with a view to enlarging distribution while the tight grain-storage position exerts a depressing influence on wheat prices.

By early September it was clear that, by herculean efforts on all hands, and by unusu-

ally efficient co-operation of government officials and private interests, the crisis had already been largely met in most winter-wheat areas. By more aggressive preparations and resort to similar measures, the spring-wheat belt has been finding its solution for the same problem, which has been especially difficult in North Dakota.

#### CANADA

Canada had a phenomenally fine season, for other grains as well as wheat. In Ontario, the principal winter-wheat province, winterkilling was low, the acreage remaining for harvest relatively high, the average yield the best on record, and the outturn of 24 million bushels the largest since 1915. In the Prairie Provinces wheat sowing was somewhat delayed, chiefly by late frosts and persistent cold weather, with moisture excessive in Manitoba and deficient in parts of Saskatchewan and Alberta. Official appraisals, however, put the "condition" of the growing crop on May 31 above average in all three provinces, and on June 30 the highest since the bumper crops of 1927 and 1928. In July the rainfall was above average and temperatures below (in Manitoba and Saskatchewan the lowest in at least 22 years), and a late harvest was in prospect, but over-all conditions were considered the best on record.

In percentages of the long-time average yield per acre, the spring-wheat condition was officially assessed as follows:

Date	All Canada	Mani- toba	Saskat- chewan	Alberta
May 31 ..	109	124	103	114
June 30 ..	136	129	137	139
July 31 ..	149	145	147	155

Private forecasts of the crop of the three provinces at the end of July were 5-10 million bushels above the record crop of 1928, for which the standing estimate is 545 million. The first official estimate, as of August 31, 1942, was 587 million bushels for the Prairie Provinces and a total of 615 million bushels of all wheat for all Canada. While later revisions may be lower, it now appears that Canada secured the highest average yield (now put at 28.5 bushels per acre), as well as the largest crop, in her history (Chart 2, p. 3).

With large crops of all grains and flaxseed,<sup>1</sup> and about 1,000 million bushels of wheat in the Dominion carryover and new crop, Canadian prairie farmers faced the same acute storage problems as their neighbors south of the border, with more experience from recent years but much less government aid. The rated grain-storage capacity on December 1, 1941 was about 600 million bushels, after increases of 176 million in the preceding two years including chiefly "temporary" country annexes and "temporary" terminal storage at Fort William and Port Arthur; and apparently little was added by July 31, 1942. Following the procedure first adopted in 1940, deliveries of western wheat are limited by genuine marketing quotas. These were initially set on August 1 at 5 bushels per authorized acre sown.<sup>2</sup> Detailed quotas for 437 stations, ranging from 5 to 10 bushels per acre, were announced on August 17. Since prairie farmers have no prospect of marketing more than their individual shares in about half of the wheat crop, they are under strong pressures to store on or near farms any excess over this, and temporarily far more. Though a recent survey by the *Winnipeg Tribune* indicated that the Prairie Provinces had farm storage space for about 766 million bushels of all grains, much resort to makeshift storage is necessary in addition to hasty construction of additional structures.<sup>3</sup>

Next to the huge crop and the storage problems presented by record wheat supplies, the chief Canadian development of recent months was the readjustment of the wheat and flour price structure. Under the law approved on March 27, in response to farmer pressures, the Canadian Wheat Board's (CWB) minimum buying price for farmers' wheat was raised from the former level of 70 Canadian cents

<sup>1</sup> The high acreage goals for grains other than wheat were exceeded, and the crops exceptionally large. The flaxseed acreage fell short of the goal, and rust infection reduced its yield per acre.

<sup>2</sup> As in 1941, the authorized wheat acreage was 65 per cent of the acreage sown in 1940.

<sup>3</sup> On this paragraph, see especially *Monthly Review of the Wheat Situation* (Canada Dom. Bur. Stat., Ottawa), May 22, 1942, p. 4, Aug. 21, 1942, p. 3, and *Canadian Coarse Grains* (Canada Dom. Bur. Stat., Ottawa), Aug. 14, 1942, p. 16; and the Wheat Acreage Reduction Act, 6 Geo. VI, c. 10, Mar. 27, 1942.

per bushel (basis No. 1 Northern at Fort William-Port Arthur or Vancouver) to 90 cents for the 1942 crop. However, an upper limit of 280 million bushels is set on the total that western farmers may deliver to the CWB, sell, or otherwise dispose of (even including custom milling)<sup>1</sup> except for local farm feed and seed use. The rest they must feed on their own farms or store.

Under tight official control, the Winnipeg May and July futures were held practically constant at their closing prices of March 5, respectively 79¼ and 80⅜ cents (Can.) until July, when the expiring future was permitted to rise by 1/16 cents per bushel every other day to a top of 81¼ cents. The October future opened on June 29 at 90 cents (81⅞ cents, U.S.), and continued at this level for several weeks. Winnipeg cash prices, which had gradually risen throughout the season, averaged for No. 1 Manitoba 72.6 cents (Can.) in September 1941 and 80.8 cents in July 1942.<sup>2</sup> Shippers' offers to the United Kingdom, on No. 1 Manitoba f.o.b. St. Lawrence port of shipment, were raised at intervals between early May and late June, by a total of 3 cents (Can.) per bushel; and early in July a substantial increase of 7 cents per bushel brought the price to \$1.03 (Can.) per bushel.<sup>3</sup>

In March the CWB pledged that it would continue to sell wheat to domestic users "at a price which conforms to the spirit and intention of the maximum prices regulations and is an appropriate price in relation to the domestic selling prices of goods made from wheat . . ."<sup>4</sup> Fulfillment of this pledge involves a subsidy. On August 21 the Wartime Prices and Trade Board announced that the

price of western wheat appropriate to the ceilings in effect on flour prices is 77⅞ cents per bushel, basis No. 1 Northern at Fort William, subject to adjustment after this board has investigated milling costs. On flour-sales contracts made from August 1, 1942, millers will be entitled to "drawbacks," to be absorbed by the Dominion treasury, representing the excess of open-market prices over the specified figure. A similar drawback of 8 cents per bushel will be paid on wheat bought for feed.<sup>5</sup>

The Canadian measures stand out in sharp contrast to corresponding ones in the United States. The effective price to Canadian farmers is far lower than in the United States. The Canadian marketing quotas impose severe restrictions on marketings, even for growers who have kept within their authorized acreage. The limit on total marketings has no counterpart in the United States, where almost all western growers may turn over all their wheat to the CCC, nominally on loan but virtually as sales, if it can be got into approved storage; and the CCC has made every effort to acquire, and to aid farmers in acquiring, storage facilities approved for loan wheat.

Canada suspended publication of export statistics in June.<sup>6</sup> From the size of the carryover of Canadian wheat in North America, and official data or reasonable estimates of Canadian wheat disposition, we infer that wheat and flour exports in April-July were about 80-85 million bushels, and the total for the crop year something like 225 million (Table V). As hitherto, the volume of such exports was determined primarily by British decisions in the light of Britain's wheat and flour stocks, her reduced wheat requirements under the new standards for flour and bread,<sup>7</sup> and the shipping stringency. It is hardly to be doubted that these led to some restraints on the overseas movement of Canadian wheat after the early opening of navigation on the St. Lawrence.

On May 29 Canada announced a new sale of 120 million bushels of wheat to the United Kingdom<sup>8</sup>—in the form of wheat futures, like earlier large sales. The press has reported additional small sales to neutral countries, specifically Switzerland, Portugal, and Eire, as

<sup>1</sup> *Order in Council P.C. 1802*, Mar. 9, 1942, Regulation No. 3. In our May "Survey" (*WHEAT STUDIES*, May 1942, XVIII, 350) we were in error in stating that this limit applied simply to deliveries to the CWB.

<sup>2</sup> *Monthly Review of the Wheat Situation*, Aug. 21, 1942, p. 12.

<sup>3</sup> *Ibid.*, p. 13, based on Broomhall's daily reports.

<sup>4</sup> *Ibid.*, Mar. 27, 1942, p. 15.

<sup>5</sup> *Winnipeg Free Press*, Aug. 22, 1942, pp. 14, 27.

<sup>6</sup> Overseas clearances of grain were last published for April, but customs exports were given for May.

<sup>7</sup> Cf. *WHEAT STUDIES*, May 1942, XVIII, 353-54. See also below, p. 16.

<sup>8</sup> *Monthly Review of the Wheat Situation*, June 1942, p. 6.

well as relief shipments to Greece (p. 17). The Canadian three-year credit of \$10,000,000 to the USSR, announced on September 8, was designed to cover past as well as some future shipments totaling about 9 million bushels of wheat (mostly as flour), drawn in part from British stocks.<sup>1</sup>

Late in August the Dominion government took steps to facilitate movement of Canadian feed grains into the United States, under the agreements reached in April;<sup>2</sup> and on September 17 the Minister of Agriculture announced a program for enlarged outputs of animal products.

#### ARGENTINA\*

Of the four chief exporting countries, Argentina alone continues to publish monthly export statistics.<sup>3</sup> Her exports of wheat and flour in the third year of the war have been running somewhat lower than in 1940-41, and less than half as large as in 1939-40 (Chart 4). With no lack of supplies to ship, the contrast is explained by war closure of most Continental European markets except Spain, scarcity of shipping, and British decisions to obtain imports of wheat and flour mostly from Canada, the much nearer source. Argentine exports of 9.5 million bushels in April 1942 were the largest since April-May 1941, but much below that level. For the year ending July 31, exports were about 80 million bushels. The exportable surplus was officially estimated at 198 million on July 25 and 190 million on August 31.

\* Based largely on the monthly official *Boletín Informativo* of the National Grain and Elevators Commission, and the weekly *Times of Argentina*, both published in Buenos Aires; the monthly circular of the First National Bank of Boston, *The Situation in Argentina*; Canadian official weeklies and monthlies; and British and American grain and flour trade journals.

<sup>1</sup> *Winnipeg Free Press*, Sept. 8, 1942, pp. 1, 5.

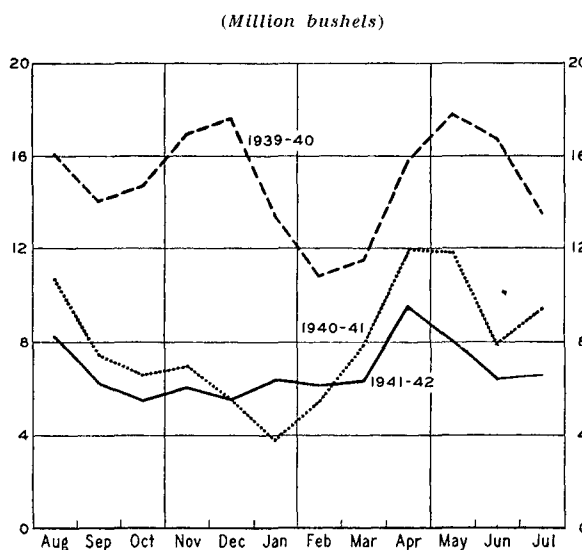
<sup>2</sup> *WHEAT STUDIES*, May 1942, XVIII, 362.

<sup>3</sup> The latest months for which official data are available for the other countries are: Australia, June 1940; United States, September 1941; Canada, May 1942. Broomhall's weekly reports of wheat and flour shipments have comprised, since the week ending May 16, only shipments from Argentina and Uruguay.

<sup>4</sup> In our May "Survey" (*WHEAT STUDIES*, May 1942, XVIII, 364) this figure was given as approximately 250 million.

As heretofore, Brazil has taken the largest block of Argentine wheat exports—nearly half of the total; Spain has continued to buy and take substantial amounts, under a series of bilateral credit-barter contracts, the latest of which was signed September 5; and Great

CHART 4.—ARGENTINE EXPORTS OF WHEAT AND FLOUR, MONTHLY FROM 1939-40\*



\* Official data in Table IV, supplemented by Broomhall's shipments for July 1942.

Britain has absorbed more or less similar quantities. Much smaller exports have been made to Sweden, Switzerland, Eire, and perhaps other European countries, and to Chile, Bolivia, Peru, and Paraguay.

Commercial stocks of wheat reached an all-time peak of 258 million bushels on April 1 (Table IV).<sup>4</sup> As of August 1, total stocks of wheat were probably close to the record peak of 230 million as of that date in 1939 (Table V). The aggregate grain-storage capacity is said to be 422 million bushels, inadequate for the huge stocks of wheat, linseed, and maize. Little progress has been made with the long-planned construction of a country grain-elevator system, or the additional port facilities now planned.

Argentine exports of maize have been extremely small—only 72,174 tons (under 3 million bushels) in the first six months of 1942, while stocks from old and new crops were



officially estimated as of June 30 at 12-13 million tons. Most of these enormous stocks are backed up on farms. The government's corn-purchase program, announced on May 13, is very complicated and highly restrictive. Shortage of coal and oil, and the extreme cheapness of maize, are causing increasing amounts of unshelled corn to be used for fuel, chiefly in utility and industrial plants.

For several months export sales were virtually restricted to 1940-crop wheat by the price differential maintained on the better-quality wheat of the 1941 crop. On April 16 the Argentine Grain Regulating Board (GRB) lowered its export price of new-crop wheat from 8.50 to 7.50 pesos per quintal for Brazil and Europe and to 8 pesos for other South American countries, while continuing to sell old-crop wheat at 6.90 pesos. Later changes in the Europe-Brazil prices, in pesos per quintal ex-dock, were made as indicated below.

Date	Bulk		Bagged <sup>a</sup>	
	1940 crop	1941 crop	1940 crop	1941 crop
About May 11.....	6.90	7.70	....	....
June 25.....	6.40	7.20	7.90	8.70
Early July.....	6.40	7.40	7.90	8.90
Late July.....	7.00	8.10	8.00	9.10

<sup>a</sup> Because of shortage of grain sacks, since July 4 permits to export bagged wheat, linseed, or corn are granted only when loading conditions require.

In June, exports were about equally divided between old- and new-crop wheat. On June 25, the premium charged on new-crop wheat sold to South American countries other than Brazil was reduced from 0.50 pesos to 0.40.

In order to insure maintenance of customary standards of flour quality, decrees of March 5 and May 13 authorized millers to buy from the GRB wheat of the 1941 crop, theretofore forbidden by the decree of November 14, 1941, up to not over 30 per cent of their milling requirements. An official estimate published in mid-May indicated that this would leave 36 million bushels (983,238 tons) of relatively low-quality grain of the 1940 crop on November 30, in addition to a high proportion of the 1941 crop.

The area sown to wheat in Argentina this year, for harvest beginning next November, is

provisionally estimated at 15.8 million acres. This is clearly the smallest since 1935, and 12 per cent below the standing estimate of 18.0 million acres in 1941.<sup>1</sup> The price paid growers for the last two crops (6.75 pesos per quintal, basis Buenos Aires) has been too low to afford any stimulus to maintain wheat acreage, and no price guarantee whatever on the new crop was given. Government inspectors urged farmers to divert acreage to crops other than wheat, linseed, and maize, or even to let it lie idle. These influences alone might have caused little or no reduction in wheat acreage sown, but weather factors were more influential. After an exceptionally hot summer but a fine early planting season, seeding was hampered by drought from late May into July through most of the grain belt, and by the early onset of a winter that developed into "the severest in many years." For the acreage seeded, the severe winter was no disadvantage, and weather conditions in August and early September were generally favorable. Since the critical period for the crop is September-October, we can venture no forecast of the harvest, but tentatively use a figure of 190 million bushels.

#### AUSTRALIA\*

Australia's 1941 wheat crop now appears to have reached 170 million bushels (Table I). By July 23, 1942 the Australian Wheat Board (AWB) had received 153.5 million bushels of wheat into its Pool No. 5. This represented almost the entire "marketed crop," on 140 million bushels of which a port price of 3s. 10d. was guaranteed.<sup>2</sup> Board sales from January 3 to July 23 totaled 46.9 million bushels, including 28.1 million of new wheat. Its stocks on

\* Most of this section is based on official statements and other discussions in two leading farm weeklies, *The Land* (Sydney, N.S.W.) and *The Primary Producer* (Perth, W.A.), each respectively the organ of the leading farmers' organization in its state.

<sup>1</sup> Cf. data for 1934-40 in WHEAT STUDIES, December 1941, XVIII, 179. In mid-June the trade expected a reduction of only 5-10 per cent. The official estimate may of course be revised upward.

<sup>2</sup> On the small amount of "illegitimate" wheat grown on unlicensed acreage, the payment is to be 2s. per bushel. How the legitimate excess over 140 million bushels will be treated was still in dispute in August.

July 18 were made up as follows, in million bushels:

Total: 1939 crop.....	6.21	
1940 crop.....	9.90	
1941 crop.....	120.46	136.57
Sold but not yet shipped.....		11.17
Unsold AWB stocks in Australia.....	125.40 <sup>a</sup>	

<sup>a</sup> By crediting sales of newer wheat to earlier pools, Pools 2 and 4 are accounted as sold out, leaving this full balance in Pool 5.

The unsold stocks were 83 million bushels larger than at the corresponding time in 1941. Australian flour consumption is somewhat increased by the presence of expeditionary forces, but the wide extension of war zones and increasing shipping tightness have held down exports of wheat and flour. In the absence of official data, we venture the guess-timates that Australian net exports in August-July 1941-42 were only 25-35 million bushels, and that total stocks on July 31 were not far below 150 million.

The Commonwealth government has undertaken to absorb losses on cut-price sales of f.a.q. wheat for livestock and poultry feed, and from April 24 the AWB made such wheat available at a reduction of 6d. per bushel from its regular selling price to millers for export (4s.).<sup>1</sup> This move was professedly designed to stimulate production of eggs and pork (subsequently dairy products as well), and to aid livestock feeders in drought-stricken areas; but it was intended also to help work down the excessive stocks. The better to deal with these, the Commonwealth government has requisitioned the bulk-handling facilities in the three states having them. The total bulk capacity, now given as nearly 77 million bushels, has been considerably increased in the past two years, especially in Western Australia.<sup>2</sup>

The possibilities of converting wheat into alcohol and rubber have been investigated, and experiments on the use of wheat as a fuel supplementary to charcoal in "producer-gas" outfits for motor cars are said to be promising. The Australian government re-

cently directed the Colonial Sugar Refining Company as its agent to build and operate one plant in each of the four principal wheat states to produce power alcohol from wheat. The New South Wales plant is expected to be in production early in 1943, and the total expected output of the four plants is 12 million gallons from 5 million bushels of wheat.

Advances paid to Australian wheat growers up to late July 1942 were officially stated as follows, port basis per bushel:

Crop	Pool	Million bushels	Bulk	Bagged
1938.....	No. 1	18	2s. 7.910d.	2s. 9.910d.
1939.....	No. 2	195	3 4.625	3 6.625
1940.....	No. 4	64	3 8.500	3 10.000
1941.....	No. 5	154	2 10.000	3 0.000

Pool No. 1 represented the requisitioned remnant of the 1938 crop. Part of the wheat in Pool No. 2 was sold to Japan, and payment had not been completed when she declared war. Pool No. 3 consisted of only about 1 million bushels of rusted wheat excluded from Pool No. 2. Further payments in prospect are less than 1½d. on Pool No. 2 and over 1½d. on Pool No. 4. Agrarian spokesmen have urged the necessity of additional advances on Pool No. 5, saying that those to date had netted growers only from 2s 4d. to 2s. 6d. per bushel while their costs of production ranged from 4s. to 4s. 6d.

The price guarantee had been officially declared applicable to the 1942 crop when, on May 18, the federal Minister for Commerce (W. J. Scully) announced that if the Cabinet and Labor Caucus adopted a new scheme (based on the so-called Robertson plan) soon to be considered, wheat growers would receive 4s. per bushel at country sidings for the first 3,000 bushels of their wheat output; and it was the evident intention to reduce or eliminate the guarantee on wheat exceeding this figure. This also aroused bitter opposition from growers' organizations. Among other things, it was argued that it would penalize the low-cost growers who produce a high percentage of the total crop. On August 24, however, the Cabinet's approval of the plan was announced, with the provision that 2s. per

<sup>1</sup> The "home-consumption price," in effect since January 1939, is 5s. 2d. per bushel.

<sup>2</sup> Cf. J. S. Davis, "Bulk Handling in Australia," WHEAT STUDIES, April 1940, XVI, 301-64.

bushel net would be *advanced* on quantities produced in excess of 3,000 bushels.

Though cost estimates presented on behalf of farmers are typically liberal if not inflated, it is safe to say that higher costs and low returns from wheat reinforced shortages of labor and superphosphates in limiting this year's acreage sown to wheat. All growers are now licensed by the Wheat Industry Stabilisation Board. The licenses issued total 10,951,000 acres. Western Australian growers had to cut their acreage one-third below the average of the four years 1937-40, with compensation of 1s. per bushel on the estimated production of the acres thus eliminated. Up to mid-July it was expected that the 1942 area sown in all Australia would be about one-fourth less than in 1941, or about 9.5 million acres (the smallest since 1923); but growing conditions were reported "the best in many years." Later information leads us to believe that the acreage reduction will be less drastic, and that the crop may equal or exceed 140 million bushels.

#### BRITISH ISLES

Data on wheat and flour imports, exports, and stocks in the United Kingdom are not available to us. There are fairly clear indications that, despite the shipping stringency and losses en route, Great Britain has continued a heavy importer—most notably from Canada; that she has shipped from her stocks to the USSR, Turkey, and Greece; and that she is maintaining "excellent" reserves far above peacetime normals but by no means excessive under war conditions.

The British Isles apparently have the largest wheat crop in 65 years or more.<sup>1</sup> Wheat acreage in the United Kingdom, stimulated both by subsidies for plowing up permanent pasture and by rising guaranteed returns per bushel, has expanded markedly since 1939,

<sup>1</sup> For available annual estimates, 1852-1932, see chart in J. S. Davis, "Britain's New Wheat Policy in Perspective," *WHEAT STUDIES*, July 1933, IX, 310.

<sup>2</sup> *WHEAT STUDIES*, May 1942, XVIII, 353-54.

<sup>3</sup> *Corn Trade News*, June 24, 1942, p. 251; *Foreign Crops and Markets* (U.S. Dept. Agr.), July 1942, p. 160.

<sup>4</sup> See *WHEAT STUDIES*, December 1941, XVIII, 176-77.

<sup>5</sup> *London Grain, Seed and Oil Reporter*, June 9, 1942, p. 573.

even though only a small fraction of the additional 6 million acres of arable land has been sown to wheat. While no official statistics of wartime harvests have been published, there is little doubt that the wheat crop has successively increased. This year's figure is unofficially put at about 100 million bushels, 60 per cent above the 1935-39 average. Whereas formerly a large proportion of the smaller crops was used for poultry and stock feed, nearly the whole of this year's crop will be used for food. In order further to economize on shipping, the British are nevertheless resorting to high-extraction flour and a darker war bread,<sup>2</sup> campaigning against waste of bread, discussing the possibility of rationing it, and urging increased consumption of potatoes; and the Minister of Agriculture hopes that 600,000 acres more will be put into wheat for harvest in 1943, most of it on land newly broken. To stimulate such expansion, a subsidy of £3 per acre will be paid on *all* wheat acreage harvested next year, and the guaranteed price will start at 14s. 6d. per cwt. For 1942 the corresponding subsidy was £2 per acre on *new* land and the price started at 16s.<sup>3</sup>

In Eire, where wheat production sank below 1 million bushels in 1931 and 1932,<sup>4</sup> wheat acreage has since been increased 28-fold; and the 1942 crop is unofficially estimated at 16 million bushels, equal to nearly four-fifths of the little state's current annual wheat utilization. Arrivals of import shipments and good new-crop prospects led to abolition of bread rationing on June 9, after it had been in force less than a month.<sup>5</sup>

#### CONTINENTAL EUROPE\*

For a third year in succession, the aggregate Continental European bread-grain crop is poor. Reliable estimates for these years are not available, but recent indications are that for wheat the 3-year average is only about five-sixths of the corresponding average for 1935-39. The 1940 crop was excep-

\* Written with the collaboration of V. P. Timoshenko, largely on the basis of materials published by the U.S. Department of Agriculture, the Dominion Bureau of Statistics, the *New York Times*, the *Corn Trade News* (Liverpool), the *London Grain, Seed and Oil Reporter*, the *Economist* (London), the International Institute of Agriculture, and several Continental European newspapers.

tionally short, and the 1941 crop otherwise the smallest since 1930 (Table I). Later information bears out the indications of last spring, to the effect that bad weather, coupled with other adverse factors (such as shortages of labor, draft power, and fertilizers), defeated official plans for enlarged bread-grain harvests in 1942, in most of the Nazi-controlled countries. The Continent's wheat crop this year may equal last year's but cannot much exceed it.

Winter set in early and was extremely severe, and spring came late and was unfavorable, especially in Denmark, northern and southeastern Germany, Poland, and southeastern Europe. In Yugoslavia, Rumania, and Bulgaria particularly, this prevented sowing the full acreage intended for winter grain. In Northern Europe, especially Denmark and Greater Germany, an amazingly high proportion of the fall-sown area was winterkilled.<sup>1</sup> In Bulgaria this proportion may have reached 20 per cent, while floods damaged winter crops in Hungary, Slovakia, and most of Rumania. The spring was several weeks later than usual, and the soil long remained excessively wet (especially on low-lying lands). These conditions prevented full reseeding of winterkilled acreage to spring wheat, and rendered difficult or impossible fulfillment of plans for enlarged spring-wheat sowings proper. Reduction of bread-grain acreage, however, was at least partly compensated for by expansion of acreage in other crops—barley, maize, and millets in southeastern Europe, potatoes in central Europe (including Germany), and oil-bearing plants everywhere. May–June weather developments were generally favorable for growing spring grains and other crops, especially in southeastern Europe; but this could not fully repair or offset the damage earlier done.

The indicated regional distribution of this year's bread-grain crops is unfavorable for

Germany and central Europe generally. Moreover, Nazi officials early abandoned their hopes of obtaining, until 1943, any substantial supplies of grain from the Ukraine and other conquered Soviet territory. In the occupied portion of the Ukraine, sowings to winter grains last fall were only about half the area normally sown; plans for above-normal spring sowings were reported more than fulfilled, but the total area sown for 1942 was apparently not over 70 per cent of normal; and winter damage, poor preparation of the soil, and late spring sowings have all made for poor yields.

In western and southwestern Europe neither the winter nor the spring was adverse. Some expansion of wheat acreage apparently occurred in France and Belgium. Early in July, the condition of the wheat crops was reported good in Italy and France, but lowered by June drought in Spain, where the acreage sown was below that of 1941. Receipts of wheat from North Africa relieved the critical position in France, and made unnecessary the anticipated reduction in bread rations there; but the fixed price of new-crop wheat was raised from 290 francs per quintal to 375, and premiums were offered for early threshing and delivery. Wheat growers are to receive higher bread rations, but are subject to severe penalties for withholding grain.

The extreme stringency in Greece was somewhat relieved, and the low bread rations liberalized, in consequence of relief shipments received in May–July. Negotiations with the belligerent powers, undertaken through the Swedish government on the initiative of the Swedish Red Cross, were successfully concluded for food-relief shipments in Swedish vessels to Greece, and for their distribution by a Swedish-Swiss commission under the general supervision of the International Red Cross Committee. Under a program of shipping 15,000 tons of North American wheat or equivalent flour monthly, the first three cargoes of 550,000 bushels of donated Canadian wheat arrived at Athens on August 29.<sup>2</sup>

In most of Nazi-dominated Europe, however, the much tighter position of the bread-grain supply during the past winter and spring, coupled with expectations of poor new crops, resulted in reduced bread rations

<sup>1</sup> The German Minister of Food (Backe) told Hanover peasants late in June that 6 million acres of winter grain (one-third of the total including rye) were reseeded this spring in Germany. In the same speech he said that deliveries of bread grain of the 1941 crop had exceeded expectations by 800,000 tons. *Neue Zürcher Zeitung*, June 29, 1942.

<sup>2</sup> *Department of State Bulletin* (U.S.), Aug. 8, 1942, pp. 686–87; *New York Times*, Sept. 9, 1942, p. 3.

and/or further tightening of bread-grain controls and their expansion to other grains.

Early in the spring, bread rations were reduced not only in Germany and Italy<sup>1</sup> but in Hungary, Slovakia, and Turkey; flour-extraction rates in Hungary were raised from 78–80 per cent to 82–85; and Bulgaria required mixing 35 per cent of maize flour with 65 per cent of wheat flour and adding 10 per cent of soybean flour. Early in the summer, bread rations were reduced in Croatia and Bucharest, and from June 29 to August 2 in Hungary where, despite favorable prospects for the new harvest, bread-grain rations for producers were established for 1942–43.

Strict regulation of land use, including threats to take it temporarily from owners in case they do not use it according to the regulations, were issued by Slovakia, Croatia, and Serbia, and other measures to stimulate agricultural output (e.g., credit for financing expansion) were taken in Rumania and Turkey.

In Germany, the grain regulations for the year beginning August 1, 1942 require total delivery of new-crop barley and mixed grain as well as bread grains; and for wheat special premiums on deliveries in August–October, and monthly increments to fixed prices (for rye also), are established with a view to inducing early delivery. On September 15 the German government announced increases in weekly rations as follows, effective October 19: bread, from 2 to 2¼ kilograms; potatoes, from 2½ to 4½ kilograms; and meat, from 300 to 350 grams. The official explanation gives a much rosier picture of the German harvest, and of supplies from conquered areas and “co-operating” countries, than many neutral observers believe to be true.

<sup>1</sup> See WHEAT STUDIES, May 1942, XVIII, 355–56.

<sup>2</sup> See map in V. P. Timoshenko, *Agricultural Russia and the Wheat Problem* (Food Research Institute, Grain Economics Series 1, Stanford University, Calif., 1932), opposite p. 4.

<sup>3</sup> For details, see L. Volin, “North Caucasus: A Russian Granary,” *Foreign Agriculture* (U.S. Dept. Agr.), July 1942, VI, 255–64.

<sup>4</sup> The London *Economist* of July 18, 1942 (p. 80) mentions estimates of some experts putting stocks of all grain in Russia as high as 112 million tons (7 billion poods), about equal to the total yearly grain production of Soviet Russia; but it is added that such estimates probably err on the optimistic side.

<sup>5</sup> *Ibid.*

#### SOVIET RUSSIA\*

Up to May 1942 Soviet Russia's losses in food resources and in population were more or less in balance, except that losses in sugar greatly exceeded the losses in consuming population while losses in lard and pork were also severe. Since May, with the new penetration of Axis forces into the Don region, the North Caucasus, and most of the Central Blacksoil region to the northeast of Ukraine,<sup>2</sup> this balance has been greatly disturbed. Except the Central Blacksoil region, the newly occupied area is rather thinly populated while its agricultural resources are of the greatest importance. Before the war, the population of the North Caucasus was less than 6 per cent of the total in Soviet Russia, while its crop area was 9–10 per cent of the total, and its crop production probably still more.<sup>3</sup> The North Caucasus was one of the principal wheat-surplus areas of Russia, and its surpluses of meat, barley, oilseeds, and tobacco were also very important in the total supply.

The crop area of the Central Blacksoil region is nearly as important as that of the North Caucasus; and in spite of its relatively dense population it was the principal rye-surplus area and an important source of oilseeds. It and the Don region constitute the principal center of the horse breeding of Russia. Its beet-sugar industry was second only to the Ukrainian. The newly conquered areas together with the Ukraine were responsible for nearly half the agricultural surpluses required by the food-deficit regions of Russia, particularly the Moscow and Leningrad industrial regions. Their loss endangers the food supply of these industrial regions, which will very soon need food supplies from the outside unless they have accumulated adequate reserves. Soviet Russia presumably had substantial stocks of bread grain when she was attacked in the summer of 1941, but their present size and location are not known to us.<sup>4</sup>

The Soviet government has tried hard to expand agricultural production in the eastern areas, particularly western Siberia, and the crop acreage in the Volga region and Siberia during the past year is reported increased by some 5–7 million acres.<sup>5</sup> This is important,

\* Largely the work of V. P. Timoshenko.

but it compensates for only a small fraction of the cultivated area lost in recent months. Further expansion of the crop area in the eastern region will be difficult with the loss of Caucasian oil, for agriculture there is more highly mechanized than in most of Russia, and it usually requires some 2-3 million tons of petroleum—an amount which equals or perhaps exceeds the total oil production of the Volga and Ural areas.

Even during this season, the government has laid increasing emphasis on shifts to horses and primitive implements.<sup>1</sup> The mechanized equipment of agriculture has not functioned smoothly, owing to the unsatisfactory state of repair of tractors and other agricultural machinery, and the lack of experienced tractor and combine operators who have been drawn into the Russian motorized army. Such difficulties were particularly acute in the Volga, the Urals, and Siberia. The short season for agricultural work in the east, where practically no winter crops are grown, makes the problem still more difficult.

The Nazi invasion this summer was made in such a way that the railroad connections between the rich agricultural areas and the northern deficit areas were cut before the harvest; and the main connection of the North Caucasus with the Transcaucasian food-deficit area (the Rostov-Baku railroad) was cut early enough to prevent shipping grain to these deficit areas. The loss of these important food resources must have been felt immediately. The most that could be done was to destroy crops to prevent their falling into the hands of the enemy. This presumably was done whenever possible. From areas (e.g., the Don region) overrun before harvest, the Germans presumably obtained some supplies for the invading army. However, the experience during last year's invasion of the Ukraine suggests that such supplies can hardly contribute much

to the civilian supply of Greater Germany in the current crop year.

Over the past few months several million bushels of North American wheat, mostly as flour, have been shipped to the USSR (pp. 8, 13). More will go during this crop year, but shipping difficulties as well as Russian-determined priorities will set limits to the volume shipped and received.

#### WORLD SUPPLIES FOR 1942-43

Aggregate wheat supplies in the world ex-Russia will this year exceed all previous records by a wide margin. This is assured by world carryovers ex-Russia ex-Asia something like half again as large as in 1939, on the eve of war,<sup>2</sup> and by bumper crops in North America far in excess of expectations four months ago. Estimates of stocks of old wheat as of August 1 outside North America and Argentina, and of new crops in Europe and some lesser producing areas, are of course less reliable than hitherto; outturns in Australia and Argentina cannot yet be safely predicted; and further revisions in standing estimates of even the North American crops will doubtless be made. But the maximum error cannot affect one broad conclusion: in the fourth year of World War II world wheat supplies will be abundant beyond all precedent, in striking contrast to the world wheat shortage that characterized the fourth year of World War I. Nevertheless, most European countries will experience wheat shortages in 1942-43 of the same general character as those in 1917-18 if not nearly so extreme.

In the period of extraordinary wheat surplus that accompanied the Great Depression of 1930-34, wheat supplies for the world ex-Russia reached their peak in 1933-34. They totaled about 4,965 million bushels, including exports to this "world" by Soviet Russia and other exporting areas outside it, but exclusive of stocks of old wheat in India, Japan, and various lesser producing areas. Wheat disappearance in the world so defined, though swelled by surplus disposition at low prices, fell short of total supplies by a carryover of nearly 1,200 million bushels. In 1942-43, the corresponding total of wheat supplies may be roughly estimated at 6,000 million. Even with

<sup>1</sup> *Ibid.*; also Mar. 21, 1942, p. 398.

<sup>2</sup> We have as yet no basis for revising our previous expectations that Continental European carryovers would be reduced well below former averages but not extremely low. World wheat stocks ex-Russia ex-Asia, as of about Aug. 1, 1942, presumably totaled 1,700-1,800 million bushels, or 150-250 million more than at the corresponding period of 1941. Such magnitudes are so large that attempts at refinement in detail are unnecessary as well as premature.

special measures to divert wheat to feed and industrial uses in surplus areas, stocks ex-Russia ex-Asia about August 1, 1943 seem likely to exceed 2,100 million bushels.

The huge wheat surplus in overseas exporting countries continues to mount. By far the greatest volume is concentrated in North America, but substantial surpluses exist in Argentina and Australia also. July 1942 stocks in the four chief exporting countries practically equal the average annual disappearance from these countries for food, seed, feed, and exports (1,420 million bushels) in the past five crop years. Moreover, the aggregate 1942 crops in the four countries will presumably approach the record of 1,990 million bushels set in 1928.

Here are vast reserves that cannot now be drawn upon by various portions of the world that are short of wheat, including most of Continental Europe. The size and durability of these reserves are such that, even if three years or more should elapse before the war is won, superabundant supplies will probably be available for postwar purchase and relief disposition. In the meantime, excessive stocks of wheat will continue a source of expense and embarrassment to the countries that hold them. They should be worked down, more substantially than is yet in prospect.

The question is frequently asked: How long will wheat keep? The scientific answers are numerous and complex, but the practical answer is fairly simple. If in suitable condition when put in store, if kept in proper storage, and if handled with due care to prevent damage by heating, vermin, weevils, etc., wheat will deteriorate very gradually and slightly.<sup>1</sup> If these conditions are ignored or violated, more or less considerable losses will occur, but their extent is commonly exaggerated even in trade circles. Depreciation in value may be greater than effective deterioration in quality,

because millers and feeders take heavier risks of deterioration in buying long-stored wheat. It is therefore sound commercial practice not to hold identical wheat much more than a year, replacing older stocks by newer if large quantities are carried forward.

#### INTERNATIONAL AGREEMENTS

The international wheat agreement that emerged from the protracted Washington Wheat Meeting was announced July 1 as effective June 27, 1942. The present participants are the four chief exporting countries and the United Kingdom, the outstanding wheat-importing country. The published documents include an interim agreement of very limited scope, with additional commitments contingent on future decisions requiring agreement, and a draft of a more comprehensive convention for consideration by a future international conference.<sup>2</sup>

The interim agreement provides for creating, by gifts from each of the five countries, a pool of wheat for intergovernmental relief disposition as soon as the international situation permits. The definitive commitments include, however, only 50 million bushels of wheat by the United States and 25 million by Canada, and an additional 25 million by the United Kingdom which may be replaced in part or in whole by a gift of transportation.

The interim agreement further commits the four exporting countries to "adopt or maintain positive measures to control production with the object of minimizing the accumulation of excessive stocks." Only the United States has had control measures in effect throughout 1938-42, but the other countries have taken more limited steps in the past two years. All these have conspicuously failed either to "control" production or to prevent an extraordinary "accumulation of excessive stocks." The wheat-surplus problem, indeed, looms up vastly larger than it appeared when the agreement was initialed on behalf of the five countries on April 22 last.

The new International Wheat Council held its organization meeting in Washington on August 3-5, and is to meet there again in January 1943.<sup>3</sup> Paul H. Appleby, United States Under Secretary of Agriculture, was elected

<sup>1</sup> Recent testimony on this point was given by J. S. Teasdale, a member of the Australian Wheat Board, *Primary Producer*, June 25, 1942, p. 1.

<sup>2</sup> *Department of State Bulletin*, July 4, 1942, pp. 582-94. In an early issue of *WHEAT STUDIES* we propose to analyze these various agreements.

<sup>3</sup> The list of delegates and a digest of the proceedings of the first meeting appear in the *Department of State Bulletin*, Aug. 8, 1942, pp. 688-89.

chairman. Leslie A. Wheeler, director of the Office of Foreign Agricultural Relations, was made chairman of the newly-established Executive Committee. The secretary of both is Andrew Cairns, a Canadian who was long secretary of the Wheat Advisory Committee which survived the breakdown of the International Wheat Agreement of 1933 until its absorption by the new agency. The council is undertaking to come to grips with the surplus problem, but it remains to be seen whether it will be able to contribute appreciably toward strengthening the natural disposition of the four exporting countries to take more effective steps in time to affect their 1943 carryovers and harvests.

In this country the wheat-acreage allotment for 1943 was announced on June 10 at 55 million acres—the same as for this year (Table VIII) and the minimum permitted by standing legislation, but a highly excessive figure under present conditions. The marketing-quota device is here employed simply to compel farmers to keep within their acreage allotments.<sup>1</sup> Secretary Wickard has frankly recognized that we cannot expect soon to dispose of the average product of more than 40 million acres; but he has not yet urged Congress to lower the minimum allotment, for which there has been no justification (other than political) under the avowed policies.

On August 5, however, the Secretary issued—far in advance of the usual date—the proclamation that marketing quotas would be in effect in 1943–44, if approved by the farmer referendum before June 10, 1943; and his accompanying statements were evidently de-

signed to persuade farmers to reduce their wheat acreage below their allotments. Such advice is weak in the face of stimuli afforded by highly excessive loan rates, Congressional efforts to raise them higher, and the readiness of the government to absorb any losses involved. The United States has led in urging the adoption of the international agreement, and incorporating in it the features of production control and the ever-normal granary. But powerful political forces, coupled with favorable weather conditions, have thus far rendered illusory these features of the American wheat program.

Mutual-aid agreements on the model of the "master agreement" signed between the United States and the United Kingdom on February 23, 1942, negotiated under the provisions of the Lend-Lease Act of March 11, 1941, have now been signed between the United States and 9 additional governments (including governments in exile), as follows:

Government	Date
China .....	June 2, 1942
USSR .....	June 11, 1942
Belgium .....	June 16, 1942
Poland .....	July 1, 1942
Netherlands .....	July 8, 1942
Greece .....	July 10, 1942
Czechoslovakia .....	July 11, 1942
Norway .....	July 11, 1942
Yugoslavia .....	July 24, 1942

These are highly important basic commitments bearing on the postwar economic policies of the United Nations,<sup>2</sup> as high officials of the several nations have repeatedly emphasized. If Congress and other national legislatures can be led to accept and implement their constructive principles, a new era may well dawn.

<sup>1</sup> It is officially estimated that of the 1942 crop only about 1 per cent will be subject to penalty as "excess wheat."

<sup>2</sup> Cf. WHEAT STUDIES, May 1942, XVIII, 362–63.

*This Survey was written with the general collaboration of Rosamond H. Peirce, the special collaboration of V. P. Timoshenko and Meriam A. Clough on certain sections, the general assistance of Elizabeth Brand Taylor, and specific aid from P. Stanley King and Alice B. Rundle.*



## APPENDIX TABLES

TABLE I.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING AREAS EX-RUSSIA, 1937-42\*

(Million bushels)

Year	World ex-Russia <sup>a</sup>	Four chief exporters					British Isles	Continental Europe ex-Russia				French North Africa <sup>d</sup>	India	Others ex-Russia <sup>a</sup>
		Total	United States	Canada	Australia	Argentina		Total	Four neutrals <sup>b</sup>	Others ex-Danube	Lower Danube <sup>c</sup>			
1937.....	3,810	1,451	876	180	187	208	63	1,473	156	955	362	72	364	387
1938.....	4,562	1,826	932	360	155	379	81	1,765	149	1,150	466	72	402	416
1939.....	4,208	1,613	751	521	210	131	72	1,624	162	1,011	451	100	372	427
1940.....	3,920	1,734	812	540	83	299	82	1,218	111	812	295	62	402	422
1941 <sup>e</sup> .....	3,940	1,652 <sup>f</sup>	946	312	170 <sup>f</sup>	224	85	1,360	143	877	340	87	374	382
1942 <sup>e</sup> .....	4,240	1,927	982	615	140	190	115	1,350	...	...	...	75	375	398

\* Largely official data, for boundaries as in 1939; figures in italics represent or include in substantial part unofficial approximations.

<sup>a</sup> Excludes USSR, China, Iran, Iraq, Transjordan, and various small producers, but includes Brazil and Peru.

<sup>b</sup> Spain, Portugal, Switzerland, Sweden.

<sup>c</sup> Hungary, Yugoslavia, Rumania, Bulgaria.

<sup>d</sup> French Morocco, Algeria, Tunis.

<sup>e</sup> As of Sept. 1, 1942. For details of estimates not here

shown by individual countries, see WHEAT STUDIES, January 1942, XVIII, 223. Additions for 1941 are as follows: Uruguay, 11.8; Chile, 28.8; Eire, 11.0; France, 235.0; New Zealand, 8.6.

<sup>f</sup> Including our allowance for upward revision of standing official estimate for Australia, 8 million bushels.

TABLE II.—UNITED STATES AND CANADIAN CARRYOVERS OF WHEAT, 1937-42\*

(Million bushels)

Year	United States (July 1)						Canada (July 31)						
	On farms	In country mills and elevators	Commercial stocks	In city mills <sup>a</sup>	Total in four positions	U.S. grain in Canada	On farms	In country mills and elevators <sup>b</sup>	In terminal elevators	In transit	In flour mills <sup>c</sup>	Total in five positions <sup>d</sup>	Canadian grain in U.S.
1937.....	21.9	11.5	9.0	40.4	82.8	.1	4.0	7.4	17.7	2.8	1.0	32.9	4.1
1938.....	59.1	30.6	22.2	40.8	152.7	.7	5.1	2.8	12.2	2.4	1.1	23.6	1.0
1939.....	90.4	36.6	64.1	61.1	252.2	.6	4.7	16.8	67.2	4.8	1.1	94.6	8.3
1940.....	83.1	33.6	84.2	80.7	281.6	.6	17.3	73.3	159.3	21.9	1.1	272.9	27.5
1941.....	87.3	73.8	142.7	81.6	385.4	.2	14.0	224.4	187.6	21.1	1.2	448.3	31.8
1942.....	159.5	141.8	224.4	96.8	632.6 <sup>e</sup>	.2	10.4	139.8	232.9	18.7	2.4	404.2	19.8

\* Official data of U.S. Department of Agriculture (excluding new-crop wheat) and Dominion Bureau of Statistics.

<sup>a</sup> 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.

<sup>b</sup> Includes private terminal elevators and flour mills in Western Division.

<sup>c</sup> In Eastern Division only.

<sup>d</sup> For data 1923-36, see Dominion Bureau of Statistics, *Monthly Review of the Wheat Situation*, Aug. 21, 1942, p. 32.

<sup>e</sup> Including 10 million bushels in steel bins.

TABLE III.—UNITED STATES FLOUR PRODUCTION, EXPORTS, AND RETENTION, 1941-42, WITH COMPARISONS\*

(Thousand barrels)

Period	Production: reporting mills			Estimated production <sup>a</sup>			Net exports <sup>b</sup>			Estimated net retention <sup>c</sup>		
	1939-40	1940-41	1941-42	1939-40	1940-41	1941-42	1939-40	1940-41	1941-42	1939-40	1940-41	1941-42
July-June ...	104,448	105,331	104,826	110,761	111,698	111,162	7,163	7,036	6,575	103,598	104,662	104,587
July-Sept....	29,145	26,673	27,005	30,907	28,286	28,637	2,386	1,390	1,625	28,521	26,896	27,012
Oct.-Dec.....	25,845	26,863	27,192	27,407	28,486	28,836	1,737	1,956	1,650	25,670	26,530	27,186
Jan.-Mar. ...	24,994	25,645	26,389	26,504	27,195	27,984	1,768	1,460	1,650	24,736	25,735	26,334
April-June ..	24,464	26,150	24,240	25,943	27,731	25,705	1,272	2,230	1,650	24,671	25,501	24,055

\* Reported production and trade data from U.S. Department of Commerce.

<sup>a</sup> Estimates of Holbrook Working.

<sup>b</sup> Includes shipments to possessions. From July 1940 through September 1941, derived by subtracting imports for consumption instead of general imports minus re-exports.

Monthly data are unavailable from October 1941. The italicized figures represent our rough guesstimate of the monthly average.

TABLE IV.—ARGENTINE WHEAT STOCKS, AND EXPORTS OF WHEAT AND FLOUR, MONTHLY, 1937-42\*  
(Million bushels)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
COMMERCIAL STOCKS												
1937.....	31.5	63.1	63.6	54.3	43.3	34.4	25.9	20.9	16.1	10.7	6.2	5.2
1938.....	37.7	69.9	73.3	70.6	65.8	59.7	50.1	44.3	39.0	32.5	26.7	30.3
1939.....	<i>143.0</i>	<i>213.0</i>	<i>231.0</i>	<i>239.0</i>	<i>237.0</i>	<i>230.0</i>	<i>217.0</i>	213.5	200.0	180.3	165.6	144.2
1940.....	133.0	137.2	134.8	126.3	113.4	92.7	71.3	55.8	43.4	33.4	22.4	19.5
1941.....	49.6	<i>141.5</i>	181.2	191.3	186.9	<i>177.4</i>	<i>172.7</i>	<i>160.7</i>	<i>152.1</i>	<i>143.0</i>	<i>133.5</i>	<i>127.1</i>
1942.....	<i>169.5</i>	<i>239.1</i>	<i>254.6</i>	<i>257.7</i>	<i>249.2</i>	<i>236.2</i>	<i>223.1</i>	.....	.....	.....	.....	.....
EXPORTS												
1937.....	29.56	32.07	32.31	18.96	8.03	5.07	3.72	4.07	3.40	2.86	1.73	6.06
1938.....	9.81	11.41	7.11	6.83	5.27	7.54	5.54	5.15	4.55	4.38	3.93	4.18
1939.....	9.88	7.81	13.36	15.79	17.45	24.27	11.40	16.06	14.10	14.76	17.00	17.67
1940.....	13.39	10.81	11.55	15.85	17.82	16.76	13.51	10.66	7.56	6.58	7.01	5.57
1941.....	3.81	5.51	7.89	11.96	11.78	7.92	9.45	8.24	6.27	5.54	6.11	5.59
1942.....	6.39	6.17	6.38	9.49	8.10	6.44	.....	.....	.....	.....	.....	.....

\* Official data. For stocks, as of the first of each month, from the Argentine National Grain and Elevators Commission, *Boletín Informativo* (Buenos Aires). The italicized figures are approximate or preliminary.

TABLE V.—WHEAT DISPOSITION ESTIMATES, ANNUALLY FROM 1938-39\*  
(Million bushels)

Year	Domestic supplies			Domestic utilization				Surplus over domestic use		
	Initial stocks <sup>a</sup>	New crop	Total	Milled (net)	Seed use	Balancing item	Total	Total	Net exports <sup>b</sup>	Year-end stocks <sup>a</sup>
A. UNITED STATES (JULY-JUNE)										
1938-39....	153	932	1,085	475	75	+173	723	362	109	253
1939-40....	253	751	1,004	472	73	+130	675	329	47	282
1940-41....	282	812	1,094	476	74	+124	674	420	34	386
1941-42 <sup>c</sup> ...	386	946	1,332	477	64	+131	672	660	27 <sup>d</sup>	633
B. CANADA (AUGUST-JULY)										
1938-39....	25	360	385	47	35	+42	124	261	158	103
1939-40....	103	521	624	49	36	+47	132	492	192	300
1940-41....	300	540	840	43	30	+56	129	711	231	480
1941-42 <sup>c</sup> ...	480	312	792	46	29	+67	142	650	226 <sup>d</sup>	424
C. AUSTRALIA (AUGUST-JULY)										
1938-39....	50	155	205	31	14	+14	59	146	96	50
1939-40....	50	210	260	33	13	- 2	44	216	86 <sup>d</sup>	130
1940-41....	130	83	213	32	14	+ 7	53	160	90 <sup>d</sup>	70
1941-42 <sup>c</sup> ...	70	170 <sup>e</sup>	240	33	12	+15	60	180	30 <sup>d</sup>	150
D. ARGENTINA (AUGUST-JULY)										
1938-39....	72	379	451	74	21	+ 4	99	352	122	230
1939-40....	230	131	361	73	21	+13	107	254	179	75
1940-41....	75	299	374	74	22	+ 2	98	276	96	180
1941-42 <sup>c</sup> ...	180	224	404	75	20	+ 9	104	300	80	220

\* Based on official data so far as possible; see WHEAT STUDIES, December 1941, XVIII, 188.

<sup>a</sup> For United States and Canada, stocks in North America, instead of stocks within the country used hitherto.

<sup>c</sup> Estimates as of mid-September 1942.

<sup>d</sup> Our rough guesstimate. Canada, August-April = 169.

<sup>e</sup> See Table I, footnote f.

<sup>b</sup> United States data adjusted for changes in stocks of U.S. wheat in Canada; Canadian include grain clearances, as in WHEAT STUDIES, December 1941, XVIII, 185, Series B.

TABLE VI.—SELECTED WHEAT PRICES, WEEKLY FROM MID-MAY 1942\*

(U.S. cents per bushel)

Week ending	United States							Canada (Winnipeg) <sup>a</sup>				Argen- tina, 75-kilo (fixed) <sup>ab</sup>	Aus- tralia, f.o.b. ports <sup>ac</sup>
	Futures (Chicago)		Cash					Futures		Cash			
	July	Sept.	Basic cash (Chi.)	No. 2 H. W. (K. C.)	No. 2 R. W. (St. L.)	No. 1 Dk. N.S. (Mnpls.)	Soft White (Port.)	July	Oct.	Wtd. aver- age	No. 3 Man.		
May 16.....	123	126	122	116	124	121	98	73	..	70	67	55	70
23.....	121	123	119	113	120	118	96	73	..	70	66	55	70
30.....	120	123	118	113	119	117	94	73	..	71	66	55	70
June 6.....	117	120	116	110	117	113	91	73	..	71	67	55	70
13.....	118	120	116	112	119	114	91	73	..	71	67	55	70
20.....	120	122	118	114	121	116	92	73	..	71	67	55	70
27.....	118	120	116	112	119	114	92	73	..	71	67	55	70
July 4.....	117	120	116	108	116	115	94	73	82	71	67	55	70
11.....	119	122	117	108	119	118	97	73	82	71	67	55	70
18.....	118	120	116	107	...	115	99	73	82	72	67	55	70
25.....	...	119	114	107	126	113	101	74	82	72	68	55	70
Aug. 1.....	...	118	115	110	126	112	102	..	82	72	69	55	70
8.....	...	117	116	110	121	112	104	..	82	79	75	55	70
15.....	...	118	117	112	127	113	106	..	82	79	76	55	70
22.....	...	118	119	113	127	113	107	..	82	79	76	55	70
29.....	...	118	119	112	127	112	108	..	82	79	76	55	..
Sept. 5.....	...	120	122	116	133	115	113	...	82	..	..	55	..
12.....	...	123	126	120	132	119	116	...	82	..	..	55	..
CCC loan rates													
1940.....	...	...	81 <sup>d</sup>	77	81	87	73	..	..	..	..	..	..
1941.....	...	...	115 <sup>d</sup>	110	115	115	105	..	..	..	..	..	..
1942.....	...	...	132 <sup>d</sup>	127	132	132	121	..	..	..	..	..	..

\* For sources and methods of computation, see WHEAT STUDIES, December 1941, XVIII, 189.

<sup>a</sup> Converted at constant official exchange rate, in U.S. cents per unit of foreign currency: Canada, 90.9090; Argentina, 29.773; Australia, 322.8.<sup>b</sup> Grain Regulating Board buying price, Buenos Aires.<sup>c</sup> Australian Wheat Board offering price to United Kingdom, bulk basis.<sup>d</sup> No. 2 Hard Winter and No. 2 Red Winter, Chicago.

TABLE VII.—UNITED STATES WHEAT PRODUCTION BY REGIONS, IN YEARS OF LARGE CROPS, 1914-42\*

(Million bushels)

Year <sup>a</sup>	Total	Subtotals for states grouped by predominating wheat types				
		Hard red winter (A)	Hard red spring (B)	White (C)	Soft red winter (D)	Soft red winter (E)
1914.....	897	311	198	91	208	90
1915.....	1,009	257	342	106	221	83
1918.....	904	211	273	85	251	84
1919.....	952	337	138	102	287	87
1927.....	875	270	284	130	135	56
1928.....	914	359	294	124	87	50
1930.....	886	366	209	109	141	60
1931.....	942	480	91	90	207	73
1937.....	876	334	130	124	204	83
1938.....	932	331	213	131	179	77
1941 <sup>b</sup> .....	946	318	270	132	158	68
1942 <sup>c</sup> .....	982	408	297	113	98	65

\* In Tables VII and VIII, latest data of U.S. Department of Agriculture are grouped as follows: (A) Kans., Neb., Okla., Tex., Colo., N.M., Wyo.; (B) N.D., Mont., S.D., Minn.; (C) Wash., Idaho, Ore., Calif., Utah, Ariz., Nevada; (D) Ill., Ohio, Ind., Mo., Mich., Iowa, Wis.; (E) Arkansas and all states which are both south of the Ohio and east of the Mississippi rivers.

<sup>a</sup> All years with crops of 875 million bushels or over.<sup>b</sup> As of Dec. 1, 1941.<sup>c</sup> As of Sept. 1, 1942.

TABLE VIII.—UNITED STATES WHEAT ACREAGE GOALS AND SOWN ACREAGE, BY REGIONS, 1938-42\*

(Thousand acres)

Year	Total	Subtotals for states grouped by predominating wheat types				
		Hard red winter (A)	Hard red spring (B)	White (C)	Soft red winter (D)	Soft red winter (E)
1938 {Goal <sup>a</sup> ...	62,500	26,629	18,360	4,789	8,868	3,854
{Sown...	79,565	36,303	21,576	5,796	10,953	4,937
1939 {Goal...	55,000	23,516	16,078	4,224	7,780	3,402
{Sown...	63,516	29,012	16,537	4,707	9,009	4,251
1940 {Goal...	62,000	27,255	17,657	4,676	8,636	3,776
{Sown...	61,464	26,554	17,269	5,215	8,205	4,221
1941 {Goal...	62,000	27,284	17,610	4,680	8,639	3,787
{Sown...	62,404	27,713	16,839	5,188	8,427	4,237
1942 {Goal...	55,000	24,186	15,704	4,170	7,502	3,438
{Sown...	53,427	23,544	15,125	4,388	6,283	4,087
1943 Goal...	55,000	23,884	15,787	4,371	7,488	3,470

<sup>a</sup> Nominal, announced after sowing, solely as basis for soil conservation payments.

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