WHEAT STUDIES

of the FOOD RESEARCH INSTITUTE

VOL. XVII, NO. 2 (Price $1.00) OCTOBER 1940

WHEAT SUBSIDIZATION AND EXPORTS

THE EXPERIENCE OF 1938-39

V. P. Timoshenko

Government interventions on wheat markets and various schemes of wheat subsidization reappeared in the third quarter of 1938 with great rapidity after a short period of relaxation during the two preceding years. In particular, wheat exports were subsidized during 1938–39 by practically all the principal exporting countries. This experience deserves careful study, even though full information on the operations and results is not yet available. Conclusions from such study have important bearings on national policy.

American subsidization of wheat exports was perhaps the greatest departure from traditional policy, and it represents the clearest case of direct export subsidy. But other exporting countries participated in competitive subsidization. This resulted in a substantial depression of wheat prices in international markets. The depression of international wheat prices partly defeated efforts of exporting countries to raise prices for their own wheat growers, and made the costs of these efforts excessively high.

Competitive subsidization of exports threatened to continue at great losses in 1939–40. This was prevented by the onset of the European war. The war soon led to concentration of wheat buying in many of the important countries, and the problem of coping with wartime conditions made government interventions in wheat markets indispensable for all countries involved in the war.

Altogether, extensive study of the experience with competitive export subsidization in 1938–39 yields little support for this approach to the problem of coping with export surpluses of wheat.

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FOOD RESEARCH INSTITUTE

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

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

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One of the most important features of the 1938–39 wheat crop year was the rapid restoration, in practically all wheat-exporting countries, of various forms of subsidizing wheat growers and of numerous governmental interventions in wheat marketing, particularly in wheat exports. In 1936–37 and 1937–38, governmental activities in the principal wheat-exporting countries had affected wheat marketing but little.

Three successive small world wheat crops in 1934–36, each below world wheat requirements, resulted in the disappearance of surplus wheat stocks, and the world wheat supply position in 1936–37 and in 1937–38 could be characterized as tight rather than easy. Accordingly, international wheat prices recovered considerably. During 1936–37 and 1937–38 they approached the levels prevailing in 1928–29 and 1929–30, before their sharp collapse in 1930–31.[1] Hence it is not surprising that various schemes of governmental wheat subsidization and control of marketing and exports were partially demobilized, if not completely abolished, during 1936–37 and 1937–38.

The Canadian Wheat Board had played an important role in marketing and exporting wheat in 1935–36. During 1936–37 it was busy only with selling a moderate amount of wheat (around 85 million bushels) carried over from the previous crop. It purchased practically nothing from the new crop as market prices rose above the minimum price which in 1936–37 remained at the previous year's level. In 1937–38 the board's activity was limited to distribution of relief grain for seed and feed use to farmers hard hit by crop failure.

In Argentina, where the market price rose in July 1936 above the rather high official buying price of 10 pesos per quintal, purchases of the Grain Regulating Board ceased to be a factor in the wheat market; and no minimum price was established for the crops of 1936–37 and 1937–38.

Australian policy during the years of greatly depressed wheat prices consisted more of direct assistance to wheat growers than of intervention in wheat marketing. When wheat prices rose in 1936–37, the relief policy was abandoned, and there was no subsidization of wheat in Australia either in 1936–37 or in 1937–38.

Even in the United States, where governmental intervention in the markets for agricultural commodities went further than in any other exporting country, wheat marketing was little affected during 1936–37 and 1937–38. Benefit payments were not made for wheat acreage adjustment (restriction). In 1937 farmers co-operating under the soil-conservation program were even permitted to expand wheat acreage, provided they curtailed their acreage seeded to other soil-depleting crops. This resulted in some additional expansion of wheat production.[2] However, American wheat growers were receiving benefits under the soil-conservation programs in so far as wheat was included in the group of soil-depleting crops. This situation continued for the 1938 crop. No separate acreage restriction was set for the

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[1] See J. S. Davis, "The World Wheat Situation, 1937–38, A Review of the Crop Year," WHEAT STUDIES, December 1938, XV, 195–97.

[2] The AAA estimated this additional increase in wheat production in 1937 at about 5 million bushels. See *Agricultural Adjustment, 1937–38, A Report of the Activities Carried on by the Agricultural Adjustment Administration* . . . . (U.S. Dept. Agr., Agr. Adj. Admin. G-86, January 1939), p. 148. Hereafter cited as *Agricultural Adjustment, 1937–38.*

1938 wheat crop, and the acreage allotment of 62 million acres, set up by the Agricultural Adjustment Act of 1938, was used only as a basis for calculating benefit payments.[1] The acreage sown for harvest in 1938 was close to 80 million acres. There were only minor instances of government marketing intervention, such as subsidization of flour exports from the Pacific Northwest to the Philippines. Generally speaking, the return of the United States as a major wheat exporter in 1937–38, after three years on an import basis, occurred without special governmental assistance, simply because of the favorable development of the market situation.

The advance of international wheat prices in 1936–37, especially during the second half of the crop year, also sufficed to permit some unsubsidized exports of wheat on free international markets from the Danube countries. Their domestic wheat prices, held above the international level in one way or another by the respective governments, were approached or exceeded in 1936–37 by the export parity price. These countries, however, did not go so far in relaxing governmental controls as did the chief exporters. Hungary and Yugoslavia continued to base their wheat exports mainly on bilateral clearing agreements with such countries as Italy, Austria, and Germany. Rumania, exporting the greater proportion of her wheat to free markets, continued to pay export premiums, though only at a nominal level in the second half of 1936–37. In 1937–38, with some decline of international wheat prices from the peak in the spring of 1937, such Danubian countries as had substantial export surpluses (Rumania) again resorted to heavier export subsidization, while wheat of the chief exporters continued to be sold without governmental assistance.

This difference in the behavior of the Danube exporting countries must be explained by their special economic conditions. All these countries, reluctant to recognize openly the depreciation of their currencies and at the same time resisting decline of domestic prices, had for several years exercised exchange controls. In some degree they succeeded in preventing the deflation of their domestic prices. Some, under the protection of the exchange control, were even able to carry out a policy of internal credit expansion that raised internal prices. But this caused their internal prices to remain out of line with the international price level; and normal exports to free markets consequently became impossible.[2] Thus they were obliged either to expand their trade under bilateral agreements with other exchange-control countries, exchanging their products for imports from contracting countries at prices exceeding those on free international markets, or somehow to subsidize their exports to free international markets.

The price situation in the exchange-control countries tended to expand the trade of those countries with each other, rather than with free-currency countries. But the deliberate policy of most of them, aimed at securing free exchange from exports, compelled them to curtail their trade under clearing agreements and to stimulate their commercial relations with the free-exchange countries, using various kinds of export subsidization.[3] With this objective, practically all the Danube countries during recent years have acknowledged some degree of depreciation of their currencies, at least in their international trade with free-exchange countries. Exchange premiums above the official exchange rates were paid to their exporters who sent wheat and other commodities to the countries with free exchanges.

Yet such admission of currency depreciation by Danubian countries, finding its expression in exchange premiums paid to exporters, failed even in 1936–38 to maintain the flow of their exports to free-exchange countries. The acknowledged currency depreciations were substantially smaller than the depreciation of the British pound and the United States and Cana-

[1] *Agricultural Adjustment, 1937–38*, p. 115.

[2] Their wheat prices were above the international level of wheat prices, because their official exchange rates were above the actual value of their currencies when based on their purchasing power. At the same time, their domestic wheat prices were perhaps lower in relation to their respective general levels of prices than were wheat prices on the open markets in terms of the international price level.

[3] See League of Nations, *Report on Exchange Control Submitted by a Committee Composed of Members of the Economic and Financial Committees* (Geneva, 1938), especially pp. 28–34.

dian dollars, and still less than the depreciation of Argentine and Australian currencies. Hence the Danubian countries could not freely export wheat to the free-exchange countries even under the prices prevailing during 1936–38. They had to pay in addition direct export subsidies to wheat exporters, as Rumania did with exports to all free-exchange countries and Hungary with her exports of wheat at least to Switzerland.[1] But these export premiums inevitably followed from overvaluation of currencies by all Danube countries, even when exchange premiums paid to wheat exporters are taken into consideration. Wheat-export premiums paid by the Danubian countries thus have an economic meaning different from those paid by countries with no exchange control (the United States, Canada, Australia, etc.) or by countries in which exchange control is combined with a sufficient preliminary devaluation of currency (Argentina).[2]

This must be emphasized because the continuation of export subsidies in the Danubian countries during 1936–37 and their strengthening in 1937–38 were frequently used as a justification for introduction of some kind of wheat-export subsidization in the countries with free exchange. These facts were used particularly to justify the American wheat-export subsidy introduced in 1938–39. If we disregard, for reasons stated above, the continuation of wheat-export subsidization by the Danube countries, we may say that during 1936–37 and 1937–38 wheat marketing and especially exportation were little affected by government interventions. We may also say that the rapid re-establishment in 1938–39 of various forms of governmental marketing interventions, particularly of wheat subsidization, was a departure from earlier policy.

It is appropriate, then, to treat the development of government interventions on wheat markets during 1938–39 as a new and independent stage which must be explained, without going into detailed analysis of preceding schemes of governmental control, by peculiarities of the wheat situation in 1938–39. Government interventions on wheat markets were, on the other hand, so widespread in 1938–39, and their effects on wheat exports and on price developments on international and domestic wheat markets were of such consequence, that this experience deserves a close and detailed study. Government interventions in the chief wheat-exporting countries are of particular interest in this connection, and they occupy the center of attention in this study.

We limit our problem further by concentrating on those features of wheat subsidization which affect international trade in wheat, and represent direct or indirect subsidization of wheat exports from the principal wheat-exporting countries. The forms of such subsidization, their scope and extent as well as their effects, are the principal objects of this study.

When the present war is over, circumstances may conceivably prompt a more or less world-wide revival of wheat-export subsidization. If so, the experience of 1938–39 ought to be borne in mind. The present study, while focusing upon that experience, is designed also to provide a historical and theoretical background for appraisal of general governmental policies of wheat-export subsidization.

I. FORMS OF WHEAT SUBSIDIZATION IN 1938–39

The speed with which various forms of wheat subsidization in the chief wheat-exporting countries were restored in 1938–39 may be explained by two circumstances: (1) the almost unprecedented rapidity with which the

[1] According to Hungarian official trade statistics, the price of wheat exported in 1936, 1937, and 1938 to Austria and Germany, and in 1936 and 1937 to Italy exceeded that of wheat exported to Switzerland by about 40 or 50 per cent. See *Bulletin Statistique Trimestrial Hongrois*, published by the Office Central Royal Hongrois de Statistique, October–December 1938, XI.I, Table 17. This difference in prices cannot be explained by differences in quality of exported wheat, because that exported to Switzerland was presumably of the best quality.

[2] Professor Howard S. Ellis comes to a similar conclusion in his recent study "Exchange Control in Austria and Hungary," published in *The Quarterly Journal of Economics*, November 1939, Part II. He says (p. 19): ". . . . it should be emphasized that, unless the amount paid the exporter exceeds the handicap imposed by official exchange rates, there is neither genuine subsidizing nor, by the same token, 'exchange dumping.'"

relative scarcity of wheat in 1937–38 turned into a large surplus in 1938–39; and (2) the facts that the activities of the various governmental agencies were suspended but not abolished in 1936–37 and 1937–38, and that the agencies themselves were preserved.

The suddenness of the change in the wheat market situation was not unexpected or unpredictable. Small wheat supplies in 1936–37 were caused by poor yields, and in 1937–38 by a combination of very small carryovers of wheat from the previous year with only a moderate new crop. But in these two years the seeded wheat areas were of record size, and it was clear that the first satisfactory crop would result in a wheat surplus. Governments in the exporting countries therefore cautiously preserved the agencies which they could use in case a wheat surplus should reappear. Furthermore, even before the superabundance of wheat reappeared, some governments chose to strengthen the agencies controlling agricultural marketing and to change them from emergency devices into permanent institutions.[1] In the United States, the Agricultural Adjustment Act enacted on February 16, 1938 contained several provisions which made possible the strengthening of governmental control of the marketing of the 1938 wheat crop.[2] Nearly all of the chief exporting countries had in existence governmental organizations ready to intervene immediately on the wheat markets, if and when an emergency situation should appear to call for such intervention. In the Danubian countries, as mentioned above, such organizations had even continued their activities during 1936–37 and particularly in 1937–38.

Canada

Of the overseas wheat exporters, Canada was in a position to change her policy from virtual nonintervention — the situation in 1937–38—to an active and complete control of wheat marketing in the simplest and practically imperceptible manner: it was necessary only that the price fixed for wheat by the Canadian Wheat Board should be somewhat above parity with the market export price.

The duty of the board, subject to the approval of the Governor in Council, is to fix the price that it will pay producers for wheat delivered to the board;[3] but in the act itself there are no directions as to the factors to be considered in fixing this price. In 1936–37 and 1937–38 the Winnipeg market price of wheat did not decline to the board's buying price under the terms approved by the Governor in Council, and for this reason the board handled practically none of the 1936 and 1937 crops. On August 4, 1938, the government announced its approval of the minimum price of 80 cents a bushel for No. 1 Northern wheat at Fort William, as fixed by the board. This price was 7½ cents below the minimum of the previous year, and it was also somewhat below the Winnipeg market price at the time of its announcement. But soon (on August 15) the Winnipeg market price of cash wheat declined below the fixed price, and continued below during the rest of the crop year. Hence, the CWB received practically all wheat marketed by farmers of Western Canada in 1938–39, but there was practically no organizational change in the control of Canadian wheat marketing.

It is also hardly possible to say that there was definite change from previous years in the bases upon which the minimum price was fixed. The board may use several bases in fixing its buying price, and different considerations probably rule in different years.[4]

[1] The intention of the United States government to develop out of the emergency legislation of 1933 a long-time farm policy was expressed as early as the fall of 1935. See *Agricultural Adjustment, 1937–38*, pp. 97–98, referring to President Roosevelt's public statement of Oct. 25, 1935.

[2] For a general analysis of the provisions of the act relevant to wheat marketing, see Wheat Studies, May 1938, XIV, 346–49.

[3] Section 8*a* of the Canadian Wheat Board Act of 1935.

[4] See an article by T. W. Grindley, "The Canadian Wheat Board," *Canada Year Book 1939* (Ottawa, 1939), p. 575. The following statements by the Canadian Minister of Agriculture, James G. Gardiner, in an address delivered at Melville, Sask., in February 1940 are pertinent to retrospective explanation of the motives behind the establishing of the board's purchase price for wheat from the 1938 crop at a relatively high level: "During the period of intense war fear (1938–39) we encouraged those who are wheat growers to remain on the land and go on producing even against great odds. . . . .

"Immediately the intensive war fear period of 1938 pushed wheat to new low levels we pressed the

Generally speaking, the setting of a minimum price is the most delicate problem; and the board must be extremely careful in fulfillment of this duty because the fixed price, once established, cannot be changed until the end of the crop year. At the same time, the fixed price somewhat determines the farmers' wheat deliveries to the board, as their self-interest will lead them to make such deliveries if the open market price is below the fixed price. This is perhaps the fundamental weakness of the CWB; it may be either completely inactive, or obliged to take on the full burden of marketing the total crop, depending on whether the fixed minimum price is below or above the open market price.

The price fixed under the act has no direct relationship to the price at which the board sells wheat on domestic markets or to exporters. The fixed price is paid to producers only, and the board may purchase wheat only from producers.[1] Wheat once sold by a producer through other channels or sold by the board cannot, according to law, be redelivered to the board. The fixed price rules only the relationship between the board and the wheat growers, and not the prices on either local or terminal markets, or the export prices. These depend on the selling policies of the board and on its selling prices, for which the act leaves wide discretion to the board.[2] With the announcement, on August 4, 1938, of the fixed minimum price to be paid to producers in Western Canada, the government found it necessary once more to reassure the milling and grain trades of the world that "notwithstanding the internal initial price of 80 cents per bushel, the Canadian Wheat Board will continue its work of encouraging the use of Canadian wheat which will at all times be competitive on the world's markets."

Premier MacKenzie King, in a public statement on August 5, emphasized that the fixed price had no necessary relation to the open market price at which Canadian wheat would continue to be sold, and added that at no time would wheat under control of the board be held off the market on account of price. He emphasized also that the board is forbidden to hoard wheat.[3] The Liberal Government of Canada was thus careful from the beginning not to repeat the policy of price stabilization of the early 'thirties, which resulted in an accumulation of enormous stocks of wheat in the hands of governmental agencies. Rather, it planned to continue the *relatively* free-selling policy that had been pursued by the *second* Canadian Wheat Board during the crop year 1935–36.

United States

In the United States, the new Agricultural Adjustment Act of 1938 placed at the government's disposition several means of control over the marketing of the 1938 wheat crop. When the act was passed, winter wheat had been sown and preparation for spring sowings were already far advanced. Hence, no acreage restriction was undertaken for the 1938 wheat crop. Wheat acreage was merely included in a general group of soil-depleting crops, under the Soil Conservation Program.

Compliance with this program was made the condition upon which wheat growers could claim loans on wheat from the Commodity Credit Corporation or from agencies co-operating with it. The offer of such loans to co-operating producers became mandatory under the 1938 act, when the July crop estimate for wheat indicated production in excess of a normal year's domestic requirements and exports. The act also prescribed maximum and minimum limits for rates on loans which the CCC was directed to make available to co-operating growers. When formal announcement of the wheat-loan program was made on July 14, 1938, rates were fixed at the lowest limit permitted by the act.

When Congress was considering the bill, Secretary Wallace had warned against fixing loan rates on wheat (and cotton), except in an

wheat board into service to assure a price which brought all the wheat to the board and paid the farmers a bonus of 18 c. a bu. This was the first time in Canada that a government had deliberately paid farmers more than the market price throughout a crop year. We took this action under the only legislation available because of both national and international necessity." *Southwestern Miller*, Feb. 13, 1940, p. 24.

[1] Before the amendment of the act in 1939, the fixed minimum price related only to wheat produced in Western Canada; but the extension of the system to Ontario wheat is of negligible international significance.

[2] Section 8*b* of the Act.

[3] See *Northwestern Miller*, Aug. 10, 1938, p. 32.

emergency, at levels so high as to maintain prices above world prices and hence to stop exports of these commodities.[1] Unhappy experiences with cotton loans in several previous years had shown the danger of loans at excessive rates.

But even the lowest wheat loan rates permissible under the 1938 act happened to be above export prices.[2] There was danger, therefore, that loans offered at such rates would prevent the normal flow of wheat into export and would lead to heavy accumulation of stocks in the hands of governmental agencies. Dangers of such an accumulation were further increased by an early amendment to the act which provided that the acreage allotted to wheat should be not less than 55 million acres, although the formula in the original act would have required more drastic restriction of the 1939 acreage.

Apprehension that the loan program would prevent normal wheat exports was presumably prominent among the factors that led Secretary Wallace to change his previous stand in opposition to export subsidization of staple agricultural commodities such as wheat and cotton. He had never before used for subsidization of exports of *major* farm commodities the customs revenue fund placed at his disposal (in an amount of 30 per cent of customs receipts), and he had not supported the bill giving him this power when Congress had it under consideration.[3]

Another reason for acceptance of the new policy of wheat-export subsidization was the eagerness to achieve an international agreement among the principal wheat-exporting countries, in order to supplement national measures by regulating the international movement of wheat. The Secretary of Agriculture assumed leadership in this direction. When prompt agreement could not be secured, the adoption of export subsidies by this country seemed to constitute a means of inducing other exporting countries to come to terms. Even this pressure proved insufficient to bring about an international agreement, but efforts continued through the crop year and were abandoned only on the eve of the war, late in August 1939.[4]

The reason officially given, in subsequent explanations, was that competing countries were subsidizing their wheat exports, and that this government had to follow suit in order to retain its "share" of the export market.[5] This explanation seems to us not strictly correct. When, in August, the United States wheat export subsidy was inaugurated, this was the first of the four chief exporting countries to adopt such a policy. Canada had merely undertaken to keep Canadian wheat at all times competitive on world markets. Such a policy might turn later into actual subsidization of exports, if the CWB should aggressively sell its wheat at great losses, but there was no evidence of this at that time. The Argentine and Australian plans were adopted later. Only the Danube countries were employing export subsidies, under special conditions already explained.

The United States export subsidy program was put in operation on August 26, 1939,

[1] See *Agricultural Adjustment, 1937–38*, p. 101.

[2] For details of the loan rate schedule, see WHEAT STUDIES, September 1938, XV, 23–25. For discussion of the effect of the government loan program on prices, see *ibid.*, January 1939, XV, 280-81, and *ibid.*, September 1939, XVI, 31–32.

[3] Section 32 of the Agricultural Adjustment Act, 1933, as amended in 1935. Concerning its history and application, see E. G. Nourse, J. S. Davis, and J. D. Black, *Three Years of the Agricultural Adjustment Administration* (Washington, D.C., 1937), pp. 186–94.

[4] See WHEAT STUDIES, December 1939, XVI, 139–40.

[5] R. M. Evans, AAA Administrator, told farmers and AAA committeemen at Amarillo, Tex., Aug. 11, 1939: "When the large world supply became visible last year the United States tried to get the surplus producing countries to get together and agree to supply only the amount of wheat the importing countries were willing to accept at a reasonable price. Our competitors remembered the droughts and they did not believe that the American wheat farmer was still in the export business. Each country tried to get a share of the world market at the expense of all the others. They provided subsidies of one kind or another. There was nothing for our government to do but also to make a subsidy available to our farmers in order to retain their share of this market. This is exactly what we did."

In his annual report for 1939, released on January 2, 1940, Secretary Wallace said: "It became increasingly apparent during the summer of 1938 that United States exporters would not be able to continue anything like normal sales of wheat and flour abroad without some form of Government assistance. All other leading wheat-producing nations were already subsidizing their exports. The wheat and flour export program was put into effect in August 1938 . . . ." (p. 22).

when the Federal Surplus Commodities Corporation issued offers to purchase wheat "for export and domestic relief requirements." In view of the previous opposition of Secretary Wallace to export subsidization, it came as a kind of surprise, and he justified it as an emergency program rather than a permanent change in his foreign trade policy.[1]

Export of at least 100 million bushels of wheat including flour was announced as a minimum objective for the 1938–39 crop year. The FSCC was charged with executing the subsidy program by purchasing wheat from domestic producers and traders and reselling it to exporters, assuming losses on these resales, and making them up from the customs-revenue funds. In carrying out the program, the facilities of the regular wheat trade were used.

The goal for flour, included in the above total of 100 million bushels, was about 5 million barrels. Technically, subsidization of flour involved "indemnity payments" to exporters to cover the difference between domestic and foreign prices at the time of sale. The plan in effect in 1938–39 was an extension of the subsidy program on exports of Pacific Northwest flour to the Philippines, which had been in operation since March 1936.

The United States indemnity on flour exports is a plain case of direct subsidization of exports. The system applied to wheat exports, though slightly less direct, was no less clearly a case of export subsidization. Both constituted examples of government-financed "dumping."[2] As we shall see, so did the Argentine plan in operation, while the Canadian did not.

It is necessary to emphasize that the FSCC, in contrast with the Canadian Wheat Board, was not restricted to purchasing wheat from producers only, but could and did purchase also from traders. Consequently, the purchasing policy of the FSCC affected not only producers' prices, but all domestic prices of cash wheat as well as of futures.[3]

[1] The first public mention of the possibility of some kind of subsidization of wheat exports seems to have been made by Secretary Wallace on Aug. 11, 1938 before the conference of AAA state committeemen in Washington, D.C. Then he expressed doubt "whether we will be able to put more than 50 million bushels on the world market unless we take some special types of action designed to hold on to our fair share of the world wheat trade," and he defined this share as 20 per cent.

Speaking on Aug. 27, 1938 before the International Conference of Agricultural Economists in Canada, Secretary Wallace stated:

"Export subsidies are a type of economic warfare which, if used on a large scale and for a long time, eventually and almost inevitably harms the nation which uses the subsidy more than it harms anyone else. Nevertheless, in certain emergencies, there may be exceptional and compelling circumstances justifying the use of export subsidies for limited and temporary purposes. It is such a situation that now confronts us in the case of wheat." *Proceedings of the Fifth International Conference of Agricultural Economists* (London, 1939), p. 276.

In his 1939 report Secretary Wallace also emphasized the emergency character of the wheat (and cotton) programs, as appears from the following statement: "Adapted to meet an emergency situation, these export programs should not be considered a long-term solution of the export problem for wheat and cotton. . . . . As an emergency device, with the limited objective of retaining for the United States a reasonable share of the world's trade in wheat and cotton they have ample justification. In the long run, however, the restoration of our agricultural export trade requires a general development of truly reciprocal commerce" (p. 12). But, from further discussions of the farm price and farm income policies relating to wheat, one may conclude also that export subsidies may remain as a part of a permanent policy. Indeed, on page 26 of the report these statements may be found: "Acreage control with benefit payments would not by itself make a satisfactory program for wheat. Yields of wheat vary considerably from year to year; moreover, we normally produce considerable wheat for export. . . . . Supplementary features of our national program, such as commodity loans, crop insurance, parity loans, and *export subsidies seem indispensable for wheat* [italics ours]."

[2] Viner defines "dumping" thus: "'sale at prices abroad which are lower than current home prices' is properly to be regarded as an instance of dumping irrespective of whether or not the export price is below the foreign market price, or is one with which foreign competitors cannot cope, or is unremunerative to the seller. The one essential characteristic of dumping . . . . is price-discrimination between purchasers in different national markets." Jacob Viner, *Dumping: A Problem in International Trade* (University of Chicago Press, Chicago, 1923), p. 4.

[3] According to the official announcement, the FSCC was directed to purchase only cash wheat, and bought no futures directly (*Southwestern Miller*, Aug. 30, 1938, p. 24). Indirectly, however, the government was a powerful factor in the futures market. Simultaneously with sales of wheat abroad, the exporting wheat merchants purchased wheat futures on a large scale. Consequently, by timing its sales abroad, the FSCC could influence futures markets; and this apparently was its policy, with a view to maintaining stability in the domestic futures market. *Ibid.*, July 4, 1939, p. 19.

Herein lies an important difference between the interventions of the United States and Canada. The Canadian plan implied outright fixation of the price to producers of wheat, and, with the 1938 price fixed above export parity, resulted in the governmental agency's taking over the total crop of Western Canada for marketing on domestic markets and abroad. This may impress one as a much greater degree of governmental regulation of wheat markets than the system employed in the United States, where there was no price fixation[1] and no taking over by the government of a greater part of the crop for marketing. On the other hand, the policy of the Canadian government was to maintain open-market prices of wheat in Canada, through the selling of the Canadian Wheat Board, on a level with wheat prices in international markets. Canadian millers could buy wheat at the same prices as exporters.[2] In the United States, on the contrary, the price of wheat on domestic markets was artificially maintained above the international market level through the combined effect of the export subsidies and of governmental loans at rates above export parity.

There was perhaps more governmental interference in wheat markets in the United States than in Canada. By diverting abroad before June 30, 1939, through subsidized sales for export, approximately 94 million bushels of wheat (including flour),[3] the United States government succeeded in curtailing the accumulation of wheat under governmental control at the end of the crop year. On the other hand, the export-subsidy program was used as a device for price maintenance on domestic markets and could thus support the wheat price at a level which prevented excessive flow under governmental loans of that surplus wheat which remained in the country. Furthermore, in certain cases, the FSCC succeeded in purchasing wheat for export supplies by paying borrowers premiums over the loan rates. Some 15 million bushels of wheat were bought thus in the Pacific Northwest (p. 57). By its program of subsidized exports, therefore, the government succeeded in counteracting some of the undesirable effects of the high loan rates. But the result was achieved by a considerable degree of governmental intervention which maintained the domestic market price upon an artificial level, and that level prevented any commercial wheat exports after the adoption of the subsidy and also introduced much uncertainty on domestic markets.

The maintenance of domestic wheat prices above a competitive international level is represented by the United States Department of Agriculture as a positive achievement which materially increased the income of the American growers.[4] How far this was actually the case, however, depends on how much the dis-

[1] Secretary Wallace consistently objected to various price-fixing programs proposed at that time. Commenting on the government's wheat-loan program at its announcement on July 14, 1938, he emphasized that "The loans are neither intended nor expected to fix the price of wheat, but only to promote the orderly handling of an especially large crop until other parts of the program can take effect." *Southwestern Miller*, July 19, 1938, p. 21.

[2] Under agreements between the CWB and western millers, the latter obtained their local milling requirements of wheat at the board's selling prices, and not at its purchase prices paid to producers. However, local sales of wheat for feed and seed by elevator companies under contract with the CWB, which presumably were not large, were at the board's fixed (carlot) price less freight to Fort William or Vancouver. In the case of feed wheat, the companies were also instructed to cancel this basis if the open market price for that grade should go above the board's price. Thus, feed and seed wheats were purposely sold on local markets of Western Canada at prices above the open market prices, evidently in order to prevent resales of this wheat to the board. See *Memorandum of Agreement* between milling companies and the Canadian Wheat Board, as well as Canadian Wheat Board, *Instructions to Trade* (mimcographed), No. 30, Sept. 13, 1938 and No. 48, Oct. 20, 1938.

[3] U.S. Dept. Agr., *The Wheat Situation*, Sept. 25, 1939, p. 16.

[4] Secretary Wallace stated in June 1939: "The public can appraise itself the full extent to which the United States wheat program in all its phases has protected the American wheat farmer from the troubles that have beset wheat farmers in most other parts of the world. . . . . Wheat prices in the United States have for the last six months averaged approximately 11 cents a bushel above world levels. . . . ." See U.S. Dept. Agr., press release of June 19, 1939. Mr. Evans, Administrator of the AAA, told farmers in August 1939 that conservative estimates put the increase of farmer income resulting from the maintenance of domestic wheat prices above the world levels at more than 60 million dollars, while the cost of subsidies was about 25 million dollars. See his address at Amarillo, Texas, Aug. 11, 1939.

parity between the United States domestic price of wheat and the world price was caused by the price-raising effects of the export subsidy on domestic markets, and how much by the price-depressing effects of the same subsidy upon the world prices. This problem will be discussed later (pp. 84 ff.). Here it is pertinent to mention that, when the program of subsidized exports was announced, it substantially depressed wheat prices on world markets; and that these depressing effects on world wheat prices were noticeable also during the first three months of the program's operation when subsidy rates were rapidly rising,[1] as well as during later months (see p. 57). During the earlier months, the depressing effects of the United States export subsidies on Liverpool wheat prices were of greater magnitude than the price-supporting effects on wheat prices in the United States.[2]

The chief exporters of the Southern Hemisphere, not harvesting their crop until December–January, could postpone decisions on wheat policies to a later date. However, world wheat prices had already declined in July–August, and particularly early in September, to so low a level that Southern Hemisphere wheat growers began vigorous campaigns for governmental assistance in order to meet the emergency.

Argentina

As early as September 30, 1938, the Argentine Parliament, under agrarian pressure, authorized the executive to fix minimum prices for wheat (and also for linseed and corn) produced in 1938–39 or to subsidize producers of these cereals in some other way which it found appropriate, if such measures appeared necessary to protect producers.[3] The same law authorized the executive to finance grain purchases, as well as eventual losses of these purchases at fixed prices, from profits on official exchange operations,[4] or, in case this source was insufficient, from advances by the Banco de la Nación Argentina. These were the same sources as had been at the disposition of the Argentine Grain Regulating Board in 1933–36. Active discussions followed concerning the level of minimum prices.[5] Finally, by a decree of November 14, the President of the Republic fixed the basic price for wheat at 7 pesos per quintal of 100 kilograms (equivalent to about 59½ cents per bushel at that time) for Grade No. 2, basis 78 kilogram wheat f.o.r. Buenos Aires. The minimum price for the new crop was fixed above the market price for old-crop wheat at the time of its announcement.[6] Another decree on the same day designated new members of the Grain Regulating Board, which had been inactive for two years, and the board began operations on November 21, 1938.

The authorizing act had stipulated that the minimum prices must be exclusively for the benefit of the producers. One of the first actions of the board was to take measures to enforce this stipulation.[7] The board also un-

[1] Officially announced export indemnities on flour sales for export from points east of the Rocky Mountains rose from 30 cents per barrel on September 7 to $1.05 per barrel on December 2. Weekly average losses on sales of wheat for export by the FSCC rose from 7 to 8 cents per bushel during the first week of operation of the program to 25 to 30 cents per bushel during December (see pp. 61–63).

[2] See Holbrook Working's price analysis in Wheat Studies, September 1938, XV, particularly pp. 11–12, 16; and also *ibid.*, January 1939, XV, particularly p. 276.

[3] By Law 12,557 of September 30, 1938, on Minimum Prices of Wheat, Linseed, and Corn. Comisión Nacional de Granos y Elevadores, *Boletín Informativo*, Oct. 15, 1938, p. 900, and Nov. 15, 1938, p. 1006.

[4] On Nov. 7, 1938, by raising the official selling rate for the pound sterling from 16 to 17 pesos and leaving the buying rate at 15 pesos, the government doubled the margin between the selling and purchasing rates from which "profits" on official exchange operations are derived.

[5] Farmers' organizations demanded, of course, higher levels for wheat, not less than 9 pesos per quintal. Trade interests first objected to any fixed price and later insisted on such a low level for the minimum price that it "should give the grower no profit whatsoever and maybe a small loss," and indicated that the fixed price should not exceed 6 pesos per quintal. *Times of Argentina*, Oct. 31, 1938, p. 13; Nov. 14, 1938, p. 24.

[6] On November 15, when the price was announced, the price of basic wheat in Buenos Aires was 6.75 pesos per quintal; but a week earlier it had been 6.00 pesos, and it declined to that level two weeks later. The average for November was 6.16 pesos per quintal and for December 5.96 pesos.

[7] See *Times of Argentina*, Nov. 21, 1938, p. 10; also *Boletín Informativo*, Dec. 15, 1938, p. 1162; and Canada, Dominion Bureau of Statistics, *Monthly Review of the Wheat Situation*, Dec. 23, 1938, p. 14. The board sent out circulars and leaflets indicating net prices to be paid for wheat delivered at every

dertook an intensive propaganda campaign to show the growers the advantage of selling directly to the board and of using the network of local branches of the Banco de la Nación Argentina, which served as the board's agencies for this purpose.

It seems reasonable to assume that wheat growers took full advantage of the fixed minimum prices, in their sales not only to the board itself but also to other buyers. Until the report of the board for the 1938–39 crop appears it is impossible to say what proportion of the total purchases of the GRB was composed of direct purchases from producers.[1] Presumably the increased facilities extended in 1938–39 to farmers for direct sales to the board resulted in this form of sale being of greater importance than it was in the earlier years of the board's operations, when purchases from traders had predominated.[2]

Minimum prices were fixed only for new-crop wheat up to specified standards of quality. Old-crop wheat, and new-crop grain of inferior quality or light weight, were sold by farmers through local dealers at free-market prices. Such prices were substantially below the official minimum price. Consequently the fixed minimum price for wheat did not rule upon all domestic wheat markets, particularly in the early part of the commercial year. After a few months, however, millers were obliged to cover their requirements for wheat by purchases from the board, and the fixed minimum price was increasingly the factor determining wheat prices on domestic markets.[3] This was inevitable because the selling policy of the Argentine board, unlike that of the Canadian, was a two-price system. In transactions between the Argentine board and wheat exporters, international prices were the rule. In its sales on domestic markets, higher prices were charged, based on the fixed minimum price at which the board purchased from producers.[4]

Prices of wheat futures on the Buenos Aires grain futures market were also based on the fixed minimum price. Hence their movements up to the abolition of the fixed price on September 6, 1939, had little relation to prices paid to the board by exporters and, consequently, to the international level of prices.[5]

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station throughout the country. Farmers were warned to take care that in case of sales made to buyers other than the board's agencies no deductions were made from the official minimum prices. In case of doubt farmers were to address the nearest branch of the bank or the board itself. Buyers were advised that in case of proved infraction upon the decisions of the board they would cease to be its agents.

[1] We must here correct a statement made in our review of the crop year 1938–39 (WHEAT STUDIES, December 1939, XVI, 136) that the Grain Regulating Board was restricted to buying from growers and co-operatives. Such restriction related only to purchases of wheat certified by the National Grain and Elevators Board at the Rosario and Tancacha terminal elevators, for which a quality premium (of 0.16 pesos per 100 kilos) was established. See *Times of Argentina*, Dec. 19, 1938, pp. 7–8.

[2] During 1933–34, the first year of the board's operations, nearly 90 per cent of the wheat was bought by the board from intermediaries and only a little more than 10 per cent from farmers or their co-operatives. Banco de la Nación Argentina, *Economic Review*, October–November 1934, VII, 143–48.

[3] Early in June the Buenos Aires correspondent of the Dominion Bureau of Statistics in Canada reported that "the local millers have recently had to resort more freely to the Board for their supplies, as most of the grain not up to the standard specified by the Board appears by now to have found an outlet." But early in August the same correspondent reported some purchases by millers in Buenos Aires at 6.30 pesos per quintal, or below the minimum price of 7 pesos.

[4] A two-price system was followed by the GRB even after the fixed minimum price was abolished on Sept. 6, 1939. The board's selling price of wheat for exporters continued below its purchase price up to December, but measures were taken by the government to enable the board to dispose of at least a part of its wheat on domestic markets without losses. By the decree of October 10, domestic millers were obliged to cover their requirements for wheat up to Nov. 30, 1940 exclusively by purchases from the board at a price of 7 pesos per quintal f.o.r. Buenos Aires (*Times of Argentina*, Oct. 16, 1939, pp. 23–24; and *Boletín Informativo*, Oct. 15, 1939, pp. 1074–75). Only in December 1939, after the sharp rise of Argentine wheat prices reflecting the poor Argentine crop of 1939–40, the two-price system automatically was discontinued, and the government also changed its regulation with regard to flour mills. They were permitted to purchase wheat from the board at 7 pesos per quintal up to 40 per cent of their requirements until Nov. 30, 1940 (*Boletín Informativo*, Dec. 31, 1939, p. 1386). With higher prices of wheat in international markets, their obligation thus turned into a privilege.

[5] The grain futures market in Buenos Aires asked the government to be permitted to deal in wheat at the international price. The GRB was reported to have advised the government to permit such operations in futures. It was pointed out that these facilities would be used mainly for hedging purposes. But the requisite permission was not given. *Times of Argentina*, Dec. 26, 1938 and Apr. 24, 1939.

Thus, in Argentina, as in the United States, the wheat price on domestic markets was artificially maintained above the world level, not only for wheat producers but also for most transactions other than those between the board and wheat exporters. The export practice of the Argentine board constituted dumping, as was true of American practice.

The marketing policy of the Argentine board, however, was for a time extremely conservative. Indeed, in the first quarter of the Argentine marketing year, it may even be described as a withholding of wheat from the market. Only about 10 per cent of the large exportable surplus of Argentina was exported during January–March 1939, the season when Argentine shipments are usually at their peak. In January–February, Argentina exported even less than in the same months of the previous year, though her exportable surplus was more than twice as large. Only in 1935–36, when the Grain Regulating Board startled the world by suddenly raising its buying price much above the current price, did Argentine exports in the first quarter of the calendar year constitute about as small a proportion of the exportable surplus; and the Argentine crop of that year was very small.

From the end of March, Argentine exports became heavier, and in June still more so; but up to the middle of June the board's selling prices showed no declining tendency. On the contrary, in May and the first half of June, they seem to have been above the January–March level. Generally speaking, the selling prices during January–June fluctuated between 5.10 and 5.50 pesos per quintal, and only in July or early August did they decline below 5 pesos.[1]

Thus, there is no evidence that the Grain Regulating Board pressed wheat on the market, though it had to sell wheat to exporters at the world price, which before its decline at the end of 1938–39 was on the average about 25 per cent below the fixed purchase price. When, in the second half of June and July, Argentine wheat afloat to Europe was offered on the markets at distressed prices, this presumably resulted from an overbought position of exporters.

The fixed minimum price evidently satisfied the producers. By the beginning of August, most of the available wheat of export quality had passed into the hands of the board. But, according to the trade estimates, less than half of it had been sold at that time, and wheat exports from Argentina in January–July 1938–39 equaled only about 40 per cent of her exportable surplus.[2]

Australia

Rapidly declining wheat prices during April–July of 1938, coupled with the effects of the drought in some areas (especially in Victoria), gave rise to an emergency in the Australian wheat industry also. The Commonwealth government, co-operating with the states, elaborated a plan of assistance to wheat growers in order to meet this emergency. Agreement on the forms of assistance and the sources of funds for its financing had been reached as early as August–September 1938,[3] but the necessary legislation, which required both Commonwealth and state action, was not passed until early in December. Thus, after an interval of two years when no assistance

[1] The selling prices of the Grain Regulating Board are not officially reported. However, there is information in the trade press, and from time to time they were also reported from Buenos Aires by the correspondent of the Canadian Dominion Bureau of Statistics. This last source mentions the following selling prices of the board in Buenos Aires at the beginning of successive months as follows, in pesos per quintal: April, 5.10; May, 5.35; June, 5.55; July, 5.27½; August, 4.77½. The price at Rosario is usually 10 centavos lower. According to the trade press, the board's selling prices for the earlier months of January–February were around 5.20 pesos per quintal. The reviewer of the grain trade in the *Times of Argentina* estimated in July that Argentina had been able to export from the beginning of the campaign about 2¼ million tons from her large exportable surplus "at a price averaging 5.30 pesos or a trifle over, from Rosario per 100 kilos." This means that the price in Buenos Aires was on the average 5.40 (or slightly over) pesos per kilo. *Times of Argentina*, July 17, 1939, p. 24.

[2] See Canada, Dominion Bureau of Statistics, *The Grain Situation in Argentina* (mimeographed), Aug. 16, 1939. Total purchases of the Grain Regulating Board at the beginning of August 1939 were estimated by the Buenos Aires correspondent of the Bureau as at least 275.5 million bushels. The eventual total was 298 (p. 70).

[3] See Commonwealth of Australia, Parliamentary Debates, Fifteenth Parliament, First Session, Second Period, 1937–38. Announcement of the Minister of Commerce, Sir Earle Page, on Nov. 18, 1938.

was given to Australian wheat producers, subsidization of wheat was restored in Australia.

The Australian plan was a rather complex combination of several legislative acts that need not be discussed in detail here.[1] The principal Commonwealth acts involved are the Wheat Industry Assistance Act and several taxation acts incorporated in the Flour Tax (Wheat Industry Assistance) Assessment Act. The legislation of the states, on the other hand, provided for fixing prices of flour and some other wheat products in the respective states, and for establishing the organization and procedure for intrastate distribution of financial grants allocated to them under the Commonwealth acts.

The new scheme of assistance to Australian wheat growers, like previous schemes there, involved no governmental interference in the marketing of wheat and its export, or any control of export and domestic wheat prices. The so-called "home-consumption price" of wheat, 5*s*. 2*d*. per bushel f.o.r. Williamstown, Victoria, was established as a base on which the price of flour and of some other products were fixed by the respective states. Whenever the export price of wheat (f.o.r. Williamstown) fell below the base, a tax on all flour consumed in Australia was to be imposed under the various Commonwealth acts.[2] The rate of tax was to be sufficient to compensate for the difference between the "home-consumption price" of 5*s*. 2*d*. per bushel of wheat and the current market price. With the variations of the market price of wheat, the rates of the flour tax had to be adjusted to these variations by a Wheat Stabilization Advisory Committee created under the Commonwealth legislation.[3]

All money collected from flour taxation was deposited in the Wheat Industry Stabilization Fund, which was administered by the above-mentioned Advisory Committee, and from that fund allocations were made to the states. In order to put the scheme into immediate operation, the act provided for advances up to £2,000,000 from the Commonwealth treasury.

It was estimated that during 1938–39 the total proceeds of the flour tax would be £3,500,000 to £4,000,000 Australian (13 to 15 million dollars at the rate of exchange prevailing in July 1939). Of these proceeds £500,000 were reserved for special purposes, according to provisions of the Wheat Industry Assistance Act. In 1938–39 the reserve was used for the alleviation of distress to wheat farmers affected by the drought and was distributed among the various states in proportion to their needs for drought relief.[4] The rest of the fund was distributed among all wheat growers on the basis of wheat sold or delivered for sale.[5] It was anticipated that these payments would approximate 5*d*. to 6*d*. per bushel.

[1] A detailed analysis of all pertinent legislative acts is given by Leo J. Schaben, "The Australian Wheat Industry Assistance Scheme," *Foreign Agriculture*, November 1939, III, 509–24.

[2] In addition to the flour tax collected from domestic flour under the Flour Tax Act, 1939, corresponding taxes were imposed on imported flour and specified imported goods containing flour under the Flour Tax (Imports and Exports) Act, 1938. See *Commercial Intelligence Journal*, Jan. 28, 1939, p. 132, and Feb. 11, 1939, pp. 194–96.

[3] Whenever, on the other hand, the export price of wheat (f.o.r. Williamstown) exceeded 5*s*. 2*d*. per bushel, the tax had to be imposed on sales of wheat by producers, not exceeding 1*s*. per bushel (whether for local consumption or for export). From the proceeds of this tax a bounty to flour millers was to be paid in order to compensate them for the excess of wheat prices above 5*s*. 2*d*.—the base on which flour prices were set by state laws. As wheat prices have been below that base since the law was passed, this stipulation of the Australian Wheat Industry Assistance scheme has not been in operation. The flour tax was applied from December 3, 1938. During December–July 1938–39 it varied between £5 per ton of flour (as it was from May 19 to June 15) and £6 (after July 21). There were numerous complaints in the Australian farm press that the tax on flour based on wheat prices ruling in Williamstown (Melbourne) was not sufficiently high to provide a "home-consumption price" of wheat at ports of 5*s*. 2*d*. a bushel as established in the act. The Williamstown wheat price, reflecting the drought in Victoria, was higher than usual in relation to wheat prices in other ports. This reduced the flour tax based on the difference between the "home-consumption price" of 5*s*. 2*d*. and the market price in Williamstown. See *The Land* (New South Wales farm weekly), Feb. 3, 1939, p. 10.

[4] Victoria, as the most affected, obtained £200,000; New South Wales, South Australia, and Western Australia obtained £100,000 each. During each of the next succeeding years, grants to the states for special purposes are to be used primarily for financing the transfer of wheat growers from submarginal lands.

[5] The first instalments of both types of payments were disbursed in the various states sometime in February 1939 from the above-mentioned advance by the Commonwealth government.

The money for drought relief was distributed among those growers whose average yields were below a specified yield per acre—in Victoria below 7 bushels per acre and in New South Wales and Western Australia below 9 bushels. This distribution was made in such a manner that the distressed farmers would receive from the drought relief an amount per acre which, together with the bounty paid them on each bushel of their production, would give them a total payment equal to that which growers whose yield just equaled the specified yield per acre would receive from the bounty paid per bushel of production.

Even at 6*d.* per bushel sold (or 9 to 10 cents per bushel), the Australian bounty was smaller than the subsidies which the Argentine and Canadian governments paid their wheat growers in the fixed purchase price of wheat. Those paid by the United States government were much higher (see p. 66).

Governmental control and interference were also the slightest in Australia. The flow of wheat to markets, domestic and foreign, as well as the wheat price formation, were left to the ordinary interaction of supply and demand. The government limited its task to the relief of farmers, both those distressed by drought and others affected by the low level of market prices.

It is necessary to add that Australia was more successful in disposing of her 1938–39 crop than were the other chief exporters. It is true that the Australian crop was somewhat below average, and that she benefited more than other exporters from the opening of an additional market for wheat in the Orient, although at low prices. But the Canadian crop too was relatively small, and on Oriental markets Australia had to compete with highly subsidized exports of wheat from the United States.

Danube Countries

Governmental assistance to wheat exporters from the Danube countries continued in 1938–39 without substantial changes. But with the great decline in world wheat prices, and with much larger export surpluses from the record crops of 1938, Danubian countries felt impelled to give much greater assistance to wheat exportation than in the two previous years, since they were reluctant to make much reduction in their domestic fixed minimum prices and in some cases even raised them.

In Bulgaria the grain monopoly raised its purchase price from 320 to 340 leva per quintal for soft wheat and from 350 to 370 leva for hard wheat.[1] In Hungary the minimum price of wheat for producers was fixed at 20 pengos per quintal of wheat from the 1938 crop, or about on the level around which the wheat price fluctuated during 1937–38.[2] In Yugoslavia the government-controlled privileged export company (Prizad), which was in charge of purchases of wheat for export with a view to price maintenance, purchased wheat during the first half of the 1938–39 crop year at 160 dinars per quintal, only some 10 per cent below its purchase price of the previous year.[3] In Rumania the minimum price for wheat from the 1938 crop was fixed at 400 lei per quintal instead of 420 lei as during the previous year. Later, the government lowered this price to 380 lei, as it lacked funds to maintain it on the earlier fixed level. But even that price was only 10 per cent below the minimum price fixed for the previous crop.

All these prices, when converted in currencies of the free-exchange countries at official exchange rates, were far above export parity with wheat prices ruling on free international markets. Consequently, in 1938–39 wheat exports from all Danube countries were possible only with some form of government assistance.

The Bulgarian grain monopoly purchased the whole wheat crop in excess of domestic consumption of producers, at a fixed price above the world market price. Consequently, the government lost heavily on its sales for export. Resisting these losses, it postponed wheat exports until late in the crop year and

[1] *International Review of Agriculture*, December 1938, XXIX, 583.

[2] See Alexandre Hubay, "Le problème de la vente du blé," *L'Est Européen Agricole*, October 1938, VII, 302.

[3] Dr. O. v. Franges, "Changes in the Export of Agricultural Products from Yugoslavia," *International Review of Agriculture*, January 1939, XXX, 1–22.

sold only a small part of the export surplus, carrying the larger part into the new crop year.

Hungary and Yugoslavia disposed of their wheat surpluses in 1938–39, as they had done before, mainly to countries applying exchange control; these, by various marketing regulations, also maintained their prices, including wheat prices, much above world markets. Extending to the buying countries under bilateral agreements some kind of a *quid pro quo*, such as purchases of industrial commodities also at prices above the world market, Hungary and Yugoslavia succeeded in 1938–39 in disposing of large portions of their wheat surpluses purchased from producers at prices above the world market, without excessive direct losses to the organizations in charge of wheat exports. In earlier years—from 1934 to 1937—Hungary had practiced such exports under the Rome agreements with Italy and Austria. In 1938, after the annexation of Austria by Germany, the Rome agreement lost its significance, but it was replaced by new bilateral agreements with Germany and Italy.[1] Yugoslavia also had clearings and quota agreements with various countries such as Germany, Italy, Czechoslovakia (later the protectorate of Bohemia - Moravia), under which she disposed of a certain quantity of wheat at prices above world market prices. These agreements were renewed for the 1939–40 crop year.[2]

But Rumania, exporting wheat in greater proportion to free markets, had to resort in 1938–39 to a larger direct subsidization of wheat exports. She first modified her subsidization of wheat exports in the form of exchange premiums paid on bills of exchange received for wheat exported to the countries with free exchange. In previous years, the National Bank had purchased such bills from wheat exporters at 38 per cent premium above the official exchange rate. In 1938–39, in addition to this, 30 per cent of such bills were left with exporters, who could sell them on the free market where they could obtain much better rates. Indeed, in September 1938 rates on the free market for sterling bills in lei were 60 to 70 per cent above the official rate; they increased greatly during the fall, and in January–February were more than 150 per cent above the official rate. For September–June the rates obtained for sterling bills in lei on the free market averaged some 120 to 130 per cent above the official rates.[3] This meant that exporters, retaining at their disposal 30 per cent of the exchange and selling it on a free market, could increase their proceeds from wheat exports in lei by 35 to 40 per cent above what they would receive at the official rates.

But this also indicates that the 38 per cent premium received by exporters on the total amount of their exchange bills in the previous years, and on 70 per cent of the total in 1938–39, was not sufficient to compensate them for the overvaluation of lei at the official rate of exchange. It thus explains why it was necessary to pay, in addition to the exchange premium, a direct subsidy in order to compensate exporters for the overvaluation of Rumanian currency under the exchange control and to enable them to export wheat on free markets.

In 1936–37, under the influence of rising wheat prices on international markets, direct export subsidies allowed to exporters were gradually reduced from 1,000 lei per ton during July–August to 250 lei in November–December, and to a nominal value of 50 lei per ton in January–April (about 1 cent per bushel at the official exchange rate), and then were completely abolished. In 1937–38, when the wheat prices on the world market declined, the export subsidy was re-established, but it fluctuated during most of the export season between 300 and 700 lei per ton. With a further decline of wheat prices in 1938–39, the direct export subsidy was fixed for August at 1,000 lei per ton, soon (still in August) raised to 1,200 lei, and finally (in October) to 1,300 lei or about 34 per cent of the fixed minimum price of wheat paid to producers.[4]

[1] See Hubay, *op. cit.*, p. 302.

[2] See *Bulletin de la Direction pour l'Achat et l'Exportation des Céréales* (Sofia, Bulgaria), July 20, 1939, pp. 196–98.

[3] See *Conjunctura Economiei Romanesti*, a monthly bulletin published by the Rumanian Association for the Study of Economic Conjuncture, June 1939, p. 1.

[4] Information on the size of subsidies from the *Buletinul Informativ*, an official monthly bulletin of the Rumanian Ministry of Agriculture, for various months.

Such increase of direct subsidies paid to exporters of wheat, coupled with the necessity of subsidizing unusually large export surpluses from the 1938 crop, resulted in a shortage in the fund collected by taxation of wheat and rye flour produced in commercial mills, from which direct wheat export subsidies were usually financed. Consequently, the Rumanian government had to finance export subsidies from other sources, mainly by borrowing from the National Bank. There are estimates that the cost of direct subsidization of wheat exports from Rumania in 1938–39 were two or three times the average of such costs for the three preceding years.[1] Such procedure contributed to monetary inflation in Rumania, evidences of which were clear by the end of 1938.

France

The picture of wheat export subsidization in 1938–39 would remain incomplete without brief mention of the subsidization of exports by the French Wheat Board. France is not usually a net wheat exporter, but her wheat surplus from the record 1938 crop was large, and the way in which the Wheat Board dumped part of it on outside markets deserves some comment. At certain times French wheat was the cheapest among competing wheats on important international markets.

The 1938 wheat crop was the first surplus crop since the French Wheat Board had been established by law of August 15, 1936, and the board's policy met its first real test in 1938–39. Under Article 14 of the original law, the board was required to establish for the 1938 wheat crop allotments for most growers and to fix progressively lower prices for wheat produced beyond these allotments. But the board was not ready to introduce this system. Instead, the law was changed,[2] and measures were taken to finance the purchase of the whole crop at a single fixed price, and to dispose of surplus wheat at a loss by selling at world prices for export and by denaturing it for feeding. In order to cover losses on surplus disposal, a special progressive levy was imposed on all sales of wheat. This was subtracted from the fixed purchase price of wheat, which was established by the Wheat Board following a formula set forth in the law. In addition, there were some other taxes partly on producers of wheat and partly on consumers of flour and bread.

From the very beginning of 1938–39, it was clear that there would be a large wheat surplus. The Central Council of the Wheat Board, meeting at the end of August, considered the necessity of disposing of some 29 million bushels of wheat by export and denaturing, and of building up a new security stock[3] of some 37 million bushels.

Subsidized exports of wheat began early in October, followed a few weeks later by subsidized exports of flour.[4] Sales for export by the board proceeded rather rapidly during the autumn of 1938. Exports went mainly to British markets but also to the Netherlands, Belgium, Spain, and French colonies, which by a decree of November 2, 1938, were forbidden to import foreign wheat and flour.

In January 1939, upon news of heavy winterkilling of growing domestic wheat, sales of wheat for export were slowed down. But later, when it was realized that the 1938 crop was substantially larger than had been esti-

[1] See quotation from the Nachrichten für Aussenhandel (German publication) in the *Bulletin de la Direction pour l'Achat et l'Exportation des Céréales*, July 20, 1939, pp. 202–3.

[2] By decree of June 17, 1938 and of Aug. 31, 1938.

[3] By the law of Dec. 24, 1934, there had already been established a security stock of wheat, amounting at the beginning of 1938–39 to about 7 million bushels. More than half of this was Yugoslavian wheat purchased by the French government a few years before. It was decided to sell this Yugoslavian wheat for export during 1938–39, replacing it by domestic wheat from the 1938 crop. At times the Yugoslavian wheat was the cheapest quoted on British markets, where it was dumped. Concerning the security stock, see the preamble to the decree of June 14, 1938, in *Bulletin de l'Office de Renseignments Agricoles*, July 1, 1938, p. 323.

[4] Subsidized exports of flour were authorized by a decree of Oct. 18, 1938, which provided that flour millers who desired to participate in the absorption of wheat surpluses by exports of flour could buy wheat from the board at prices approved by its director and which were actually much below its fixed purchase price. Indeed, the prices approved on the first sales of wheat to millers for this purpose, at the end of October, averaged 61 francs per quintal against 201.50 francs per quintal paid in October to producers. Sales of wheat for exports in grain, also at low prices, fluctuated mainly between 55 and 60 francs per quintal. See J. A. Goldschmidt, *Revue du marché du blé* (Paris), Oct. 12 and Nov. 2, 1938.

mated earlier, and that losses from winter-killing had been sufficiently offset by reseedings, the board again accelerated its wheat export sales at low prices. In this, the strained situation of the board's finances was a factor. The government set a limit for further credit to the board for financing its purchase of wheat, and pressed the board for early repayment of the credit already granted.[1]

The board then felt impelled to press wheat on export markets, and in the spring and summer of 1939 substantial quantities were dumped, mainly on British markets. Large subsidized exports took place despite the fact that the French government, under the influence of political developments in March, extended a large additional credit to the board in order to finance carrying over much larger security stocks than it had contemplated in the fall of 1938.

The extent of French subsidized exports and their total cost are discussed below (p. 75). Here it is enough to say that the costs of subsidization per bushel of wheat exported were higher for the French Wheat Board than for any other governmental agency subsidizing wheat exports in 1938–39. The board recovered from its sales of wheat to exporters only about one-third of its net purchase price paid to producers, excluding the special progressive levy and taxes collected from them for financing the cost of the surplus disposal.[2]

Comparisons

The foregoing analysis shows that exports of wheat in 1938–39 were affected by one or another form of wheat subsidization in practically all the principal wheat-exporting countries. The Australian scheme of assistance to wheat growers interfered the least with the usual forms of marketing of wheat and with price formation in international wheat markets. But even there bounties paid to producers on their wheat sales must be regarded, to a certain extent, as indirect subsidization of wheat exports in so far as they presumably stimulated farmers to sell more freely than they would have done without such bounties.

The Argentine and Canadian systems imply a much greater degree of governmental interference with the usual marketing process and present much clearer cases of indirect export subsidization. In these cases practically total crops were purchased from producers by governmental agencies at prices fixed above the price ruling in international markets and then sold to exporters at whatever they could obtain. In so far as prices paid to producers exceeded actual market prices, they tended to stimulate further crop expansion (see pp. 89–92), and during 1938–39 they presumably stimulated producers to sell more wheat early in the season and to carry less into the next crop year. How much export subsidy was actually implied in the Canadian and Argentine systems depends also on their selling policies, which are discussed below.

Export sales of wheat by the Argentine Grain Regulating Board may even be called "dumping" in the strict meaning of the word. Such a designation is justified by the fact that the Argentine board applied the two-price system in its sales, but does not indicate that its selling policy was aggressive. As a matter of fact, the board was very conservative in its sales during a considerable part of the marketing season.

The United States system represented a clear case of direct subsidization of wheat (and flour) exports and of "dumping" on international markets. It also implied a much greater degree of governmental interference in the marketing of wheat and in wheat-price formation than may appear from the fact that purchases and sales of the FSCC, in contrast with those of Canada and Argentina, comprised only a small portion of the United

[1] See Decree of Nov. 12, 1938 aiming at the establishment of economic and financial equilibrium in wheat production. *Bulletin de l'Office de Renseignments Agricoles*, Nov. 15, 1938, p. 588.

[2] We have mentioned that the board's average selling price of wheat for export was about 55 to 60 francs per quintal. Its net purchase price may be estimated by subtracting from the fixed price paid to producers the average progressive levy imposed on sales of wheat by producers. The crop year's fixed price to producers averaged about 205 francs per quintal. The special progressive levy varied with the quantity of wheat production by individual growers from 18 francs per quintal at the base to 45 francs at the highest bracket. It averaged about 21.5 francs per quintal, which made the average net purchase price for the board about 184 francs. *Bulletin de l'Office de Renseignments Agricoles*, July 1, 1939, p. 369.

States wheat crop. Also, the share of the United States in the responsibility for the initiation of competitive subsidization of exports is greater than one might conclude from certain official statements in explanation of this major departure from traditional policy (see p. 44). Direct subsidization of wheat exports before the announcement of the export program of the United States in August 1938 was practiced only by the Danube countries, where export subsidies chiefly compensated for the handicap on exports caused by high official exchange rates.

Without question the export sales of wheat by the French Wheat Board represent a classical case of wheat "dumping." But it seems more natural for a country that is not usually a wheat exporter to "dispose" of an accidental surplus without much regard to effects on the international market.

II. OPERATIONS AND COSTS: UNITED STATES

Various forms of wheat subsidization in practically all the important wheat-exporting countries were thus widely extended in 1938–39. It is desirable next to present in some detail the operation of governmental controls and subsidies in the principal exporting countries, in order to obtain a better understanding of these operations and of their possible effects on price formation, to evaluate costs of subsidization in various countries, and to compare various systems of financing these costs in order to appraise their incidence and their burden. We begin with the United States, for which fairly adequate official information is now available.[1]

Export Sales

Total sales of wheat and flour for export under the United States subsidy program amounted, for the period beginning with the opening of the Federal Surplus Commodities Corporation wheat operations at the end of August 1938 until June 30, 1939, to approximately 94 million bushels. This included about 70 million bushels of wheat sold for export by the FSCC, and some 24 million bushels of wheat in the form of flour upon which an "indemnity" was paid. All exports of wheat assisted by the FSCC went through usual trade channels. All FSCC export sales of wheat were made to regular wheat exporters, even in the case of exports to Great Britain under the deal with British millers.

Not all of this wheat and flour was actually exported by June 30, 1939. Though precise figures are not available, we infer that some 10 million bushels did not appear in the export statistics until after June 1939. The final date for export of flour sold under the 1938–39 program was initially fixed at August 15, then extended successively to October 31 and December 15, 1939.

Total exports of wheat and flour during the crop year were officially reported as 115.9 million bushels, including 31.3 million as flour.[2] After the export subsidy program for wheat grain came into effect, on August 30, 1938, sales unassisted by subsidy appear to have been negligible. Actual exports for the crop year, however, included other sales reflected in July–August exports of 24.5 million bushels (3.8 million in the form of flour),[3] and perhaps a few million more that were sold earlier but exported after August 31. These were "unassisted sales" except for the wheat equivalent of flour exported to the Philippines under the program that was merged into the broader one on November 2, 1938.

Generally speaking, *exports* of wheat grain did not follow closely the *sales* of wheat for export made by the FSCC. As appears from Chart 1, large quantities were sold in September. These were partly at the opening of operations, but more in the second half of the

[1] This section is based in considerable measure on valuable information on the operations of the Federal Surplus Commodities Corporation furnished by its president, Milo Perkins. We express here our appreciation of this co-operation, which enabled us to analyze the United States export policy of 1938–39 with more insight and better understanding than we were in position to do in regard to the policies of other exporting countries. All statistical information in this section, if not otherwise indicated, is from the above source.

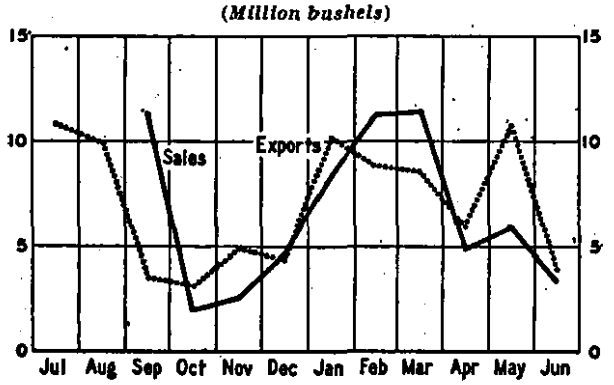
[2] See table in Wheat Studies, December 1939, XVI, 191.

[3] Data of U.S. Department of Commerce.

month when the FSCC was selling on rising prices due to political developments in Europe (see Chart 2, p. 58). But only a small proportion was exported in September, and sales were not all cleared for several months thereafter. Despite the balance of shipments on earlier unassisted sales, wheat exports during the first four months of the export subsidy program were low, much lower than in the two months preceding. Some time was required to get the new machinery into good working order, and disturbances due to European developments were presumably another factor retarding exports.

CHART 1.—FSCC SALES OF WHEAT FOR EXPORT, AND UNITED STATES EXPORTS OF WHEAT GRAIN, MONTHLY, JULY 1938–JUNE 1939*

(*Million bushels*)



* Sales data derived from weekly data furnished by the FSCC; export data from *Monthly Summary of Foreign Commerce*.

Not until January 1939 did United States wheat exports reach the level of July–August 1938. By that time—indeed, beginning with the second half of December—a new rising wave of FSCC export sales was under way which reached its peak in February–March. In these two months wheat exports, though relatively large, once more fell far below FSCC export sales. During the last three months of the crop year the sales, though still considerable, fell below actual exports—particularly in May, when exports rose to a new peak.

The lag of exports behind sales would appear still greater if instead of sales by the FSCC to American exporters, which are represented in Charts 1 and 2, one took for comparison the large direct arrangement of the FSCC with British millers for the sale of 20 million bushels of American wheat, announced on December 2 and soon raised to 25 million. A large fraction of subsequent FSCC sales to American exporters was simply in execution of this large deal.

Very little has been officially revealed concerning the conditions of this transaction. From information in the trade press it may be inferred that the British millers agreed to take, during the remainder of the crop year, specified quantities of wheat of various types and grades at world prices,[1] apparently on the basis of the Liverpool May option at the time actual purchases would be made. In return the FSCC agreed to withhold any offers of more wheat as well as of subsidized American wheat flour from markets in the British Isles through July 15, 1939. This concession the FSCC was presumably forced to grant in order to win the opportunity to dispose of the large quantity of wheat in the important British market. It met with severe criticism from American milling interests (see p. 65).

Export sales of the FSCC subsequent to the transaction with British millers consisted partly of new sales and partly of sales executed in fulfillment of the earlier transaction. The timing of sales to British millers was presumably determined by the importing millers. Hence, it is not altogether clear to what extent the timing of total export sales during the later months of the export season was determined by the FSCC. For instance, we cannot say whether heavy sales during February and March, coincident with a persistent and substantial decline of wheat prices at Liverpool,[2] reflected the selling policy of the FSCC or the placing of orders by British millers in execution of their general commitment. We lean to the view that the timing was determined primarily by the importing millers.

Up to the end of January 1939, with the

[1] No. 1 Dark Hard Winter, No. 1 Hard Winter, and No. 2 Soft Wheat from the Pacific Coast were the principal grades purchased under this agreement. But there were also purchased smaller quantities of No. 1 Dark Northern Spring and of No. 2 Dark Hard Winter.

[2] The weekly average price of the May (new) future at Liverpool for the week ending Jan. 28, 1939 was equal to 64.0 cents per bushel, and for the week ending Apr. 8, 58.5 cents, a decline of 5.5 cents per bushel, or nearly 9 per cent. The persistence of the decline is indicated by the fact that only one weekly average of the ten in question failed to show a decline from the preceding week.

exception of the first week of FSCC operations, sales of wheat for export by the FSCC were made mainly on bulges in wheat prices (Chart 2, p. 58). This was true of sales in the second half of September, the second half of November, the second half of December, and again in the second half of January. At the end of January, however, a recession of prices on the Liverpool futures market coincided with very large sales by the FSCC in the week ended February 4; and thereafter heavy sales at increasing losses through February–March were accompanied by continuous decline in Liverpool futures as well as in c.i.f. prices on that market. A large portion of the FSCC sales to exporters during this period presumably reflected the placing of orders by British importers in execution of the December deal. Their heavy orders may have been stimulated by the decline of the futures prices at Liverpool on the basis of which actual purchase prices were fixed.

The problem of the depressing effects of the United States export subsidy program upon the level of wheat prices on international markets will be discussed below (pp. 78–84). Here we merely note that declines at Liverpool synchronized both with rumors concerning and formal announcement of the United States subsidy program and the opening of its operations, and also with the heaviest wheat-export sales by the FSCC from the end of January up to the end of March, when exports of the other principal exporters were not pressed on the market.

Purchase Policy

Of the total of nearly 74 million bushels of wheat purchased by the FSCC before June 30, 1939, with a view to export, about 52 million bushels were purchased from traders. The bulk of the rest was wheat held by growers under government loan. These purchases involved paying to farmer-owners the loan price plus a premium to induce them to sell when the FSCC needed wheat to fill export commitments, chiefly under the British deal; or, perhaps, also when it seemed desirable to reduce regional wheat surpluses accumulated under the influence of the loan program. Practically all such purchases from growers were made in the Pacific Northwest—more than 14.2 million bushels in Portland or its tributary districts, and about 800,000 bushels in Utah and Idaho.

Purchases at the loan rate in interior markets directly from farmers eligible for loans under the wheat-loan program were only about 2.4 million bushels.[1] These were made in September–October, in specific areas, in order to relieve situations where farmers eligible for loans were unable to obtain them because acceptable storage facilities were not available.

The remaining 4.3 million bushels of wheat purchased by the FSCC before June 30, 1939 consisted of unredeemed loan wheat taken over from the Commodity Credit Corporation. This wheat had not been sold for export during July–June 1938–39, and the FSCC sold it in 1939–40, together with a larger quantity of such wheat purchased from the CCC after June 30, 1939.[2]

The policy of the FSCC was to buy mainly hard winter wheat produced in the Southwest, and wheat produced in the Pacific Northwest. In its first announcement on wheat purchase, it stated that the greatest export demand was for these types. Relatively little spring wheat was purchased for export, since this found better outlets on domestic markets. Total wheat purchases by the FSCC before June 30, 1939 were distributed by the principal regions as follows (in million bushels):

Pacific Northwest	32.2
Hard-winter-wheat area	31.6
Spring-wheat area	10.1
Total	73.9

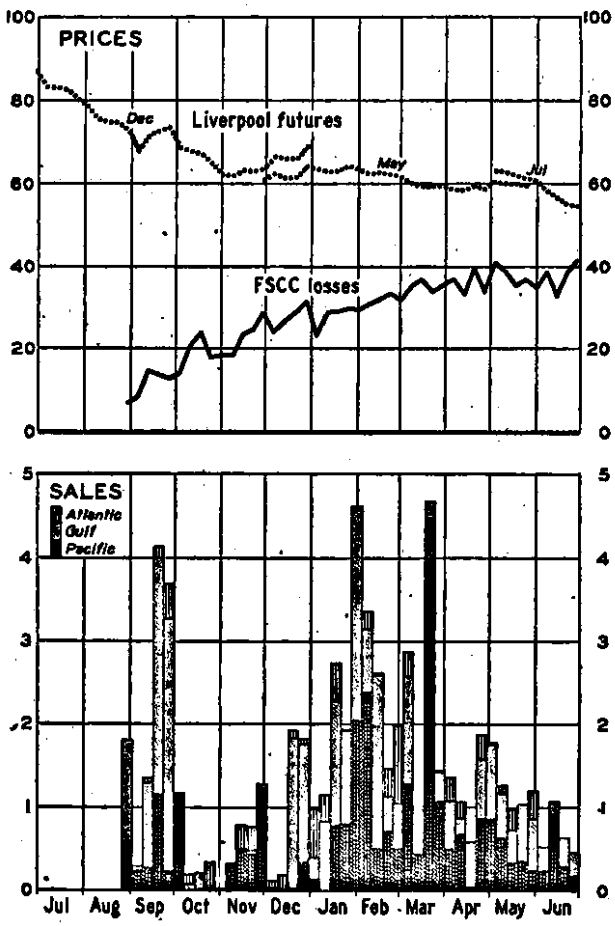
[1] This figure, like other data on purchases mentioned here, was supplied by the president of the FSCC. A substantially larger figure of about 7.1 million bushels was indicated as bought from farmers at the loan rates in a press release by the U.S. Department of Agriculture on Feb. 25, 1939. Conceivably the lower figure includes only wheat eligible for loans purchased at the loan rate directly from producers, while the larger includes also wheat bought at loan rates from traders who purchased it from producers eligible for loans under the wheat-loan program. FSCC announcements issued in September–October permitted purchases at loan rates from traders "of wheat of the quantity and sub-class equal to quantity and sub-class purchased from producers eligible for a loan under the government wheat loan program."

[2] During July–December 1939 the FSCC sold for export 9.4 million bushels from the total of 14.2 mil-

Of export sales of 65.5 million bushels made between August 30, 1938 and June 30, 1939, the total of 65.5 million were 4.4 million bushels.

CHART 2.—WEEKLY DATA ON (*a*) AVERAGE DIFFERENCE BETWEEN FSCC PURCHASE AND SALES PRICES ("LOSSES") OF WHEAT OF ALL CLASSES AND GRADES; (*b*) AVERAGE PRICES OF LIVERPOOL FUTURES; AND (*c*) FSCC SALES OF WHEAT FOR EXPORT, JULY 1938–JUNE 1939*

(Cents per bushel; million bushels)



* Sales and price differences from data furnished by the FSCC; Liverpool futures prices from *London Grain, Seed, and Oil Reporter*, converted to U.S. cents at noon buying rates for cable transfers.

for which this information is available, 28 million were from Pacific ports, 30 from Gulf ports, and 8 from Atlantic. Of total purchases in the spring-wheat area, 4.3 million bushels consisted of winter wheat. Export sales of spring (including durum) wheats included in

lion bushels of unredeemed wheat purchased from the CCC. The remaining unredeemed wheat in the hands of the FSCC was reserved for exchange against flour for distribution on domestic markets. *Southwestern Miller*, Jan. 2, 1940, p. 22.

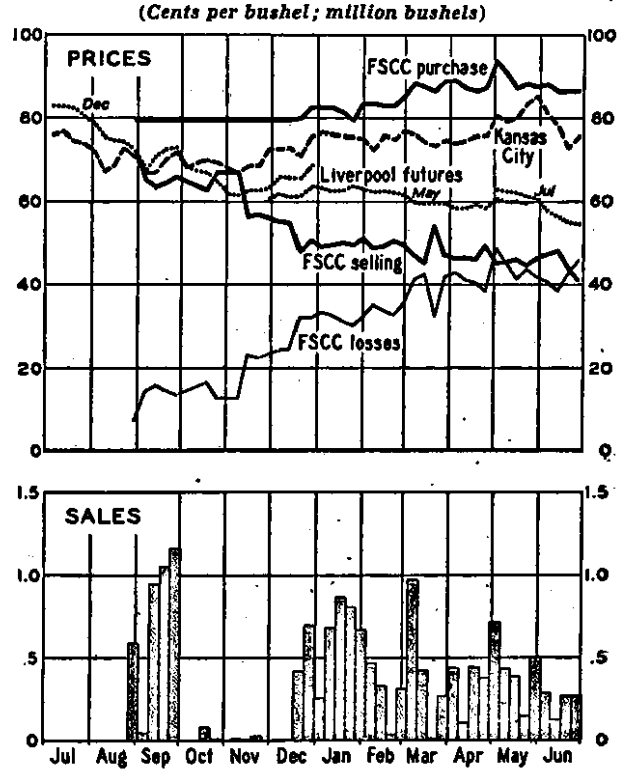
WEEKLY SALES

Information on the time-distribution of FSCC purchases of wheat is not available to us. But detailed information on sales of wheat by the FSCC, yields a fairly complete picture of the course of sales. Most of this information is graphically presented in Charts 2–5.

Chart 2 shows weekly sales of all grades and classes of wheat distributed by groups of export ports; the weekly average losses per

CHART 3.—FSCC AVERAGE PURCHASE AND SELLING PRICES OF NO. 1 DARK HARD WINTER WHEAT AND THEIR DIFFERENCE ("LOSSES"), COMPARED WITH WEIGHTED AVERAGE PRICES OF THE SAME GRADE IN KANSAS CITY AND WITH AVERAGE PRICES OF LIVERPOOL FUTURES; AND FSCC EXPORT SALES OF NO. 1 DARK HARD WINTER WHEAT, WEEKLY, JULY 1938–JUNE 1939*

(Cents per bushel; million bushels)



* FSCC data from FSCC; Kansas City prices from U.S. Bureau of Agricultural Economics.

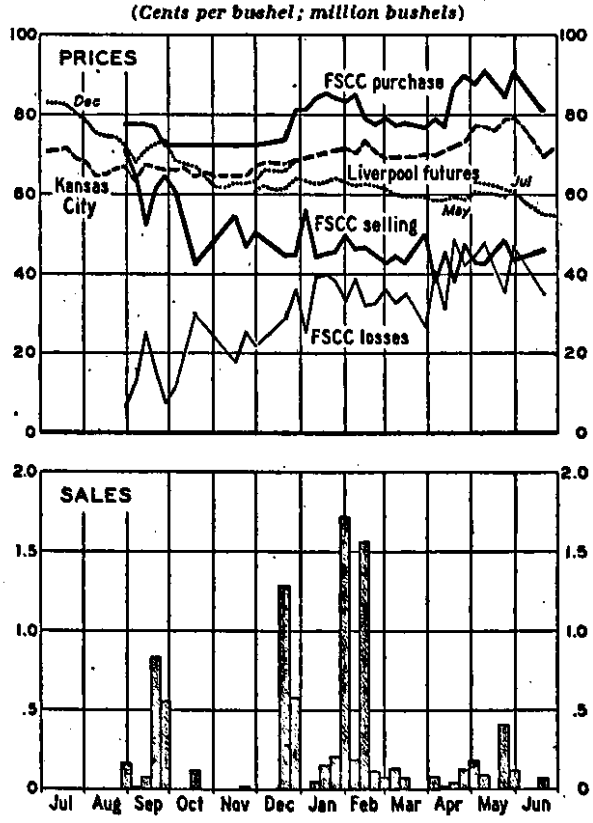
bushel on wheat sold for export, and the course of wheat prices in Liverpool. In combination, these afford some indications of possible effects of the United States export operations on price developments in international

markets. Although fluctuations in the weekly average losses per bushel of wheat sold, as presented in this chart, depend partly on the composition of weekly sales of wheat by grades and classes as well as on the direction of exports, its general trend shows the change in the extent of subsidization of wheat exports through the crop year.

Charts 3–5 supplement Chart 2, supplying similar information concerning export sales of those grades of wheat which were sold in large quantities and more or less continuously throughout the crop year. Exports from Gulf ports are represented by No. 1 Dark Hard Winter and by No. 1 Hard Winter, which together comprised 82 per cent of the total reported sales from those ports. Exports from the Pacific Northwest are represented by No. 2 Soft White wheat, which made up 52 per cent of the total sales from the Pacific Coast. These three grades represented nearly 60 per cent of the total reported wheat sales for export by the FSCC before June 30, 1939, and may be regarded as a fairly representative group.

CHART 4.—FSCC AVERAGE PURCHASE AND SELLING PRICES OF NO. 1 HARD WINTER WHEAT AND THEIR DIFFERENCE ("LOSSES"), COMPARED WITH WEIGHTED AVERAGE PRICES OF THE SAME GRADE IN KANSAS CITY AND WITH AVERAGE PRICES OF LIVERPOOL FUTURES; AND FSCC EXPORT SALES OF NO. 1 HARD WINTER WHEAT, WEEKLY, JULY 1938–JUNE 1939*

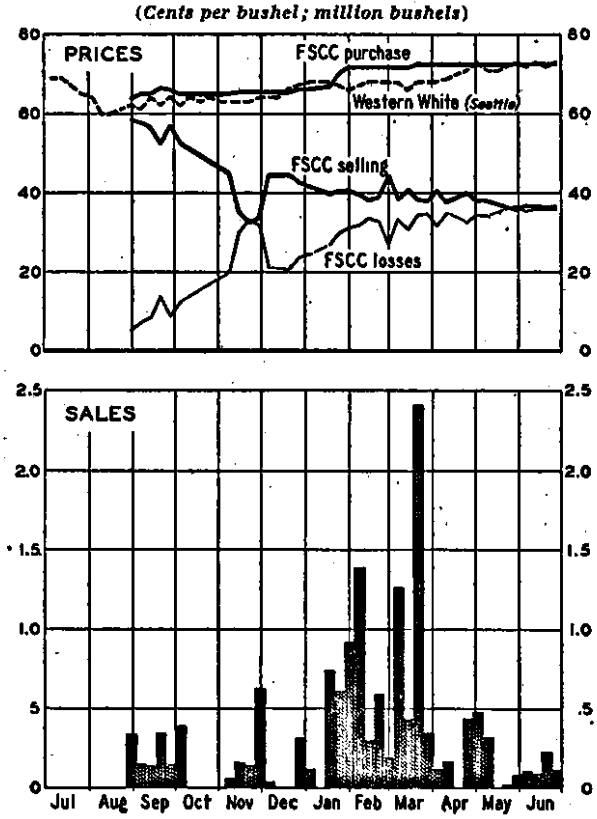
(Cents per bushel; million bushels)



* See footnote to Chart 3.

CHART 5.—FSCC AVERAGE PURCHASE AND SELLING PRICES OF NO. 2 SOFT WHITE WHEAT AND THEIR DIFFERENCE ("LOSSES"), COMPARED WITH WEIGHTED AVERAGE PRICES OF NO. 1 WESTERN WHITE, SEATTLE; AND FSCC EXPORT SALES OF NO. 2 SOFT WHITE WHEAT, WEEKLY, JULY 1938–JUNE 1939*

(Cents per bushel; million bushels)



* FSCC data from FSCC; Seattle prices from U.S. Bureau of Agricultural Economics.

On the charts representing export sales of individual grades of wheat, it was advisable to show weekly average selling prices as well as average purchase prices of the same wheat. These data yield more information regarding the subsidization policy than do the weekly average losses per bushel of wheat sold. For

example, all three charts indicate that the gradual increase of losses per bushel of wheat sold for export, as shown in Chart 2, was caused mainly by the lowering of the FSCC sale price rather than by increased purchase prices of wheat on domestic markets. This is particularly true of the development during October–December, when the FSCC lowered its sale prices rapidly while its purchase price, usually on the basis of the Chicago market, remained practically unchanged. Yet even the rapid lowering of sale prices failed to stimulate export sales much during these months, except for substantial sales of soft white wheat from the Pacific Northwest during the second half of November. These were made at very low prices and entailed large losses.

Comparisons of the purchase prices of the FSCC, which are given f.o.b. export ports, with the market prices for the same (or comparable) grades of wheat in appropriate domestic markets, shown in the same charts, must be made with special caution. The weekly data of the FSCC are classified by time of sales. Consequently, the weekly average purchase prices shown on these charts do not precisely represent the change in the price through time.

In general, the charts do not indicate close relationship between the FSCC purchase price and the domestic market price in such regional markets as Kansas City or Seattle. This perhaps may be explained partly by the fact that almost all purchases by the FSCC were made on the basis of the Chicago futures market, where prices usually diverge somewhat from the cash price on regional markets. Part of these divergencies may be due to the fact that purchase prices, as shown on our charts, are averaged by week of sale, which may not synchronize with actual time of purchase. Changes from one week to another in the ports from which wheat was exported may also have been a contributing factor. But Charts 3 and 5, at least, leave the broad impression that major sustained increases in domestic market prices preceded rather than followed changes in FSCC purchase prices.

Indeed, the rising trend in the Kansas City price of No. 1 Dark Hard Winter began in the middle of November and continued, with some fluctuations, to the beginning of January, while the purchase price of the FSCC remained stable until the last week of December, when it rose considerably with the last upward movement of the market price. During January and most of February, however, the spread between the FSCC purchase price and the market price in Kansas City was narrower than in October–November. Only in March was the spread between these two prices restored to its mid-November size by a further rise in the FSCC purchase price. In the spring also, the market price of No. 1 Dark Hard Winter at Kansas City began its upward movement earlier—early in April, whereas the FSCC purchase price rose only in the last week of April. The same features also appear in the relationship between FSCC purchase prices for soft white wheat and the market price of white wheat at Seattle, shown in Chart 5, with the difference that in the spring the FSCC purchase price did not follow the April advance in the market price.

The FSCC purchase prices show more violent and erratic fluctuation for No. 1 Hard Winter than for No. 1 Dark Hard Winter and for Soft White. That for No. 1 Hard Winter also rose only in the last week of December, while the Kansas City price of the same grade rose three weeks earlier; but in January the FSCC purchase price was raised so much that the spread between it and the Kansas City price became wider than in October–November, and the purchase price was lowered in February and then fluctuated around this lower level until mid-April. Then it suddenly rose by about 10 cents, while the Kansas City price of No. 1 Hard Winter rose only slightly, though earlier. Thus in the second half of April, and during most of May, the FSCC purchase price exceeded the market price in Kansas City by a wider margin than during the two preceding months.

Both major upward movements of the market price—in November–December and in April–May—may be explained by such factors as changes in crop expectations in connection with weather developments, and may be regarded as more or less independent of the

purchase policy of the FSCC. The foregoing comparisons of FSCC purchase prices with market prices rather indicate that in these cases the purchase price of wheat was raised by the FSCC following the rising tendency on the domestic markets, in order to continue subsidized exports in substantial volume.

Our general impression is that the FSCC followed rather than attempted to influence market prices in its daily purchases. This does not mean that the FSCC export program as a whole was not a price-supporting influence generally upon domestic wheat prices. Part of the advance of wheat prices on the Chicago market against the Liverpool market undoubtedly was attributable to additional exports caused by this program. But while we do not question the price-supporting influence of the export-subsidy program upon domestic wheat prices, we cannot exclude also their possible depressing effects on wheat prices abroad. The picture presented on all charts given above points to the need for careful study of the question whether or not the United States subsidized exports of wheat were among the causes of the decline in wheat prices abroad. This problem is discussed in a later section (pp. 78–84).

Losses on Wheat Exports

We now turn to the question of the cost of the United States export subsidy program in 1938–39, due to losses suffered on sales of wheat for export by the FSCC. The largest loss per bushel was on exports from the Gulf ports, particularly of No. 1 Dark Hard Winter wheat. The weighted average loss per bushel of all grades and classes of wheat sold by the FSCC for export through the Gulf ports before June 30, 1939 amounted to 31.76 cents; and on No. 1 Dark Hard Winter wheat through the same ports to 35.61 cents. The weighted average loss per bushel of all grades and classes of wheat sold by the FSCC through Pacific ports amounted for the same period to 28.5 cents per bushel, and on those sold through Atlantic ports to 27.0 cents. The last figure becomes 24.6 cents if sales of 418,000 bushels of wheat to the American Red Cross, at the nominal price of 10–11 cents per bushel, are excluded.

In the tabulation given below are shown export sales of particular grades of wheat by the FSCC from August 30, 1938, to June 30, 1939, and losses suffered on these sales, total and average per bushel. It may be seen from the tabulation that average losses per bushel of wheat sold through Pacific and Atlantic ports were much lower than the average loss per bushel of No. 1 Dark Hard Winter, and somewhat lower than average losses per bushel on No. 2 Dark Hard Winter and No. 1 Hard Winter.[1]

Export area and grade	Sales (*thousand bushels*)	Difference between purchase and sale prices	
		Total (*thousand dollars*)	Per bushel (*cents*)
From Gulf ports	30,234	9,604[a]	31.76[a]
No. 1 Dark Hard Winter	15,645	5,571[a]	35.61[a]
No. 1 Hard Winter	9,067	2,733[a]	30.15[a]
No. 2 Dark Hard Winter	2,761	836	30.29
No. 2 Hard Winter	2,606	437	16.76
Other	155	27	17.42
From Pacific ports	27,657	7,873	28.47
No. 2 Soft White	14,279	4,280	29.97
No. 2 Hard Winter	8,257	2,468	29.88
No. 2 Western White	3,107	752	24.22
No. 1 Hard Winter	1,420	266	18.70
Other	594	107	18.01
From Atlantic ports	7,602	2,053	27.01
No. 1 Dark Northern Spring	2,815	712	25.27
No. 2 Red Winter	1,219	270	22.14
No. 2 Yellow Hard Winter	1,054	293	27.78
Other	2,514[b]	778[b]	30.95[b]
Grand total	65,493	19,530	29.82

[a] Figures obtained from data on weekly sales are somewhat different from the above, which are taken from the summary tabulation supplied by Mr. Perkins.

[b] Including sales to the American Red Cross.

[1] The information concerning average losses per bushel given in the tabulation above, as well as weekly average losses per bushel used in Charts 2 to 6, must be regarded as preliminary and tentative. A letter from the President of the FSCC explains that: "Due to the mixing of grades, exchanges of wheat, location of stocks, freights, and differences in time of purchases and sales, the figures appear to reveal extremely narrow and extremely wide subsidies, when, in fact, these extremes did not exist." The reader must remember this qualification of data on reading a few of the following paragraphs. We believe, however, that the general tendency revealed in our charts and the discussions that follow will not be invalidated by the appearance of more precise data.

These differences in the average losses per bushel of various classes and grades of wheat exported in various directions can be explained only partially by different distribution of sales throughout the crop year. Losses per bushel of wheat sold averaged much larger in later months of the commercial year than in the earlier. But from Chart 6 (p. 64) it appears that losses per bushel on hard winter wheats exported from the Gulf ports, particularly on No. 1 Dark Hard Winter, tended to be higher than losses on other wheats sold through Pacific and Atlantic ports, almost throughout the year.[1] At the end of April and the beginning of May, the average losses per bushel on No. 1 Dark Hard Winter and on No. 1 Hard Winter were in some weeks around 48 cents per bushel, while average weekly losses on the principal wheats sold from Pacific Northwest ports, namely on No. 2 Soft White wheat and No. 2 Hard Winter, did not then exceed 35 cents per bushel. It is true that per-bushel losses on sales of No. 2 Soft White wheat increased to above 36 cents per bushel for some weeks in June, while losses on hard winter wheats from Gulf ports were at their maximum at the end of April and the beginning of May. But even in June, the per-bushel losses on No. 1 Dark Hard Winter from the Gulf were larger than such losses on sales of wheat from Pacific ports. Losses on all grades and classes of wheat exported from Atlantic ports, excluding the sales to the Red Cross, were never as great as the above-mentioned per-bushel losses on hard winter wheats sold from Gulf ports.

Chart 6 also shows how persistently weekly average losses per bushel of wheat sold by the FSCC increased throughout the crop year. Losses on No. 1 Dark Hard Winter rose from the relatively moderate level of 7–8 cents per bushel in the first week of operations to 15–16 cents per bushel in the second week; but as wheat prices on international markets rapidly declined, following the announcement of the export subsidy program, sales at this doubled rate were small during the second week (Charts 2 and 3, p. 58). It was only after prices on international markets turned upward during the third week of September that it became possible to sell considerable quantities of No. 1 Dark Hard Winter at such a level of subsidy.

When wheat prices at Liverpool declined in early October to about the same level as in the second week of the program's operation, export sales at a subsidy level of about 15 cents per bushel again shrank. Further lowering of sales prices by the FSCC in the second half of November without change in the purchase price, implying an increase of subsidy to about 23 cents per bushel, failed to stimulate export sales, which continued very small until mid-December. In the last three weeks of November the FSCC made substantial sales from Pacific ports, but at much higher subsidy costs (Charts 5 and 6, pp. 59 and 64). In the second half of December, export sales of Hard Winters from Gulf ports were stimulated by the joint effect of increased subsidy—to a level exceeding 30 cents per bushel—and a rising tendency in international wheat prices. This last, however, was offset by a parallel advance in the price of hard winter wheat on domestic markets (Charts 3 and 4, pp. 58 and 59).

With a subsidy exceeding 30 cents per bushel, Hard Winters were exported in substantial quantities through January and part of February; but during the second half of February this rate once more became insufficient to maintain the export flow of Dark Hard Winters, and the FSCC began to sell No. 1 Dark Hard at losses exceeding 40 cents per bushel. These increased losses were partly due to the advancing purchase price for No. 1 Dark Hard (Chart 3). During the preceding December, advancing prices of Hard Winters on domestic markets, partly in reaction to crop news, reduced the margin between the purchase price of the FSCC and the Kansas City price of Hard Winters. One may infer,

[1] According to information supplied by the FSCC, it appears that, on the basis of the average premiums on Gulf wheat (over the Chicago option) during the period of operations of the export program until June 30, 1939, the difference in prices between Pacific Coast wheat and Gulf wheat required an added subsidy for Gulf wheat of approximately 8 cents per bushel. Gulf wheat was, according to official statements, the most desirable for British importers. The situation which made necessary payment of a larger subsidy on exports of Gulf wheat than on exports of Pacific Coast wheat (a less desirable grade that had to be transported longer distances) appears to be an unexpected result of export subsidization.

from the increased average purchase price for wheat sold by the FSCC in the last week of December and several weeks following, that the purchase price was then raised.[1]

Yet the margin between the FSCC purchase price for No. 1 Dark Hard Winter wheat sold during January–February and its market price in Kansas City remained narrower than it had been before December. When the purchase price of wheat sold by the FSCC was raised at the beginning of March, this margin was enlarged to its previous size; it stimulated larger sales of Hard Winters, but at the cost of greater losses per bushel on the sales. Finally, in May, when news of the deterioration of the hard winter wheat crop in the Southwest raised market prices of Hard Winters on domestic markets, while the FSCC persisted in selling it for export at prices still lower than before, its losses rose to a peak of 48 cents per bushel. This was more than half of its cost per bushel at the export port, to say nothing of the purchase price paid to producers. These extreme losses were reduced somewhat in the second half of May and in the first half of June; but with the further lowering of the selling price of No. 1 Dark Hard Winter wheat at Gulf ports at the end of June to 40 cents per bushel, when its costs in ports equaled nearly 86 cents per bushel, the FSCC suffered losses nearly as large as in the beginning of May.

Losses on sales of No. 1 Hard Winter—the second important wheat in export sales from the Gulf ports—followed much the same pattern, as may be seen from Charts 4 and 6. Fluctuations in the average weekly losses on sales of this wheat, however, were much wider and more erratic. For example, the average loss of 25 cents per bushel of this wheat sold in the third week of September exceeded losses per bushel on any other grade sold at that time, but only a small quantity was sold at such losses. On the other hand, a substantial quantity of No. 1 Hard Winter was sold in the last week of September with an average loss below 8 cents per bushel. During October and the first half of November, average weekly losses on sales of this wheat fluctuated from 11.5 cents to nearly 30 cents per bushel. These wide fluctuations continued in later months. They were caused both by changes in the purchase price, which fluctuated in the later months more than the purchase prices for other wheats, and by erratic changes from one week to another in the average selling prices of this wheat. Whether these erratic changes in selling prices of No. 1 Hard Winter wheat were traceable to the quality of the particular parcels (sometimes, as in the week ended October 22, the average price of No. 1 Hard Winter was much below that of No. 2 Hard Winter) or by difference in the countries of destination, or ports of exports, we are not in a position to say.

It was earlier observed that losses on sales from Pacific ports were generally smaller than on sales of Hard Winters from the Gulf (Chart 6); but there were some exceptional situations. Thus, at the end of November and the beginning of December, substantial quantities of No. 2 Soft White were sold at exceptionally low prices—on the record the lowest for the whole crop year; and at that time losses suffered by the FSCC on sales of that wheat from Pacific ports were greater than on any other grade. We infer that these sales were to China.

The highest losses per bushel on No. 2 Soft White, about 36 cents, were sustained at the end of May and in June. But even with such large losses, equaling about 50 per cent of the cost of wheat at the ports, only small exports were then possible. The largest exports of Soft White occurred in January–March at slightly smaller losses per bushel.

Wheat Export Subsidy vs. Flour Export Indemnity

Encouragement of exports of 5 million barrels of wheat flour was a component part of the United States program that aimed at exports of about 100 million bushels of wheat during 1938–39. Actual sales of flour under the indemnity program up to June 30, 1939 were 5,245,000 barrels, equivalent to 24.1 million bushels of wheat.[2] Some of this—perhaps over 1 million barrels—remained to be exported after June 30. Total United States

[1] It must be remembered that the weekly average purchase prices shown in the charts are averages not by weeks of purchase but by weeks of sale.

[2] See U.S. Dept. Agr. press release of July 18, 1939.

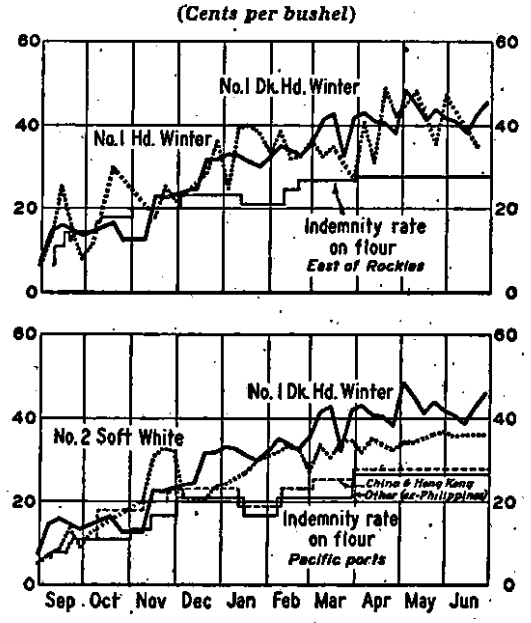
exports of wheat flour, including sales made before the main flour export subsidy program went into effect on September 7, 1938, and exports of flour milled in bond from Canadian wheat, amounted to 6,657,000 barrels. Exports plus shipments to Alaska, Hawaii, and Puerto Rico reached the still larger figure of 7,251,000 barrels, equivalent to 34 million bushels of wheat. In short, United States flour exports considerably exceeded the goal set in the export program, and a considerable fraction of these exports was made without subsidy.

Moreover, the export subsidy was substantially smaller on flour than on wheat. Indeed, the average indemnity paid on the 24 million bushels of wheat sold before June 30, 1939 for export in the form of flour was about 22 cents per bushel, while the difference between purchase and sales prices of wheat sold for export during the same period averaged nearly 30 cents per bushel.[1]

Chart 6 compares weekly average losses by the FSCC on sales for export of certain grades of wheat sold in considerable quantities, with the indemnity rates on flour in effect in the same weeks. The flour indemnity rates were comparable in their value per bushel of wheat with the subsidy rates on wheat exports only in the earlier months of the operation of the program, before the middle of December.[2] The upper part of Chart 6 indicates that weekly average losses suffered by the FSCC on sales of No. 1 Dark Hard Winter and on No. 1 Hard Winter, though fluctuating widely during the period from September to the middle of December 1938, were more or less on the same level as indemnity rates on flour exported from Gulf and Atlantic ports.[3]

But from the second half of December through February, the difference between the FSCC purchase and sales price for No. 1 Dark Hard Winter rose above 30 cents per bushel and fluctuated around 32 cents, while the indemnity rate on flour exported from Gulf and Atlantic ports was left at its previous level of about 23 cents ($1.05 per barrel) and later, from January 13 was lowered to about 21 cents (95 cents per barrel). The indemnity rate on flour was then some 10 cents below the export subsidy on No. 1 Dark Hard Winter. By two consecutive increases in February, the rate of indemnity on flour was raised to about 27 cents per bushel ($1.20 per barrel); but the margin between the subsidy on No. 1 Dark Hard and the indemnity on flour was reduced only temporarily, since wheat subsidies in March were raised even more. From the end of March through June, the

CHART 6.—WEEKLY AVERAGE LOSSES PER BUSHEL ON FSCC SALES OF SPECIFIED WHEATS, AND EXPORT INDEMNITY RATES ON FLOUR FROM SPECIFIED AREAS AND TO SPECIFIED DESTINATIONS, SEPTEMBER 1938–JUNE 1939*



* Losses computed from purchase and selling prices furnished by the FSCC; flour indemnity rates as given in WHEAT STUDIES, December 1939, XVI, 134, converted to wheat equivalent at 4.5 bushels per barrel.

[1] Reported as about 29 cents in *The Wheat Situation*, Sept. 25, 1939, p. 16.

[2] The equality in the degree of subsidization of wheat and flour exports during that period was explicitly recognized by official representatives of the Millers' National Federation. In a letter of Dec. 14, 1938 to Mr. J. D. LeCron, assistant to the Secretary of Agriculture, Mr. Herman Fakler, vice-president of the federation, wrote: ". . . . the indemnity rates on wheat and flour, as you know, are comparable, so that neither has an advantage over the other." Millers' National Federation, *The Hook-up*, Dec. 31, 1938.

[3] In order to compare indemnities paid per barrel of flour exported with wheat export subsidies, which we identify with the difference between the purchase and sales prices of the FSCC for wheat sold for export, the indemnity rates per barrel of flour were divided by 4.5. Actually, during July–June 1938–39, there was ground 4.579 bushels of wheat per barrel of flour. See WHEAT STUDIES, December 1939, XVI, 197.

indemnity rate on flour was about 28 cents per bushel ($1.25 per barrel of flour), while the subsidy on exports of No. 1 Dark Hard Winter ranged 10 to 20 cents above this level. The margin between the export subsidies of No. 1 Dark Hard Winter wheat and the rates of flour indemnity therefore increased persistently. Much the same situation prevailed in the subsidization of No. 1 Hard Winter.

The lower part of Chart 6 shows that, from the middle of December, the weekly average losses per bushel of wheat sold by the FSCC from Pacific ports were also persistently larger than the rates of indemnity on flour exported from the same ports. The same had been true during several weeks in November and early December. But generally speaking, the broad equality in rates of subsidization of wheat and flour exports characteristic of the earliest weeks of the program disappeared in mid-December.

This change in policy followed the official announcement on December 2 of the arrangement with the British millers for sales of 20 million bushels of wheat (later raised to 25) which was made on the condition that no subsidy be paid on United States flour sales to the British Isles. The Millers' National Federation vigorously protested this deal and asked for assurance "that no further activities of this kind will be engaged in by the Department"; and a letter from an official of the United States Department of Agriculture gave assurance that no similar arrangement was contemplated.[1] But only a few days later the selling policy of the FSCC resulted in a new departure from the previous policy—a substantially heavier subsidization of wheat exports than of flour exports. This condition persisted throughout the second half of the crop year. To get the wheat out, even in fulfillment of the contract with British millers, required acceptance of heavier losses on wheat export sales.

So far as we know, United States milling interests did not complain that the flour export indemnity rates were not high enough. On sales of the by-products of flour milling on domestic markets price developments in the first half of 1939 were exceptionally favorable to millers.[2] These presumably compensated millers for the lower rate of subsidization of wheat exported as flour compared with wheat as grain. Yet milling interests, like manufacturing interests in general, would strongly urge the general principle that any form of export promotion affecting raw materials and their products should certainly not discriminate against the manufactured products, and should if anything discriminate in their favor.

We interpret the actual development not as implying official adherence to an opposite principle, but mainly as an unintended and even unexpected consequence of commitments made. From the outset it was clear that restrictions on flour imports in the principal wheat-importing countries would permit only limited expansion of markets for American flour there, whatever the subsidy rate; and that reaching the goal of 100 million bushels would require subsidization of substantial wheat exports. Once the British wheat deal was made, the actual rate of subsidy on shipments in fulfillment of it was largely beyond the control of the FSCC; and it was presumably difficult for the FSCC to disapprove concurrent wheat sales elsewhere on similar terms. Since flour exports, however, promised to exceed the planned goal for flour, there probably appeared no obvious reason for extending as favorable terms to flour exporters. Indeed, there may have been instances where the flour indemnity rate was temporarily reduced, as actually occurred from January 13 to February 7, in order to facilitate regional acquisition of wheat to fulfill export requirements. Even this reasoning may not fully explain why the aggregate goal was substantially exceeded, at what in retrospect appear heavy subsidy costs on wheat exports in the second half of the crop year.

Costs

The total cost of the United States export subsidy program up to June 30, 1939, excluding administrative costs, has been given in a preliminary official report as 26 million dollars.[3] Indemnities paid on flour exports

[1] *The Hook-up*, Dec. 31, 1938.

[2] Wheat Studies, December 1939, XVI, 178.

[3] *The Wheat Situation*, Sept. 25, 1939, p. 18.

amounted to about 5.3 million dollars. Practically all of the remaining 20.7 million was due to differences between purchase and sales prices of wheat sold for export by the FSCC.

The total cost of subsidizing wheat exports from the 1938 crop, however, properly includes losses on wheat of that crop purchased from the CCC, even though it was not sold in the crop year 1938–39. Of the amount so purchased from the CCC before June 30, 1939, the FSCC then had on hand unsold 4,330,000 bushels. In total the FSCC took over from the CCC 14.2 million bushels.[1] The larger portion of this—9.4 million bushels—was sold for export after June 30.

The export-subsidy program, moreover, was intimately related to the wheat-loan program. Both were directed toward maintaining domestic wheat prices above export parity. Jointly, in proportions impossible to appraise, they were responsible for an increase in farm returns from wheat of the 1938 crop. Interest centers in the comparison between such increase in farm returns and the costs incurred on account of both. Hence it seems reasonable to add total costs of the 1938–39 wheat-loan program.

Expenses charged against the 1938–39 wheat-loan program were given in the preliminary official report as 16 million dollars, excluding costs of administration. This brings the aggregate costs connected with the support of domestic wheat prices to 42 million dollars plus administrative costs of both programs. These costs are to be compared with the advantages to United States wheat growers from the price-raising effect of both programs. But these comparisons must be postponed until we have analyzed the effects of export subsidization on wheat prices.

For this purpose we disregard much larger subsidies paid directly to United States wheat growers in connection with wheat of the 1938 crop: "soil-conservation payments" of 50.5 million dollars; and "parity payments" of approximately 54 million dollars.[2]

The payments under the Soil Conservation Program amounted to about 12 cents per bushel of wheat on the "normal" yield of the acreage allotments of co-operating wheat growers for the 1938 crop. The parity payments amounted to about 11 cents per bushel on the "normal" yield of their 1939 acreage allotments. Recalculated on the normal yield on 1938 acreage allotments, these represented about 12.8 cents per bushel. They were paid only to those wheat growers who co-operated in the *1939* program and who did not exceed the acreage allotments established for wheat for the 1939 crop. But the appropriation from which these parity payments were made, 212 million dollars for five crops together, was approved as early as June 21, 1938, and the payments themselves were partly made during 1938–39. Thus they also may be regarded as made in respect to the 1938 crop, the more so because the allocation among various crops was partly on the basis of average farm prices for the marketing season up to January 31, 1939.

The combined total of the soil-conservation and parity payments, some 105 million dollars as we now compute it, represented a highly important supplement to growers' returns from wheat sales officially estimated at 401 million.[3]

III. OPERATIONS AND COSTS: OTHER COUNTRIES

For the other wheat-exporting countries much less adequate information is yet available. The very brief report of the Canadian Wheat Board on its operations during 1938–39, delayed by the Canadian elections and released only in May 1940, revealed few important facts. Corresponding reports of the Argentine Grain Regulating Board, and of similar controlling agencies in other coun-

[1] See footnote 2, p. 57.

[2] Both figures according to the memorandum presented by the U.S. Department of Agriculture in January 1940 to the U.S. Tariff Commission in connection with its investigation in respect to wheat and wheat products. See also *Agricultural Adjustment, 1938–39*, p. 20.

[3] U.S. Dept. Agr., Agr. Marketing Serv., *Farm Production, Farm Disposition, and Value of Principal Field Crops, 1937–1939* (April 1940, mimeographed), p. 7.

tries, are not yet available. Though our analysis is mainly limited to the Northern Hemisphere crop year ending with July 1939, for Argentina it extends to the end of the calendar year 1939 which nearly coincides with the Southern Hemisphere crop year. This will enable us to see how successful the principal wheat exporters were in disposing of their crops, and what quantities of wheat various governmental agencies were obliged to carry into the following crop year. Only with this knowledge is it possible to appraise the ultimate costs of subsidization for the various exporting countries.

The Canadian Wheat Board

The Canadian Wheat Board (CWB) resumed active participation in the marketing of the wheat crop of Western Canada before the United States officially announced its program to subsidize exports at the end of August 1938. Early in the crop year, market prices of Canadian wheat declined below the purchase price of the CWB, fixed at 80 cents per bushel for No. 1 Northern in store at Fort William, as announced on August 4, 1938.[1] Prices remained below this level during the rest of the crop year. Hence the board received practically all the 1938 wheat marketed by farmers of the Prairie Provinces. From the crop, estimated officially at 336 million bushels, 289.4 million were reported marketed, and total receipts of the board amounted to 292.6 million bushels.[2] The only wheat not delivered to the board was that retained for seed and that used for feed on farms (including unmerchantable wheat), plus the very small quantity carried by farmers into the next crop year—only 2.8 million bushels, the smallest figure since the 1925 crop.

During August–September 1938, farmers' sales to the board lagged somewhat behind their deliveries to country elevators and railroads. In part this lag may have been due to technical difficulties in the board's receival of wheat hauled by farmers to country elevators and platform loadings at an unusually rapid rate.[3] But some farmers may have hesitated to sell their wheat to the board because of their appraisal of the future price development. Beginning with October, however, farmers' sales to the board exceeded their deliveries to country elevators. This followed the decline of the international price of wheat at the end of September, after it had fluctuated at a higher level during the preceding three weeks in reflection of political uncertainty in Europe. Practically no wheat that was marketed by western farmers remained outside the board's hands by the end of November. By this time traders had disposed of the wheat carried over from earlier crops, and they followed a "hand-to-mouth" policy in buying from the board for export or domestic sale. During the rest of the crop year, the board was the only source of Western Canadian wheat on the market.[4]

In spite of its policy of free-selling, the board's sales through July 1939 were only 206 million bushels. Of this 47.6 million were sold at interior points, to mills and for seed.[5] The rest was shipped to various points: 190.9 million bushels to Fort William–Port Arthur (of which 6.7 million were subsequently transshipped to eastern ports by the board), 49.3 million to Pacific Coast ports, and 4.8 million to Port Churchill on Hudson Bay. Of this total the board sold 158.4 million bushels in August–July 1938–39, and on August 1, 1939 it had unsold stocks of 86.5 million bushels, out of a total carryover in Canada reported as 94.6 million.

How much was sold for export and how much for domestic requirements, we are unable to say. With one exception, however, no

[1] Corresponding prices of other classes and grades were approved on Aug. 16, 1938.

[2] The figure for the board's receipts is from the *Report of the Canadian Wheat Board, Crop Year 1938–1939*, as are also most of the statistics in this section. Crop and marketings data are from the *Monthly Bulletin of Agricultural Statistics*, January 1940, p. 4. Figures for deliveries to the board by provinces (44.2 million bushels from Manitoba, 115.6 million from Saskatchewan, and 132.7 million bushels from Alberta) indicate that the discrepancy must be in the statistics relating to Manitoba and Alberta.

[3] Wheat Studies, December 1939, XVI, 141.

[4] Whereas at the end of September, Canadian visible supplies exceeded the quantity held by the CWB by some 66 million bushels, by the end of November the board's holdings slightly exceeded the total visible supply of Canadian wheat.

[5] CWB report, p. 6.

differentiation in prices was made. Under the regulations of the CWB, sales at interior points for seed purposes were at the board's purchase price (less freight to Fort William), while mills were paying a lower market price even when they purchased wheat from the board at interior points. According to the official estimate, about 2.2 million bushels of wheat for seed were withdrawn during 1938–39 from elevators in the Prairie Provinces.[1]

Available statistics preclude a close analysis of the effects of the board's selling policy upon international wheat prices. Data on net sales of the 1938 crop by the board are given only in monthly totals. These are shown below in thousand bushels, together with monthly data on deliveries to the board, and on the balance from the 1938 wheat crop held by the board at the end of the respective months.[2]

Month	Deliveries	Net sales	Balance, end of month
1938			
Aug.	5,496	8,671	(3,175)
Sept.	118,500	28,330	86,996
Oct.	92,221	17,050	162,166
Nov.	27,670	17,455	172,381
Dec.	11,443	25,525	158,299
1939			
Jan.	4,683	20,226	142,756
Feb.	2,581	12,927	132,409
Mar.	5,398	15,077	122,731
Apr.	5,094	20,843	106,982
May	4,463	16,089	95,356
June	5,453	14,305	86,504
July	9,572	9,537	86,540
Total	292,575	206,035	86,540

These monthly net sales cannot be compared directly with exports of wheat grain from Canada. Allowances must first be made for board sales for domestic use, and for exports of old-crop wheat sold for export by private traders into November (p. 67). From the information on wheat carryover from the 1937 crop, together with its distribution among various positions, we infer that more than 20 million bushels of such wheat were exported or sold for domestic requirements during 1938–39.[3]

We infer that the board's sales of wheat for export before August 1, 1939 were about 145 million bushels, of which perhaps 45 or 50 million were sold during August–November 1938. August sales were not very large, although they exceeded current wheat deliveries to the board. According to its annual report, from August 11 the board was handicapped by rumors of an impending subsidy on exports of United States wheat. In September, taking advantage of the demand created by the European crisis, the CWB succeeded in selling the largest monthly total for the crop year, but only a little of this was exported during the month. A comparison of the board's sales with total exports makes this evident, and the September exports included some wheat from the 1937 crop.

With the decline of international prices at the end of September, the board's sales declined and were on a moderate scale during the following two months. According to the annual report of the board, it made substantial sales of wheat only between the 9th and 18th of November, when prices were recovering from their low of November 7. The seasonal peak in exports, however, was reached in October as usual, and exports continued to be high in November. The large September sales were exported mainly during these months; and a comparison of the balance held by the board with the visible supply of Canadian wheat indicates that very little of the wheat sold by the board before December remained in Canada at the end of November.

In December the board's sales rose to a new peak, and good business continued in January also. This was rather contrary to the usual seasonal pattern, but the disturbed political outlook in Europe increased the demand for security stocks, particularly from Great Britain. According to the board's report, large sales took place in the first twelve days of December, and again between December 22 and 28. During both periods prices were tending to rise. Thus far in the crop year, the policy of the CWB was similar to that of the FSCC in the United States, namely, to increase its sales at rising prices.

[1] *Monthly Bulletin of Agricultural Statistics*, January 1940, p. 4, note 1.

[2] CWB report, p. 5.

[3] Stocks of wheat owned by flour mills on Aug. 1, 1938 could hardly have exceeded some 3 million bushels of the total carryover of about 25 million.

This similarity in policies did not continue during the two following months. With falling prices during February–March, Canadian sales declined to a low level, while the subsidized sales for export by the FSCC reached their peak—in part simply reflecting orders of British importers in executing the arrangement with the FSCC announced early in December. On the other hand, though the CWB sales were small in February–March, they considerably exceeded current exports from Canada and were evidently for shipment after the opening of navigation in the spring.

In April both prices and CWB sales showed an improvement, reflecting an increased demand from Europe and the drought in the United States. Most of these sales were made for future shipment, for Canadian exports in April were at the crop year's lowest level.

At the end of April the visible supply of Canadian wheat exceeded the balance of the 1938 crop held by the board, by nearly 30 million bushels. This excess declined to about 10 million at the end of July, showing that the board's sales for export during May–July were somewhat below current wheat exports from Canada. The annual report of the CWB mentions that during June–July it had difficulty in making sales without aggravating the decline in prices. The board's sales were particularly small during July, especially after July 7 when another period of rapid price decline started, and the Liverpool market was very weak.

The above analysis of the selling policy of the CWB indicates that the board handled its sales with great caution and substantial skill. It reduced its sales when markets were weak and when prices showed a tendency to decline and took advantage of any increase in demand, usually selling larger quantities at rising prices. All sales for export and for domestic milling were made through the usual trade channels, and with the use of facilities of the Winnipeg Grain Exchange. Considerable effort was made to avoid disturbance of the normal process of price formation. In spite of this, international wheat prices were unduly depressed in 1938–39 (pp. 78–84). Even skillful and cautious handling of operations failed to eliminate the inherent weaknesses of a system of competitive subsidization of exports.

The annual report of the CWB, dated December 29, 1939 but released only in May 1940, gives no information on sales prices or losses on wheat disposed of before or after August 1, 1939. It merely states that "Based on sales made to date and on valuations of remaining stocks at market prices there will be a substantial loss in handling the crop."

In the budget speech on June 24, 1940, Finance Minister Ralston said that "while at the close of the fiscal year [March 31, 1940] there still remained unsold a small amount of wheat of the 1938 crop, it was clear that the losses of the Canadian wheat board in respect of the marketing of that crop would amount to at least $52,000,000."[1] This would represent about 18 cents a bushel on the total purchase. The Minister of Agriculture, in an address in February 1940, used this figure as the bonus that the board had paid the farmer.[2]

One may compute the difference between selling and purchase prices during the 1938–39 crop year as averaging between 18 and 19 cents per bushel. At this rate, on the 204 million bushels of wheat sold below purchase price[3] by the board before August 1, 1939, it lost some 37 to 39 million dollars, in addition to administrative costs and probably abnormal costs of storage and handling.[4]

On the 86.5 million bushels sold later, the price difference probably averaged less, but other charges more. At prices ruling on the markets at the end of July, the board's paper loss apparently exceeded 25 cents per bushel. But they sold at such prices only that portion of the balance of the 1938 crop which was disposed of before September 1. On the basis of August exports and flour-mill requirements, and assuming that the policy of the board was

[1] *Winnipeg Free Press*, June 24, 1940, p. 6.

[2] *Southwestern Miller*, Feb. 13, 1940, p. 24.

[3] We assume that about 2 million bushels were sold for seed at the board's purchase price.

[4] The price paid to producers for wheat delivered to the board was the fixed price in store at Fort William, less freight charges to Fort William or Vancouver (whichever rate was more advantageous to the producers) and 4½ cents per bushel (or 5½ cents per bushel on lower grades) for storage and handling costs. These deductions covered normal freight and handling costs, but extra costs arose from shipping wheat by rail, not always in the direction of the most advantageous rate, and from carrying a large quantity of wheat into the following crop year.

to sell preferably old-crop wheat early in the season, we estimate these sales at about 15 or 20 million bushels, and the losses on these sales at 4 to 5 million dollars.

Canadian wheat prices, although substantially improved in September 1939, remained during September–November below the fixed purchase price. In three months the losses on old-crop wheat sold were probably 10 to 15 cents per bushel. Probably nearly all of the balance of the 1938 crop was disposed of before December 1939, since the board presumably preferred to dispose of old-crop wheat during these months, and the August–November wheat exports plus domestic requirements by flour mills amounted to about 100 million bushels. It was only on the portion of the 1938 crop carried into December that the CWB may have avoided loss or possibly made a slight profit. Since we believe that very little of the 1938 wheat was held so late, its losses on the 1938 crop sold after the beginning of the war probably amounted to some 7 to 10 million dollars.

The sum of our rough approximations for losses in the 1938–39 crop year, in August 1939, and after war broke out, is in general harmony with the totals officially stated in round figures. Taking storage, handling, and administrative costs roughly into account, we regard the higher figures of our ranges as nearer the truth than the lower figures.

The Argentine Grain Regulating Board

The fixed purchase price paid for wheat from the 1938–39 crop by the Argentine Grain Regulating Board (GRB) exceeded the export price of Argentine wheat during the whole period when the fixed price was effective. Nevertheless, by no means all of the crop was delivered to the board. Some 20 million bushels were presumably retained for seed, and a few million for feed use. The board refused to buy, even at a discount, wheat below export standards, of which there was an indeterminate amount even in a crop of generally excellent quality. Most of this was sold through ordinary trade channels to Argentine mills. In addition, probably considerable amounts remained undelivered when, on September 6, 1939, the board was directed to cease purchases. Continuation of the purchase program through November had apparently been counted upon, and the sudden termination caught many unprepared.[1]

In all, the board purchased 298 million bushels[2] out of a crop now estimated (provisionally) at 367 million.[3] The movement of new-crop wheat in Argentina proceeds much more slowly than in Canada or Australia. The 1938 crop was so large, and subsequent exports so retarded, that storage facilities were soon seriously congested—even though most of the wheat continues to be moved and stored in bags. For this reason among others, deliveries to the board continued throughout the period it stood ready to purchase.

There is no official information as yet concerning the way in which the GRB disposed of wheat purchased from the 1938–39 crop. For this we must use our own approximations based on other official statistics. It may be assumed that practically all wheat from the 1938–39 crop exported from Argentina before September 1939 was purchased from the board, because Argentine export prices of wheat throughout that period were below the board's purchase price, and private holders of 1938–39 wheat of exportable quality had advantages in selling to the board and not directly to exporters. With the discontinuance of purchases of wheat at fixed prices by the GRB on September 6, 1939, the situation changed. Wheat of export quality then remaining in private hands could no longer be

[1] *Times of Argentina*, Sept. 11, 1939, p. 25. We consider excessive the estimate there given that over 2½ million tons remained to be delivered; but the difference between the true figure for the total crop and deliveries to the board may have approached this figure.

[2] *Revista del Banco de la Nación Argentina*, 1939, III, 207. Based on the statement that total purchases assisted by credits from that bank were 8,125,567 tons.

[3] The information that the 1938 crop has been revised from 336 to 367 million bushels was received while the study was in press. At the same time the 1937 crop was revised from 185 to 208 million. The two revisions together result in an increase in 1938–39 wheat supplies from both crops of about 54 million bushels. See *Foreign Crops and Markets*, Oct. 21, 1940, p. 583, and *Boletín Estadística Agropecuaria*, June 1940, XLI, 1.

delivered to the board, and sales of such wheat for export, if it was still held in substantial quantity by private holders,[1] may have become important. However, free selling of wheat by the board during the following months at prices substantially below its purchase price must have limited private sales for export also after September 6, 1939.

It is reasonable to assume that up to October 10 private holders of wheat continued to prefer sales to domestic millers, who were ready to pay higher prices than exporters. This situation arose from the board's policy of selling wheat for export at prices lower than those on domestic markets. But when domestic millers were obliged by the decree of October 10, 1939 to cover their total requirements of wheat exclusively from the board, sales for export became the only outlet for wheat held by the private trade, and domestic and export prices of wheat were drawn closely together. Even then, however, the board's sales apparently were by far the larger portion of the total sales for export, at least until December 1939, when export prices rose above the board's purchase price. Thus, we assume that September–November exports from Argentina also consisted preponderantly of wheat sold by the GRB. The board's export sales, of course, did not coincide in time with actual exports; consequently, it seems probable that sales of wheat for export exceeded actual exports during 1939. However, because information is lacking, exports and sales for exports will be regarded as coincident in the following discussion of the disposition of wheat by the board and of losses on its sales.

On this assumption it may be said that before August 1, 1939 (the end of the Northern Hemisphere crop year) the GRB disposed of not less than 90 million bushels of wheat for export, and up to the time of the outbreak of war—indeed, by September 1—its export sales of wheat were not less than 105 million bushels. Sales of 1938–39 wheat for export before the end of November 1939 perhaps amounted to some 150 million bushels. This figure would be somewhat smaller to the extent that September–November exports, amounting to 44.3 million bushels, consisted of wheat sold by private holders; but presumably it was actually larger, because export sales usually preceded actual exports.

A reliable estimate of the board's sales of wheat for export for the period ending November 1939 is important in approximating the board's losses on the 1938–39 crop. Up to the beginning of December the GRB took losses on all export sales, for its selling prices to exporters during the whole period were below its purchase price. But early in December export prices were brought to a level above the board's purchase price by a sharp rise of international wheat prices. Thereafter the board was able not only to sell for export without additional losses but even to recoup a part of the earlier losses.

With such a situation on international markets from early in December 1939, it is reasonable to assume that private holders of wheat could participate more in December exports (17.3 million bushels) than they did previously. Nevertheless, it still seems probable that before the end of 1939 the GRB sold not less than 165 million bushels for export, since total exports of 1938–39 wheat before January 1, 1940 amounted to about 167 million. Subtracting this figure for the board's sales for exports from its total pur-

[1] The recent upward revision of 1937 and 1938 Argentine crops by more than 50 million bushels indicate that at the beginning of September there were substantial stocks of wheat of exportable quality in the hands of private holders not delivered to the board. Furthermore, during the few weeks of September when strong speculation in wheat took place on the Buenos Aires futures market with the beginning of war, and when the price of futures rose substantially above the fixed price, the GRB took advantage of the situation and disposed of some of its wheat at its purchase price. Following this policy the board succeeded also in limiting undue speculation on the market of futures. These operations of the board may further have increased stocks of wheat with private holders. See the *Times of Argentina*, Sept. 18, 1939, p. 25, and *Boletin Informativo*, Feb. 15, 1940, p. 122.

[2] Exports of wheat grain from the 1938–39 crop through July1939 were officially given as 90 million bushels, and as 105 million through August 1939. In addition, exports of wheat in the form of flour for January–July were 3 million bushels, and for January–August 3.3 million. These last figures, however, do not represent export sales by the board. The millers may have purchased wheat from the old crop, or wheat from the new crop which was not up to the board's standards.

chases of 298 million bushels, we find that the board must have had 130 to 135 million bushels for sale on domestic markets during 1939 and for carryover into the new crop year.

It is not possible to calculate closely how much was actually sold to domestic millers by the GRB before January 1, 1940. The revised estimate of the 1937 crop indicates that a sizable quantity of old-crop wheat, not purchased by the board, was carried into 1938–39. There were also substantial quantities of wheat which were not delivered to the GRB from the 1938 crop. Consequently, Argentine flour mills may have bought some 60 million bushels of wheat without recourse to the board.

Millers can hardly have resorted freely to purchase of wheat from the board before the old-crop wheat and the grain from the new crop not up to the board's standards were exhausted, for these wheats could be bought for less than the fixed price which it was the policy of the board to charge domestic millers for good-quality 1938 wheat. With the abolition of the fixed purchase price of wheat on September 6, the possibilities for domestic millers to purchase wheat from private sources presumably increased. But a decree of October 10, 1939 prohibited them from purchasing wheat other than that held by the GRB, for which they were obliged to pay 7 pesos per quintal. This situation continued up to December 15, when a new decree modified that of October 10 to the effect that domestic mills were permitted to acquire from the board (before March 31, 1940) 40 per cent of their wheat requirements from December 1, 1939 to November 30, 1940, at 7 pesos per quintal.

At this time the opportunity of purchasing their supplies from the board was a privilege, since the domestic price of wheat had risen above that level. If domestic millers used this privilege fully, they bought from the board's stocks about 30 million bushels of wheat, representing roughly 40 per cent of their usual yearly requirements;[1] but how much of this was bought before January 1, 1940 is not clear. Their total purchases of wheat from the 1938–39 crop presumably exceeded this amount, since between October 10 and December 15, 1939 they had been obliged to cover their requirements through purchases from the board; and at least some millers had been forced to resort to purchases from the board as early as June 1939.[2]

Since it was the policy of the GRB during the earlier months of 1939 to sell wheat to domestic flour mills at the fixed price paid at its purchase, and since from October 10 such price was required from domestic millers by decree, a knowledge of the exact quantity of these sales is immaterial for an estimate of the board's losses. The board suffered no losses on these sales except perhaps the extra handling and storage costs and also some allowances for deterioration of quality of wheat.[3] But so long as we do not know what quantity of wheat the GRB may have sold to domestic millers before the end of the year, we cannot estimate the balance of the 1938–39 crop held by the board on January 1, 1940. Since so little is known concerning the disposal of the 1938–39 crop by the GRB and since even the crop estimate is uncertain, it is not possible at this time to make more than a rough approximation of the losses of the board on the 1938–39 crop.

The GRB has not as yet disclosed its selling prices for 1938–39 wheat sold to exporters, but from trade information one may conclude that during the first six months of 1939 its selling price for standard wheat fluctuated between 5.10 and 5.50 pesos per quintal f.o.r. Buenos Aires (p. 49). Semi-official information on the marketing of

[1] According to official report, stocks of wheat in mills on Apr. 1, 1940, were about 27 million bushels, of which 19 million were old-crop wheat. *Boletín Informativo*, Apr. 30, 1940, p. 392. This indicates that Argentine flour mills took full advantage of this privilege.

[2] There were trade reports even in the beginning of June that most of the non-board wheat had found an outlet and that domestic millers were forced to buy their supplies from the board (Canada, Dominion Bureau of Statistics, *The Grain Situation in Argentina*, June 14, 1939). But later information indicates that as late as September substantial quantities of wheat remained with private holders.

[3] We assume that the usual handling and storage costs were deducted by the board from the basic fixed price in its calculation of the net price paid to producers at various interior points. Such was the practice of the Canadian Wheat Board.

wheat during the 1939 commercial year[1] indicates that the difference between the board's sale price of wheat in Rosario and the fixed purchase price fluctuated around 1.50 pesos per quintal until July 1939. In July–August this difference increased substantially and, according to the same source, reached nearly 2.50 pesos per quintal.

A further complication in the computation of losses suffered by the GRB on sales of the 1938–39 crop is introduced by the fact that, before the trade agreement between Brazil and Argentina in April 1939, sales to Brazil were at free-exchange rates. Brazilian sales at or even below the international price in pounds sterling resulted in a higher price in pesos than wheat sold to other destinations, because foreign exchange realized by exporters to other countries had to be sold at the official purchase rate, which was lower than the rate on the free market. Thus in January the price of wheat sold to Brazil was quoted at 6.15 pesos, while the GRB selling price to other exporters was 5.35 per quintal.[2]

Exports of 1938–39 wheat from Argentina before July 1, 1939 were about 78 million bushels; in July, about 12 million; and in August, about 15 million. Assuming that these exports represent the GRB sales and applying to them the above-mentioned differences between the board's selling and purchase price, we estimate that the board lost nearly 32 million pesos on wheat exports before July 1, 1939 and more than 18 million on exports during July–August. Thus, the total loss of the GRB on 105 million bushels of 1938–39 wheat exported before the war (before September 1, 1939) amounted to about 50 million pesos or (according to the official purchase rate of the United States dollar) nearly 16 million dollars.

With the outbreak of the war, speculation in the Buenos Aires futures market caused the October future to rise substantially above the board's purchase price. But the GRB, taking a more conservative position, did not follow the market all the way; on the contrary, it took steps to limit speculation on the futures market (p. 71) and continued to sell wheat for export at moderate prices.

During the three months following the outbreak of the war, the board's selling price to exporters was, generally speaking, on the basis of about 6 pesos per quintal f.o.r. Rosafé (10 centavos higher at Buenos Aires). There were minor variations in the board's selling price in pesos because of various changes in exchange rates that took place during September–October. Its selling prices also varied somewhat from one transaction to another, but the stated basis was in effect for the board's export sales through September–November;[3] and it was consequently losing some 0.9 pesos per quintal on its export sales during that period. The total losses on exports during September–November were about 10,800,000 pesos or $3,200,000. This brings the total loss of the GRB on its sales of the 1938–39 crop for export until December 1939 to about 60 million pesos, or nearly 20 million dollars.[4]

After the end of November, Argentine wheat prices rose, partly in reflection of the news of the poor condition of the new Argentine crop and partly in agreement with a rising tendency on international wheat markets; and the GRB raised its export selling price at the beginning of December to 6.80 pesos per quintal f.o.r. Buenos Aires, a week later to 7.50 pesos. By early January the board's selling price had reached 8.20 pesos. Thus, during the second half of December, the GRB was already selling above its purchase price, and was able to recoup some of its earlier losses. The quality of old-crop wheat had deteriorated, however, because of

[1] See "La Comercialización del Trigo en el Año Agrícola Comercial 1939," *Boletín Informativo*, Feb. 16, 1940, p. 121.

[2] *Times of Argentina*, Jan. 30, 1939. In the following estimate of the board's losses we were unable to take into consideration this fact for lack of information. It is possible that private holders of old-crop wheat profited mainly from selling their wheat to Brazil at higher prices in pesos.

[3] The GRB withdrew its offers on this basis on November 24. See WHEAT STUDIES, January 1940, XVI.

[4] This figure may be too high if the GRB gained advantage by selling wheat to Brazil during January–March at higher prices (in pesos) than those charged to exporters in other markets. The board's losses may have been smaller if a large portion of wheat exported during July–August was sold by the GRB to exporters at an earlier date, before the price fell to a low level in July. Comments in the trade press point to such a possibility.

long storage under unfavorable conditions, and the board encountered substantial loss on discount for unsatisfactory quality.[1] This tended to reduce possible advantages to the board from the liquidation of remaining stocks at a higher general level of prices. Furthermore, as has been mentioned, domestic millers had the privilege of buying from the GRB at 7 pesos per quintal 40 per cent of their wheat requirements until November 30, 1940. The board therefore had the advantage from higher prices only on part of the old-crop wheat which it held at the end of December.

Scanty information on the operations of the GRB in recent months, as well as uncertainty about the balance of the 1938–39 wheat held by the board on January 1, 1940, precludes an estimate of the extent to which the GRB was in a position, during December 1939 and the following months, to recoup the large losses sustained on earlier sales. But, judging by the level of domestic prices of wheat at Buenos Aires, which after October 10, 1939 reflected quite well the selling price of the board to exporters, the GRB could not have held its selling price at the high level to which it rose at the beginning of January. Wheat prices at Buenos Aires declined substantially in the second half of that month, and during February were only slightly above the board's purchase price of 7 pesos per quintal. In March they gradually recovered, in April and May substantially exceeded the high level of early January, and continued high in June. But we do not know at present how much of the 1938–39 wheat the board held at the beginning of April, and therefore cannot appraise the advantage gained by the board from the situation during these months.[2]

In addition to losses on the price of wheat from the 1938–39 crop, the GRB incurred such other costs as the extra cost of storing and handling involved in the slow liquidation of the surplus. All this leaves uncertain the final appraisal of total losses of the Argentine GRB. But later profits could hardly be expected to recoup a large portion of the board's losses on operations prior to December 1939.

[1] See *Times of Argentina*, Jan. 8 and 15, 1940.

[2] We know merely that of 77 million bushels of 1938–39 wheat in commercial stocks in Argentina on Apr. 1, 1940, 19 million bushels were held by flour mills.

Summary of Costs of Subsidies

The preceding analysis of the operations and costs of subsidies in the principal wheat-exporting countries has brought forward evidence of great losses suffered on export operations by all governmental agencies concerned. Here we recapitulate costs in 1938–39 for the three countries for which export operations have been discussed in detail, and add some rough approximations of costs for some of the secondary wheat exporters.

In the United States, direct expense for subsidies paid on exports of wheat and flour prior to June 30, 1939 amounted to some 26 million dollars. To that sum must be added 16 million charged against the 1938–39 wheat-loan program (p. 66). The total cost of the policies directed toward maintenance of wheat prices on domestic markets was thus about 42 million dollars excluding administrative costs. Still larger wheat subsidies—benefit payments under the soil-conservation program of 1938 (50 million dollars) and parity payments (54 million dollars)—are not included here; they were not directly connected with the control of wheat supplies during 1938–39, although the parity payments were conditioned by limiting wheat acreage for the 1939 crop.

The losses of the Canadian Wheat Board on its operations with the 1938 crop probably exceeded 50 million dollars.

The Argentine Grain Regulating Board probably lost about 20 million dollars on its operations with the 1938–39 wheat crop prior to December 1939. But it recouped an indeterminate but small part of this on later sales at higher prices.

Australian subsidies to wheat growers on the 1938–39 wheat crop were some 13–15 million dollars (the exact figure is not yet revealed so far as we know). But these subsidies can hardly be compared with losses of the FSCC in the United States or the Canadian Wheat Board, for they represented simple bonuses to growers without attempt to control marketing of the 1938–39 wheat crop with a view to price maintenance.

Of the Danubian exporters, only Rumania paid direct export subsidies. Roughly we approximate these for 1938–39 at some 8 million dollars (counting Rumanian lei at official exchange rates, which evidently exaggerates the cost of subsidies in dollars). The cost of other forms of encouragement of wheat exports by Rumania and other Danubian countries, such as exchange premiums paid to wheat exporters or barter agreements with importing countries, are difficult or impossible to estimate. Furthermore, some part of these costs was really compensation for overvaluation of the monetary units by official exchange controls rather than genuine export subsidy (p. 41).

Finally, a rough estimate of the cost of French wheat dumping may be given within the limits of 15 to 20 million dollars. French trade statistics for 1938–39 suggest that subsidized wheat exports were about 14 million bushels.[1] Exports of flour, also subsidized by the French Wheat Board, were about 5 million bushels in terms of wheat, so that total subsidized exports were about 19 million bushels. On sales of wheat directly to exporters or millers who exported it later in the form of flour, the French Wheat Board suffered direct losses of some 120 to 130 francs per quintal (85 to 95 cents per bushel). The total losses of the board on 19 million bushels of exported wheat amounted to some 625 to 675 million francs, or around 17 million dollars on the basis of the exchange rate effective in July 1939.

In all, it may be estimated that for the countries enumerated above direct costs of policies aimed at the maintenance of wheat prices on domestic markets during 1938–39 were about 130 to 140 million dollars. If one includes other subsidies not directly connected with price maintenance in 1938–39, such as 104.5 million dollars paid to wheat growers in the United States in the form of benefit and parity payments and Australian bonuses to wheat growers, the total would run to 250 to 260 million dollars. Even this total is incomplete, since costs of some forms of subsidization in certain of these countries were not included because of lack of information needed for an estimate, and since some minor exporters of wheat also subsidized their wheat exports in 1938–39 in one form or another.

Because of the extensive costs of wheat subsidies during 1938–39, even when one considers only those costs caused by losses on export operations and connected with governmental policies directed toward maintenance of wheat prices on domestic markets, it is advisable to discuss briefly the sources from which these costs were covered.

Sources for Financing Subsidies

Financial acts providing funds for subsidies varied greatly from one country to another. In the United States, funds necessary to meet costs of subsidization of wheat and flour exports were placed at the disposal of the Secretary of Agriculture under two acts: (*a*) Section 32 of the Agricultural Adjustment Act of 1933, as amended in 1935, authorizes the secretary to use funds equal to 30 per cent of the annual customs receipts for stipulated purposes, among which is included encouragement of exports as well as domestic consumption of agricultural commodities; (*b*) Section 12 of the Soil Conservation and Domestic Allotment Act of 1938 authorizes the Secretary of Agriculture to use "such part as he deems necessary of the sums appropriated to carry out this Act for the expansion of domestic and foreign markets or for seeking new or additional markets for agricultural commodities or the products thereof or for the removal or disposition of surpluses of such commodities or the products thereof."

The customs revenue fund was a part of general United States revenue before the amendment of the AAA. Hence the allocation of a portion of the fund to finance export subsidies gave rise to the necessity to provide other sources for such expenses as were previously covered from customs revenue. Sums necessary for carrying out the Soil Conservation Act in 1938–39 were also appropriated from general revenue. Consequently, the American export subsidies, as well as other wheat subsidies and the costs of the wheat loan, were financed from general revenue in 1938–39. In fact, they were partly responsible for the mounting national debt.

[1] Not counting export sales of some 4 million bushels of Yugoslavian wheat; see above, p. 53.

A similar situation existed in Canada. The Canadian Wheat Board Act of 1935 provided that the board may borrow money on the security of wheat. According to the same act, the Minister of Finance may guarantee loans of the board from the chartered banks.[1] The CWB thus has power to transfer deficits to the Dominion government. Consequently, it may be said that losses suffered by the board on its operations with the 1938 wheat crop are, or will be, covered from the general revenues of the Dominion government.[2]

A somewhat different situation exists in Argentina. The law of September 30, 1938 on minimum prices for wheat, linseed, and corn authorized the executive to finance from profits on exchange operations of the Exchange Control Board eventual losses on purchases of wheat made by the Grain Regulating Board. In case these funds were inadequate, the Banco de la Nación was to advance the necessary funds on conditions agreed upon by the executive. Thus, the losses of the GRB are covered from a special source. Furthermore, a week before the reconstitution of the GRB and the fixation of its purchase price for wheat from the 1938–39 crop at a price above the current market price for old-crop wheat, the margin between the official selling and purchase rates for the pound sterling—to which the Argentine peso was pegged from the beginning of 1934—was increased from 1 to 2 pesos by raising the selling rate of the pound. An additional source of profits on exchange operations was thus created, with a view to raising funds necessary for financing eventual losses on government operations in the 1938 crop.

Who ultimately bore the burden of this additional revenue? Presumably Argentine consumers of those imported goods for payment of which importers could obtain foreign exchange at the official rate; they paid at least in part. The official selling rate of foreign exchange was lower than the rates ruling on the so-called free market and may be regarded as a preferential exchange rate. At this rate foreign exchange was distributed among importers of certain commodities with a view to encouraging their imports from countries with which Argentina had a favorable balance of payments. Imports from other countries and imports of some commodities from all countries are paid for at higher rates of foreign exchange. By raising the preferential rate to a higher level, the costs in pesos of imported goods that profited by this rate were presumably increased. But it is difficult to decide which groups of consumers were taxed more, since foreign exchange at the preferential rate was distributed not only and not mainly by kind of commodities imported but also by origin of imports. It may be assumed, however, that those imports which may be characterized as imports of necessity goods were more favored by the preferential rate of exchange than other goods. Presumably certain imports of important producers' goods also had advantage of the preferential rate.

In several countries, among them Australia and Rumania, the costs of subsidies for wheat growers were covered by taxation of the consumers of flour. In Australia this was the only source from which bounties to wheat growers were paid on wheat from the 1938–39 crop. But in Rumania the tax on flour was not sufficient to cover the total high cost of the direct export subsidies paid to exporters of wheat during 1938–39. Part of the cost of direct export subsidies in Rumania was thus covered temporarily by credits from the National Bank and, presumably, was ultimately paid from general state revenue.

The cost of other forms of subsidization of wheat exports in Rumania and in other Danube countries, consisting of exchange premiums paid to exporters as well as the cost of encouragement of wheat exports under various barter agreements, was presumably paid ultimately by consumers of imported commodities, in so far as higher costs of foreign exchange tended to raise prices of imported goods in domestic currency, and the prices of imported commodities under barter agreements were usually above the prices of the

[1] T. W. Grindley, "The Canadian Wheat Board," *Canada Year Book 1939*, p. 574.

[2] On July 31, 1939, according to the *Report of the Canadian Wheat Board, Crop Year 1938–1939*, the demand loans and liability to agents of the CWB on the 1938 wheat crop amounted to $90,184,156.89, against the balance of the 1938 crop on that date of 86.5 million bushels.

[3] *Boletín Informativo*, Oct. 15, 1938, p. 900.

same commodities in free international markets.

In France the heavy losses connected with the disposal of surplus wheat, mainly abroad, were covered by a special progressive levy subtracted from the fixed purchase price of wheat paid to producers and by other taxes falling partly on producers of wheat and partly on consumers of flour. Ultimately, consumers of flour and bread bore all costs of the dumping of French wheat, since wheat prices paid to producers, even after subtracting the special progressive levy and taxes falling upon producers at their highest brackets, were much above the price of wheat ruling on the international markets. The progressive levy and taxes on producers resulted only in various degrees of subsidization of wheat growers according to the size of their wheat sales: subsidies paid to larger producers were smaller because the progressive levy and taxes, both subtracted from the flat fixed price paid to all producers, were larger.

The conclusion is that costs of wheat subsidization, particularly those connected with wheat exports, fell ultimately either on the general taxpayer, on consumers of bread, or on consumers of certain imported commodities taxed by the higher cost of foreign exchange or competing with these domestic goods. These burdens, falling on taxpayers and consumers and distributed differently in the various exporting countries, are to be set against the special advantages obtained by wheat growers in the several countries from the higher prices for wheat received under various schemes of governmental control of the wheat markets.

These special advantages, however, should be appraised correctly. The costs of subsidization of wheat exports are always determined by the difference between their actual purchase and selling prices of wheat of the various governmental agencies. But the advantages to wheat growers must be measured by another difference; namely, the difference between the price which they actually received under governmental control and the price which they would have realized without it. It is always possible that only part of the cost of subsidization of exports paid by taxpayers and consumers of an exporting country will be returned as benefits to its domestic wheat growers. The rest may be a net loss to the country. Such a situation must arise when the spread between the actual domestic price and the export price is caused not solely by the price-raising effects of governmental control on domestic markets of an exporting country—no matter if it be in the form of a fixed minimum price for producers or in the form of an artificially maintained domestic market price—but also by the price-depressing effects of subsidized exports upon the prices on international markets.

These problems are discussed in the following section.

IV. EFFECTS OF EXPORT SUBSIDIZATION

For a definite appraisal of the various forms of wheat subsidization it is important to evaluate their effects upon wheat prices, both abroad and on domestic markets of the respective subsidizing countries. All schemes were aimed at increasing the incomes of wheat growers, and the actual achievement depended heavily upon the prices at which producers sold their wheat.[1]

Where governmental agencies bought wheat from farmers at guaranteed minimum prices, as in Canada, Argentina, and some other countries, domestic wheat prices for producers were practically fixed, since minimum guaranteed prices in 1938–39 were generally above the world market price. In these countries wheat growers sold the bulk of their crops to the official agencies at guaranteed minimum prices. Other countries, as for instance the United States, did not undertake to fix wheat prices outright but sought in various ways to maintain domestic prices above the levels determined by the supply-

[1] Direct subsidy to producers without intervention on wheat markets may also enhance producers' income. This was the case with the Australian wheat bonus and, in some degree, with soil-conservation and price-parity payments to co-operating farmers in the United States. These bonuses and payments directly increased farmers' incomes above their receipts from sales at market prices.

demand situation on international markets. In both cases, however, the price-raising effects of the governmental controls could not be measured by the spreads between domestic prices and the prices prevailing on world markets. The world market prices were influenced by the selling policies of various governmental agencies, and particularly by the direct subsidization of exports practiced by the United States and some other countries. Excess of domestic prices over the level of international prices could be caused, at least partially, by the price-depressing effects of export policies upon international prices, as well as by their price-raising effects on domestic prices.

In this connection, the question inevitably arises: were wheat prices on the international markets depressed in 1938–39 by policies of the chief exporters, particularly by the American subsidies; and, if so, what was the extent of the depression?

Effects on Prices on Open International Markets

The problem of the effects of governmental interventions upon the international wheat price may be approached in two ways. One could make a detailed analysis of the effects of changing selling and subsidy policies of the several governmental agencies in the exporting countries on the course of wheat prices in the international markets during 1938–39; or one could interpret the level of international prices throughout the crop year, or parts of the crop year, with reference to the supply-demand relationship on the world wheat market. The second approach must seek to determine (1) whether international wheat prices were truly reflecting the supply-demand relationship, or (2) whether these prices were affected by the governmental policies, and if so to what degree and in which direction.

Though both approaches might be fruitful and are in some degree complementary, the former requires a more intimate knowledge of the selling and subsidy policies of the respective agencies than we now have. We shall therefore attempt to analyze the level of international wheat prices, as represented by British prices, with reference to the supply-demand relationship on the world wheat market in 1938–39 as compared with other postwar years.

There are various possibilities for such an analysis. In view of the relative stability in the demand for wheat, total world supplies of wheat may be regarded as the principal causal factor in changes in the level of international wheat prices from one crop year to another. Changes in demand, however, are not so insignificant as to be ignored altogether. Direct measurement of changes in the demand for wheat, as for other commodities, is a problem not yet solved. Various indirect measurements of changes in the demand for agricultural commodities have been devised. Indexes reflecting changes in the national income are frequently so used. Sometimes index numbers of the general level of wholesale prices are used as indicators of variations in purchasing power resulting from fluctuations of business. Though we recognize the usefulness of these methods in price analysis of many agricultural commodities, we cannot see that they are very satisfactory for measurement of the demand for wheat.

The demand for wheat for use may depend only slightly on general purchasing power, particularly in countries with a high standard of living; and these are responsible for a large part of the demand for wheat on international markets. Nevertheless, it would be erroneous to assign an undue weight to the supply factor in analysis of the level of wheat prices in 1938–39. Statistical totals of world wheat supplies in 1938–39 were inflated by record-large crops (or crop estimates) in regions which export only small quantities of wheat, and whose wheat supplies therefore influence international wheat prices relatively little.[1]

[1] Wheat supplies in Europe ex-Danube and in the four chief wheat exporters were large in 1938–39 but by no means of record size. But wheat supplies were of record size in India, in several countries of the Near East, and in the Danube Basin (see Wheat Studies, January 1939, XV, 261). In several countries of these regions, wheat supplies in 1938–39 were of record size only "statistically," because of overestimates of crops or of changes in the methods of estimating crops. Even if the crop estimates for these

In our analysis of the world wheat price, we attempt to consider factors which reflect not only the world wheat supplies, but also changes in the demand for wheat. The year-end world wheat carryover may be regarded as one of the best indicators available for reflecting variations in both the world supplies and world demand. It is a balancing item between the world supplies of wheat for a crop year and its disappearance during the year. Our previous experience in using this indicator for an analysis of the postwar wheat prices on international markets has shown the usefulness of the method.[1]

One difficulty emerges, however, in applying such an analysis to the world wheat price in 1938–39. Although year-end wheat carryovers well reflect changes in the relationship between the supply and the effective demand for use, there are other types of demand for wheat; and these do not cause wheat disappearance and do not reduce year-end wheat carryovers. A heavy demand for wheat by various European governments in order to build up security stocks had an important influence on the wheat situation in 1938–39. These governmental purchases, made with a view of holding wheat for an indefinite period of political insecurity, of course increased the demand for wheat in 1938–39, but did not reduce the wheat carryover on August 1, 1939. On the contrary, security stocks swelled European wheat carryovers then to a high level. European stocks of old-crop wheat on August 1, 1939 accordingly are not comparable with the usual commercial wheat carryovers at the end of a crop year, and it would be erroneous to use the world wheat carryover, including the large security stocks at the end of 1938–39, as an indicator of the relationship between the supply and effective demand for wheat during that year. In order to make European wheat carryovers on August 1, 1939 comparable with those for previous years, one must subtract from the total some 150 million bushels which represent the security stocks built up by governments in various European countries.[2]

An alternative method of making the 1938–39 wheat carryover comparable with those for previous years is to use as an indicator of the supply-demand situation the wheat carryovers in exporting countries only and, thus, to eliminate European carryovers in total. For practical reasons, we use for this purpose year-end carryovers only in the four chief wheat-exporting countries.[3]

As shown in Chart 7, both indicators of the supply-demand relationship on the world wheat markets (namely the total "world" wheat carryovers and the wheat carryovers of the four chief exporters, both given on the chart on a logarithmic vertical scale) moved closely together through the postwar period; and the crop-year average price of wheat imported into Great Britain moved in fairly close inverse correlation with both of these indicators.[4]

areas were correct, their wheat supplies, except perhaps those from the Danube Basin, usually affect the world wheat price relatively little, since their domestic consumption of wheat fluctuates widely depending upon the size of their crops.

This may partially explain why Dr. F. L. Thomsen, of the U.S. Bureau of Agricultural Economics, in an analysis of the world wheat price using as the principal factors world supplies of wheat and the level of wholesale commodity prices in Great Britain, reached the conclusion that there was no evidence that the world price was unduly depressed in 1938–39. See U.S. Dept. Agr., *The Agricultural Situation*, August 1939, XXIII, 9–10.

[1] See V. P. Timoshenko, "Monetary Influences on Postwar Wheat Prices," WHEAT STUDIES, April 1938, XIV, 263–318.

[2] Practically the total increase in stocks in Europe ex-Danube from August 1, 1938 to August 1, 1939, about 180 million bushels, occurred in the following countries: Germany, some 60 million bushels; France, some 65 to 70 million; the United Kingdom, some 35 million; Italy, some 10 million; Holland, Belgium, and Switzerland together, some 10 million; and the Scandinavian countries, about 6 million. All these increases, except some 25 or 30 million bushels in France, were caused by governmental accumulation of security stocks. See also WHEAT STUDIES, September 1939, XVI, 10.

[3] Year-end carryovers in the Danube exporting countries and in French North Africa on the average for the postwar years were only about 10 per cent of the total wheat carryover in exporting countries, excluding India and Russia, and these estimates are much less reliable than those for the four chief exporters.

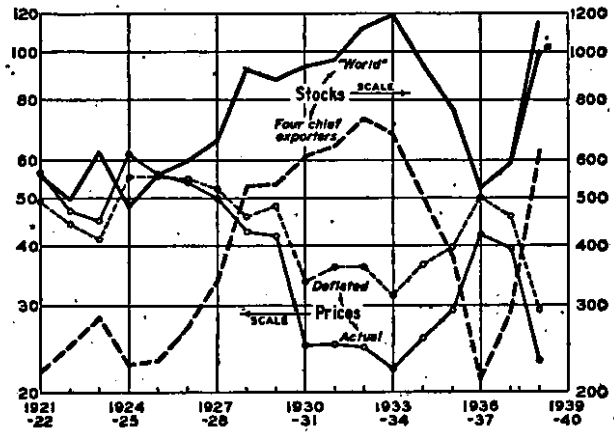
[4] For the postwar period, 1921–22 to 1938–39, the coefficient of correlation between the yearly average price of British parcels and the "world" wheat carryover was $r = -.863 \pm .062$; the coefficient between the same price and the wheat carryover of the four

The results of our analysis of British wheat prices in relation to (*a*) the world wheat carryovers excluding security stocks in Europe on August 1, 1939, and (*b*) wheat carryovers of the four chief exporters[1] indicate that there was an undue depression of British wheat prices during 1938–39, inexplicable in the light of the supply-demand relationship on international markets.

This conclusion rests on analyses of several price series for imported wheat in British markets. Our basic cash price series was the British parcels price, for which crop-year averages are shown in Chart 7; but for comparison we also used weighted customs prices of imported wheat, which show practically the same tendency. The price of futures was represented in our analyses by the March future in Liverpool, which we used in quarterly averages. All these series indicate an undue depression of the British wheat price during 1938–39. But the deflated price—the price of wheat in terms of its purchasing power relative to other commodities on British wholesale markets—shows better than the actual price the undue depression of the British wheat market in 1938–39.

CHART 7.—AVERAGE ANNUAL BRITISH PARCELS PRICES OF WHEAT, CROP YEAR ENDING JULY 31; AND YEAR-END WHEAT STOCKS IN THE "WORLD" EX-INDIA AND IN THE FOUR CHIEF EXPORTING COUNTRIES, ABOUT AUGUST 1, 1922–39*

(Shillings per quarter of 480 lbs.; million bushels; logarithmic vertical scales)



* Data from Tables I and II.

[a] "World" stocks on Aug. 1, 1939 adjusted for security stocks in Europe.

This appears from comparison of the course of the actually reported and deflated price of British parcels during the ten recent years, both shown in Chart 7. Though the average price of British parcels for the 1938–39 crop year, about 23.2*s*. per quarter in British currency, was about 7 per cent lower than the low average for three earlier years of deep depression and of excessive wheat surpluses, 1930–31 to 1932–33, it was still somewhat higher than the average of actual prices for 1933–34. In that year, wheat prices fell to a record low level because of further accumulation of wheat surpluses, especially in European importing countries, and under the influence of certain monetary policies.[2] The deflated price of British parcels, on the other hand, was at a record low figure in 1938–39. Even the 1933–34 average of de-

chief exporters was $r = -.854 \pm .066$. The same price deflated by the Board of Trade index number of wholesale prices, shown on the above chart by a dotted line, also was in a fairly close inverse correlation with the same indicators, although the respective coefficients of correlation were slightly smaller: namely, $r = -.811 \pm .083$ and $r = -.812 \pm .083$. However, because of the narrower range of fluctuations of deflated prices as compared with original prices, the standard errors for estimates of these prices from the equations characterizing average relationship during 1921–22 to 1938–39 are substantially smaller for deflated prices than for prices in currency.

[1] "World" wheat carryovers, as well as wheat carryovers in the four chief exporters on Aug. 1, 1939, include Argentine wheat stocks of 220 million bushels on that date. This figure is some 45 million bushels larger than it would be if calculated on the basis of the official estimates of the 1937 and 1938 Argentine crops as they stood before the recent change (see footnote 3, p. 70).

Until recently, the trade was quite unaware of this understatement, partly because publication of official information concerning commercial stocks of wheat in Argentina had been discontinued in January 1939 and was resumed only in April 1940. The selling policy of the GRB, moreover, was so conservative during most of the first half of 1939 that it also did not suggest the real size of the huge 1938 crop.

With Argentine stocks on Aug. 1, 1939 at 220 million bushels the stocks of the four chief exporters on the same date are estimated at 625 million. These stocks would amount to only 580 million with Argentine stocks based on the official estimates as they stood before the recent change. Consequently, our appraisal of Aug. 1, 1939 stocks both of Argentina and of the four chief exporters is not significantly affected by the recent upward revision of 1937 and 1938 Argentine crops. Stocks in both positions on Aug. 1, 1938 now appear somewhat larger. But this change must be too small to affect significantly the price analysis that follows.

[2] Timoshenko, *op. cit.*, pp. 277–81, 309–12.

flated prices was some 7 per cent higher than the 1938–39 average, while the average for three earlier years of low wheat prices—1930–31 to 1932–33—exceeded the 1938–39 average by some 20 per cent. This is clear evidence of an unduly low level of the purchasing power of wheat in the light of the supply-demand relationship on the world wheat market.

Indeed, on August 1, 1939, the "world" wheat stocks characterizing the supply-demand relationship during 1938–39 were, when adjusted for European security stocks, some 200 million bushels or some 16 to 17 per cent below the same stocks on August 1, 1934. At the same time, the purchasing power of wheat on British markets in 1938–39 was substantially below its previous record low level in 1933–34. The adjusted "world" wheat stocks on August 1, 1939 were also appreciably smaller than world stocks on August 1, 1933, though they were somewhat larger than the stocks on the same date in the two preceding years, as the chart shows. On the average, world wheat carryovers for the three earlier years, 1930–31 to 1932–33, were about on the same level as or slightly higher than the adjusted world wheat stocks on August 1, 1939. This indicates that the supply-demand relationship on international wheat markets during the 1938–39 crop year was about the same as in the three earlier years, whereas the purchasing power of wheat during the earlier years of low wheat prices averaged some 20 per cent above its 1938–39 level.

The actual prices of wheat on British markets show less evidence than deflated prices of undue depression in 1938–39. Nevertheless the average price of British parcels in 1938–39 was some 7 per cent below the average of 1930–31 to 1932–33, even though the wheat supply-demand situation on international wheat markets was about the same, and the general economic situation during these earlier years was much more depressed than in 1938–39.

Comparison of the fluctuation of British wheat prices during the past ten years with the total wheat carryover of the four chief exporters, shown on Chart 7 by the heavy dotted line below the "world" wheat stocks, also points toward undue depression of the 1938–39 wheat price on British markets. Wheat surpluses of the four chief exporters, though large in 1938–39, were by no means up to their 1932–33 peak, as may be seen on comparison of August 1, 1939 stocks with those of August 1, 1933. The 1938–39 surplus was about equal to surpluses of 1930–31 and 1931–32, and consequently somewhat smaller than the three-year average of August 1 stocks, 1931 to 1933, while the average price of British parcels in 1938–39 was some 7 per cent and purchasing power of those prices some 17 per cent below the average for the three earlier years, 1930–33. In this comparison also, the excessive depression of British wheat prices in 1938–39 is much more pronounced if prices are expressed in terms of their purchasing power.

Wholesale prices in Great Britain, reflecting an improved business situation, rose substantially during 1935–37 from their low level during the period of deep depression, 1931–33. In 1938, the level of wholesale prices declined somewhat in connection with the business recession. But the decline stopped in September, and through 1938–39 the general price level was maintained substantially above the low level of 1931–32 to 1934–35, though somewhat lower than in 1937. The Board of Trade index number of wholesale prices (1926 = 100) rose from an average of 70 during the period 1931–32 to 1934–35 to 87.7 in 1937, but declined to 79.0 in 1938–39. The general level of prices in 1938–39 was substantially higher than during 1931–34, partly because the armament program maintained business activity and prevented further decline in prices.

Wheat prices failed to reflect this changed situation in the general level of prices. Their rise from the extremely low level of 1933–34 to a substantially higher level in 1936–37 was not so much the result of general business conditions as of change in the wheat situation in world markets. This is shown (Chart 7) by the great reduction in the world wheat carryover, as well as in the carryover of the chief exporters. The purchasing power of wheat rose from 1933–34 to 1936–37 much

less than the price in currency, as is shown by the narrowing of the spread between the solid and dotted lines showing prices in currency and deflated prices.

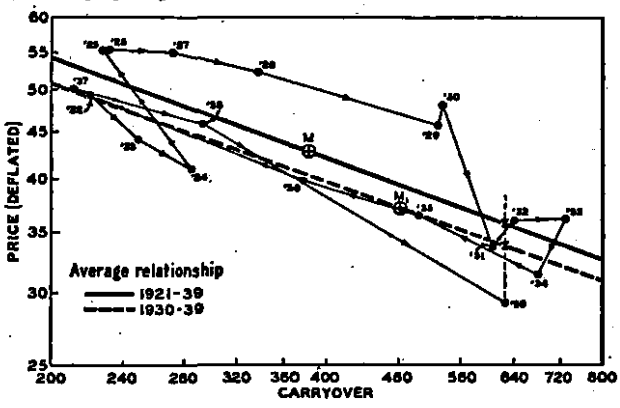
The behavior of British wheat prices during more recent years also points to an undue decline in 1938–39. During the two years 1934–35 and 1935–36 the wheat carryover of the four chief exporters decreased nearly as much as it increased from August 1, 1938 to August 1, 1939. Yet during the two earlier years the purchasing power of wheat, as represented by the deflated price on Chart 7, rose in percentage terms only half as much as it declined from 1937–38 to 1938–39.

Again, the increase in the wheat carryover of the four chief exporters during 1937–38 and 1938–39 was smaller than the reduction during the three preceding years of short crops. Yet the decline in the purchasing power of wheat on British markets from 1936–37 to 1938–39 was greater than its rise during the preceding three years. Consequently, the purchasing power of wheat on British markets in 1938–39 was lower than it had been in its worst year, 1933–34. Furthermore, practically the whole decline took place during 1938–39.

This excessive decline of the purchasing power of wheat on world markets in 1938–39 cannot be explained as reaction from an unduly high level in 1937–38. In that year, indeed, the purchasing power of wheat only approached a level which could be regarded as normal after the experience of the previous 16 years of the postwar period. This appears from Chart 8. The diagram shows that the deflated price in 1937–38 was itself below the heavy solid line representing the average relationship between deflated prices and wheat carryovers. In view of the tight position of the world wheat market in 1937–38, the average deflated price of wheat in that year was somewhat low, not only in relation to its level before the collapse in 1930–31 but in relation to the price of wheat in British markets in 1931–32 and 1932–33. Consequently, the collapse of the purchasing power of wheat in 1938–39, even greater than that in 1930–31, brought the deflated price of wheat so much below any price that may be regarded as normal, or most probable from the experience of the last 18 years, that it was further out of line with the usual relationship with the supply-demand situation than had been true in any of the postwar years except 1929–30.

CHART 8.—RELATIONS BETWEEN AVERAGE ANNUAL BRITISH PARCELS PRICES (DEFLATED) FOR CROP YEARS ENDING JULY 31 AND YEAR-END WHEAT STOCKS IN THE FOUR CHIEF EXPORTING COUNTRIES, ABOUT AUGUST 1, 1922–39*

(Shillings per quarter; million bushels; logarithmic scales)



* Data from Tables I and II.

The collapse of wheat prices in 1930–31 could easily be explained in terms of maintenance, through various influences, of too high a level during the five preceding years.[1] The collapse of wheat prices in 1938–39, greater than can reasonably be explained by a sudden increase of supplies relative to the demand, can hardly be explained by factors outside of the wheat markets. The business recession that began in the second half of 1937 in the United States and somewhat later in the United Kingdom, about the beginning of 1938, was arrested before the beginning of the crop year 1938–39. Decline of the general level of prices was also checked at about the same time, and increased industrial production of armaments maintained prices of other commodities on a much more satisfactory level. Monetary disturbances during 1938–39 were also not such as to explain the excessive depression of wheat prices. The international political situation introduced much uncertainty, it is true, but this tended to increase rather than to decrease the de-

[1] Timoshenko, *op. cit.*, pp. 294–303.

mand for wheat. If, judging by the extremely small volume of futures trading in the grain exchanges, particularly in the United States,[1] speculative demand for wheat declined greatly in 1938–39, this may be regarded at least partly as a consequence of governmental interventions on the wheat markets, rather than as an independent factor. Hence it seems clear that, except for governmental policies and especially the competitive subsidizing of wheat exports by governmental agencies, there was no important factor serving to explain the undue depression of world wheat prices in 1938–39, particularly when these prices are expressed in terms of purchasing power.

From the scatter diagram on Chart 8 covering 18 postwar years, it may be estimated that the most probable deflated price of British parcels in 1938–39 would be about 36 (35.8)*s.* per quarter. During the nine latest years (from 1930–31), however, the deflated prices of British parcels had usually run somewhat below the average relationship for the postwar period as a whole. Hence, on the basis of experience of these years a deflated price of about 34 (33.8)*s.* per quarter may reasonably be regarded as the most probable for 1938–39.

But the actual deflated price of British parcels, averaged for the crop year, was only 29.3*s.* per quarter, or some 13 to 14 per cent below the lower estimate of the most probable price. Expressed in currency, our estimate of the price reasonably to be expected under the supply-demand conditions of 1938–39 would be, at the general price level for that year, about 27 (26.7)*s.* per quarter, instead of 23.2*s.*, the actual average price of British parcels in 1938–39. The actual price in 1938–39, in currency, was below the lower estimate of the most probable price for that year by about 3½*s.* per quarter or 10 cents per bushel. Practically the same result would be obtained from an interpretation of British wheat prices in the light of the world wheat carryovers, when the carryover on August 1, 1939 is adjusted for the security stocks accumulated by various European governments during 1938–39.[2]

Significant results also emerge from an analysis of quarterly rather than crop-year average prices of wheat in British markets. Average prices during October–December 1938 were, in the light of previous experience, much more depressed than prices during January–March 1939. This is equally true of c.i.f. prices of imported wheat (British parcels) and of futures prices. Several factors may explain this contrast. One is undoubtedly the course of wheat prices in 1937–38. The expectation of large surpluses from the 1938 crop began to influence wheat prices early in 1938: prices declined continually from the middle of January and were substantially depressed by March. This lowered the January–March average price in 1938. Consequently, comparison of the January–March average prices in 1939 and in 1938 does not show so sudden and deep a decline as does a similar comparison of autumn prices.

Government policies affecting the course of prices in 1938–39 were another factor. Announcement of the American program of subsidized exports at the end of August substantially depressed Liverpool prices early in September (see p. 47), and the depressing effects of subsidized exports continued to be noticeable during October–December, when the United States subsidy rate was rapidly rising (p. 62), and also during January–March 1939. But Argentine selling policy during these three months was conservative, and at the time this may have prevented wheat prices from fully reflecting the depressing effects of the huge Argentine crop —the more so in view of the official understatement of the Argentine crop of 1938, only recently corrected. Indeed, when the

[1] For influences which held down the volume of futures trading in the United States, see WHEAT STUDIES, December 1939, XVI, 146.

[2] The measure of depression of British wheat prices in 1938–39 at 10 cents per bushel is estimated on the assumption that Argentine wheat stocks on Aug. 1, 1939 amounted to 220 million bushels. If we use in our calculation these stocks as they were appraised concurrently by the trade, this estimate would be raised to about 12 or 13 cents. There are reasons to believe the last figure may be closer to the actual depression of prices, because trade interests used these smaller supplies of Argentine wheat in their business calculation.

Argentine board began to sell wheat more freely during the spring and early summer, the world price declined much further, except in May when Liverpool prices responded slightly to a sharp advance of prices on North American markets caused by reports of deterioration of winter wheat in the Great Plains.

In spite of the relatively minor degree of depression of world wheat prices during January–March 1939 as compared with the year before, the crop-year average price of imported wheat on British markets in 1938–39 was some 10 cents below the level most probable in the light of recent postwar experience. This fact must be considered in analysis of the price-raising effects of the various governmental schemes upon the domestic prices of wheat in the several countries, for it means that measurement of these effects simply by spreads between the domestic price and the export parity price overstates the price-raising effects.

Effects on Domestic Prices in Subsidizing Countries

Assuming that the level of world wheat prices in 1938–39 was some 10 cents per bushel lower than could reasonably be expected in the light of the supply-demand relationship, and assuming also that export policies of the chief wheat-exporting countries contributed heavily to this undue depression,[1] we may undertake now to analyze the price-raising effects of the various programs on the domestic wheat markets of the exporting countries, and to see also how much these price-raising effects increased the incomes of wheat growers, and at what costs to the governments concerned.

United States.—As to the price-raising effects on domestic wheat markets of the United States program of subsidized exports, combined with the loan program, it can be said that practically all official statements about this question overemphasized the price-raising effects. In some of these statements, the price-depressing effects upon wheat prices abroad were simply neglected.[2] In others, the occurrence of significant price-depressing effects abroad was denied, but the denials were not adequately substantiated by detailed statistical analysis of international wheat prices.[3]

[1] The preceding analysis suggests the probability that competitive subsidization of wheat exports by governmental agencies was certainly not the least of the major factors which might explain the excessive depression of the world wheat price, itself inexplicable in terms of supply-demand relationships. But, without more detailed and intimate knowledge about the operation of the various programs, it is difficult to assign specific shares of the responsibility to individual agencies. More detailed analysis of the course of prices with reference to specific governmental policies and changes in them is necessary for this.

[2] One recent example of complete neglect of price-depressing effects of the American export program on prices in foreign markets and of exaggeration of its price-raising effects on domestic markets, is found in *General Information Series*, issued by the U.S. Dept. Agr., Agr. Adj. Admin., in July 1940. This description of the AAA wheat program in operation states:

"In the face of record-breaking world supplies which depressed world wheat prices to an all-time low, United States farmers protected domestic wheat prices and wheat income. For example, in August 1938, just before farmers began seedings under the new program, the average United States farm price of wheat was 34 cents under the average quotations at Liverpool. One year later, in August 1939, the United States farm price was 3½ cents above the Liverpool price.

"Because Liverpool is normally about 30 cents above the domestic farm price, this meant that United States farmers got 30 to 35 cents a bushel more for their wheat than they would have received if their price had been based on the world price."

[3] The U.S. Dept. Agr., *Wheat Situation* (Sept. 25, 1939), in a section analyzing the loan and export subsidy, at the beginning accepts as reasonable the expectation that "Prices in other countries would be lowered at least to some extent because the supply of wheat in the world ex-United States was increased as a result of the operation of the export subsidy; whereas, the resulting decrease in domestic supplies would tend to raise prices in this country." However, in the following paragraph, it is noted that according to an analysis made by the Bureau of the relationship between world wheat supplies and deflated prices at Liverpool "no appreciable effect of the United States wheat export subsidy on world wheat prices was discernable." (The analysis referred to was presumably that of Dr. Thomsen, published in the *Agricultural Situation* for August 1939.)

In subsequent discussion, it is observed that "If only the depressing influence of the subsidy were examined without consideration of offsetting influences it would naturally be expected that Liverpool prices would have been depressed some." After attributing to export subsidization some 60 million bushels of additional exports from the United States, it is stated that "An increase of this quantity in the world supply ex-United States is associated with a decrease in price of about 5 cents on the basis of the average relationships for the past 14 years of prices

Disregard or denial of significant price-depressing effects of the American export program on wheat prices abroad of course resulted in erroneous computation of the price-raising effects on domestic markets. Simple comparison of wheat prices in the United States and British markets was used, and on the basis of this comparison various numerical estimates of the price-raising effects of the programs were set forth. One of these appeared in an official publication of the United States Department of Agriculture, following a special analysis of the loan and subsidy programs.

The Department, assuming that prices in importing countries were not lowered by the United States export subsidy, estimated that American wheat growers benefited to the extent of about 57 million dollars from the price-raising effect of these programs on domestic wheat prices,[1] and from this it was calculated that enhancement of the per-bushel price of wheat marketed by growers during the September–June period when the programs were in operation was about 17½ cents.

The estimate of gain of 57 million dollars to American wheat growers was contrasted in this analysis with a cost of the subsidy of about 26 million, and with expenses charged against the 1938–39 wheat-loan program estimated at approximately 16 million. The reader was left to draw his own conclusions about the profitableness of the subsidy and loan programs for the national economy as a whole.

If we are right in concluding that British prices of c.i.f. wheat were depressed by some 10 cents, then the above estimate of the price-raising effects of the subsidy and loan program in the United States wheat market must be reduced by more than half. The price of wheat paid to growers was raised perhaps only 7 or 8 cents, instead of 17½ cents.

That this was the degree of price-raising effect is indicated by a different type of analysis based on United States wheat prices in relation to the supply-demand situation on domestic wheat markets. Postwar experience shows that domestic wheat prices in the United States change from one crop year to another in much closer relationship to the supply-demand situation in domestic markets (as represented by year-end wheat carryovers in the United States) than to the situation on the world wheat markets (as represented by world wheat carryovers).[2] In the light of this experience the United States domestic price of representative export wheat (No. 2 Hard Winter at Kansas City), which averaged about 68 cents per bushel in July–June 1938–39, was fairly well in line with the supply-demand relationship on American markets as represented by a carryover of wheat on July 1, 1939 amounting to 253 million bushels. This appears from the scatter diagram in Chart 9.

If we assume that the program of export subsidization contributed about 60 million

at Liverpool, adjusted by wholesale commodity prices in Great Britain and world ex-United States supplies of wheat." This implies recognition that Liverpool prices may have been depressed by about 5 cents per bushel by the United States export program. However, it is then concluded that "it appears that any depressing effect the subsidy may have had was largely offset by other factors. Fundamentally, the Liverpool price is related to world supplies and demand, and the quantity of trade. The export subsidy did not change the world supply of wheat, although it did change the supply situation as regards the world supply ex-United States. Moreover in 1938–39, the quantity of wheat which was sold in international trade probably would have been about the same with or without the United States subsidy."

The discussion summarized above is followed by a calculation of the effect of the loan and subsidy programs on returns to United States growers in which it is "assumed that prices in importing countries were not lowered by the United States export subsidy programs."

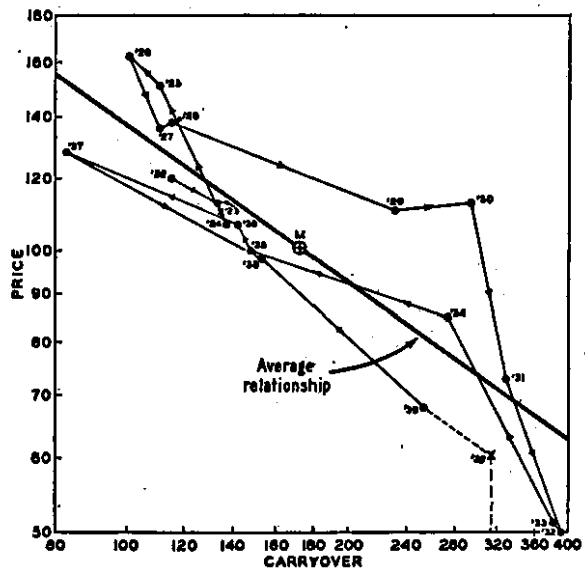
[1] See U.S. Dept. Agr., *The Wheat Situation*, Sept. 25, 1939, p. 18. Returns to wheat growers were reckoned as follows: "The estimated quantities of wheat sold by growers monthly, adjusted for wheat placed under loan and later liquidated on a monthly basis, was multiplied by the monthly average price received by growers. This was assumed to represent the results under the programs. Then, the quantities which it was assumed would have been marketed monthly without the effect of any loan program were multiplied by the price of wheat parcels at Liverpool less 28 cents. This was assumed to represent the results without the loan and subsidy programs. The price of parcels at Liverpool were reduced by 28 cents because United States exports of 100 to 110 million bushels in the past have been associated with prices to growers in the United States being about 28 cents below the price of parcels at Liverpool. . . . ."

[2] For 18 postwar years, 1921–22 to 1938–39, the coefficient of correlation between average crop-year prices of No. 2 Hard Winter wheat in Kansas City and year-end carryovers of wheat in the United States was $-.85 \pm .07$.

bushels of additional exports of American wheat (an assumption implied by several official statements, but perhaps unduly high), then without subsidy American wheat exports would have been some 50 million bushels instead of the 109 million actually exported in July–June 1938–39. Failure to export this 60 million bushels would have increased the year-end carryover of wheat from 253 million bushels to some 313 million bushels. Using the experience for the postwar period (Chart 9) as a basis, we may estimate that such an increase of the wheat surplus in the United States would have caused the price of No. 2 Hard Winter to decline to about 60 cents per bushel. The actual price of No. 2 Hard Winter at Kansas City, 68 cents per bushel, was thus only about 8 cents higher than the price indicated as probable on the assumptions of no subsidy and of exports of only 50 million bushels.

CHART 9.—RELATIONS BETWEEN AVERAGE ANNUAL PRICES OF NO. 2 HARD WINTER WHEAT AT KANSAS CITY FOR CROP YEARS ENDING JUNE 30 AND YEAR-END WHEAT STOCKS IN THE UNITED STATES, JULY 1, 1922–39*

(U.S. cents per bushel; million bushels; logarithmic scales)



* U.S. stocks include U.S. wheat in Canada. Data from Tables I and II.

If there had been no competitive subsidization of exports by various government agencies, our earlier conclusion was that British c.i.f. prices of imported wheat in 1938–39 would have approached 78 cents per bushel instead of the 68 cents actually recorded. At a level of 78 cents on British markets, the spread between British prices and the price of No. 2 Hard Winter wheat in Kansas City would approach 18 cents per bushel. When this spread has prevailed during several postwar years, the United States was able to export more than 50 million bushels, which we have taken as the quantity which would have been exported without subsidy in 1938–39. Without the competitive subsidization of wheat which contributed to depression of British prices, American exports would perhaps have exceeded 50 million bushels; and, consequently, domestic wheat prices would not have fallen to a level of 60 cents per bushel. Reasonable bases can thus be found for the conclusion that the price-raising effects of export subsidization, combined with the loan program, may have been even smaller than the 8 cents mentioned above.

But even if the price-raising effects of the program be supposed to have raised the price paid to producers 8 cents per bushel, the total increase of their income would amount to only 26 million dollars instead of the 57 million estimated by the Department of Agriculture.[1] If so, the financial burden on the United States government for the subsidy and wheat loans, some 42 million dollars plus administration costs, was substantially larger than the increase in the income of American wheat growers resulting from the application of these policies.[2] Furthermore, the losses suf-

[1] The estimate of 26 million dollars as the total increase in income to American wheat growers may be an overstatement. Indeed, in making our estimate of the price-raising effects of the programs on domestic wheat prices at about 8 cents per bushel, we used the price of hard winter wheat at Kansas City. But domestic prices of hard winters respond more to changes in exports than prices of other wheats, for they are the principal export wheats in the United States. Moreover, it was the policy of the FSCC to subsidize preferably exports of hard winters (p. 57), and the rates of subsidy paid on exports of these wheats were the highest (p. 61). It is quite possible, therefore, that soft winter wheat as well as spring wheats profited less from the export-subsidy program. This question requires further investigation.

[2] For reasons already mentioned, we ignore in this connection the soil-conservation and parity payments.

fered by governments and by farmers in other wheat-exporting countries were enlarged as the result of the depression of wheat prices on international markets caused by competitive subsidization of American exports.

Canada.—The Canadian Wheat Board purchased wheat from producers at a guaranteed minimum price. The Argentine government fixed the minimum price of wheat from 1938–39 crop on all domestic markets. Undue depression of the world wheat price through competitive subsidization of exports therefore placed losses upon the Canadian and Argentine governments, not upon growers in those countries.

But it would be erroneous to measure the benefits to wheat growers springing from interventions of their respective governments on the wheat markets by reference to governmental losses calculated from differences between their selling and purchasing prices for wheat. The selling prices reflected the depressed level of international wheat prices caused by competitive subsidization of exports, and losses were presumably greater than the possible losses of the wheat growers if there had been no interventions on the international wheat market.

The losses of the Canadian Wheat Board on wheat sold during August–July 1938–39 were something like 18 cents per bushel (p. 69). But, if we assume that competitive policies of the governmental agencies in exporting countries were responsible for price depression of some 10 cents per bushel on international markets, then benefits to Canadian farmers from governmental intervention in wheat marketing would be less than half of the losses of the government; and more than half of the government's losses, resulting from competitive subsidization of wheat exports of all exporting countries, may be regarded as useless from the point of view of Canadian farmers.

A supplementary analysis of Canadian wheat prices with reference to the supply-demand situation in Canada and abroad also confirms the conclusion that the selling prices of the CWB during 1938–39 were unduly depressed.

Interventions in wheat marketing over a large part of the postwar period of governmental and other (pool) agencies affected Canadian wheat prices considerably. Accordingly, Canadian wheat prices do not reflect changes in the supply-demand relationship on international wheat markets so closely as do, for example, Argentine wheat prices. On the other hand, Canadian wheat depends much more than American upon foreign outlets, and Canadian prices, in contrast to those in the United States, therefore do not so closely reflect changes in the domestic supply-demand situation. Conclusions regarding the behavior of Canadian prices are therefore less definite than those concerning prices in other markets.[1]

An analysis of average Canadian wheat prices in 1938–39, particularly as expressed in terms of purchasing power, nevertheless supplies further evidence that Canadian prices were unduly low. This conclusion follows both from the relationship of prices to the supply-demand situation on the world market as represented by the wheat carryovers with the four chief exporters, and from the relationship of prices to the supply-demand situation in Canada herself.

It would be expected that study of Canadian prices in the light of the supply-demand situation on world markets would result in this conclusion, for the policy of the CWB was to sell wheat at competitive prices. If British prices of wheat were unduly depressed, one would naturally expect that prices of Canadian wheat would also be depressed, and our conclusion from this analysis that Canadian prices seemed to be depressed some 10 cents may not supply a new argument.

But our analysis of Canadian wheat prices with reference to the supply-demand situation in Canada herself indicates an even more

[1] In spite of these disturbing factors, a fairly close correlation exists for the postwar period 1921–22 to 1938–39 between the price of Canadian wheat (taking the Winnipeg price of No. 3 Northern Manitoba, basis Fort William, as representative) and both year-end wheat carryover of the four chief exporters and the year-end carryover in Canada. Using prices of wheat deflated by the Dominion Bureau of Statistics index number of wholesale prices, we obtained a coefficient of correlation for the first relationship of $r = -.79 \pm .09$, and for the second of $r = -.66 \pm .14$.

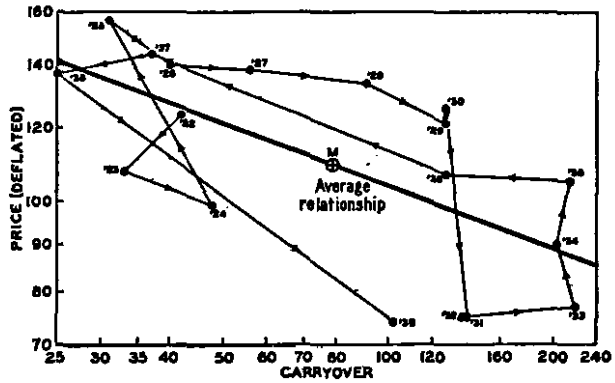
marked degree of undue depression of the purchasing power of wheat. This appears from the scatter diagram in Chart 10.

In view of the very tight situation of the Canadian wheat market in 1937–38, due to the failure of the 1937 crop, the purchasing power of Canadian wheat in 1937–38 was already relatively low. But in 1938–39 it fell below the level of any postwar year, and, as judged by the supply-demand situation on Canadian markets, was further out of line with the average relationship for the postwar period than in any other year, even though the wheat carryover in Canada on August 1, 1939 was smaller than in any year from 1929 to 1936. The purchasing power of Canadian wheat in 1938–39 was not only much lower than in the predepression years of larger surpluses (1928–29 to 1929–30), but was even lower than in the years of deep depression from 1930–31 to 1932–33, when surpluses of Canadian wheat were much larger than in 1938–39. It was much lower also than the average price in 1935–36,[1] when the second Canadian Wheat Board was rapidly liquidating huge stocks of wheat accumulated during the preceding years and when, despite this rapid disposal of stocks, Canada still carried at the end of the crop year 127 million bushels instead of only 103 million as on August 1, 1939. The 1935–36 price of Canadian wheat was very close to the average relationship for the postwar period; and, consequently, the much lower price of 1938–39, with the smaller surplus of Canadian wheat in that year, clearly point to undue depression of the 1938–39 price of Canadian wheat. Interpretation of Canadian wheat prices in relation to the wheat situation in Canada herself thus supplies an additional and strong argument in favor of the hypothesis that wheat prices in 1938–39 were unduly depressed.

The same analysis indicates also that in 1938–39 the CWB carried smaller stocks into the following crop year than it did in 1935–36 in spite of the fact that wheat prices in international markets were much more satisfactory in the earlier year. This situation may be explained partly by the fact that the "new" board was formed late in 1935–36 when the principal Canadian export season was over, but may serve also as evidence of the more aggressive policy of the CWB in 1938–39.

CHART 10.—RELATIONS BETWEEN AVERAGE ANNUAL PRICES (DEFLATED) OF NO. 3 NORTHERN MANITOBA WHEAT AT WINNIPEG FOR CROP YEARS ENDING JULY 31 AND YEAR-END WHEAT STOCKS IN CANADA, AUGUST 1, 1922–39*

(Canadian cents per bushel; million bushels; logarithmic scales)



* Canadian stocks include Canadian wheat in the United States. Data from Tables I and II.

Argentina.—Prices of Argentine wheat on domestic markets, as was mentioned above, fluctuated from one crop year to another in a surprisingly close agreement with changes in the supply-demand relationship on the international markets.[2] Hence, it is most interesting that the minimum price of wheat fixed by the Argentine board for the 1938–39 crop, 7 pesos per quintal, was very close to that which could reasonably be expected under the conditions of the 1938–39 supply-demand relationship on the international wheat markets, despite the fact that this price was above the market price at the time when it was announced (see p. 47). The world wheat price was then probably depressed by competitive subsidization of wheat exports, since wheat

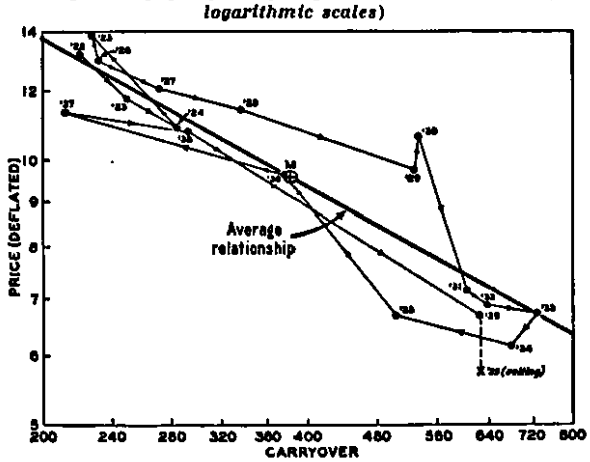
[1] The average price of No. 3 Manitoba in Winnipeg was 23 cents per bushel higher in currency in 1935–36 than in 1938–39, and 33 cents higher in terms of purchasing power (Table I).

[2] For the eighteen years 1921–22 to 1938–39, there was a very close correlation between the price of Argentine wheat in Buenos Aires and wheat carryovers at the end of the Northern Hemisphere crop years (on August 1) in the four chief wheat-exporting countries. A correlation coefficient of $r = -.93 \pm .03$ was obtained for this relationship. For the same price deflated by wholesale index numbers of Banco de la Nación Argentina (1926 = 100) the coefficient was $r = -.90 \pm .04$.

prices in the fall of 1938 were particularly out of line with their usual relationship to the supply-demand situation (p. 83). On the other hand, the Grain Regulating Board's selling price of wheat for exporters, especially when expressed in terms of its purchasing power (deflated by an index number of wholesale prices in Argentina), was the lowest in the postwar period and far below the level which could reasonably be expected under the conditions of the supply-demand relations on the international markets (see Chart 11).

CHART 11.—RELATIONS BETWEEN AVERAGE ANNUAL PRICES (DEFLATED) OF ARGENTINE WHEAT AT BUENOS AIRES FOR CROP YEARS ENDING JULY 31 AND YEAR-END WHEAT STOCKS IN THE FOUR CHIEF EXPORTING COUNTRIES, ABOUT AUGUST 1, 1922–39*

(Argentine paper pesos per quintal; million bushels; logarithmic scales)



* Data from Tables I and II.

Analysis of the prices of Argentine wheat supplies, thus, confirming evidence that wheat prices on the international markets were unduly depressed. This evidence cannot be regarded as a new argument, because it was quite natural to find that the selling prices of the Argentine board to exporters were in line with British prices. But the fact that Argentine wheat prices were, for the postwar period, in closer correlation with the supply-demand situation on the international markets than any other prices tends to strengthen our conclusions from prices analyses elsewhere, and to make them more definite. These conclusions justify the assertions that without competitive subsidization of wheat exports, Argentine wheat growers could have sold their wheat at prices substantially above the board's selling price, and that not less than two-third of the losses incurred by the Argentine GRB were caused by the policies of wheat-exporting countries, particularly the United States.

EFFECTS UPON THE 1939 WHEAT AREA

Changes in crop areas in a particular country depend on so many factors that it is scarcely possible to appraise separately the effects on the 1939 wheat areas of policies of wheat subsidization applied by various countries in 1938–39. Yet approximations are significant for judgments regarding these governmental policies relating to wheat. It would be shortsighted to judge a policy by its effects on the wheat situation only during a current crop year, without attempt to appraise its more distant effects. Here we endeavor to interpret changes in the wheat areas that took place in various exporting countries from 1938 to 1939, in the light of their wheat regulations during 1938–39.

From this point of view, governmental regulations must be classified in two groups: those which involved direct control of the crop area, such as the AAA program in the United States, and those which did not undertake such direct control but left the matter of acreage completely to individual farmers. Policies included in the second group could have influenced crop areas only indirectly through their effects on returns to producers. By maintaining domestic prices of wheat above the low level ruling in 1938–39 on the international markets, they might prevent downward readjustment of crop areas or even stimulate further expansion, especially if price maintenance should be regarded by wheat growers as permanent governmental policy.

In the United States the maintenance of wheat prices above the international level, through the combined effect of the loan and the export-subsidy programs, was only a minor portion of the total wheat subsidization. Benefit payments to wheat growers under the conservation program, and parity-price payments, constituted much the larger fraction of

the wheat subsidies (p. 66), and such payments were conditioned upon compliance of growers with acreage allotments for the 1939 crop. Furthermore, compliance with the soil-conservation program for the 1938 crop was made a condition upon the fulfillment of which wheat growers could claim loans on 1938 wheat from the CCC and they could reasonably expect similar regulations for the 1939 crop. Hence it is not surprising that the United States Department of Agriculture succeeded in obtaining unprecedented reduction of the wheat area for the 1939 crop, even though the wheat prices received by American producers were maintained during 1938–39 at a higher level than in any other of the chief wheat-exporting countries. The area sown to wheat in the United States was drastically reduced from 79.5 million acres in 1938 to 63.9 million in 1939. This was the chief factor in the reduction of the wheat area of the world ex-Russia from its peak of 288.5 million acres in 1938 to 271.1 million in 1939.

Wheat growers in other wheat-exporting countries had no such direct stimuli to restrict wheat acreages. The principal factors determining their behavior in respect to wheat acreage for the next crop year were, disregarding weather conditions, the profitableness of the current price of wheat as compared with other crops, and price expectations for the future crop. So far as governmental wheat policies maintained domestic prices during 1938–39 above the international level and so far as continuation of such policies in the future could reasonably be expected, these factors might substantially affect the 1939 wheat acreage.

The minimum wheat price paid by the CWB to growers in Western Canada stood next to the price maintained in the United States in terms of excess over parity with wheat prices on the open markets. As was earlier estimated (p. 69), the selling price of the CWB, maintained at a competitive level with the wheat prices ruling on international markets, averaged during 1938–39 some 18 to 19 cents per bushel below the purchase price paid to producers. It has been authoritatively stated that it was purposely decided in expectation of war to maintain Canadian wheat prices on a level so satisfactory to wheat growers that producers would continue wheat cultivation on a high level.[1] This purpose was achieved, for the wheat area in the Canadian Prairie Provinces increased from 24.95 million acres in 1938 to 25.81 million in 1939.

There seems no doubt that the maintenance of wheat prices for Canadian wheat growers for the 1938 crop on a level substantially exceeding the international level contributed materially to the expansion of the Canadian wheat area in 1939, and thus to a further unbalancing of the world wheat situation. Yet it must be noted that the expansion of the Canadian wheat area in 1939 by some 3 to 4 per cent above the 1938 level was made by Canadian farmers when discussions in the Dominion parliament indicated a possibility that the guaranteed minimum price for the 1939 crop might be lowered from 80 cents per bushel to 60 cents, although it was finally fixed at 70 cents.

The more conservative price policy of the two Southern Hemisphere wheat exporters tended, on the other hand, toward reduction of wheat acreage there. Australia intervened not at all in wheat marketing and limited activity simply to paying a moderate bonus to wheat growers on the 1938–39 crop, while Argentina fixed the minimum purchase price for wheat at a level only moderately exceeding prices ruling on the international markets. Though the wheat area for the 1939–40 crop was reduced both in Argentina and Australia, the reduction in Australia was relatively much less drastic than that in Argentina. Indeed, the Argentine wheat area was reduced from 20.9 million acres in 1938 to 17.8 million in 1939, about 15 per cent, whereas the Australian area declined from 14.3 to 13.3 million acres, or only about 7 per cent. This occurred even though wheat prices paid to Argentine producers during January–August 1938 exceeded the wheat price ruling on international markets by a larger margin than did the bonus paid to Australian wheat growers per bushel of wheat sold at competitive market prices (see p. 51). From the point of view of Argentine wheat growers, the fixed pur-

[1] See footnote 4, p. 42.

chase price paid by the GRB for the 1938–39 crop may be regarded as relatively satisfactory in view of the extremely high yield of wheat in Argentina that year, while Australian producers obtained lower prices for a small crop.[1]

Several factors help somewhat to explain why Argentine wheat growers reduced the acreage sown to the 1939 wheat crop much more than did Australian growers despite the fact that their returns from the 1938–39 wheat crop were more satisfactory than those received in Australia. First, in some Argentine wheat regions, the southwestern part of the province of Buenos Aires and southern part of the Pampa, plowing and planting for wheat were handicapped by persistent drought, though in general weather conditions were satisfactory for wheat planting both in Argentina and in Australia. Further, the Argentine government took special measures to discourage wheat planting for the 1939 crop on marginal lands.[2] Finally, a shift from wheat to alternative crops, particularly corn and linseed, was stimulated in Argentina by relatively better prices for these crops in spite of the maintenance of wheat prices. In Australia, on the other hand, farmers were discouraged from shifting to the sheep industry, which may be regarded as the alternative crop, by the fact that wool prices fell sharply at the same time as wheat prices.[3] The reduction of the wheat area in Australia as a whole was smaller also because Victoria, which suffered a crop failure in 1938–39, increased its wheat area in 1939.

These factors partially explain the greater reduction of the Argentine wheat area as compared with the Australian, in contrast with what could be expected from comparison of their respective wheat policies. Unfavorable weather conditions in Argentina reduced the 1939–40 wheat crop far out of proportion to the acreage reduction, while on her smaller 1939 wheat area Australia harvested a much larger crop than she did in 1938–39. This may serve to illustrate that governmental policies and controls of crops do not always produce the results expected from them.

In the wheat-exporting countries of the Lower Danube, the 1939 wheat area was larger than the 1938 area, and thus the rising tendency prevailing during recent years was continued. The largest increase apparently occurred in Rumania, where subsidization of wheat exports was substantially intensified during 1938–39. Most of the increase in the Hungarian wheat acreage from 1938 to 1939 must be explained by changes in boundaries, but statistics roughly adjusted for these changes indicate that some enlargement of wheat areas may also have taken place from 1938 to 1939 within the old boundary of Hungary. In Yugoslavia the wheat area was also somewhat expanded in 1939. As to Bulgaria, conclusions are unwarrantable because of apparent incompleteness of her crop statistics for 1939.[4]

Some uncertainty arises regarding the causes of these changes in Danubian wheat acreage because harvested areas rather than sown areas are reported. Some of the apparent changes may be due to fluctuation in abandonment. Nevertheless, there can be no question that farmers in the Danube countries, particularly Rumania, further expanded their wheat area in 1939 in spite of the great decline of wheat prices on international markets in 1938–39. It may be inferred that their domestic wheat prices, maintained by subsidization of exports and other devices above parity with prices ruling on international markets, were regarded by wheat growers as more profitable than prices for alternative crops. This is per-

[1] For comparison of the returns to wheat growers from 1938–39, See WHEAT STUDIES, December 1939, XVI, 173–75.

[2] By a decree issued in April 1939 the Banco de la Nación was authorized to extend loans to farmers up to 6 million pesos, which were offered on conditions encouraging farmers to take marginal wheat lands out of cultivation and to shift to pastoral industries.

[3] WHEAT STUDIES, December 1939, XVI, 175.

[4] According to statistics published by the International Institute of Agriculture, the Bulgarian wheat area for the 1939 crop was at 3.0 million acres as against 3.4 for 1938. But practially the same figure for the 1939 area was shown in a Bulgarian source (*Bulletin de la Direction pour l'Achat et l'Exportation des Céréals*, July 5, 1939, p. 179), with the specific statement that it relates to winter wheat alone. Usually the spring-wheat area in Bulgaria is about 10 per cent of the total wheat area. The total wheat acreage in Bulgaria may thus have been about the same in 1939 as in 1938.

fectly clear in the case of Rumania. Her crop statistics show that the areas under the other principal cereals—corn, barley, and oats—declined substantially in 1939, continuing a declining tendency characterizing these crops during recent years. Rumanian subsidization of wheat exports may well have more than compensated for overvaluation by the exchange control of her monetary unit, which worked as a handicap upon exports (see p. 41); and the wheat-export subsidy paid in 1938–39 in Rumania must be regarded as genuine.

Thus wheat subsidies in the Danube countries contributed somewhat to further expansion of wheat production in 1939, and if peace had continued would have been responsible for prolongation of the world wheat crisis. The war, however, so changed the wheat situation in Europe that the wheat expansion in 1939 in the Danube countries may be regarded quite differently in view of the short crop of 1940 from a small acreage harvested.

The general conclusion is that, except in the United States, intensified subsidization of wheat growers in 1938–39 tended to obstruct adjustment of the wheat acreage necessary in response to the extremely low price of wheat in the open markets, and that the subsidization contributed to the prolongation of the world wheat crisis. The success of the United States Department of Agriculture in the drastic reduction of the 1939 wheat area was, moreover, purchased at very high costs.

V. RECENT DEVELOPMENTS

This study was undertaken before the European war began in September 1939, but its completion was delayed because most of the governmental agencies in control of wheat marketing were late in revealing information on their operations. Meanwhile, the outbreak of war brought some important changes in governmental wheat policies. For the countries involved, preparedness for war became more important than stabilization of the wheat market. Thus, under changed conditions, governmental wheat policies appear in a different light.

Our principal task, however, was to analyze operations of various governmental agencies and to appraise their activities during 1938–39, preceding the war. A few principal aspects of more recent developments, however, deserve presentation and appraisal as a kind of sequel to the experience already discussed.

For convenience in presentation we shall divide our discussion of recent changes in wheat policies into two periods: (1) the few weeks of the 1939–40 crop year preceding the beginning of war, and (2) the subsequent period.

Developments Preceding War

During the earlier period there was no fundamental change in the trend of wheat policies. Certain facts, however, must be noticed relating to Canadian and United States policies.

Great losses suffered by the Canadian Wheat Board during its operations in 1938–39 imposed a heavy burden upon Dominion finances. There was serious criticism of and even resentment against the policy, particularly in Eastern Provinces where little wheat was produced. This resulted in the amendment of the Canadian Wheat Board Act of 1935 and in the lowering of the minimum price guaranteed to producers for 1939 crop wheat. Instead of 80 cents per bushel for No. 1 Northern, basis Fort William, effective for the 1938 crop, the Dominion government announced on July 13, 1939 a new minimum of 70 cents for new crop wheat. According to the amended act, this guarantee was limited to 5,000 bushels of wheat for each grower, but it was extended to include wheat produced in Eastern Provinces. However, the minimum price of 70 cents a bushel, although lower than the previous year's price, exceeded the market price at the time of announcement (July 13) by some 15 cents. It was, thus, more out of line with the market than the higher price of 80 cents guaranteed for the 1938 crop had been when announced on August 4, 1938. A price of 60 cents for the 1939 crop was first proposed in the government bill, but later the Dominion government found

it politically necessary to guarantee a higher minimum price, perhaps partly for the same reasons which prompted it to guarantee a relatively high price of 80 cents for the previous crop (see p. 42). Thus, at the beginning of 1939–40, the Canadian wheat policy was continued on previous lines, in spite of the heavy burden upon the Dominion finances resulting from CWB operations in 1938–39.

The export subsidy policy of the United States also was not changed fundamentally in the beginning of 1939–40, though the Department of Agriculture hesitated with regard to continuation of the export subsidy. When both wheat and flour export programs expired on June 30, 1939, the new programs for 1939–40 exports were not announced immediately. On July 11 flour export indemnities were restored at the rates effective at the end of the previous crop year, but wheat export subsidies were not restored until much later, only from August 19. Meanwhile, the FSCC disposed of substantial quantities of loan wheat purchased from the CCC.

The intention of the Department of Agriculture to continue and even to enlarge its flour export program in 1939–40 was well manifested in the raising on July 24 of the rates of indemnities above the June level and again on August 17, and in their extension on August 3 to exports of flour to the British Isles. The restoration of the flour export indemnities to the United Kingdom and Eire, discontinued on December 2, 1938 simultaneously with the announcement of the large sale of wheat by the FSCC to British millers (p. 56), had been expected even earlier by the trade, since the obligation of the FSCC to withhold indemnities on flour for export to the British Isles expired on July 15, 1939.[1]

The Department of Agriculture postponed the restoration of wheat export subsidies and the announcement of the 1939–40 wheat-export program mainly because of hopes for success in negotiations in London toward a new international wheat agreement. The desire to achieve such an agreement was one of the reasons why the Department of Agriculture accepted the policy of subsidization in the beginning of the 1938–39 crop year (p. 44). When it appeared somewhat prematurely that London negotiations had failed, the Department of Agriculture announced on August 11 that wheat export subsidies would be available beginning with August 19. Hopes for agreement revived, and were not abandoned till the very eve of war.

The second reason for the postponement of the announcement of the export-subsidy program was attributed officially to a need for more complete and recent information on the world wheat situation.[2] The 1939 wheat crop in the United States was much smaller than the large crop of 1938, and the total supplies of American wheat in 1939–40 were somewhat smaller in spite of a large carryover. Hence, a large export goal did not seem necessary. But when wheat subsidies were restored under a new method of operation on August 19,[3] export sales were rather heavy during the two weeks preceding the war.[4] These sales were made possible by relatively high rates of indemnity payments, which ranged during the first five days of the operation of the programs from 33 to 36 cents per bushel. Subsidies of such size approached losses suffered by the FSCC on its export sales during the last weeks of the 1938–39 program.

[1] *Northwestern Miller*, July 19, 1939, p. 17.

[2] See U.S. Dept. Agr., *The Wheat Situation*, Aug. 26, 1939, p. 3.

[3] The new method of assistance to exports of wheat was similar to that followed previously in the flour-export program in that both programs had to be carried out through export indemnity payments. Under the flour-export program, however, general rates of indemnity were announced for all exporters on a daily basis. Under the wheat-export program the Secretary of Agriculture, or his authorized agent, accepted rates of indemnity payments for each individual exportation on the basis of competitive individual offers from exporters. The existing authority to buy and resell wheat was used, however, in handling loan wheat taken over by the FSCC from the CCC. The Secretary of Agriculture reserved the right to terminate the program on five days' notice, but it was announced that unless the program was terminated indemnity payments on wheat sold for export would be made through June 30, 1940. See *Northwestern Miller*, Aug. 16, 1939, p. 18.

[4] From Aug. 19 to Aug. 31, 1939, 4.1 million bushels of wheat were sold by the FSCC to exporters under the new bid-payment program. Of this 3.9 million bushels were sold during the first five days of the operations of the program before political developments in Europe limited further sales. See U.S. Dept. Agr., press release for Sept. 13, 1939, and *Federal-State Market News Service*, Aug. 15, 1939.

In July–August Southern Hemisphere exporters were still in the midst of their export season, and their exports proceeded as before. Sales for export by the Argentine Grain Regulating Board were at their peak in June, and they continued heavy also in July and August. During these months competitive sales of the board were intensified, and no changes in its policy were considered at that time.

Australian farmers were dissatisfied with the low market prices of wheat, which were not sufficiently compensated for by the moderate bonus paid to producers per bushel of wheat sold under the Australian assistance scheme. Therefore, various plans for the alleviation of distress of Australian wheat growers were advanced by interested parties early in 1939. Under economic pressure, Australian farmers became more amenable to various plans of governmental control, including crop restriction. Most of the farmers' organizations came out in favor of some kind of international wheat agreement. But in spite of this trend, the separate states could not come to an agreement with the Commonwealth government concerning forms of assistance, and particularly concerning the sources from which this assistance should be financed.[1]

In the middle of August, therefore, the stage was set for another year of competitive subsidization of wheat exports, if an international wheat agreement did not prevent; but the advent of war changed the situation.

Wartime Developments

War did not solve the problem of disposing of record large wheat supplies. For exporters distant from the principal import markets in Europe (Australia and, to a certain extent, Argentina), the problem then appeared even more difficult because war conditions created a shortage in ocean tonnage. However, war did create a widespread expectation of later shortage, which encouraged speculative holding and found expression in an immediate increase of wheat prices. It also changed problems for exporters directly involved in the war, such as Australia and Canada.

With the outbreak of war the most important change in the control of wheat marketing took place in Australia. Canada had already a wheat board flexible enough to meet problems created by the war. Certain aspects of the Canadian wheat policy, such as the guarantee of a relatively high minimum price for the 1938 crop, may have been influenced even during 1938–39 by expectation of war (p. 42). But before the war Australia remained the only principal wheat exporter without governmental control of wheat marketing. Under conditions of peace she had succeeded in disposing of her moderate 1938–39 crop better than other chief exporters. But the war threatened to put Australia in a more difficult position than other wheat exporters, and the Commonwealth government decided to meet the situation by the immediate creation of the Australian Wheat Board (AWB) under the National Security Act, to take over, handle, and dispose of old-crop wheat and succeeding harvests.

The balance of the 1938–39 crop was taken over by the AWB, with specified exemptions, on September 23 in Western Australia and on October 9 in other states. In total the Commonwealth government acquired under this regulation nearly 18 million bushels, which were treated as in Pool No. 1. The proceeds from their sale were to be distributed in the ordinary pooling way among those who were holders of wheat upon the date of acquisition.

According to information in the farm press, all wheat in this Pool No. 1 was sold by the end of November 1939, the average realization being approximately 2*s.* 9*d.* f.o.b. a bushel.[2] About half of this wheat was purchased by the Imperial government. Shipments of old-crop wheat were nearly com-

[1] Victoria and Tasmania refused to accept the plan advanced by the Prime Minister (Mr. Menzies), according to which the Commonwealth government would advance 2 million pounds to aid the wheat growers if the six states would contribute 1.5 million pounds. These contributions, together with 3½ million pounds which would be raised by means of the flour tax under the Australian wheat industry assistance scheme accepted in 1938, would have permitted the guarantee of an average price of 3*s.* 4*d.* a bushel f.o.r. for the new crop. The Victorian Premier, Mr. Dunstan, insisted that assistance of a primary industry is essentially a national responsibility. See *Commercial Intelligence Journal*, Sept. 26, 1939, p. 580.

[2] See *The Land*, Jan. 19, 1940, p. 4.

pleted by the beginning of March.[1] The disposition of the balance of the 1938–39 crop was, thus, solved satisfactorily by the AWB in spite of difficulties in transportation. The balance, however, was relatively small.

The handling of the near-record wheat crop of 1939–40 presented a much greater problem for the AWB. In November the Prime Minister announced that the government would guarantee a price of 3*s.* 4*d.* a bushel f.o.r. shipping points for new season wheat. Later the Commonwealth government acquired the whole 1939–40 wheat crop, with the exception of wheat retained by growers for their own use for seed, food, and feed. Some 196 million bushels from this crop were delivered to the AWB, and this wheat formed Pool No. 2. Practically all of it had been delivered before the end of February 1940. Since exports, limited by shortage of ocean tonnage, could proceed only slowly, wheat storage facilities were overtaxed, and provisional storage facilities had to be provided. At the same time the Commonwealth government was obliged to advance large sums against the delivered wheat.[2]

Simultaneously with the announcement of the guaranteed price for 1939–40 wheat the Commonwealth government raised the question concerning the restriction of wheat production for the following year. The problem was discussed during the next two months by the Commonwealth and state governments. In the beginning the Commonwealth government planned that any future financial assistance to the wheat industry should be conditioned upon a reduction in total production. But when, in January, an agreement was made with the Imperial government for the sale of some 63 million bushels of wheat (including about 6 million in the form of flour), the outlook for marketing the Australian wheat crop was improved, and the Commonwealth government abandoned its proposal for restriction of wheat planting for the 1940 crop.[3]

This sale of 63 million bushels of wheat to the British government eased the problem of the AWB in marketing the 1939 crop but did not solve it. The problem of shipping sold wheat was still more difficult because of shortage in tonnage. In accordance with the terms of the agreement, the first half of the purchase, for which the price was definitely fixed, was to be taken by July 15, 1940, and payments made on that date for any undelivered balance of that half.[4] By this means the risk that this wheat would not be shipped was shifted to the British government.

By the beginning of August the board had succeeded in selling some 122 million bushels of the 196 delivered to it from the 1939 crop. Of this quantity 22 million were for local consumption, and the remaining 100 for export.[5] Hence, during the first eight months of the Australian crop year, the board was able to sell for export some 37 million bushels of wheat (including flour) in addition to sales to the British government. There still remained 74 million to be sold. This indicates that, in spite of the board's efforts to dispose of as much wheat as possible in the nearest non-European markets, the carryover at the end of the Australian crop year (November 30) promises to be very large, even if the British purchase should be shipped in total. The new crop, however, is now expected to be small though no formal restriction of planting was imposed on producers.[6] The weather developments thus, lessened the problem of the AWB for the coming year.

The achievements of the AWB may be regarded broadly as satisfactory in spite of the fact that it was not created until after war began, and in spite of particularly unfavorable conditions for the disposition of the Austral-

[1] See the *Primary Producer*, Mar. 14, 1940, p. 1.

[2] Up to the beginning of August 1940 the Commonwealth government had advanced £A 34 million, of which £A 27 million were paid to growers, while £A 7 million were required for handling charges. See *Monthly Review of the Wheat Situation*, Aug. 30, 1940, p. 7.

[3] See *The Land*, Dec. 1 and 29, 1939, and Jan. 19 and 26, 1940.

[4] Information revealed by Clive McPherson, chairman of the AWB (see *The Land*, Jan. 19, 1940, p. 4).

[5] *Monthly Review of the Wheat Situation*, Aug. 30, 1940, p. 7.

[6] The Commonwealth government has decided, however, to grant £ 500,000 for distribution among [the] four states, the principal producers of wheat, to assist in transferring wheat growers from marginal lands. Actually no allocation was made for Victoria. This is the first of four yearly allocations for this purpose from the funds produced by the flour tax. See the *Primary Producer*, Mar. 7, 1940, p. 1.

ian crop in time of war. Australia was able to build upon her experience in the war of 1914–18. This indicates that an emergency condition can sometimes be met satisfactorily by an agency created *ad hoc*.

With the outbreak of war the Canadian Wheat Board, on the other hand, had to make little change in its established practices. Apparently, indeed, efforts were made to introduce as few changes as possible in the methods of disposing of the 1939 crop. The policy of the CWB was to sell wheat through the usual trade channels, in spite of the fact that under war conditions buying of wheat was more and more concentrated in a few governmental agencies. This was particularly true of purchases of wheat made by the United Kingdom, which comprised about two-thirds of the total Canadian exports in 1939–40. All these purchases were made through the British Cereals Control Board.

The CWB conducted its operations through the Winnipeg Grain Exchange, offering wheat for sale both in the cash and futures markets at prices determined in those markets. The board did not seriously depart from this practice until June 1, 1940[1] when it sold 50 million bushels of wheat to the British Cereals Import Committee at a price several cents above the market price. This new practice was used also in the beginning of the new crop year 1940–41, when 100 million bushels of wheat were sold to the British government at a price well above the market level.

We do not imply that during earlier months the CWB exercised no influence in price determination. During October–November 1939 the buying price of the board tended to form a floor for Winnipeg prices. In later months market prices presumably were influenced by the CWB in co-operation with the official British agencies, but these influences were such that the usual marketing process was little disturbed.[2]

[1] A few days before the outbreak of war, a direct sale of something less than 10 million bushels was made to the British government.

[2] See Dr. Working's price discussions in "Surveys" for January and May, WHEAT STUDIES, January 1940, XVI, 221–22; May 1940, XVI, 379–80.

[3] See James Richardson and Sons, *Weekly Grain Letter*, Oct. 25, 1939.

Without official information on the purchases of the CWB during 1939–40, it is difficult to ascertain what portion of wheat marketed by farmers during that year was delivered to the board. When prices rose with the outbreak of war, farmers were not anxious to sell their wheat. But, when prices fell a few weeks later and remained during October–November only a little, if at all, above the board's buying price, farmers delivered their wheat mostly to the board, in the hope that participation certificates would eventually raise their proceeds. According to trade opinion the board held at the end of October the bulk of the visible supplies from the old and new crops.[3] In November a still greater portion of marketed wheat must have been delivered to the board. Thus it may be concluded that by far the larger portion of the marketings from the 1939 crop was handled by the CWB.

The record-large stocks of Canadian wheat carried into 1940–41 indicate that the CWB disposed of an abnormally small portion of the huge 1939 crop during that crop year. In times of peace such accumulation of stocks would reflect unfavorably on the policy of the board. But under the present condition of war it may be regarded as a positive achievement. It reflected at least in part an Empire policy of providing for large reserve supplies in the most accessible oversea position. Nevertheless, the CWB will have to meet great difficulties in disposing of the record wheat carryover from 1939 together with the near-record new crop of 560 million bushels for which the board guaranteed the same price as for the previous crop. The lack of storage space has forced the board to introduce a quota system for deliveries of wheat by producers.

While exporting countries which were involved in the war as parts of the British Empire continued previously established controls of wheat marketing (Canada) or adopted stronger measures (Australia), countries which remained neutral relaxed their controls or hesitated to continue their export efforts with the previous vigor.

On September 6, 1939 the Argentine Grain Regulating Board abolished its purchase of

wheat at fixed prices. It gave as an excuse the fact that speculation had raised wheat prices above the fixed purchase price, but in reality the board sought to limit its responsibility to handling the huge 1938 crop, which was larger than had been thought (p. 70). No fixed price was established for the 1939 wheat crop. This eventually was very small, and the board made no purchases from this crop. But it continued energetically to dispose of the enormous supplies of 1938–39 (p. 73). The disposal of the wheat surplus was so nearly complete that on July 30, 1940 the Argentine government decided to ban further wheat exports except under permit. The war thus helped rather than handicapped the GRB in the disposal of its enormous stocks of wheat. Final disposal of stocks with only moderate losses (p. 73) justified, to a certain extent, the board's policy of restrained sales early in 1939, but the situation would have been quite different if war had not occurred.

The outbreak of war resulted also in a relaxation of efforts on the part of the United States Department of Agriculture in subsidizing wheat exports. The program had been fully restored only two weeks before the war began. Yet before the formal announcement of war, the United States government withdrew wheat grain subsidies in view of the political situation, and continued this policy during the first few weeks of war. In the last week of September subsidies were restored, but only on a limited scale. In view of much improved wheat prices, the government was presumably not prepared to pay as high a subsidy as it was ready to pay just before the war. At the same time the drought in the winter-wheat area resulted in poor prospects for the next crop year. Hence, it was decided to continue further export sales of loan wheat turned over to the FSCC, but to subsidize other exports of wheat only on a conservative basis without attempting to retain a "fair share" of the world markets—the 1938–39 goal. As a result, only moderate export sales, consisting mainly of flour and loan wheat, were made under the subsidy program during the first three months of war, and less than one million bushels of other wheat were sold during September–December.[1]

When the official December estimate of the winter wheat crop revealed extremely poor prospects for the next crop year and the Chicago wheat price went above a dollar per bushel, a further restriction of subsidized exports was deemed advisable. The government announced a suspension of subsidies on wheat effective January 3. Exception was made only for flour exports from the Pacific Coast to the Philippines. On January 19 the flour subsidy was extended to exports of Pacific Coast flour to China. Further restorations of subsidies for exports from the Pacific Coast took place later, presumably under pressure of local interests. On March 12 subsidization of exports from the Pacific Coast to Europe was resumed. But in spite of this, subsidized sales for export during the first six months of 1940 were very small.[2]

With such developments in the United States export-subsidy program, net exports of wheat for July–June 1939–40 amounted to only 45 million bushels, and on July 1, 1940 the carryover from the small 1939 crop was greater than that from the much larger 1938 crop. At the opening of the 1940–41 crop year, the Surplus Marketing Administration of the United States Department of Agriculture announced for the new crop year the continuance of the wheat and wheat-flour export program on the limited scale on which it was maintained during the later months of 1939–40.

It may be concluded from the above analysis of wartime developments that to a certain degree war relieved the intensity of subsidization of exports which prevailed in 1938–39 and which promised to continue in 1939–40 perhaps with losses for participating agen-

[1] WHEAT STUDIES, January 1940, XVI, 229.

[2] During the 1939–40 crop year only 35 million bushels of wheat were sold for export under various programs, including 16.5 million in the form of flour. Twenty-seven million were sold before the suspension of the subsidy on Jan. 3, 1940. Of 18.5 million bushels of wheat grain sold under the subsidy, more than half—9.4 million—consisted of loan wheat. Of the remaining wheat, nearly half was sold before the outbreak of war. Thus, during the second half of the 1939–40 crop year subsidized exports consisted mainly of flour, but they also were small. Since January 1, the average subsidy for wheat and flour has been the equivalent of 26 cents a bushel, compared with 32 cents for July–November 1939.

cies even greater than those suffered in 1938–39. At the same time war resulted in a great concentration of wheat buying by principal wheat importing countries. This justified to some extent, perhaps even made indispensable, a certain degree of centralization of wheat selling by exporters, particularly by those directly involved in war. Hence, governmental agencies in charge of wheat marketing in exporting countries became advisable under war conditions, though the necessity for them in peace time could reasonably be doubted. For instance, it may be admitted that the existence of the Canadian Wheat Board facilitated the stabilization of the Canadian wheat market under war conditions when Canadian exports became so dependent on the centralized buying of the British government. But the Australian experience, on the other hand, indicates that an efficient agency for centralized selling of wheat under war emergency can also be created at the time of the emergency. As we know, Australian assistance to wheat growers before the war was organized in a form that required the least interference with marketing of wheat and with price determination in wheat markets, and no agency existed for centralized marketing of wheat. Yet, with the outbreak of war, an efficient wheat board was organized in a very short time. Thus, usefulness under war conditions of governmental agencies for centralized wheat marketing may not justify sufficiently their permanent existence. This may be warranted only by their achievements under peace conditions.

The great decline of United States exports in 1939–40, although it may be explained partly by the smaller size of American wheat supplies in that year, points also to certain disadvantages of the American system of subsidized exports under the 1938–39 and 1939–40 programs. Their purpose was to maintain wheat prices above those on the open market not only for producers, as in Canada, but on all domestic markets. This artificial relationship between domestic and foreign wheat prices, produced by the combined effects of the loan and export programs, made impossible ordinary commercial exports of wheat, and thus perpetuated the necessity for export subsidies. The greater the spread between domestic and open market prices, the larger the subsidy required.

When, with the outbreak of war and the changed price situation on domestic wheat markets, the United States Department of Agriculture refused a subsidy as high as that paid before the war, wheat exports became practically impossible. Better maintenance of subsidized flour exports during wartime may suggest that costs of their subsidization in 1939–40 continued, as in 1938–39, to be lower than those for wheat exports.

The author is indebted to Mr. Milo Perkins, President of the Federal Surplus Commodities Corporation and to Dr. T. W. Grindley, Secretary of the Canadian Wheat Board for valuable information; to Mr. Jesse W. Tapp, formerly President of the FSCC, for reading a part of the manuscript covering operations and costs of the United States subsidy and for valuable comments on this section; to Dr. Joseph S. Davis for valuable suggestions and advice during the preparation of the study; and to other members of the Institute staff for counsel. Charts are by P. Stanley King.

APPENDIX TABLES

TABLE I.—ANNUAL AVERAGE WHEAT PRICES FROM 1921–22*

August-July	British parcels[a]		Kansas City[b]	Winnipeg[c]		Buenos Aires[d]	
	Currency	Deflated	currency	Currency	Deflated	Currency	Deflated
1921-22..	56.3	49.4	120	123	124	13.64	13.22
1922-23..	47.0	44.2	113	106	108	11.78	11.76
1923-24..	45.0	41.1	107	97	99	11.48	10.90
1924-25..	61.7	55.3	151	160	156	15.29	13.86
1925-26..	56.0	55.5	162	142	140	13.38	12.99
1926-27..	53.9	54.9	136	136	138	11.90	12.08
1927-28..	50.0	52.2	138	130	134	11.27	11.42
1928-29..	42.6	45.7	111	115	121	9.50	9.76
1929-30..	41.8	48.1	113	118	126	10.07	10.64
1930-31..	25.0	33.7	73	58	75	6.30	7.14
1931-32..	25.1	36.0	50	52	75	6.26	6.94
1932-33..	24.7	36.1	51	51	77	5.89	6.72
1933-34..	22.3	31.4	85	63	90	5.68	6.15
1934-35..	25.8	36.4	100	75	105	6.55	6.69
1935-36..	29.3	39.8	107	78	107	9.43	9.62
1936-37..	42.0	50.1	128	118	144	12.16	11.35
1937-38..	39.3	45.8	98	114	137	11.96	10.77
1938-39..	23.2	29.3	68	55	74	6.83	6.67

* Arithmetic averages of monthly prices in domestic currency, and deflated by an index of wholesale prices of "all commodities."

[a] Basic data from *London Grain, Seed and Oil Reporter;* averages of all sales of wheat parcels on British markets, in shillings per quarter of 480 pounds. Deflation by the Board of Trade index, converted to 1926 = 100.

[b] July–June averages of monthly prices of No. 2 Hard Winter from *U.S. Department of Agriculture Yearbooks;* weighted averages of carlot sales in U.S. cents per bushel.

[c] Averages of monthly prices of No. 3 Northern Manitoba from *Canadian Grain Statistics,* and *Prices and Price Indexes* (data prior to August 1922 received direct from Dominion Bureau of Statistics), in Canadian cents per bushel. Deflation by Dominion Bureau of Statistics index, 1926 = 100.

[d] Averages of monthly prices from *Boletin Estadistica Agropecuria,* in paper pesos per quintal. Deflation mainly by the Banco de la Nación Argentina index, 1926 = 100, published in *Economic Review,* January–March 1934, VII, 30, continued in *Wholesale Prices,* U.S. Bureau of Labor Statistics; prior to January 1926, monthly index numbers estimated from annual figures.

TABLE II.—WORLD WHEAT STOCKS EX-RUSSIA EX-INDIA ABOUT AUGUST 1, 1922–39*

(*Million bushels*)

Year	Total	Four chief exporters	United States grain[a]	Canadian grain
1922.....	557	221	107	28
1923.....	497	250	134	23
1924.....	620	285	137	48
1925.....	479	228	111	31
1926.....	556	232	101	40
1927.....	598	272	111	56
1928.....	658	337	115	91
1929.....	919	529	232	127
1930.....	880	534	294	127
1931.....	933	608	329	139
1932.....	964	640	391	136
1933.....	1,123	730	382	218
1934.....	1,194	680	274	204
1935.....	943	503	147	214
1936.....	763	378	142	127
1937.....	524	212	83	37
1938.....	590	293	153	25
1939.....	1,150	626	253	103

* Food Research Institute estimates mainly from WHEAT STUDIES, October 1939, XVI, 66, but here including data for Japan and revisions up to September 1940. Based as far as possible upon stocks of old-crop wheat reported either officially or unofficially.

[a] As of July 1.

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