WHEAT STUDIES

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SURVEY OF THE WHEAT SITUATION
APRIL TO AUGUST 1933

A TREMENDOUS wave of speculative enthusiasm more than doubled the price of wheat futures at Chicago between April and July 17. Unfavorable prospects for North American wheat crops of 1933, and inflationary developments in the United States, were the principal bases for the advance. A persistent and initially very steep decline followed. By early September, wheat prices at leading futures markets, in terms of gold, had fallen almost to the level of early April; and the net gain of April–August in Chicago prices, as quoted, corresponded closely to the amount of depreciation of the dollar.

Favorable new-crop prospects in Europe and the pressure of huge world stocks of old-crop wheat—the highest on record—were dominant factors in restraining the advance and forcing the decline. Barriers to international trade in wheat were maintained or increased in rigor, though an international agreement concluded late in August may tend to relax import controls later. In the United States, early developments in the wheat "adjustment" program did not greatly affect the immediate wheat situation, but important changes may eventuate.

The outlook for the crop year 1933–34 includes a very small movement of wheat and flour in international trade—probably only 575 million bushels. The United States again will export little, though perhaps more than in 1932–33. The United States carryover will be substantially reduced, and world stocks as well; but neither will be brought down to a normal level. British wheat prices (gold) in the next four months will probably advance moderately from the low level of early September; but no more than a moderate advance is reasonably in prospect. Probably only further inflationary developments would cause Chicago futures as quoted to advance; and in any event the excessive premium of Chicago over Liverpool (gold prices) is likely to decline, though perhaps after temporary widening.

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SURVEY OF THE WHEAT SITUATION

APRIL TO AUGUST 1933

The months of April–August 1933 were full of spectacular developments in the world wheat situation. Prospects for the United States winter-wheat crop of 1933, unfavorable throughout the winter, remained so in April–July; and the outturn is the smallest in several decades. The spring-wheat crop in North America was sown under fairly good conditions and germinated well, but was severely injured by drought and heat in June–August; it now appears to be almost as small as the very short crop of 1931. Beginning in mid-April, the United States dollar depreciated substantially but erratically on the foreign exchanges.

Under the joint influence of unfavorable new-crop prospects and inflationary developments, and aided in the later weeks by a tremendous wave of speculative enthusiasm, the Chicago September future more than doubled in price between April 1 and July 17, rising from 56 to 119 cents. This advance of 63 cents was the largest within a four-month period that has been recorded at Chicago since 1920, and was even more spectacular in terms of percentages. The advances at Winnipeg and Liverpool in terms of depreciated United States currency, however, were substantially smaller—49 and 38 cents, respectively; and in terms of gold Chicago rose only 27 cents, Winnipeg 20 cents, and Liverpool 10 cents. Buenos Aires prices moved fairly closely with those at Liverpool, where the advance was restrained not only by existing heavy world supplies of old-crop wheat, but also by favorable prospects for the 1933 wheat crops in Europe. These contrasts arouse reflections on the concept of a "world" price of wheat.

The advance in prices stimulated the movement of wheat from farms in North America, and tended to swell North American visible supplies. It also led to shrinkage of import purchases such that the volume of international trade in April–July and in the crop year 1932–33 as a whole fell below earlier expectations. North American exports were restricted by the shrinkage in demand much more than Argentine and Australian, since North American prices moved further out of line with import prices. As had seemed probable earlier in the crop year, because of prevailing and prospective relationships of domestic and foreign prices, United States net exports of wheat and flour in 1932–33 were extremely small — the smallest since 1868–69.

At the peak of futures prices on July 17 and 18, the technical position of the market was seriously overstrained at least at Chicago. Prices crashed 26 current cents a bushel in two days, the largest two-day break since May 1917. The Boards of Trade closed all futures markets in the United States on July 21 and 22, and at the reopening on July 24 set limits to daily price fluctuations which remain in modified form at this date. Prices partially recovered, abruptly but erratically; held for over a week; but again declined steeply and persistently. These fluctuations were very disturbing to millers. On September 1, Chicago futures prices, as quoted, stood over 30 cents below the July peak, but had held most of the advance of April–June. In terms of gold, however, Chicago prices were less than 5 cents above their position on April 1 and more than 20 cents below their position on July 17. Winnipeg had gained less than 5 gold cents over the April 1 position and Buenos Aires about 5 cents, while Liverpool had lost 1 or 2 cents.

The period under review was noteworthy in

CONTENTS

other respects. Data became available which point to a level of old-crop world wheat stocks about August 1 higher than ever before — about 1,113 million bushels, according to our tentative appraisal. This figure represents an increase of over 100 million bushels in the course of the crop year 1932–33; it compares with an average of 630 million in 1922–27, before stocks began to pile up; and it includes stocks of record size in North America and Australia, and large stocks in European importing countries, notably France and Germany. Elsewhere stocks were moderate or small.

In the field of governmental policy and regulation of wheat, the United States formulated and embarked upon a wheat "adjustment" program of which the main features thus far are imposition of a processing tax upon wheat which goes for domestic consumption, with use of the proceeds mainly as benefits to farmers who contract to reduce their sown acreage. For the crop year 1933–34, the main effects of the plan on the wheat situation now seem likely to be some reduction of domestic utilization for milling and seed and some relative strengthening of wheat prices. Later developments may possibly include government-aided export of wheat from the Pacific Northwest to the Orient. France, prominently among other countries, has also formulated a comprehensive wheat policy. An international agreement, tentatively approved by twenty-two nations late in August, contemplates allocation of exports in 1933–34, reduction of production in exporting countries both through curtailment of sown areas and diversion of surpluses to non-food uses, and relaxation of restraints upon imports and domestic consumption in European importing countries. The actual steps taken by governments during April–August, however, were such as to maintain or increase the rigor of barriers to international trade in wheat.

The outlook for the crop year 1933–34 definitely includes a relatively small prospective volume of international trade, probably only about 575 million bushels. Large 1933 wheat crops and ample old-crop stocks in importing Europe preclude a heavy movement. The outlook also includes relatively small net exports from the United States, though perhaps larger ones than in 1932–33. It definitely includes reduction of the United States carryover by at least 100 million bushels, and of world wheat stocks by at least 200 million. But world stocks will not be reduced to a normal level at the end of the crop year.

Despite the small world wheat crop of 1933 and a clearly defined prospect for reduction of surplus stocks, British wheat prices in terms of gold seem unlikely in September–December to reach and maintain a level as much as 15 cents above the low level prevailing in the week ending September 9. They are, however, less likely to decline or remain stable than to advance moderately. The excessive premium of Chicago over Liverpool futures, measured in gold cents, is likely to decline. Chicago futures at a level equivalent to 61 gold cents may be expected to decline, though further inflationary developments may well produce an advance in actual dollar prices and even a temporary advance in gold prices.

Governmental Measures and Policies

Outstanding developments of April–August in the field of governmental policy toward and regulation of wheat production and trade were a preliminary international agreement tending toward reduction of production and relaxation of trade barriers; the inauguration of the wheat "adjustment" program in the United States; and the formulation of policies and methods of wheat control in France including notably a schedule of fixed minimum prices during the crop year 1933–34. In other countries, few tariff changes became effective during the period under review; but in general trade restrictions became more rigorous, and new measures of governmental support to domestic wheat markets appeared in several countries.

International agreements bearing upon solution of the world wheat-surplus problem, ultimately perhaps of far-reaching importance, were tentatively concluded late in August. Delegates from the United States, Canada, Argentina, and Australia had convened at Geneva on May 10 to discuss policies and methods. This conference adjourned

without concluding a formal agreement, but reconvened at London on May 29 in order to enjoy contacts with representatives of European countries at the World Economic Conference.[1] No definite agreement had been reached when this meeting adjourned late in July. It reconvened on August 21, and four days thereafter the American press announced that an agreement had been consummated between 21 (later 22) participating nations; this later was described as conditional upon a supplementary agreement among the four major overseas exporting countries; the supplementary agreement was initialed on August 30.

We have not seen the text of these agreements, and discussion of their provisions must accordingly be deferred to a later issue of WHEAT STUDIES. It seems clear from press reports that in general the governments of European importing countries have permitted their delegates to subscribe to broad general policies (1) of relaxing import restrictions and control of uses of imports, including tariffs if prices rise, (2) of encouraging domestic consumption, and (3) of discouraging further expansion of domestic wheat acreage. Delegates from the four major exporting countries subscribed to general policies of controlling their exports for one or two years through allocation of quotas. We infer from announcements of the Department of Agriculture that the United States and Canada are tentatively committed to a policy of acreage reduction, while Argentina and Australia are tentatively committed to a policy of diverting surplus wheat to non-food uses. Tentative export quotas for the year ending July 31, 1934, were allocated as follows: Canada, 200 million bushels; Argentina, 110 million; Australia, 105 million; the United States, 47 million; and the Danube countries, 50–54 million.

This allocation of exports would carry great significance for the outlook for international trade in the crop year 1933–34 and for wheat prices in September–December, if ratification of the agreement were certain in all four countries concerned (this is not necessary in the United States), and if methods of executing the agreement were ready for prompt application in each country. We take it, however, that the allocations must be more or less elastic in practice, and that the pact must allow for some expansion in the total if import demand warrants, as well as for adjustment of particular allocations one to the other if domestic crop production creates the necessity. Consequently we explicitly assume in subsequent discussion of the outlook (pp. 376–80) that over the next few months the export quotas will not operate effectively as a price-lifting device; that they will not significantly condition the probable total volume of international trade in 1933–34; and that they will not appreciably affect the distribution of exports by country of origin. The policies to which importing countries have tentatively subscribed likewise remain to be ratified and implemented; they may assume great importance in the course of time, but seem unlikely to have much effect upon the world wheat situation in the next four months.

In the *United States,* the Agricultural Adjustment Act was approved on May 12. It confers wide powers upon the Secretary of Agriculture. Authority is granted notably "to provide for reduction in the acreage . . . . of any basic agricultural commodity, through agreements with producers or by other voluntary methods, and to provide for rental or benefit payments in connection therewith or upon that part of the production of any basic agricultural commodity required for domestic consumption . . . ."; ". . . . to enter into marketing agreements . . . ."; to issue and revoke "licenses permitting processors, associations of producers, and others to engage in the handling . . . . of any agricultural product . . . ."; and to utilize funds "for expansion of markets and removal of surplus agricultural products . . . ."

An initial sum of $100,000,000 was appropriated to be available to the Secretary of Agriculture for use under the Act. Provision was made for levy of a tax on the primary processing of any basic agricultural commodity which might be designated as subject to rental or benefit payments. The rate of the tax was specified as "such rate as equals the

[1] The two conferences were not connected.

difference between the current average farm price for the commodity and the fair average exchange value of the commodity"; and the fair average exchange value was specified as "the price . . . . that will give the commodity the same purchasing power, with respect to articles farmers buy, as such commodity had during the base period" (August 1909–July 1914 for wheat). Provision was also made for levy of a tax equivalent to the processing tax, on stocks of processed commodities and on existing contracts as of the date when the processing tax should become effective; and exporters were granted refunds of processing taxes.

Conferences and discussions followed regarding methods to be applied to wheat under the Act. The Agricultural Adjustment Administration was formed, with subordinate sections according to commodities. On June 16 the main features of the "wheat adjustment plan" sponsored by the administration were made public. The general policy was stated to contemplate reduction of wheat sowings by farmers in exchange for benefit payments; co-operation of the Agricultural Adjustment Administration with existing agencies to facilitate wheat exports; possibly, removal from the domestic market of certain types of wheat produced in excess of domestic requirements in 1933–34; and imposition of the processing tax on wheat for domestic consumption, the proceeds to be used mainly to pay benefits.

It was made clear at the outset that acreage reduction and compensatory payments were contemplated for the crops of 1934 and 1935 only; that payments would be contingent upon making and fulfilling contracts; that farmers would be asked to bind themselves to reduce their 1934 sown acreage by not over 20 per cent of the acreage each had sown in the base period; that farmers would be asked to agree to sow as much land as would produce, with average yield, a crop equal to their allotment; that two-thirds of the total benefit would be paid as early as possible in the autumn; and that the maximum legal processing tax would be levied. The precise amount of the processing tax was not indicated; and the precise percentage reduction of acreage to be written into the contracts remained unspecified pending the outcome of the international wheat conference.

Definite rulings regarding the processing tax were promulgated on June 28. These prescribed the marketing year as beginning July 9, 1933; fixed the processing tax at 30 cents per bushel of 60 pounds (the maximum in consideration of the current average farm price and the "fair exchange value"); and established conversion factors for applying the tax to "floor stocks" of wheaten products. Wheat ground or cracked for feed purposes was exempted from the tax; retail flour stocks of wheaten products held (in shops) by retailers were exempted from taxation if disposed of within thirty days; and exemption was further specified of wheat processed by or for a producer for consumption in his own household.

The plan was gradually elucidated in its details in subsequent weeks. Meetings for discussion of it were held in practically all wheat-growing districts, and farmers were given the opportunity to join county wheat-production control associations and make application for contracts. Aspects of the plan which seem to have given particular concern to farmers and which were not made clear at once had to do with the probable method of allocating benefit payments between landlord and tenant; with the method to be used in calculating a contracting farmer's allotment or a county's allotment; and with the uses to which land taken out of wheat could be put. The contracts themselves were not made available to farmers for signature until announcement was made, on August 28, that the reduction of sown acreage required of contracting farmers for the 1934 crop was 15 per cent of the 1930–32 acreage.

We infer from the fragmentary evidence now available that well over 75 per cent of the sown wheat acreage of the United States will eventually be covered by the contracts. At this time, however, appraisal of the effects of the wheat adjustment plan would be premature. Imposition of the processing tax resulted in a prompt increase in the wholesale price of flour, and retail prices of flour and bread have also risen. Flour millers already

contend that the consumption of wheat flour has been adversely affected; although neither the fact nor the degree has yet been demonstrated conclusively, the effect is probably in this direction. Thus far there is no evidence of significant effects upon the export trade in wheat and flour, already heavily reduced. The Agricultural Adjustment Administration is seriously considering the use of some portion of the receipts from the processing tax to facilitate exports from the Pacific Coast to the Orient, and has indeed announced (July 24) that 2 cents out of the total per bushel benefit would be withheld for facilitating exports; but no definite export policy has yet been announced. It cannot be expected that the steps thus far taken under the plan will in themselves tend to lower the level of the wheat carryover on July 1, 1934; rather they will tend somewhat to increase it through diminishing the volume of domestic utilization for food and particularly for seed during the crop year, unless the policy of facilitating exports should be executed. Thus far the plan has functioned rather more as a potential than as an actual influence on production, trade, and prices. Domestic wheat prices have probably been affected favorably, though not largely, by the adoption and progress of the plan. Income for 1933–34 on wheat farms will certainly be enhanced, at the expense of flour consumers.

In certain other respects the program of the present administration, as it has developed in recent months, will affect the grain trade in the United States. The Reconstruction Finance Corporation established on June 5 a credit of $50,000,000 for the Chinese government, $10,000,000 of which is available for purchase of United States wheat and flour in the open market. At least up to September 10 no purchases have been reported; perhaps native supplies may have sufficed, or Chinese officials may have been waiting to buy at lower c.i.f. prices possible if Chicago prices should fall relatively or if exports from the Pacific Coast to the Orient should be subsidized.

Representatives of the grain exchanges were warned, shortly after the collapse of prices in July, that continued existence of present institutions engaged in marketing was conditional upon performance of useful service; the only specific governmental action (July 20), however, has been to call for renewal, under the Grain Futures Act, of daily reports on open commitments in futures of 500,000 bushels or more.

"Codes of fair competition" have been submitted to the National Recovery Administration or the Agricultural Adjustment Administration by associations of mills, bakeries, country elevators, and grain exchanges. These bear mainly upon employment of labor and profits of invested capital rather than upon wheat supplies, trade, and prices; but the code of the grain exchanges, when finally approved, may contain important changes in trade practice, particularly with regard to margin requirements in futures trading and to rate of accumulation or liquidation of open lines.

France, faced with a large crop and carryover, has resorted to further measures to supplement her previous régime of protection to domestic wheat producers, which was characterized mainly by high tariff duties on imports, compulsory admixture of specified but variable percentages of domestic wheat in mill mixes, and governmental aid in storing wheat stocks.

The comprehensive law of July 10, 1933, providing for "fixation of a minimum wheat price and for organization and defense of the wheat market" in France and Algeria,[1] has three main features: fixation of a minimum price to farmers for the period July 15, 1933, to July 15, 1934; the establishment of a statistical background and an interpretative organization such that prompt decision can be made regarding the need of "defense" of the wheat market in future years; and the specification of methods that may or must be employed for making the "defense" effective.

The minimum price to be paid to French producers for 1933–34 is 115 francs per quintal ($1.23 gold per bushel) from July 15 to August 31, rising 1.50 francs on September 1

[1] The full text of the law is given in the *Bulletin de l'office de renseignements agricoles*, July 15, 1933, pp. 291–95; an analysis appeared in *Foreign Crops and Markets*, August 21, 1933, pp. 194–97.

and on the first of each month thereafter. Premiums and discounts will be paid for wheat of higher or lower quality than that specified. The price of 115 francs is higher than the Paris price in any month between September 1932 and July 1933.

The methods outlined for achieving the specified minimum price (or for defense of the market in coming years) include payment of an export bounty on domestic wheat and flour, in an amount per quintal equal at the maximum to the existing tariff duty on foreign wheat (85 cents gold); fixation of milling extraction ratios; payment of premiums for denaturing both wheat and low-grade flour; financial aid either for storage and orderly marketing throughout the year or for carrying wheat from one year to another, together with direct governmental purchase and storage; and suspension for two months of milling in bond of foreign bread wheats. Among these measures, the law clearly requires that two, the "compensatory exportation" and the suspension of milling in bond, must be put into effect in the present crop year. For the protection of consumers, authority is granted to the Ministry of Agriculture to fix maximum prices for flour, and to seize wheat and flour stocks and to occupy and operate mills and bakeries, if the necessity arises.

The statistical background is to be provided through requirement of annual reports on the acreage sown to wheat and on the size of wheat and flour stocks, and of monthly reports on stocks, purchases, receipts, sales, and deliveries of mills. Provision is also made for regional and national "committees of organization and control of wheat production and trade."

Presidential decrees and ministerial orders subsequent to July 10 have dealt only with the export bounty and the form and substance of reports from millers and from holders of stocks. There is not yet evidence that provisions of the law regarding fixed extraction rates, denaturing of wheat and low-grade flour, or storage will be resorted to in 1933–34.

In the first two months of operations under the law, the price has apparently been maintained as specified, and substantial quantities of French wheat and flour have been exported. Internal difficulties, it is asserted, have arisen —mainly, it is said, because grain dealers have practically been put out of business, since millers tended to deal directly with farmers; because port mills have been injured; because buyers have contrived to couple full payment for wheat with purchases of other grains below the market;[1] and because farmers have not been able to sell all that they wished to sell. The volume of funds available is interpreted as indicating possible exports of 18 million bushels or more in the course of the crop year;[2] but this result is by no means assured. Much depends upon the precise amount of the bounty payment, which is apparently subject to change. Even the prospective relationship of French exports to imports (probably largely from northern Africa) during the crop year is not yet clear. The contingent of Moroccan wheat and flour admissible duty-free into France and Algeria in 1933–34 has been fixed at about 7 million bushels, the same as in 1932–33.

The new *British wheat policy* (discussed in the July issue of WHEAT STUDIES) entered upon its second year on August 2. The guarantee of an average farm price of 10*s.* per cwt. on sales of millable wheat, up to a stated maximum quantity, has decidedly stimulated British wheat growing. The 1933 wheat acreage is estimated at about 30 per cent larger than in 1932. Acreage statistics for England and Wales indicate that the wheat area has expanded at the expense of barley, oats, hay, and some minor crops.

Favorable weather, moreover, has led to wheat yields well above average. The Wheat Commission therefore expects the 1933–34 sales of millable wheat to reach or exceed the statutory limit, 27 million cwt., to which the 10*s.* guarantee applies, as compared with last year's estimate of 19.8 million. The Commission has provisionally forecast the average farm price of millable wheat for the season at 5*s.* 8*d.*, only slightly higher than last year. The large supply of British wheat, in a year when soft wheats are conspicuously abundant, will presumably cause it to sell at a

[1] *The Economist*, August 12, 1933, p. 322.

[2] *Foreign Crops and Markets*, August 21, 1933, p. 195.

greater discount than usual below imported wheats. To supply funds to meet a price deficit nearly as large as last year on a substantially increased volume of wheat sales, the Commission has initially fixed the flour levy at 3*s.* 6*d.* per sack of 280 pounds. This compares with last year's initial rate of 2*s.* 3*d.* per sack, and a rate of 2*s.* 9*d.* from October 30, 1932.

The *Irish Free State* has embarked upon a general policy of protection to domestic wheat producers and flour millers; early indications point toward response of domestic wheat acreage for 1933 similar to that in the United Kingdom, and enlargement of the 1933 crop will tend to reduce imports in 1933–34.

Other developments in governmental wheat regulations throughout April–August deserve briefer mention. *Tariff duties* were imposed in China effective May 22 (15 gold cents per barrel of flour); in Holland effective August 14 (11 gold cents per bushel of wheat); and Belgium announced from August 17 that unlimited quantities of wheat imports would be licensed on payment of a duty of 8 gold cents per bushel. In Egypt the sliding scale duty on flour was increased May 1. The existing wheat duty in India was continued for another year, to March 31, 1934; wheat ground for export as flour was exempted. *Monopolies on wheat imports* were instituted in Holland (August 14) and Uruguay (April 13). Strict *licensing* of wheat imports was inaugurated in Switzerland (April 1), Denmark (April 6), and the Irish Free State (May 24). *Milling quotas* for domestic wheat were raised in France on April 16 (from 99 to 100 per cent), in Italy on July 16 (from 95 to 99 per cent), and in Sweden on June 1 (from 95 to 98 per cent). Certain *bilateral arrangements* involving wheat trade were concluded during the period between Hungary and Czecho-Slovakia, Hungary and France, Hungary and Switzerland, Switzerland and Czecho-Slovakia. *Governmental financial aid in storing grain* has apparently been extended into 1933–34 in Germany and Italy, and in Japan has now been made part of a five-year program looking toward national self-sufficiency in wheat through increase of domestic production. The Japanese program has already resulted in a large increase of wheat acreage and production (Table I). *Direct governmental purchase* of surplus farm stocks was inaugurated in Portugal by decree of June 6, and has at least been contemplated in Spain and Roumania. What has transpired in Canada, where government-sponsored dealing in futures has apparently continued in recent months, is not of public record. The federal *payment to producers* in Australia on the 1932 crop is apparently to be distributed on the basis of 2*s.* 8*d.* per acre, which is estimated to yield 1½ to 2½*d.* per bushel, as against 4½*d.* paid on the crop of 1931. In Germany the complicated system of controls remained in operation; significant new developments were limited to announcements that the *export certificate system* will again be used in 1933–34, much as it was in 1932–33, and that, effective August 16, the standard milling quota of 97 per cent domestic wheat (with certain significant exceptions) has again been adopted.

Development of 1933 Crops

Europe ex-Russia.—European wheat crops wintered well; winterkilling was below normal, and as of April 1 the condition of most crops was relatively high. Cold weather in April and May, however, retarded plant growth; and scanty rainfall during the first part of April brought some complaints. Timely rains later in April and in May generally restored crop condition except in Spain, Portugal, and southern France, where drought continued. June weather was abnormally cool and wet; but despite generally late crop development and lodging in certain districts, most crops were in good condition on July 1. Exceptionally warm and dry weather, favorable for ripening and harvesting, prevailed during the latter part of July and August. At present, the outlook is for a European (ex-Russian) crop of record size and of good quality.

For the second successive year, the major importing countries of western Europe have harvested a large wheat crop from a planted acreage of about record size. The latest available crop estimates for 1933 are as follows, in million bushels:

Area	Average 1927–31	1932	1933
England, Wales	45	41	57[a]
France	277	334	297[b]
Germany	136	184	193[a]
Italy	228	276	279[a]
Belgium	15	16	14[a]
Netherlands	6	13	14[a]
Total	707	864	854

[a] Official.
[b] Estimate of the Berlin office of the U.S. Department of Agriculture.

The increase in the British crop was due mainly to acreage expansion stimulated by the new British wheat policy. Protective measures also encouraged acreage expansion in other countries of this group, with the exception of Belgium. Both the German crop and the Italian are officially reported as the largest on record, having been harvested from record wheat areas. Private estimates of the German crop, however, are said to be less optimistic.[1] Despite an increased planted area in France, the crop appears to be reduced from 1932, largely because of spring drought.

In both central and northern Europe, wheat crops this year are larger than average. But while central European countries, as a group, secured a larger outturn this year than last (because of increases in Poland and Czecho-Slovakia), the Scandinavian and Baltic countries apparently harvested smaller crops. Recent estimates for these countries are as follows, in million bushels:

Area	Average 1927–31	1932	1933
Poland	70	49	73[a]
Czecho-Slovakia	49	54	66[b]
Austria	12	13	14[b]
Switzerland	4	4	5[b]
Central Europe	135	120	158
Scandinavia	30	38	33[a]
Baltic states	13	18	17[a]
Scandinavia and Baltic	43	56	50

[a] Estimate of the Berlin office of the U.S. Department of Agriculture.
[b] Official estimate. Allowance made for spring-wheat production in Austria.

Of the remaining importing countries, Spain and Portugal, where record crops were harvested in 1932, were less favored by weather conditions this year. Spain planted a somewhat smaller area to wheat; but the big reduction in the crop was due mainly to drought in April and May. The preliminary official estimate for Greece indicates a crop of 28 million bushels, by far the largest on record; but in view of reductions of preliminary estimates in other years and the size of the previous record crop, we doubt if this year's outturn exceeds 18 million bushels. The latest crop estimates for these countries are as follows, in million bushels:

Country	Average 1927–31	1932	1933
Spain	141	184	129[a]
Portugal	11	18	15[a]
Greece	12	17	18[b]
Total	164	219	162

[a] Official.
[b] Our approximation.

The Danube countries apparently harvested an aggregate wheat crop of good size, over 100 million bushels larger than last year's short crop, from a total sown area below the average for the preceding five years. Preliminary estimates of the 1933 crops are shown below, with comparisons in million bushels:

Country	Average 1927–31	1932	1933
Bulgaria	49	51	52[a]
Hungary	82	64	87[a]
Jugo-Slavia	87	53	90[b]
Roumania	116	56	114[a]
Total	334	224	343

[a] Official.
[b] Our approximation.

None of these countries secured a large, none a small crop. Only the Roumanian outturn may be below average, and this because of a reduction in planted acreage.

To summarize, the 1933 crop of European importing countries now appears to be almost 175 million bushels above the 1927–31 average, but 40 million below last year's record crop. The crop of Danubian exporting countries, while not exceptionally large, is so much

[1] *World Wheat Prospects*, August 26, 1933. The Berlin office of the Department of Agriculture places the German crop at 179 million bushels.

larger than the short crop of 1932 that Europe ex-Russia appears to have harvested some 80 million bushels more than last year's record total. In contrast with last year, the quality of the 1933 crop is generally good.

Russia.—No official indication of the Russian wheat crop of 1933 has appeared. All unofficial indications are at best well-considered guesses based upon (1) the official estimate of winter-wheat plantings, (2) the official estimate of area sown to all spring crops (the acreage sown to spring wheat not being separately reported), (3) reports of weather conditions during the growing period, and (4) Russian offers and shipments of new-crop wheat to date.

Reported sowings of winter wheat and the available data on spring plantings are as follows, in million acres:[1]

Year	All wheat	Winter wheat	Spring wheat	All spring crops
Reported sown				
1929	73.5	16.2	57.3	.....
1930	80.5	23.4	57.1	214.5
1931	92.1	29.2	62.9	239.4
1932	88.7	32.3	56.4	238.5
1933	....	28.1	....	230.1
Planned				
1933	93.4	36.1	57.3	234.8

Reported winter-wheat sowings were considerably smaller this year than last, but larger than sowings for the crop of 1930. Though spring-wheat plantings were not separately reported, it seems improbable that they appreciably exceeded the 56.4 million acres planted last year. Indeed, there may have been some reduction, for in the major spring-wheat–producing regions sowings of spring crops this year were reduced even more than in regions which usually produce less wheat. The total area sown to wheat for the crop of 1933, therefore, was probably smaller than that sown for either of the two preceding crops, but larger than the area sown for the bumper crop of 1930.

Weather conditions are usually more important than acreages in determining the size of a given Russian crop; but reports of weather conditions in Russia are fragmentary and at times conflicting. Almost all reports, however, have indicated much better weather this year than last. Official reports suggested that the winter-wheat crop wintered well, and as of April 1 was in satisfactory condition. The spring season was earlier than in either of the two preceding years; and the planting of spring crops proceeded at a rapid pace. As of June 1, the area reported sown to all spring crops was the largest in recent years, but subsequent plantings were smaller than in several of those years. Since early sown spring wheat has a better chance of developing satisfactorily than late sown, this year's crop presumably had the advantage of a good start. The most frequent complaints this year have been of excessive weed growth and lodging. Some areas, like Ukraine which ordinarily exports a fair portion of its crop, are reported to have good outturns this year.

Shipments of Russian wheat from July 1 to September 9 were considerably smaller this year than in 1930 or 1931, and about equal to shipments in 1932. This, however, may signify collection difficulties and diversion of the early deliveries to domestic consumption rather than a poor wheat crop. It does not, however, point toward a distinctly large crop.

United States.—From the fall of 1932 to the end of July 1933 weather conditions were distinctly unfavorable for the development of the United States wheat crop.

Drought in the Great Plains and low wheat prices at seeding time resulted in reduced sowings of hard winter wheat. Continued drought and unseasonably cold weather through November gave the crop a bad start. As of December 1, winter-wheat condition was reported at 68.9 per cent of normal, the lowest December 1 condition on record (since 1863). The drought was not relieved during the winter; and in the Pacific Northwest wheat suffered from extreme cold. The crop condition on April 1, as on December 1, was the lowest ever reported. Abandonment of acreage to May 1 was officially estimated at 32.2 per cent; this is the highest percentage abandonment on record, nearly three times as high as the ten-year (1921–30) average percentage of 12.2.

According to official crop reports, little

[1] Data of the International Institute of Agriculture.

change in winter-wheat crop prospects occurred during April–July. Private forecasts, on the other hand, were reduced by around 40 million bushels during this period. For both April and May, the private forecasts were generally higher than the official, partly because private estimates of abandonment were lower. The course of winter- and spring-wheat crop development, as indicated by successive average private and official crop forecasts and estimates, is shown below, in million bushels:

Date	Winter		Spring		Total	
	Private	Official	Private	Official	Private	Official
Apr. 3, 10...	371	334	...	...	...	...
May 2, 10...	350	337	...	...	...	...
June 2, 9...	357	341	270	265[a]	627	606[a]
July 5, 10...	323	336	196	160	519	496
Aug. 2, 8...	333	340	147	159	480	500
Sept. 1, 11...	...	340	151	166	491	506

[a] Interpretation of official condition figure.

Winter crop conditions improved somewhat during the last week of April and the first part of May (an improvement reflected in the private crop forecasts issued June 2) but declined again during the latter part of May. Over a large part of the winter-wheat belt (from southern Ohio, Missouri, and Kansas northward) June temperatures were the highest on record, and June rainfall was below normal. Yet the official forecast of winter-wheat production was reduced only 5 million bushels between June 1 and July 1.

Spring wheat was planted somewhat later than usual, on an acreage slightly smaller than was sown last year. The official report on farmers' intentions to plant (in March) indicated a probable reduction in acreage of 2.5 per cent from last year; but private estimates of the acreage actually sown up to the last week of May generally indicated a smaller reduction. The first official estimate of spring-wheat acreage was published in July, after hot weather and drought in June had taken heavy toll of the crop and reduced the acreage to be harvested. This estimate indicated a decrease of 16.0 per cent from the acreage harvested in 1932. Crop forecasts, both private and official, showed big reductions from June 1 to July 1. During the first two weeks of July, weather conditions were more favorable for crop development in the principal spring-wheat states; but recurrent heat waves and dry weather later in the month resulted in further deterioration. The official forecast of production as of August 1 was the same as that of July 1; this led some commentators to express the belief that the official July estimate was too low, or the August estimate too high.[1]

The total United States wheat crop is now estimated officially at only 506 million bushels. According to official statistics, this is the smallest outturn since 1893; adjusted production estimates of the Food Research Institute show it to be the smallest since 1885. On August 1 the crop appeared to be distributed by classes as follows, in million bushels:[2]

Year	Hard red winter	Soft red winter	White	Hard red spring	Durum
1929.....	362	166	83	145	56
1930.....	375	175	88	161	59
1931.....	492	250	68	70	21
1932.....	264	148	86	187	41
1933.....	163	143	84	92	19

The greatest relative shortage is of hard red winter and durum wheats; the crop of hard red spring, though small, is less far below average, and is appreciably larger than in 1931. The soft red winter-wheat crop, about the size of last year's poor outturn, shows less reduction as compared with earlier years than any of the other classes except white wheat. In the Pacific Northwest, winter-acreage abandonment was strikingly high and the yield of winter wheat unusually low as a result of cold weather without snow protection. But much of the abandoned acreage was resown in the spring; and the spring-wheat crop, though later than usual, was favored by good growing weather during April–July. As a result, the total outturn of Pacific white wheat is of average size.

Despite the high temperatures and drought

[1] See Lamson Bros. and Co., *Crop Report and Statistics*, August 1933, and *Modern Miller*, August 12, 1933, p. 13.

[2] Estimates as of September 1 are not yet available to us.

which prevailed in the major wheat areas of the United States during June and part of July, the quality of both the winter- and spring-wheat crops appears to be good.

Canada. — In Canada, spring seeding was later than in any year since 1928. As of May 1, farmers in the Prairie Provinces reported intentions to plant only 24.9 million acres to spring wheat, a reduction of 5.5 per cent as compared with the area sown in 1932. Favorable weather and higher wheat prices in May apparently resulted in a somewhat smaller reduction, 4.6 per cent.

On May 31 the condition of the Canadian crop was officially reported as about average. But excessive heat and lack of moisture in June resulted in increased deterioration with each successive week, grasshoppers adding to the damage in the southern areas. By the end of June a spring-wheat crop of less than 350 million bushels (an interpretation of the official condition figure) appeared to be in prospect. Further deterioration occurred in July, heat and drought again being principal factors, with insect damage and frost secondary influences. The condition of the spring-wheat crop on July 31 was reported at only 57 per cent of the long-time average; with the exception of 1931, this is the lowest condition figure for that date in the records of the Dominion Bureau. The development of the spring-wheat crop during May–July is illustrated below in terms of official condition figures, representing percentages of the long-time average yield per acre:

Year	May 31	June 30	July 31
1931	80	56	54
1932	96	99	88
1933	99	77	57

Some further decline in crop condition took place during August. As of August 31 the total Canadian crop was officially estimated (report of September 11) at 283 million bushels, including 14 million bushels of winter wheat. It is perhaps worthy of note that during recent years final official estimates of the Canadian crop have generally been higher than the September preliminary estimates.

Other Exporting Countries.—The aggregate wheat crop of the three exporting countries of northern Africa appears from preliminary estimates to be of moderate size, and about 10 million bushels smaller than the latest estimates of the 1932 harvest.

The Indian wheat crop of 1933 is now estimated at 353 million bushels. Though somewhat above average, this crop is presumably not large enough to provide more than insignificant net exports in 1933–34 unless world wheat prices should rise considerably.

Southern Hemisphere wheat crops in September are still in the early stages of growth; and the outlook for these crops may change greatly in the next few weeks. Official acreage estimates indicate a reduction of about .7 million acres in Australia and 1.5 million acres in Argentina. The *Times of Argentina,* however, contended (July 31), that the Argentine sown area is as large as, or larger than, that of 1932. The weather has been too dry in Australia since early in the planting period; and in early September crop condition was probably lower than in most recent years. In Argentina, planting conditions were more favorable; but weather in the early growing period was too warm. Later, cold weather and drought caused considerable damage. Rainfall was below normal from early June to mid-September. Locusts are reported to be more numerous this year than usual, and unless effectively controlled by the government campaign may do much damage to the growing crops during the next two months.

Hence both Argentina and Australia now seem likely to produce smaller crops this year than in 1932, or than on the average in 1927–31. Tentatively, we assume that the Argentine crop will approximate 200 million bushels. This figure is based upon the official estimate of acreage sown, and upon the assumption that percentage abandonment will approximate the average for the last three years. An average (1923–30) yield per acre on the calculated acreage remaining for harvest would bring the Argentine crop to 210 million bushels; but at present, a yield somewhat lower than average seems to be indicated. For Australia, we accept the crop forecast of Broomhall's agent—152 million bushels. This indicates a yield per acre about 10 per cent below the 1923–30 average on an area offi-

cially estimated to be smaller than the acreage harvested in any of the five preceding years except 1930.

Ex-European Importing Countries. — Both China and Japan apparently harvested larger crops this year than in 1932. The Chinese winter-wheat crop is stated by the United States Agricultural Commissioner at Shanghai to show an increase of 10 per cent over last year; while the official estimate of the Manchurian crop shows an increase of over 50 per cent and the official estimate of the Japanese crop indicates an increase of over 20 per cent. Japan's crop is the largest on record. Chosen has a crop of about average size. The Egyptian crop, on the other hand, is considerably smaller than last year's bumper crop, mainly because some of the acreage under wheat last year was planted to cotton this year. The Mexican crop is apparently about average, but larger than the poor outturn of 1932.

A summary of the significant facts regarding the size and distribution of the world crop of 1933 is presented below, page 375.

International Trade

In April–July, international shipments of wheat and flour were smaller than in the same months of any preceding post-war year except 1925. Too small to fulfill any of the leading forecasts of international trade for 1932–33 (though almost fulfilling the estimate of the International Institute of Agriculture), April–July shipments brought the *total for the crop year* to only 615 million bushels, approximately the same as the record small post-war shipments of 1929–30. As in that year, the small trade in 1932–33 reflected mainly low European requirements for imported wheat. Shipments and net exports for 1932–33 are shown below in relation to forecasts standing in March 1933, and with trade data for other recent years, in million bushels.

Net exports in 1932–33 exceeded Broomhall's reported shipments by an unusually small margin, as in 1929–30. Exports from the Danubian countries, Russia, and the United States (an appreciable part of which is often not reported as shipments) were unusually low in 1932–33. Moreover, German exports, stimulated by the export certificate system, swelled the volume of shipments more than usual, but were not large enough to put Germany on the list of net exporters.

Crop year	Shipments[a] Aug.–July	Net exports Aug.–July	Shipments[a] Apr.–July
Reported trade			
1924–25	715	766	188
1928–29	916	941	278
1929–30	613	626	205
1930–31	787	833	275
1931–32	770	790	249
1932–33	615	628[b]	190
Forecasts 1932–33			
Broomhall	664	...	238
Food Res. Inst.	645	665	219
International Inst.	...	630	...

[a] Reported by Broomhall; 52 weeks in all years, 18 weeks in April–July.

[b] Preliminary estimate based on incomplete trade data.

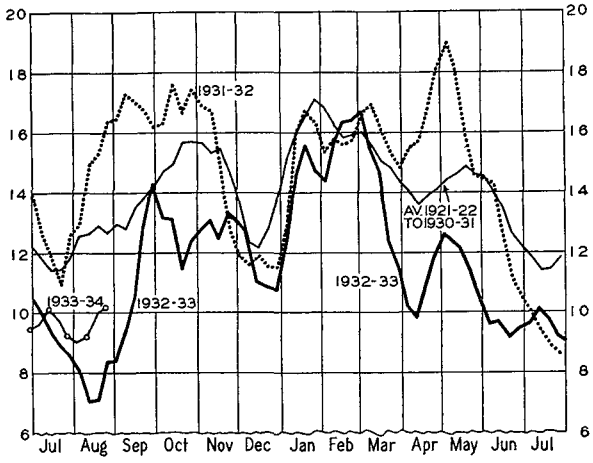
An unusually large proportion (about 45 per cent) of total crop-year shipments came from the Southern Hemisphere (Table VI). Despite the low world total, Australian exports were of near-record size, reflecting large crops in 1931 and 1932. In the face of large wheat supplies, United States net exports were the smallest since 1868–69, because of speculative holding of United States wheat at prices above export parity. Danubian exports were the lowest in recent years on account of general crop failure in 1932. Exports from Canada as well as Argentina were below average in size, although the exportable surplus of Canada was notably high. The USSR succeeded in exporting about 17 million bushels of wheat, despite persistent reports of serious food shortage in certain sections of the Union.

April–July shipments from all countries represented an unusually small fraction of the year's total. Between December–March (17 weeks) and April–July (18 weeks), world shipments fell off more than usual, though less than in 1924–25 and 1928–29. After the peak of the Southern Hemisphere movement in late February and early March, world shipments declined abruptly to mid-April (Chart 1). Uncertainty as to the future course of

international exchanges was a predominant factor in this period. But when international financial conditions later became more settled and wheat prices firmed, European importers purchased foreign wheat more freely.

CHART 1.—WORLD SHIPMENTS OF WHEAT AND FLOUR, 1932–33, WITH COMPARISONS*

(Million bushels; 3-week moving average)



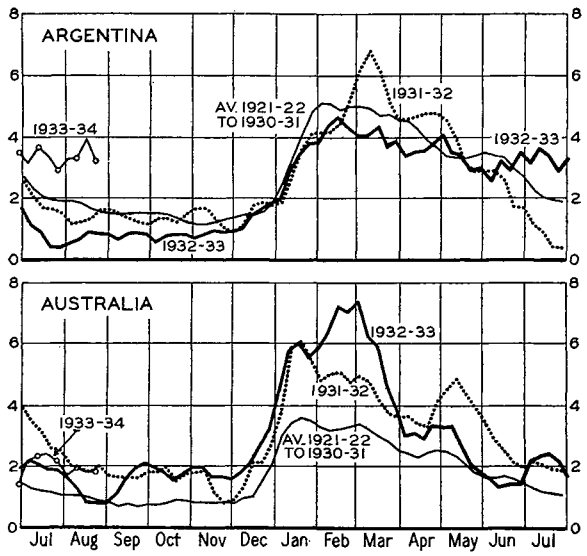
* Data from Broomhall's *Corn Trade News.*

Shipments to Europe rose more than seasonally from mid-April to mid-May mainly because stocks of foreign wheat in Europe had previously been reduced almost to a minimum. Ex-European takings, on the other hand, decreased rapidly during these weeks as Australian and Argentine wheat prices advanced; and during the remainder of the crop year shipments to ex-Europe were only slightly above the average level. The spring bulge in shipments to Europe was short-lived; with import restrictions tightened, instead of relaxed as in the three previous crop years, and with the outlook for European crops promising, there was little inducement for European importers to buy heavily. In July, the European demand increased slightly as prices rose on news of serious damage to the North American spring-wheat crop. But purchases at this time were mainly of Argentine and Australian wheat, the higher-priced Canadian wheat being neglected (Charts 2 and 3).

During April–July, Australia, Argentina, and Canada were practically the sole competitors for the restricted import trade in wheat. With optimism running high in speculative markets in the United States, Chicago wheat futures were maintained 10 to 15 cents

CHART 2.—ARGENTINE AND AUSTRALIAN SHIPMENTS, 1932–33, WITH COMPARISONS*

(Million bushels; 3-week moving average)

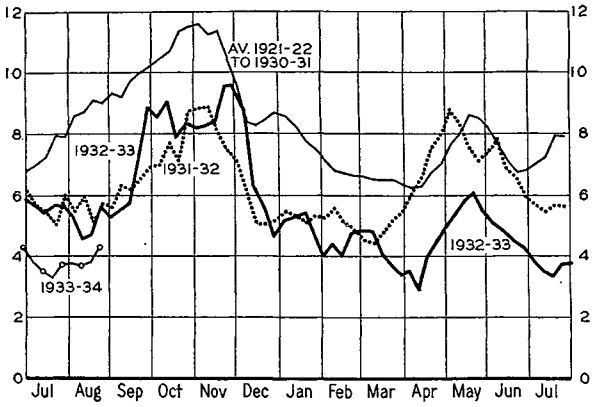


* Data from Broomhall's *Corn Trade News.*

(gold) above Liverpool futures, and United States net exports were extremely small. Indeed, the United States was a net importer of

CHART 3.—NORTH AMERICAN SHIPMENTS, 1932–33, WITH COMPARISONS*

(Million bushels; 3-week moving average)



* Data from Broomhall's *Corn Trade News.*

wheat grain during this period; but net exports of flour more than offset small net imports of grain (Table III). Depleted wheat

supplies kept Russia and the Danubian countries from exporting more than a trickle of wheat; and India supplemented her moderate supplies with small net imports in these months. Argentine and Australian net exports, 58 and 39 million bushels, respectively, were approximately equal to our April forecasts.[1] Net exports from Canada, however, fell short of our forecast by almost 30 million bushels, because of a smaller import demand than we had anticipated and because Canadian wheat prices were raised above export parity as a result of market developments in June–July. April–July exports from Argentina and Canada were larger this year than last; but Australia shipped less wheat, and apparently had larger stocks on August 1, 1933, than in any other recent year.

Restricted European imports, rather than ex-European, were responsible for the low volume of international trade in both April–July and August–July (Table VI). In both of these periods, shipments to Europe were unprecedentedly small as compared with other post-war years, reflecting the record post-war wheat harvest in Continental European importing countries in 1932, a favorable outlook for the crop of 1933, and the most stringent governmental restrictions ever imposed upon wheat importation and milling (p. 357). For the first time in post-war years, the British Isles took more wheat than all the countries of Continental Europe together.

Only the British Isles, Switzerland, and Czecho-Slovakia maintained their imports at or above a normal level in April–July, though the takings of Belgium and some of the smaller importers were only slightly lower than usual. The most striking reductions, as compared with April–July imports in other years, came in Germany and Italy.

Crop-year net imports into Germany and Italy were the lowest in the post-war period, Germany even ranking as a net exporter on balance till May. French imports were considerably below average, but not so low as in 1921–22, 1925–26, or 1929–30. In view of the bumper French wheat crop of 1932 (a crop officially reported to be of about the same size as the crops of 1921, 1925, and 1929), and in view of the severe milling restrictions supposedly in force there, French net imports of 30 million bushels in 1932–33 were surprisingly large. Probably a part of these imports (those reported for August–September 1932) was actually taken near the end of the preceding crop year.

Austria, Czecho-Slovakia, the Baltic states, and perhaps Portugal and Greece imported (net) less wheat in 1932–33 than in any year since 1922–23; and the Netherlands had the smallest imports since 1925–26. These countries all harvested large or moderately large crops in 1932; and in several, economic depression and exchange restrictions also tended to keep imports low. Belgian and Scandinavian net imports were somewhat below average, but not strikingly so. Despite a small wheat crop, Poland ranked as a small net exporter of wheat.

Only the British Isles, Switzerland, and Spain had net imports of average size or larger in 1932–33. Spain falls within this group because reported imports for August–September 1932 (which probably represented wheat actually imported late in 1931–32) were notably large.

Although the crop-year net imports of most European countries were strikingly small, few countries appear to have been forced to reduce wheat consumption on account of low aggregate supplies (including domestic production, net imports, and approximate carryover from 1931–32). In Spain, Portugal, France, Sweden, and perhaps Greece available supplies were of record size, while in a large group of countries (the British Isles, Switzerland, Netherlands, and the Baltic states) they were distinctly large. Belgium had about average supplies. Germany appears to have had somewhat more wheat available than in either of the two preceding years; but neither Germany nor Italy had large enough supplies to raise per capita consumption to the 1926–30 level. In fact, recent official stocks estimates for Germany suggest there may have been some further reduction in consumption from 1931–32. In other central European countries, too, wheat utilization was low in 1932–33.

[1] See WHEAT STUDIES, May 1933, IX, 294.

Ex-European takings, though of moderate size in both April–July and August–July 1932–33, were lower than in 1931–32 (Table VI) and lower than forecast early in the year. Chinese buyers, however, were apparently stimulated by low wheat prices and abundant Australian supplies to import more wheat in 1932–33 than ever before; and Peru and Chile, where the 1932 crops were small, also took more foreign wheat than usual. Brazilian takings were of moderate size; but the imports of practically all other ex-European countries were strikingly small. In the group of countries designated by Broomhall as "Central America" (including the Dutch East Indies, the West Indies, and Venezuela) low purchasing power probably played an important part in keeping imports below the level of any of the preceding seven years for which data are available. In Egypt and South Africa large wheat supplies, and in Japan large supplies of rice and a depreciating currency, were restricting influences.

Thus far (September 12) in 1933–34, world shipments of wheat and flour have been notably small, but not so small as in the first six weeks of 1932–33. North American shipments have been even smaller in the early weeks this year than last, and the smallest in over a decade. Argentina and Australia, on the other hand, have maintained shipments at a relatively high level—a level which appears surprisingly high for Argentina in view of estimates of only moderate-sized stocks in that country. The movement of Russian wheat, which as usual has been closely watched by traders, has been fairly light, considerably smaller than the early movement in 1930–31 and 1931–32, and even somewhat below that of last year.

Visible Supplies and End-Year Stocks

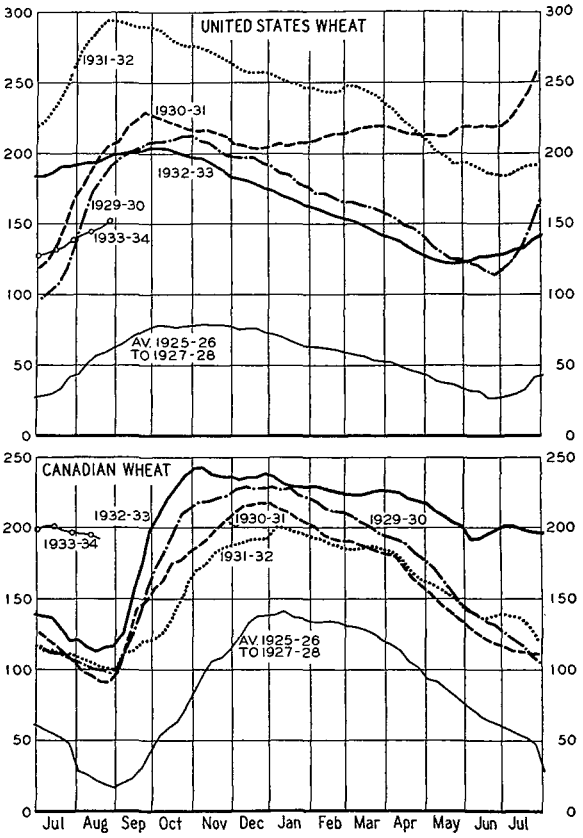
"World" *visible supplies* (Table VIII) declined somewhat less between April 1 and August 1, 1933, than in any of the preceding five years. The total on August 1, 423 million bushels, was accordingly the second largest on record and only 20 million below the peak of August 1931.

Dominant factors in the small April–July seasonal reduction of the world visible this year were a heavy movement of old-crop North American wheat from farm to market, and a relatively light movement of Canadian and United States wheat to export.

The United States visible (Chart 4, upper tier) declined in April at about the same rate as in earlier months. In May the rate of decline was checked as farmers marketed much more freely at the higher range of prices. June witnessed the unusual phenomenon of rising rather than declining visibles. This occurred in the face of exceptionally heavy accumulation of wheat by mills. Primary receipts (Table II) were larger than in any of the preceding six years except 1931, despite the extremely short new crop of winter wheat. In July, however, the effects of the short crop were apparent in the visible, which rose only moderately. In August the

Chart 4.—North American Visible Supplies, 1932–33, with Comparisons*

(Million bushels)



* Recent data for the series in Table VIII.

flow of wheat out of the visible—to mills and to export—was slow. But since farm marketings fell to the lowest level in several years as a result of both the short crop and the fall in prices, the inflow was also small and the visible rose by somewhat less than the average amount.

The decline of the Canadian visible in April–July 1933 was only 30 million bushels, as compared with an average decline of 75 million in 1928–32. The movement to export was moderately below average, and hence tended to maintain the level of visibles. More striking, however, were exceptionally heavy farm marketings, about 51 million bushels in April–July as compared with an average of 28 million in 1928–32. In Canada as in the United States, the advance in prices stimulated sales by farmers, especially in June and July. During August, the Canadian visible declined about as usual; farm stocks had been reduced to a level not greatly above normal early in the month, new-crop wheat did not move in substantial volume, and exports were about of average size.

Stocks of Canadian wheat in the United States and of United States wheat in Canada (included in the data summarized in Chart 4) were about of the usual size when the year closed. In June it was announced[1] that British regulations had finally prescribed documentation which would permit Canadian wheat, at least to some extent, to be shipped through the United States without payment of the British preferential duty. This development possibly, though not demonstrably, accounts for a change in the level of Canadian stocks stored in the United States, which were exceptionally small on April 1, but on August 1 were somewhat larger than in the two preceding years.

Among the remaining components of the world visible supply (Table VIII), stocks afloat to Europe were unusually small in May–July, reflecting mainly the small volume of international trade. The low level persisted through August. Stocks in British ports, on the other hand, rose to a relatively high level in May–July, though never so disturbingly high as in parts of 1930–31 and 1931–32. These stocks were about of the usual size in August. Visible supplies in Australia, which had been notably high on April 1, were reduced substantially, but on August 1 stood somewhat higher than in any recent year except 1930. The fact that April–July net exports fell appreciably below the reduction in the visible suggests that Australian farmers, with new-crop seeding conditions unfavorable, tended to market sparingly. Argentine visibles were relatively high on August 1; but these data, covering only the stocks at ports, are not a reliable index of the general stocks position.

A more comprehensive view of the *world stocks position about as of August 1, 1933,* is afforded by the tabulation below. This shows, in million bushels, our May forecast of 1933 stocks, and statistics and estimates now available on both 1933 and 1932 stocks.

	1932	1933	
		May forecast	September appraisal
United States grain			
In U.S. (revised data)	382	379	386
In U.S. (*unrevised data*)	*363*	*360*	...
In Canada	16	5	4
Canadian grain			
In Canada	132	160	212
In United States	5	3	7
Argentina	65	75	75
Australia (revised)	49	59	65
Australia (*unrevised*)	*40*	*50*	...
Danube basin	51	23	23
Importing Europe	195	235	255
Afloat to Europe	31	38	32
India	52	31	30
Northern Africa	8	8	8
Japan and afloat to ex-Europe	19	19	16
Total (revised)	1,005	1,035	1,113
Total (*unrevised*)	*976*	*1,007*	...

Last May, it seemed probable that world stocks might increase by about 30 million bushels in the course of the crop year 1932–33. Data now available point to a much larger increase, around 110 million. The estimated total of 1,113 million bushels for August 1, 1933, is the largest on record. Among similar estimates covering the period 1922–32, the

[1] See *Northwestern Miller,* June 28, 1933, p. 695.

highest is 1,033 million bushels in 1931. The average for 1922–27, before stocks began to pile up, is about 630 million bushels.[1]

The generally slow movement of wheat to export in April–July is the main reason why present appraisals of end-year stocks in Australia, afloat to Europe, and afloat to ex-Europe disagree with May forecasts. The unexpectedly large Canadian carryover, however, though in part due to the fact that net exports during April–July were only 68 million bushels instead of the 94 million we forecast in May, appears to call in question the official estimate of stocks on April 1, upon which we had relied. It is difficult to believe that Canadian stocks, as the official statistics suggest, could have been reduced only 101 million bushels between April 1 and August 1 if net exports and domestic seed and milling requirements for the period were 113 million. Apparently, both the crop of 1932 (see below, p. 368), and farm stocks on April 1, 1933, were significantly underestimated.

Among the European importing countries, end-year stocks now seem larger than our May calculations suggested in Spain, Germany, France, the British Isles, Scandinavia, and Portugal; and only for Greece and a group including Belgium, Holland, and Switzerland has accumulated information pointed toward reduction of estimates. Increases in 1932 crop estimates (Spain, Greece, and France), and direct official or unofficial appraisals of certain elements in stocks (Germany and the British Isles), constitute the principal evidence to support the increase of 20 million bushels in our estimate for the European importing countries as a group. The fact that April–July European net imports fell about 10 million bushels below our May forecast would, except for this evidence and the inference that 1932–33 consumption fell below our earlier assumption, point toward decrease rather than increase in our appraisal of stocks.

This increase brings the total to 255 million bushels, the highest figure in a decade except for 1929. It implies an increase of roughly 60 million bushels in the course of the crop year 1932–33, in contrast with successive reductions during each of the three preceding crop years. Stocks on August 1, 1933, were undoubtedly concentrated very heavily in Spain and France, where bumper crops were harvested in 1932. In many countries—Italy, Poland, Belgium, Greece, Austria, Czecho-Slovakia, Denmark, Norway, and the Baltic states—the level of stocks was low, probably close to a minimum. In some other countries only moderate stocks seem to have been carried over—the British Isles, Holland, Switzerland, and perhaps Sweden and Portugal. Germany, however, held rather heavy stocks, exceeded only by those of 1929. Appraisal of the European stocks position is always insecurely buttressed; and at this time some trade comments point toward end-year stocks rather heavier than our calculations suggest in the British Isles, France, and Italy. The situation in France at least may later become clear, if official stocks estimates (see p. 356) are made public.

August 1 stocks of old-crop wheat in the Danube basin, India, northern Africa, and Japan were presumably close to a minimum level. The quantity afloat to Europe was the smallest in a decade except for 1932; and stocks afloat to ex-Europe were only of average size. We appraise Argentine stocks at 75 million bushels, a figure about in line with a direct estimate as of May 30,[2] and about midway between two calculations of total stocks, one based upon current official estimates of exportable surplus and the other upon Broomhall's current estimates of exportable surplus. At 75 million bushels, Argentine stocks were only of moderate size, though 10 million larger than in 1932. A substantial fraction of the total is probably of rather poor quality.

End-year stocks in Australia and North America were of record size. Australian

[1] In these comparisons we employ revised figures for Australia and the United States. Australian stocks on August 1 can now be appraised by reference to official estimates of total stocks on November 30; the effect is to raise the August 1 level by 9 to 14 million bushels in different years. For the United States, revised estimates of July 1 farm stocks, 1926–32, have recently appeared (*Crops and Markets*, July 1933, p. 236); except for 1928, the revised figures exceed the unrevised; and for 1932 the revised figure exceeds the unrevised by 18 million bushels, or over 25 per cent.

[2] *Times of Argentina*, June 26, 1933, p. 28.

stocks of about 65 million bushels, though 25–35 million bushels above the usual level, were only moderately in excess of stocks on August 1, 1931. The heavy stocks of 1933 reflect both the record size of the 1932 crop and some tendency for farmers to restrain marketings.

The *Canadian carryover* of 212 million bushels (not including 6.7 million in the United States) was by far the largest on record, 78 million larger than the previous high carryover of 1931. The official estimate, which appeared on August 11, was a bearish influence on futures markets. As late as July 20, official calculations had indicated as of June 30 a surplus of only 211 million bushels to cover both July exports and carryover at the end of July;[1] and exports in July were 19 million bushels, leaving only 192 million. Taken in relation to other items of Canadian supply and disappearance (Table XII), the estimated carryover confirms and goes beyond the tentative official view that the 1932 crop was underestimated by 20 to 25 million bushels. Stocks were of record size in country mills and elevators, and in terminal elevators (Table IX); stocks in transit and in flour mills were not exceptionally heavy; and farm stocks, though nearly triple the 1926–30 average, were smaller than in 1930.[2] The total Canadian carryover reached so high a level partly because Canada had ample supplies in 1932–33 but only limited outlets in international trade; partly because Canadian wheat prices rose strikingly in relation to Argentine and Australian wheats on European import markets in June–July; and partly because, more or less throughout the crop year, the large government-sponsored holdings of Winnipeg futures tended to keep Canadian wheat from competing as actively as it might have done on the import markets.

The *United States carryover* as of July 1, 386 million bushels (not including wheat stored in Canada, which was reduced to about a normal level in the course of the year), was also of record size. It was, however, only a few million bushels larger than the revised figure for 1932.[3] Of the several components of the total (Table IX), all were very high in contrast with the position prior to 1930. But in comparison with the preceding three years, 1930–32, only stocks in city mills and in country mills and elevators were of record size. Country mill and elevator stocks were only slightly larger than in 1930.

City mill stocks of 121 million bushels, however, were fully 40 million above their previous peak in 1932. Millers were induced to accumulate huge wheat stocks not only because of the poor outlook for the 1933 crop, but also because of rising wheat prices, favorable carrying charges between near and distant futures, and a heavy accumulation of flour orders placed partly in anticipation of imposition of the new processing tax. Consumers of flour, faced both with a rising wheat market and with the prospect of further enhancement of flour prices through the tax, tended to stock up heavily before the tax became effective on mill and wholesale stocks July 9, and on retail stocks August 9. The effect upon flour production is apparent in the fact that the quantity of flour milled and retained in the United States (Table III) in each of the three months April–June was as large as or larger than in any corresponding months of the preceding six years, though the figure for July–March 1932–33 stood relatively low. Net mill grindings in April–June 1933, at 27.5 million barrels, were nearly 15 per cent above those of 1932, and over 7 per cent above the high figure of 1929.

By geographical regions, the United States stocks on July 1, 1933, were probably relatively most burdensome in the Pacific Northwest. Witness the following tabulation of stocks, in million bushels, for Washington, Oregon, and Idaho:

[1] See *Monthly Review of the Wheat Situation*, July 1933, p. 17.

[2] From the statistics of April 1 and August 1 stocks on farms, it is to be inferred that farm marketings were not particularly heavy in April–July 1933. From statistics of receipts at country elevators and platform loadings in the Prairie Provinces, it appears that April–July farm marketings were much the largest in six years. Tentatively we interpret this discrepancy as pointing toward official underestimation of April 1 farm stocks.

[3] It is quite certain, though to an indeterminate extent, that the wheat adapted to American milling standards is below the statistical figure.

July 1	On farms	Country warehouses	Terminals	City mills	Total
1927.....	1.5	1.9	2.0	2.2	7.6
1928.....	2.4	3.9	1.7	2.7	10.7
1929.....	3.3	9.8	1.6	3.1	17.8
1930.....	4.9	18.0	2.8	2.6	28.1
1931.....	4.2	11.4	9.7	1.6	26.8
1932.....	4.2	9.3	1.8	2.1	17.4
1933.....	6.7	25.4	3.8	5.9	41.8

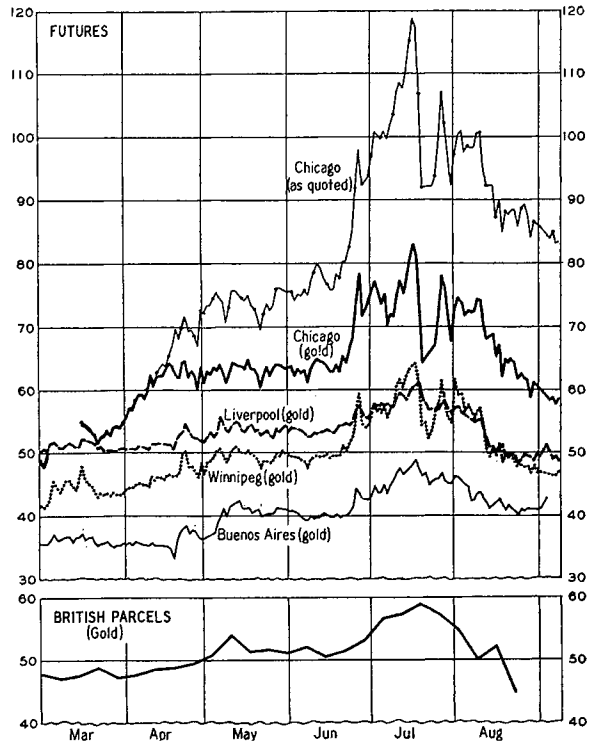
In this normally exporting area, from which at least 34 million bushels of wheat had been shipped to foreign countries in each of the six years prior to 1932–33, only 9 million bushels were shipped last year. The stocks on July 1 reached the unprecedented total of 42 million bushels, nearly 50 per cent above the earlier peak in 1930. Moreover, although the region's wheat crop is less than 85 per cent of the 1926 – 30 average, it is nevertheless large enough to bring total available supplies to a high level. The relatively serious surplus condition in this region goes far to explain why governmental adoption of a regional plan for export subsidy is seriously under consideration (p. 355).

THE COURSE OF PRICES

Crop news, speculation as to the probability of general price inflation and of improvement in business in the United States (to a less extent in Canada), and developments at the World Economic Conference and the international wheat conference were dominant factors in wheat futures markets during April–August. After a moderate upturn in wheat futures prices (gold) from late March to early May (Chart 5), there was little change until the end of June. North American (and particularly Chicago) futures then began to advance spectacularly in an orgy of speculation. Foreign markets only partially reflected the tremendous increase in North American wheat prices; and Chicago and Winnipeg futures broke sharply in mid-July. After three weeks of wide price fluctuations in North America, futures both here and abroad declined steadily to the end of August. On September 1 wheat futures at Chicago sold about 4 *gold* cents higher than at the beginning of April, and Buenos Aires and Winnipeg futures sold respectively 6 and 3 *gold* cents higher. At Liverpool, on the other hand, futures prices on September 1 were slightly lower in terms of gold than on April 1. The general course of wheat futures prices at Chicago was strikingly parallel to the course

CHART 5.—WHEAT FUTURES AND BRITISH PARCELS PRICES IN GOLD AND CHICAGO FUTURE AS QUOTED, MARCH–AUGUST 1933*

(United States cents per bushel)



* Daily closing prices of wheat futures (converted to gold) mainly from *Daily Trade Bulletin*, Chicago; *Grain Trade News*, Winnipeg; and *London Grain, Seed and Oil Reporter*. September future at Chicago; October future at Liverpool and Winnipeg; and May, June, August, September futures successively at Buenos Aires. Weekly British parcels prices from Table X, converted to gold.

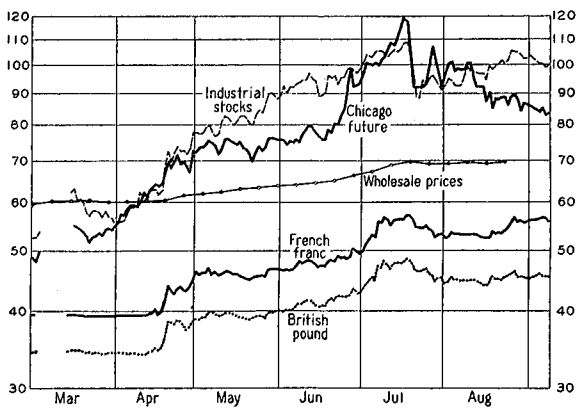
of French and other gold exchanges at New York (Chart 6, p. 370), though the spectacular advances of Chicago futures in April and again in June–July preceded and exceeded increases in value of foreign gold currencies on our markets.

The speculative rise in Chicago wheat prices during the first three weeks of April—an advance based upon a bad outlook for United States winter wheat and political developments and rumors which seemed to

point toward inflation of commodity (particularly agricultural) prices in this country —was only slightly reflected at Winnipeg, and not at all in Liverpool or Buenos Aires. But after the United States formally abandoned the gold standard on April 19, foreign

CHART 6.—PRICES OF CHICAGO WHEAT FUTURE, NEW YORK STOCKS, FRENCH AND ENGLISH EXCHANGE; AND UNITED STATES ALL-COMMODITY PRICE INDEX, MARCH–AUGUST 1933*

(United States cents per bushel and per 10 francs; United States dollars per share and per 10 pounds; percentage of commodity prices in 1926)



* Daily closing price of September wheat future at Chicago; Dow-Jones index of closing prices of thirty industrial stocks at New York; noon cable rates for French and English exchange at New York; and U.S. Bureau of Labor weekly index of wholesale commodity prices.

markets showed increased firmness. Grain exporters in Canada, anticipating higher Canadian as well as United States wheat prices, raised c.i.f. offers to importers; and Argentine and Australian exporters followed suit. Passage of the inflation amendment to the farm relief bill by the United States Senate (April 28) and by the House (May 3), and subsequent enactment of the entire bill (May 12), strengthened the conviction both here and abroad that the administration would, sooner or later, resort to currency and/or credit inflation to raise commodity prices. Meanwhile, many students of the world wheat situation were anticipating improvement in the world statistical position as a result of the short United States winter-wheat crop, and of the possibility of reduced sowings, at least in the United States, in 1933–34.[1] At Chicago, wheat futures continued to rise in terms of depreciated United States dollars during the last week of April and the first week of May, but only enough to offset the effect of further depreciation of the dollar in foreign exchange (Charts 5 and 6). Thus the *gold* price of the September wheat future at Chicago showed no upward trend during this period, and the spread between Chicago and the other futures markets narrowed slightly in terms of gold (Chart 7, p. 374, top tier).

After the first week of May, *gold* prices of wheat futures in the leading markets did not change their level until late in June, when sensational reports of damage from drought and heat in the North American spring-wheat belt led to sharp price upturns in North American markets and to more moderate advances at Liverpool and Buenos Aires. The speculative propensities of the American public were inflamed not only by reports of damage to wheat and other grains, but also by interpretations of the implications of President Roosevelt's refusal (July 1) to join other countries in stabilizing international exchanges, on the ground that stabilization might interfere with a domestic depression-combating policy. Trading became very heavy on both stock and grain markets.

Early reports suggested that the new winter crop of the United States was of light weight; and there were also claims that the wheat carryover was composed largely of wheat of inferior milling quality. Both of these reports now appear to have been false or much exaggerated; but they undoubtedly had an effect upon speculative sentiment. Announcement (June 28) of impending imposition of a wheat processing tax was widely interpreted as assuring earnest governmental effort to reduce wheat acreage; and it stimulated flour purchases by consumers and retailers (and hence mill demand for wheat) prior to July 9. From time to time during the bull wheat market, the press carried news items suggesting (prematurely) that the major exporting countries had concluded an agreement to reduce wheat acreage during the next two or three years, or until the surplus should be exhausted; and these reports, timed

[1] See *Corn Trade News*, April 26, May 3; and *Times of Argentina*, April 24, May 1.

as they were, further encouraged speculative buying. Rising securities prices (Chart 6) contributed to bullish sentiment through July 8; but with the exception of certain issues, mainly alcohol stocks, there was little advance in stocks prices after that date, though grain prices continued to rise to July 17.

Between June 17 and July 17, the September future at Chicago rose fully 43 cents in depreciated United States currency and 20 cents in gold. This rise, in terms of United States currency, was the largest recorded in any one month on the Chicago Board of Trade during the past half-century, except in connection with corners. It was remarkable also for the absence of real set-back during its course. Inflation prospects attracted to the wheat market much buying by individuals not accustomed to trading in wheat. They also introduced an element of uncertainty tending to restrain short selling by experienced traders who recognized that the commodity situation by itself justified no such extreme price advance but who found peculiar difficulty in appraising the significance of the inflation element.

Winnipeg futures prices, less influenced by inflation talk, and more influenced by the failure of importing markets to follow the price advance in North America, increased less than Chicago prices. But here, as in Chicago, the May wheat future rose to over a dollar in domestic currency, for the first time since the summer of 1930. We suspect that the advance at Winnipeg would have been greater had not some of the government-sponsored holdings of wheat been sold on the rise; but the official silence about transactions in futures precludes even the assertion that such sales were made.

Liverpool and Buenos Aires responded only partially to the price advance in North American markets June 17–July 17. In terms of gold, the October future at Liverpool rose only 7 cents, and August–September futures at Buenos Aires only 9 cents, as compared with increases of 14 and 20 cents at Winnipeg and Chicago, respectively. Traders at Liverpool and Buenos Aires apparently hesitated to bid up prices on crop damage reports from North America when current European demands for foreign wheat could so easily be supplied by exporting countries, when the outlook for the new European crops was so promising, when the world wheat carryover as of August 1, 1933, was expected to be of record size, and when representatives of the major exporting countries at the wheat conference had not been able to reach agreement upon acreage reduction.

The speculative rise in North American markets came to an abrupt end July 18. During the next two days all grain prices broke sharply. The September wheat future at Chicago dropped back almost 26 cents (the largest two-day decline in any Chicago wheat future price since May 1917); and the Winnipeg October future broke about 16 cents in terms of depreciated United States currency. There was no appreciable improvement in crop conditions in either Canada or the United States to account for the crash; nor were political developments notably unfavorable. The character of the advance and of the buying behind it had made severe reaction inevitable. A background had been laid by offers of Argentine wheat at New York close to import parity; by widening of Chicago–Liverpool, Chicago–Winnipeg, and domestic cash–futures spreads; and by the fact that even a short 1933 wheat crop would leave a substantial surplus for export. The first day of reaction in the wheat market was coincident with a sharp decline in stocks prices at New York.

As prices began to fall, speculators rushed to take profits; stop-loss orders were encountered; and calls for more margin were met with additional orders to sell. The volume of trading in wheat futures at Chicago on July 20 was of record size, 163.1 million bushels as compared with the previous record volume of 156.2 million bushels on October 24, 1929. Despite the heavy trading of July 19 and 20, some speculators (one in particular) were left with large long lines still unliquidated.

Under orders of the Boards of Trade, all futures markets in the United States remained closed July 21 and 22 to allow the various houses opportunity to complete the clerical work incidental to the previous heavy trading and to give the trading public time

to recover from obsession. Winnipeg futures prices continued to decline while United States markets were closed. This additional decline, however, amounted to only 5 cents in United States currency; it was checked, according to trade reports, by stabilizing purchases sponsored by the Canadian government, and by improved export business.

Liverpool and Buenos Aires prices, which had responded only mildly to the big advance in North America, showed but little reaction as prices broke at Chicago and Winnipeg.

On Monday, July 24, futures trading was resumed in the United States, with limits upon daily price changes and with definite minimum prices for all grain futures. These and subsequent restrictive regulations were apparently approved by, and made in response to pressure from, the United States Department of Agriculture. Price fluctuations for wheat and rye futures were limited to 8 cents above or below the average closing price on the preceding business day; and in no case was any grain future to be sold below the average closing price of July 20. Under these provisions, and with continued bad reports of crop damage from Canada, wheat futures prices rose sharply for four days, while the open interest in Chicago wheat futures was reduced by 24.2 million bushels, or to the level of July 7.

Probably of some importance in this temporary recovery was the announcement on July 25 by Vice-President Boylan of the Chicago Board of Trade that "the distressed lines of grain which recently caused uneasiness have been liquidated"; that "in all grains conditions are now sound and it may be definitely stated that the emergency has been corrected"; and finally that "the directors are unanimously of the opinion that there is no thought of any change affecting present minimum prices under existing conditions." In view of subsequent developments, this was an amazing statement.

On July 28, minimum prices on grain futures were everywhere removed; and the limit on daily price changes for wheat and rye was reduced from 8 cents to 5. For three days thereafter, wheat futures declined by the maximum amount allowed—15 cents in three days. The drop reflected mainly a weak technical position rather than response to bearish news. It induced the directors of the Chicago Board of Trade to re-establish on August 1 definite minimum prices for all grain futures and provisions. These minimum prices, effective until August 15, corresponded to the closing market prices of July 31. With price declines again limited, and with the publication of bullish private crop estimates on August 1, there was an immediate reversal of price tendency in North American markets. Chicago futures advanced 5 cents (United States currency) on August 1, the maximum advance permitted; while Winnipeg futures rose 8 cents under the influence of developments at Chicago, an enlarged export demand for Canadian wheat, and reports of frost in the West.

In all wheat futures markets, prices (gold declined irregularly during August. There was a sharp break August 11–14 in response to official North American crop reports which were less pessimistic than expected, bearish official estimates of Canadian and United States carryovers, and cheap offers of French and German wheat on British markets. On August 12 Chicago futures closed at the fixed minimum prices. The minimum price regulations were removed August 15, as originally planned; but daily price fluctuations were still limited to 5 cents above or below closing prices of the preceding business day, and clearing-house margin requirements for wheat were raised to 5 cents per bushel.[1] On the day when fixed minimum price limits were removed at Chicago, similar limits (based on closing prices August 14) were established at Winnipeg because of "the abnormal conditions surrounding other grain markets and the effect these conditions might have on this market to the detriment of the producer."

Thereafter, until the end of the month, *gold* prices fell in all leading futures markets. Depreciation of the Canadian dollar against gold currencies resulted in a reduction of the minimum prices expressed in gold. English and United States exchange also depreciated somewhat during this period, probably with

[1] On August 26 these requirements were lowered to 4 cents.

a minor depressing effect upon Liverpool and Chicago gold prices. But the principal causes of weakness in world wheat markets at this time were (1) that immediate supplies of wheat appeared large in relation to the demand, (2) that Continental countries (particularly France and Germany) pressed wheat for sale on British markets, and (3) that discouraged longs gradually liquidated their holdings of Chicago futures. No strikingly bullish factors appeared to bolster up the markets, though firming influences were found in reports of drought in Argentina, rising securities prices in the United States, the announced agreement at the international wheat conference, and Secretary Wallace's decision to call for acreage reduction of 15 per cent.

The Chicago price movement from the middle of June, though deriving much of its impetus from a crop scare, differed essentially from the usual crop-scare cycle. It resembled more closely what we have elsewhere called the "winter cycle." The typical examples of this type of price movement culminated in January or February 1904, 1916, and 1925. While the name is drawn from the timing of the cycles, the peculiar character of the movements, and particularly of the decline from the peak, in these cases rested on the unusual amount of buying by individuals unaccustomed to trading in wheat and lacking any good basis for price judgment.[1] In the autumn of 1931 a movement of similar character developed, the large uninformed participation arising not, as in previous cases, largely from the character of the early price advance, but from the fact that the wheat developments were widely publicized and the price rise popularly regarded as one of the first evidences of a general business revival.[2] In June and July 1933 the widespread desire to find media for profiting from anticipated general price inflation gave the chief incentive to extensive buying of wheat by individuals without the basis for a sound price judgment.

Most extreme wheat-price increases are accompanied by participation in the market of many buyers who are not regular wheat traders; and are followed by severe reaction. In the typical crop-scare price cycle, however, the buyers drawn in are largely people who, though not regular wheat traders, are more or less familiar with the wheat situation and form price opinions which they do not quickly abandon on the first price recession. In consequence, reaction from such price peaks tends to be retarded, and to depend in measurable degree upon the emergence of evidence that earlier judgments were ill founded. But when prices have been carried to their final peak largely by participation of buyers lacking clear judgments of the wheat situation, the market becomes peculiarly vulnerable and subject to quick and severe collapse. Such buyers have little disposition to hold against a price decline and probably operate to an unusual degree on margins too narrow to permit holding even when they are so disposed.

The extreme price fluctuations of June–August in Chicago have emphatically raised again the problem of regulation of the grain exchanges. Demonstration has been given of lack of disposition in the Chicago Board of Trade to apply controls of speculative activity in the grain futures markets such as would justify withholding of additional governmental regulation. The position of the Grain Futures Administration in advocacy of limitation of size of individual holdings and other regulatory measures has been greatly strengthened. Recognition by the trade of the need for corrective measures has appeared in provisions of the code submitted to the Agricultural Adjustment Administration, which call for a schedule of margin requirements increasing with the amount of the individual's net open interest, for limitation of daily price changes, and for abolition of trading in indemnities good for more than one day.

Price Spreads

The relationships between futures prices (gold) in the leading markets during April–August, incidentally discussed above, are shown graphically in Chart 7 (top tier).

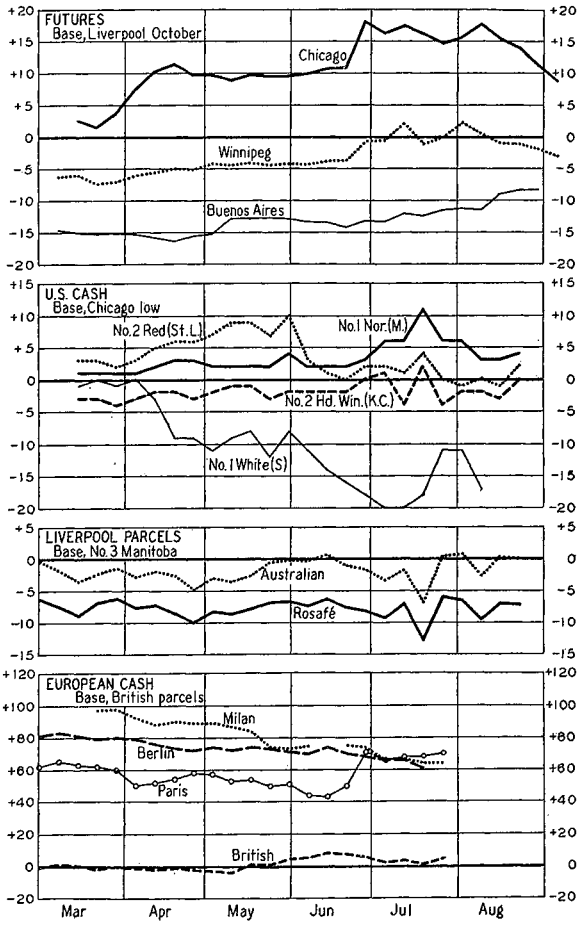
[1] "Cycles in Wheat Prices," WHEAT STUDIES, November 1931, VIII, 23–24.

[2] WHEAT STUDIES, January 1932, VIII, 214–15.

Wheat prices at Chicago, Winnipeg, and Buenos Aires all advanced relative to Liverpool prices during this period; Chicago futures were maintained 10 to 15 cents above corresponding futures at Liverpool. The relative increase of Buenos Aires prices was largely seasonal, though the sharp upturn in August is attributable mainly to continued drought in Argentina. That North American prices should have risen relative to prices at Liverpool in June and early July, when crop-damage reports and inflationary news stimulated North American markets, is not surprising; but that the spreads then ruling should have been maintained from mid-July nearly to the end of August while North American prices were dropping back to the May level is noteworthy. Liverpool futures were extremely weak in August on the prospect of a bumper European wheat crop, on cheap offers from France, Germany, and Russia, and on reports of a record wheat carryover in North America. For some days futures at Liverpool sold below import parity with futures in the other *three* markets, a most unusual behavior.

CHART 7.—SIGNIFICANT PRICE SPREADS, WEEKLY, MARCH–AUGUST 1933*

(Gold cents per bushel for futures, parcels, and European prices; quoted cents per bushel for United States cash wheats)



* Futures price spreads are weekly average spreads of prices described in footnote to Chart 5. Prices of United States cash wheat (except No. 1 White, quotations for which are from the same official source), Liverpool parcels, and British parcels from Table X. Continental European domestic prices (at Milan, Berlin, Paris) from *World Wheat Prospects;* British domestic prices from *The Economist* (London).

During the last week of August and the first week of September, Chicago and Winnipeg weakened relative to Liverpool. Liverpool responded more strongly to bullish Argentine crop news, and in addition reflected diminution of French and German offers.

More distant futures at Chicago and Winnipeg were maintained at approximately a full carrying charge over nearer futures in those markets. At Chicago, the July–September spread, which approximated only one cent in April and early May, later widened, as we had anticipated,[1] to almost 3 cents in late June. Spreads between near and distant futures at Liverpool were also large during the period under review, presumably reflecting existing and prospective abundance of cash wheat supplies in that market.

In the United States, cash wheat prices declined relative to futures during the latter part of May and early June, under the influence of a relatively heavy movement of wheat to primary markets (Table II). During the early part of the major price advance in late June and the first week of July, cash differentials firmed, with mills buying actively; but as futures were rapidly pushed above a dollar, buyers of cash wheat were less anxious to absorb the increased marketings. The result was that cash prices broke relative to futures prices; and for over a week even high-grade protein wheats sold at appreciable discounts under the September future, despite general anticipation of a short crop and some

[1] See WHEAT STUDIES, IX, May 1933, 298.

concern (later proved to be without basis) over the quality of the new wheat. During August, cash prices advanced rapidly relative to the basic future, in consequence of curtailment of farm marketings under declining prices.

Spreads between cash wheats in various United States markets widened considerably during April–July as the price of No. 1 White wheat at Seattle fell to a big discount under basic cash wheats in other markets (Chart 7, second tier). The relative weakness of Seattle prices, associated with burdensome supplies and improvement in crop outlook in the Pacific Northwest, and with increased farm marketings as prices rose to mid-July, resulted in sizable shipments of wheat from that region to eastern domestic ports, but not to foreign countries. Later in July, as prices of Chicago futures and of cash wheats in eastern markets broke sharply, wheat prices in the Pacific Northwest remained fairly firm, reflecting the relatively sounder position of Seattle prices at the peak. Early in August, however, the spread widened again.

The premium on No. 2 Red wheat at St. Louis increased markedly during April–May under the influence of a fairly good mill demand for the limited offerings; but broke sharply in June as millers bought sparingly, preferring to wait for the movement of the new crop. At Minneapolis, durum wheat increased somewhat more in price than did other spring wheats because of the extremely poor outlook for the new durum crop.

On the British import market, parcels of Rosafé wheat (duty-unpaid) continued to sell considerably below No. 3 Manitoba and Australian (Chart 7, third tier). During most of the period Australian was at a small discount under No. 3 Manitoba, but the position was reversed in mid-June and again in late July. The most striking change in spreads came from mid-June to the end of July. As Winnipeg futures rose rapidly to July 18, Canadian exporters raised prices of their offers more than did exporters in Argentina and Australia. This resulted in a substantial widening of spreads on the British market. But with the subsequent break in Winnipeg and Chicago futures, the competitive position of Canadian wheats improved, and price spreads narrowed.

Domestic wheat prices declined significantly in Italy and slightly in Germany during April–August, largely under the influence of favorable domestic crop developments and (in Germany) of good-sized stocks of old-crop wheat (Table XI, and Chart 7, bottom tier). After advancing in April, French wheat prices dropped markedly to mid-June under pressure of immediate and prospective large supplies, then rose sharply (about 30 cents) during the last two weeks of June on anticipation of enactment of the law providing for fixed minimum wheat prices higher than those prevailing. This law, dated July 10, became effective five days later (p. 355); since that time wheat prices at Paris have been maintained at approximately the fixed minimum level. British domestic wheat prices reflected strength in April–July, their increase in relation to parcels prices being largely seasonal in nature.

Summary of 1933 Supplies

The present outlook is for a *notably short world wheat crop* in 1933 (Table I). Preliminary estimates indicate that the Northern Hemisphere crop, excluding Russia, China, and southwestern Asia, is the smallest since 1924; and reports of the Southern Hemisphere crop, now in the early stages of growth, are far from promising (p. 361). Reduced acreage and notably low yields per acre in several of the large producing countries have apparently combined this year partially to correct the world wheat surplus condition which has existed since 1928.

No less striking than the size of the world crop is its unusual distribution. On the one hand, European importing countries have harvested a crop now estimated at only about 40 million bushels smaller than last year's record outturn, and perhaps equal to it in flour outturn. On the other hand, the wheat-exporting countries of the world (excluding Russia) will probably have the smallest aggregate crop in post-war years, a crop of about the same magnitude as these countries harvested on the average in 1909–13, and

about 360 million bushels smaller than last year's crop. The prospective reduction in the aggregate outturn of the four chief exporters (Canada, United States, Argentina, and Australia) is even greater, about 465 million bushels; for the exporting countries of the Danube basin harvested a considerably larger crop this year than last. If the United States crop does not much exceed 500 million bushels (probably the smallest since 1885), and Canadian production does not greatly exceed 280 million bushels, the total North American crop will be the smallest since 1910. Present indications are that Russia does not have a distinctly large crop this year, though probably a larger one than in 1932.

With August 1 "world" wheat stocks of record size, *total world*[1] *supplies* of wheat available for 1933–34 will be less strikingly small than the world crop itself. However, aggregate supplies may be the smallest since 1927–28, the year before the wheat surplus problem became acute. Available supplies (crop plus stocks about August 1) for recent years are estimated as follows, in million bushels:

Year	World ex-Russia	European importers	Principal ex-porters[a]	United States and Canada	Argentina and Australia
1926–27	4,000	1,145	2,283	1,387	485
1927–28	4,249	1,224	2,431	1,527	504
1928–29	4,649	1,279	2,827	1,707	640
1929–30	4,420	1,413	2,424	1,490	461
1930–31	4,635	1,254	2,764	1,713	563
1931–32	4,679	1,276	2,762	1,700	551
1932–33	4,671	1,458	2,612	1,689	565
1933–34	4,410	1,481	2,327	1,397	492[b]

[a] Including United States, Canada, Argentina, Australia, Danube exporters, and northern Africa.

[b] Including our approximation for 1933 crops in the Southern Hemisphere (p. 361).

Despite a record carryover, North American supplies for 1933–34 are smaller than in any of the six preceding years; and exporting countries as a group (excluding Russia) also have the smallest supplies since 1926–27. European importers, on the other hand, have an enormous quantity of wheat available this year, supplies apparently larger than those of last year, even with a smaller crop.

[1] Excluding Russia, and domestic crops in China, southwest Asia, etc.

Outlook for Exports

Total net exports of wheat and flour in 1933–34 may fall between 550 and 600 million bushels. Even the higher figure would represent the smallest export movement in more than a decade, not excepting 1929–30. As early as August 8 Broomhall estimated probable total shipments (and import requirements) in 1933–34 as 552 million bushels, in contrast with reported total shipments of 615 million in 1932–33. The international wheat conference tentatively placed import requirements at 560 million bushels. These figures imply a reduction of about 60 million bushels in the volume of international trade between 1932–33 and 1933–34.

An increase rather than a reduction in the volume of international trade between two successive years can ordinarily be anticipated when European importing countries have smaller domestic wheat crops in the second year than in the first. This is the case between 1932 and 1933, and with reference to importing Europe, excluding Spain and Poland. Nevertheless, reduction of European takings between 1932–33 and 1933–34 is *possible* because (1) stocks carried into 1933–34 were significantly larger than stocks carried into 1932–33; (2) total domestic supplies this year are consequently as large as or larger than those of 1932–33; and (3) stocks can be drawn down in the course of the crop year rather than built up as they were last year, with reduction of imports roughly corresponding to reduction of stocks. Reduction of takings is *probable* because in France reduction of stocks during 1933–34 has been made highly probable by the new governmental measures (p. 355), and because elsewhere, despite the international agreement, relaxation of import restrictions is not assured and several other countries have such burdensome supplies that reduction rather than maintenance of stocks — and consequently reduction of imports—will be sought. Broomhall appraises the probable reduction in European import takings at 49 million bushels.

So far as concerns ex-European countries, the principal reasons for anticipating reduction in takings are three. China, with a larger domestic crop this year and an outlook for higher import prices especially of Australian wheat, is unlikely to purchase as much this year as last, despite the loan from the United States (p. 355) and the possibility of subsidized exports from there. Japan has a much larger wheat crop in 1933 than in 1932, as well as a policy of domestic self-sufficiency. A prospective increase in Egyptian imports following a reduced domestic crop can hardly suffice to offset the prospective reduction in Oriental purchases. Broomhall appraises the probable reduction in ex-European takings at 14 million bushels.

We regard forecasts of reduction in total net exports by 60 million bushels between 1932–33 and 1933–34 as indicating satisfactorily the probable direction of change, but as somewhat overstating its probable extent unless governments in exporting countries definitely control the outflow of wheat and flour. If our appraisals of crops and stocks are substantially accurate, reduction of European takings by as much as 49 million bushels is contingent upon (1) reduction of stocks at the end of the crop year about to a minimum level in practically every country that ranks as a regular importer[1] except Germany, France, and the British Isles—and to moderate or low levels in the last two; and (2) mere maintenance or even reduction in aggregate consumption of wheat in 1933–34 in every regular wheat-importing country of Europe except Germany. In view of evidence that economic recovery seems to be under way in many European countries, it appears more probable that wheat consumption should increase or be maintained than that it should decline further. Removal of import restrictions, tending to improve bread, would favor imports. Whether or not stocks will be brought to minimum or rather low levels (except in Germany), especially in countries that ordinarily use much imported wheat, depends heavily upon domestic crop prospects and import - domestic price relationships in the spring and early summer of 1934. These are unpredictable at present. Extraordinary developments would probably be required, however, to give incentive either to reduce stocks to minimum and low levels in most countries of this sort or to build up stocks to high levels. In our judgment France and Czecho-Slovakia are the only regular wheat-importing countries certain to have significantly smaller imports this year than last; others may or may not. Largely because of the real uncertainties regarding what may happen to end-year stocks in many European countries, we regard a forecast of reduction in European takings by 49 million bushels as nearer to a maximum than to the middle of a range.

Broomhall's allowance for a probable reduction of 14 million bushels in ex-European takings, on the other hand, is in our judgment about as close a prediction as the available information warrants; but the information itself can reasonably be interpreted as pointing either to ex-European takings nearly equal to those of 1932–33 or to takings as much as 25 million bushels smaller. Total net exports might therefore decline by as much as 75 million bushels, or by as little as 25 million—that is, to 550–600 million bushels.

It is convenient to employ the middle of this range, 575 million bushels, in considering the probable *sources of net exports.* We do not stress the fact that the international wheat conference has apparently allocated 1933–34 exports in specified amounts to the United States, Canada, Argentina, Australia, and the Danube countries (p. 353); for, so far as we can judge, it is more probable that in general the allocations will tend to be adapted to the flow of trade as determined by crops, requirements, and prices than that trade will tend to adapt itself to the allocations. The allocations, however, may carry significance for United States exports, since the volume of exports will probably hinge largely on governmental action.

Present uncertainties surrounding both 1933 crops and appraisals of stocks carried

[1] Spain and Poland are here regarded as occasional rather than as regular importers. Spain will not import more than a trickle of wheat in 1933–34, but will draw down stocks, while Poland may export a few million bushels.

into the crop year are themselves sufficient to cast doubt upon any forecast of the probable distribution of probable net exports in 1933–34 by sources. The following tabulation, however, presents our reasoned guesses, in million bushels, in comparison with data for 1932–33 and with Broomhall's estimates of shipments and the allocation of exports made at the international wheat conference:

Region	1932-33	1933-34		
	Net exports reported	Net exports (F.R.I.)	Allocated exports (I.W.C.)	Shipments (Broomhall)
United States...	33	45	47	32
Canada	263	225	200	192
Argentina	131	115	110	144
Australia	151	120	105	104
Russia	17	25	...	40
Danube	12[a]	30[a]	50-54	40[b]
Others	21[c]	15[c]	...	...
Total	628	575	560[d]	552

[a] Hungary, Jugo-Slavia, Roumania, Bulgaria.
[b] "Danube and France."
[c] Algeria, Morocco, Tunis, Poland.
[d] Total import requirements; not a summation of allocated exports.

Our reasons for placing probable Russian and Danubian net exports comparatively low lie in the facts that during the first six weeks of the crop year the outflow has been distinctly small, and that the normal seasonal movement from these areas calls for a heavier outflow at this time if the year's total is to reach Broomhall's estimates or the allocation. Northern Africa apparently has too small a crop to permit sizable exports, and Poland has never exported more than 5 million bushels even with supplies larger than those of 1933–34.

We take it that the United States will export 45 million bushels, on the one hand because adequate governmental machinery can readily be put to work to accomplish the result, and on the other because the allocation will presumably set an approximate upper limit to an administration which has assumed leadership in the international conferences. Except for the possibility that a policy of subsidizing exports will be adopted, we should place probable net exports even below those of 1932–33 on the ground that domestic prices will this year stand persistently even further above export parity.

If the United States, Russia, the Danube countries, northern Africa, and Poland can reasonably be counted upon to export 115 million bushels, and if a reasonable estimate of total net exports is 575 million bushels, then 460 million bushels may go from Canada, Argentina, and Australia. Our appraisals of the quantity likely to go from each are based upon reports and estimates of initial stocks (p. 366); tentative appraisals of 1933 crops (Table I); and statistics of domestic disposition in recent years (Table XII), with allowance for prospective changes this year. Account is also taken of the size of stocks on August 1, 1933, in relation to normal or average stocks, and to historical tendencies which indicate that among these three countries August 1 stocks tend to be accumulated mainly in Canada if the world situation makes accumulation necessary and if big crops in Australia and Argentina do not result in temporary accumulations there.

The general *outlook for "world" wheat stocks* about next August 1 is for a large reduction—perhaps 200 million bushels in the course of the year—in the four major exporting countries, more than half of which will occur in the United States. Additional reduction now seems probable in European importing countries, though this may be wholly or partially offset by an increase in the Danube basin. Only minor changes are in prospect in India, northern Africa, and Japan, or in stocks afloat to Europe and to ex-Europe. Crop estimates are still too uncertain, and developments in wheat consumption too obscure, to warrant detailed regional analysis of the outlook for end-year stocks. A really substantial reduction in the world wheat surplus is nevertheless clearly in prospect with a world crop as small as that of 1933 must be. Equally clear, however, is the fact that, barring almost complete crop failure in the Southern Hemisphere, reduction of the surplus to approximately a normal level must depend upon the occurrence of at least one more short crop.

Outlook for Prices

During the week ending September 9, wheat prices significant for consideration in the price outlook for the ensuing four months averaged about as follows per bushel:

Currency unit	British parcels	December futures		
		Liverpool	Chicago	Winnipeg
U.S. gold cents.....	48	51	61	48
U.S. current cents...	69	73	87	68

The British *gold prices* are barely above the very low level prevailing early last March (Chart 6, p. 370), before the greatly reduced outturn of the 1933 crop was known or in prospect. The Chicago gold price is 10 cents above that level, and the Winnipeg gold price about 5 cents above. British gold prices had fallen about 10 cents from the mid-July peak, Chicago gold prices about 18 cents, and Winnipeg gold prices about 15 cents. In terms of depreciated United States currency, the level of Chicago and Winnipeg wheat prices in early September of course compares much more favorably with the level six months ago.

Two outstanding facts must be borne in mind in appraisal of the price outlook: the world ex-Russia as a whole does not face shortage of wheat supplies in 1933–34 despite the short crop of 1933; and total supplies are so distributed between importing and exporting countries that the international market cannot possibly assume the aspect of a sellers' market for more than a very brief period, if at all. In its broadest aspects the world statistical position of wheat remains unfavorable for the level of world wheat prices. A sustained advance of British gold prices of imported wheat as large as 30 cents a bushel during September–December seems out of the question, even in the event of severe crop damage in the Southern Hemisphere.

On the other hand, three important factors militate against significant sustained decline of British gold prices of imported wheat from their level in the week ending September 9. First, that level is close to the lowest in history, and the lowest levels in history were plumbed in 1932–33, a year when world wheat supplies were substantially larger than they can be in 1933–34. Second, the low level in early September was reached after a rather sharp decline from the mid-July level, which itself was relatively low. Finally, there is reason to suppose that early in September selling pressure on the British import market was about as severe as it can be expected to become in the next four months. Pressing offers then came especially from Germany, France, Argentina, and Australia, and tenders of later wheat from Russia; and it may be expected that pressure will not grow more severe as the exportable supplies from those countries are disposed of and offers from Canada, a stronger holder, assume larger importance. Ordinary commercial offers from the United States are practically out of the question; and from the facts that Russia and the Danube countries have not yet pressed export offers, and that tentative quotas have been or may be assigned, a presumption arises that they will not do so. In view of the low British prices of early September, their antecedent decline, and a prospect for export selling pressure no more severe than it was in early September, it seems improbable that international wheat prices (in gold) can fall as much as 5 cents below their level of early September for more than two or three weeks. A greater decline, however, might be occasioned by the concurrence of substantial depreciation in the gold price of both the dollar and the pound, and of distinctly bearish influences otherwise.

The firming factors would probably suffice not only to prevent more than a fractional decline, but also to provoke a small sustained advance. Such an advance would be accentuated especially by further deterioration of Southern Hemisphere wheat crops, downward revisions of Northern Hemisphere crop appraisals now standing, confirmation of existing evidence that the trade cycle had entered its upward phase in many countries, and prompt and extensive relaxation of import restrictions. It would tend to be checked by the reverse of these developments, and also by sharp depreciation of the British pound in relation to currencies remaining on the gold standard, or by heavy liquidation of the government-sponsored holdings of wheat futures in Canada. It is obviously impossible to

demonstrate which of these developments is improbable. Significant reappraisals of Northern Hemisphere crops before January, prompt relaxation of import restrictions, and liquidation of the Canadian holdings, however, seem reasonably to fall in this category; and sharp depreciation of the pound seems rather more improbable than probable. On the other hand, it seems reasonable to expect that normal growing weather will prevail in the Southern Hemisphere instead of the abnormally dry weather of recent months, and that price advances at Liverpool will tend to be checked thereby; whereas price advances will be accentuated by general improvement in business activity and wholesale prices. The probabilities do not seem to us to point to a sustained advance of as much as 15 gold cents per bushel in British import wheat prices during the next four months, or to indicate whether the sustained advance is more likely to amount to 14 than to 2 cents. As we appraise them, the probabilities point rather to sustained advance than to stability or sustained decline, but to an advance of small magnitude. It would require a sustained advance of 15 cents to bring the British parcels price to 63 gold cents, the average figure fixed by the international wheat conference as that to be maintained over four months as a condition precedent to revision of European tariffs.

The *prospects for Chicago prices* are surrounded by additional uncertainties. On other occasions when an extreme increase in Chicago wheat prices has been followed by an especially sharp decline, apparently associated with liquidation by peculiarly weak holders (price movements of the "winter cycle" type, see p. 373), the price recession has been terminated within a period of two months or less. But to infer from this that the price of the Chicago December future at 87 cents had probably closely approached or actually reached the bottom in its readjustment is to neglect other lines of reasoning. In the week ending September 9, Chicago futures prices in terms of gold stood 10 cents above corresponding Liverpool prices. Such a relationship can be justified only on one or both of two assumptions: (*a*) that with a reduced wheat surplus and prospective acreage reduction, and perhaps aided by special government aids to export, the United States can for some time remain on a domestic price basis; (*b*) and/or that there is in prospect a substantial further depreciation of the dollar relative to the pound. The view that wheat prices are being supported by expectation of further depreciation of the dollar implies that traders in wheat are more impressed by the prospects for dollar depreciation than are traders in foreign exchange.

In so far as the premium of Chicago prices over Liverpool rests on expectation that it will not prove necessary in the next year or two for the United States to attain or even approach a normal export basis, we regard that premium as subject to fairly early and rapid decline. Were this the only factor in the situation it would appear probable that during the next four months this premium would decline more rapidly than Liverpool prices are likely to advance. Expectation of further dollar depreciation, however, must be counted an important, if indeterminate, factor in supporting Chicago prices. The developments of the next four months as they affect these expectations will greatly influence the movement of Chicago prices and even their gold equivalent. If the expectations are strengthened, supported by some further depreciation in the exchanges, Chicago wheat prices in currency may be expected to rise, and even in gold they may possibly rise relative to Liverpool prices over a large part of the ensuing four months. If, on the contrary, expectations of early dollar depreciation weaken or vanish, Chicago wheat prices in current dollars may be expected to decline substantially below the levels of the week ending September 9 and the premium of Chicago over Liverpool in terms of gold to narrow. Even with the most bearish domestic developments, however, the very short domestic wheat crop of 1933, with the accompanying necessity of drawing down stocks in 1933–34, and the general tendency of Americans to hold wheat at low prices are likely to keep Chicago gold prices more or less above Liverpool throughout the next four months.

This issue was written by M. K. Bennett and Helen C. Farnsworth, with the advice of Joseph S. Davis, Alonzo E. Taylor, and Holbrook Working

APPENDIX

TABLE I.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING AREAS AND COUNTRIES, 1927–33*

(Million bushels)

Year	World ex-Russia[a]	Northern Hemisphere ex-Russia[a]	Four chief exporters	United States			Canada	Australia	Argentina	USSR	Lower Danube[b]	Other Europe	Northern Africa[c]	India
				Total	Winter	Spring								
1927.....	3,588	3,118	1,755	875	548	327	480	118	282	785	272	1,002	60	335
1928.....	3,924	3,350	2,002	926	591	335	567	160	349	807	367	1,042	69	291
1929.....	3,425	3,060	1,408	813	577	236	305	127	163	694	303	1,146	77	321
1930.....	3,686	3,182	1,728	857	599	258	421	214	236	989	353	1,006	64	391
1931.....	3,646	3,174	1,632	900	787	113	321	191	220	...	370	1,064	69	347
1932[d]....	3,652	3,140	1,607	727	462	265	429	216	235	...	224	1,256	66	337
1932[e]....	3,666	3,154	1,606	726	462	264	429	216	235	...	224	1,263	75	337
1933.....	*3,297*	*2,875*	*1,141*	506	340	166	283	*152*	*200*	...	*343*	*1,226*	64	353

Year	Hungary	Jugo-Slavia	Roumania	Bulgaria	Morocco	Algeria	Tunis	Egypt	British Isles	France	Germany	Italy	Belgium[f]	Netherlands
1927.....	76.9	56.6	96.7	42.1	23.5	28.3	8.1	44.3	57.2	276.1	120.5	195.8	17.0	6.2
1928.....	99.2	103.3	115.5	49.2	24.7	30.3	13.7	37.3	50.9	281.3	141.6	228.6	17.9	7.3
1929.....	75.0	95.0	99.8	33.2	31.8	33.3	12.3	45.2	50.9	337.3	123.1	260.1	13.5	5.5
1930.....	84.3	80.3	130.8	57.3	21.3	32.4	10.4	39.8	43.4	228.1	139.2	210.1	13.7	6.1
1931.....	72.6	98.8	135.3	63.8	29.8	25.6	14.0	46.1	38.5	264.1	155.5	244.4	14.2	6.8
1932[d]....	64.4	53.5	55.5	50.6	22.0	29.2	14.7	52.6	43.7	331.4	183.8	276.1	15.6	13.7
1932[e]....	64.5	53.4	55.5	50.6	28.0	29.2	17.5	52.6	44.4	333.5	183.8	276.2	15.9	12.8
1933.....	87.4	*90.0*	113.9	52.1	25.7	28.1	10.3	39.9	57.0[g]	*297.1*	192.7	279.2	13.6[h]	14.2

Year	Scandinavia[i]	Baltic States[j]	Spain	Portugal	Switzerland	Austria	Czecho-Slovakia	Poland	Greece	Mexico	Japan, Chosen	South Africa	Chile, Uruguay	New Zealand
1927.....	25.3	10.0	144.8	11.4	4.34	12.0	47.2	61.1	13.0	11.9	38.3	5.7	46.0	9.54
1928.....	31.3	10.9	122.6	7.5	4.24	12.9	52.9	59.2	13.1	11.0	39.4	7.2	42.0	8.83
1929.....	31.5	13.7	154.2	10.6	4.21	11.6	52.9	65.9	11.4	11.3	38.8	10.6	46.7	7.24
1930.....	31.8	17.9	146.7	13.8	3.60	12.0	50.6	82.3	9.7	11.4	38.5	9.3	28.6	7.58
1931.....	27.7	14.6	134.4	13.0	4.04	11.0	41.2	83.2	11.2	16.2	39.2	13.7	32.4	6.58
1932[d]....	37.9	17.8	178.5	18.1	5.65	13.0	53.8	49.5	17.0	8.9	40.8	9.3	21.8[k]	10.00
1932[e]....	38.3	18.0	184.2	18.1	4.18	13.0	53.7	49.5	17.1	9.7	39.9	9.3	31.3	10.00
1933.....	*33.3*	17.4	128.6	14.8	4.81	13.3	65.8	72.8	*18.0*	11.8	46.5	...	...	...

* Data mainly through U.S. Department of Agriculture. Dots (...) indicate no data available. Figures in italics are unofficial; for sources of these estimates and for appraisals of Southern Hemisphere crops see text.

[a] Excluding also China and southwestern Asia. Totals for 1932 and 1933 include some rough estimates. [b] Hungary, Jugo-Slavia, Roumania, Bulgaria. [c] Morocco, Algeria, Tunis. [d] Data available about May 10, 1933. [e] Data available about September 10, 1933. [f] Including Luxemburg. [g] England and Wales only. [h] Belgium only. [i] Denmark, Norway, Sweden. [j] Finland, Latvia, Estonia, Lithuania. [k] Chile only.

TABLE II.—WHEAT RECEIPTS IN NORTH AMERICA, MARCH–AUGUST 1933, WITH COMPARISONS*

(Million bushels)

Year	United States (14 primary markets)							Canada (4 leading terminal markets)						
	March	April	May	June	July–June[a]	July	Aug.	March	April	May	June	July	Aug.–July[a]	Aug.
1928	26.3	17.9	25.9	15.5	496.2	72.6	84.2	13.7	11.8	25.0	23.8	16.8	354.4	4.6
1929	27.2	17.5	18.6	25.7	531.2	94.2	101.7	20.7	17.0	17.7	17.7	17.9	421.2	3.1
1930	16.7	13.4	16.5	18.7	425.4	99.0	85.5	8.5	5.7	10.5	27.3	17.5	190.7	16.1
1931	30.8	21.2	30.9	29.7	494.9	104.0	61.5	10.5	13.3	18.2	25.3	15.4	261.3	6.0
1932	13.4	13.2	15.3	13.5	374.7	41.0	40.7	11.5	12.5	12.7	31.8	19.7	225.5	18.3
1933	12.7	15.8	23.3	28.6	281.9	37.2	26.6[b]	18.0	12.8	15.3	33.6	19.9	285.6	17.8[b]

* United States data unofficial, from *Survey of Current Business;* Canadian data compiled from official figures given in *Canadian Grain Statistics.* For a list of the markets in each country, see WHEAT STUDIES, January 1933, IX, 163.

[a] From 1927–28 to 1932–33. [b] Approximate.

TABLE III.—UNITED STATES FLOUR PRODUCTION, EXPORTS, AND NET RETENTION, FROM 1928*

(Million barrels)

Year	Feb.	March	April	May	June	July–June[a]	July	Feb.	March	April	May	June	July–June[a]	July
	PRODUCTION: ALL REPORTING MILLS							PRODUCTION: ESTIMATED TOTAL						
1928	9.0	9.8	8.5	8.7	7.8	111.2	8.5	9.7	10.5	9.2	9.4	8.4	120.6	9.2
1929	9.0	9.2	8.6	9.3	8.9	115.3	9.3	9.6	9.8	9.2	10.0	9.6	123.6	10.0
1930	8.8	9.3	9.1	9.0	8.7	114.6	9.5	9.4	10.0	9.7	9.6	9.3	122.5	10.1
1931	8.2	8.7	8.5	8.0	7.8	109.9	9.9	8.8	9.4	9.1	8.6	8.3	117.6	10.5
1932	7.7	8.5	8.2	7.7	7.8	105.8	7.8	8.3	9.1	8.8	8.3	8.4	113.4	8.4
1933	7.2	8.9	9.3	8.8	8.6	103.5	...	7.8	9.5	10.0	9.4	9.2	110.9	...
	EXPORTS AND SHIPMENTS TO POSSESSIONS							ESTIMATED NET RETENTION						
1928	1.00	1.05	1.04	0.90	0.72	13.38	0.68	8.7	9.5	8.1	8.5	7.7	107.2	8.5
1929	1.27	1.24	1.12	0.99	1.05	13.55	1.13	8.4	8.6	8.1	9.0	8.5	110.0	8.9
1930	0.97	1.10	0.98	1.08	1.00	13.62	0.99	8.4	8.9	8.7	8.5	8.3	108.8	9.1
1931	0.81	0.78	0.81	0.84	0.84	12.32	1.05	8.0	8.6	8.3	7.8	7.5	105.3	9.5
1932	0.75	0.65	0.58	0.39	0.47	8.93	0.40	7.5	8.4	8.2	7.9	7.9	104.5	8.0
1933	0.34	0.39	0.28	0.38	0.42	4.90	....	7.4	9.1	9.7	9.0	8.8	106.0	...

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

[a] 1927–28 to 1932–33.

TABLE IV.—SHIPMENTS OF WHEAT AND FLOUR TO EX-EUROPEAN DESTINATIONS, AUGUST–JULY 1932–33, WITH COMPARISONS*

(Million bushels)

Year	Apr.–July (18 weeks)						Aug.–July (52 weeks)[a]					
	China and Japan	Central America[b]	Brazil	Egypt	India	Others[c]	China and Japan	Central America[b]	Brazil	Egypt	India	Others[c]
1927–28	10.18	25.18	8.71	3.77	....	2.33	31.38	55.62	26.68	9.16	1.50	6.67
1928–29	17.21	24.94	10.87	4.98	4.67	2.56	69.48	70.38	30.26	17.85	27.64	9.38
1929–30	7.05	13.67	8.64	2.62	1.03	1.32	33.61	50.07	28.17	7.60	6.28	4.10
1930–31	27.15	18.94	9.40	3.91	3.74	1.70	67.36	58.05	26.54	11.06	11.00	5.03
1931–32	23.93	16.20	9.54	2.50	....	1.36	88.07	56.66	31.20	8.35	....	3.71
1932–33	24.94	11.36	11.00	0.92	0.18	1.37	91.48	34.70	29.46	3.72	1.78	4.99

* Converted from data in Broomhall's *Corn Trade News.* Dots (...) indicate no shipments reported.

[a] 53 weeks in 1928–29.

[b] Includes Venezuela, West Indies, Dutch East Indies, etc.

[c] North and South Africa, Chile, Syria, Peru, Palestine, New Zealand.

TABLE V.—INTERNATIONAL SHIPMENTS OF WHEAT AND FLOUR, WEEKLY, APRIL–AUGUST 1933*

(Million bushels)

Week ending	Shipments by export regions								Shipments to Europe				Shipments to ex-Europe		
	Total	North America	Argentina[a]	Australia	South Russia	Danube	India	Other countries[b]	Total	United Kingdom	Orders	Continent	Total	China, Japan	Others
Apr. 1...	11.55	4.79	2.67	3.88	...	.12	...	.09	7.98	1.96	3.16	2.86	3.57	2.29	1.28
8...	9.91	2.61	4.67	2.42	...	.09	...	.12	6.64	1.04	4.19	1.41	3.27	2.14	1.13
15...	9.42	3.58	2.79	2.71	.10	.10	...	.14	5.94	1.73	2.44	1.77	3.48	2.18	1.30
22...	10.14	2.63	3.15	4.14	...	.07	...	.15	5.39	2.60	1.76	1.03	4.75	3.18	1.57
29...	12.62	5.73	4.79	1.92	...	.06	...	.12	10.07	2.95	2.83	4.29	2.55	0.98	1.57
May 6...	12.58	4.98	3.37	3.97	...	.11	...	.15	8.15	2.07	3.16	2.92	4.43	2.97	1.46
13...	12.63	4.38	4.08	3.90	...	.10	...	.17	9.54	2.31	4.08	3.15	3.09	1.68	1.41
20...	11.97	6.70	2.97	2.03	...	.14	...	.13	10.26	3.16	4.30	2.80	1.71	0.46	1.25
27...	11.90	6.29	3.23	2.18	...	.10	...	.10	9.27	4.82	1.58	2.87	2.63	1.06	1.57
June 3...	9.98	5.32	2.58	1.92	...	.08	...	.08	7.60	3.27	1.31	3.02	2.38	1.38	1.00
10...	9.68	4.98	3.20	1.34	...	.07	...	.09	7.38	2.32	2.25	2.81	2.30	0.94	1.36
17...	9.24	5.04	2.07	1.55	...	.11	...	.47	7.21	2.91	2.06	2.24	2.03	0.66	1.37
24...	10.14	4.50	4.42	.99	...	.07	...	.14	7.87	2.81	2.39	2.67	2.27	0.92	1.35
July 1...	8.19	3.94	2.15	1.72	...	.12	...	.26	6.05	2.58	1.49	1.98	2.14	0.64	1.50
8...	10.02	4.37	3.93	1.47	...	.07	...	.18	8.16	2.10	2.88	3.18	1.86	0.82	1.04
15...	10.69	3.05	3.43	3.43	.08	...	...	.70	8.19	3.33	2.67	2.19	2.50	0.93	1.57
22...	9.51	3.19	3.67	2.11	...	.10	...	.44	7.40	2.23	3.34	1.83	2.11	0.78	1.33
29...	9.09	3.69	3.12	1.72	...	.06	...	.50	6.40	2.51	1.36	2.53	2.69	0.92	1.77
Aug. 5...	9.07	4.22	1.92	2.78	...	.06	...	.08	7.89	3.08	2.82	1.99	1.18	0.34	0.84
12...	8.90	3.33	4.85	0.61	...	.07	...	.05	6.92	1.79	2.90	2.23	1.98	0.30	1.68
19...	9.61	3.47	3.06	2.47	.25	.14	...	.22	7.75	2.30	3.35	2.10	1.86	0.54	1.32
26...	11.58	4.54	3.91	2.45	.17	.16	...	.36	9.67	2.87	3.82	2.98	1.91	0.46	1.45
Sept. 2[c]..	9.34	4.93	2.72	0.58	...	...	...	1.10	7.25	....	....	....	2.09	....	....

* Data in Broomhall's *Corn Trade News*. Dots (...) indicate no shipments reported, or, for last week, data not available.

[a] Including Uruguay. [b] Mainly northern Africa, Germany, and (in later weeks) France.

[c] Preliminary, from Broomhall's *Cable Advice*.

TABLE VI.—SHIPMENTS OF WHEAT AND FLOUR, AUGUST–JULY 1932–33, WITH COMPARISONS*

(Million bushels)

Period and year	Shipments by export regions							Shipments to Europe				Shipments to ex-Europe		
	Total	North America	Argentina[a]	Australia	South Russia	Danube	Others	Total[b]	United Kingdom	Orders	Continent	Total	China, Japan	Others
Dec.–Mar. (17 weeks)														
1927–28.....	272.8	149.6	82.4	27.6	0.8	10.0	2.4	223.2	49.6	60.6	112.7	49.6	14.6	35.0
1928–29.....	341.3	169.1	95.0	62.3	...	12.8	2.0	239.4	46.1	71.4	121.8	101.9	39.3	62.6
1929–30.....	188.4	90.8	45.6	28.0	2.5	16.3	5.2	140.0	32.0	41.0	67.8	48.4	14.7	33.7
1930–31.....	241.6	92.0	45.6	64.4	26.0	10.0	3.6	169.6	32.1	63.9	73.4	72.0	24.2	47.8
1931–32.....	246.4	88.8	62.4	67.6	8.8	16.0	2.8	174.0	41.2	65.0	67.7	72.4	39.3	33.1
1932–33.....	239.2	91.2	52.8	84.4	4.8	2.4	3.6	165.6	60.3	52.0	53.5	73.6	46.0	27.6
Apr.–July (18 weeks)														
1928.....	268.0	144.8	74.4	33.2	...	7.2	8.4	217.6	55.0	53.7	109.3	50.4	10.2	40.2
1929.....	278.3	144.6	89.5	32.2	...	9.0	3.0	213.0	49.2	45.7	118.8	65.3	17.2	48.1
1930.....	204.9	120.8	34.7	22.2	3.9	10.1	13.1	171.1	53.3	30.7	86.2	33.8	7.0	26.8
1931.....	274.7	119.1	63.2	67.2	9.9	10.4	4.9	210.1	53.2	55.5	101.1	64.6	27.2	37.4
1932.....	248.8	123.2	52.4	57.2	0.4	9.6	6.0	195.2	50.9	51.4	93.3	53.6	23.9	29.7
1933.....	189.6	80.0	60.4	43.2	0.4	1.6	4.0	139.6	46.8	47.3	45.4	50.0	25.0	25.0
Aug.–July (52 weeks)														
1927–28.....	792.8	489.6	177.6	74.4	4.8	29.2	17.2	661.6	164.7	145.0	352.1	131.2	31.4	99.8
1928–29[c].....	927.6	542.9	223.7	112.1	...	37.4	11.5	702.8	158.8	145.1	399.3	224.8	69.5	155.3
1929–30.....	612.5	318.4	151.9	64.6	6.4	46.8	24.4	483.1	137.4	120.4	225.3	129.4	33.6	95.8
1930–31.....	786.7	354.3	123.2	154.0	98.7	37.6	18.9	607.7	131.0	193.7	282.8	179.0	67.4	111.6
1931–32.....	769.6	331.2	138.4	153.2	70.4	60.0	16.4	581.6	135.8	193.2	252.9	188.0	88.1	99.9
1932–33.....	615.2	290.0	126.4	154.4	17.6	7.2	19.6	448.8	161.2	127.9	159.8	166.4	91.5	74.9

* Converted from data in Broomhall's *Corn Trade News*. Dots (...) indicate no shipments reported.

[a] Including Uruguay. [b] Not direct summations of items in next three columns. [c] Fifty-three weeks.

TABLE VII.—NET EXPORTS AND NET IMPORTS OF WHEAT AND FLOUR, MONTHLY FROM AUGUST 1932*

(Million bushels)

A. NET EXPORTS

Month or period	United States[a]	Canada	Argentina	Australia	Four exporters	USSR	Hungary	Jugo-Slavia	Roumania	Bulgaria	Poland	Algeria	Tunis	India
Aug.	5.57	19.76	3.94	3.85	33.12	(0.87)	0.81	0.22	0.08	0.31	0.05	2.27	1.22	0.10
Sept. ...	3.86	28.60	3.46	7.24	43.16	4.89	1.36	0.13	0.03	0.17	(0.04)	1.16	0.79	0.13
Oct.	4.23	42.55	3.34	8.14	58.26	3.30	0.85	0.08	0.00	0.36	(0.02)	1.12	0.78	0.08
Nov.	5.29	29.88	4.10	7.50	46.77	4.73	0.35	0.14	0.01	0.70	(0.03)		0.12	0.09
Dec.	3.79	29.94	7.30	12.46	53.49	2.55	0.43	0.21	0.00	0.46	(0.02)	0.84	0.44	0.11
Jan.	2.84	16.48	16.04	21.64	57.00	1.22	0.33	0.13	0.00	0.06	(0.13)	0.18	0.14	0.06
Feb.	1.90	12.41	16.65	27.40	58.36	0.33	0.52	0.00	0.00	0.01	0.12	0.06	0.18	(0.56)
Mar.	1.50	17.00	18.02	22.82	59.34	0.38	0.64	0.02	0.00	0.03	0.14	0.45	0.12	(0.60)
Apr.	0.82	5.51	15.62	11.62	33.57	0.22	0.17	0.01	0.00	0.12	0.10	0.69	0.13	(0.05)
May	0.77	23.97	14.30	11.63	50.67	0.11	0.44	0.00	0.00	0.49	0.34	....	0.26	(0.19)
June	1.35	19.44	13.80	6.60	41.19	0.04	0.98	0.00	0.00	0.24	0.44	....	0.29	(0.13)
July	....	18.57	14.70	....	....	....	....	....	....	....	....	....	....	....
1931–32 ..	114.56	206.87	140.26	156.30	617.99	113.74	18.26	14.90	37.36	11.27	3.30	5.86	8.52	1.99
1932–33[b] .	....	263.41	131.10	150.50	....	17.00	7.90	0.95	0.15	3.20	1.20	9.30	5.20	(1.00)

B. NET IMPORTS

Month or period	United Kingdom	Irish Free State	British Isles total	Three variable importers				Belgium	Netherlands	Denmark	Norway	Sweden	Scandinavia total	Switzerland
				Total	Italy	Germany	France[c]							
Aug.	17.76	1.64	19.40	11.77	0.02	2.15	9.60	2.94	2.24	1.62	0.40	0.85	2.87	1.82
Sept. ...	16.00	1.68	17.68	1.09	(0.15)	(2.40)	3.64	2.61	1.82	1.27	0.71	0.43	2.41	1.64
Oct.	20.15	1.32	21.47	0.59	0.44	(1.61)	1.76	4.33	3.09	1.21	0.73	0.41	2.35	1.82
Nov.	16.89	1.29	18.18	2.14	0.91	(0.74)	1.97	2.46	1.99	0.89	0.74	0.23	1.86	2.19
Dec.	15.46	1.72	17.18	5.39	1.30	0.75	3.34	4.52	2.28	1.06	1.00	0.21	2.27	1.42
Jan.	16.04	0.90	16.94	1.55	1.70	(1.45)	1.30	3.09	2.75	0.78	0.58	0.21	1.57	1.42
Feb.	15.03	1.28	16.31	2.36	1.40	(0.52)	1.48	2.32	1.97	1.11	0.62	0.20	1.93	1.24
Mar.	23.35	2.10	25.45	4.22	1.81	1.32	1.09	3.83	2.07	0.90	0.42	0.17	1.49	1.87
Apr.	20.19	1.65	21.84	3.65	1.31	0.82	1.52	5.26	2.00	0.71	0.84	0.20	1.75	1.45
May	20.11	1.84	21.95	5.03	0.77	2.32	1.94	4.20	1.65	0.81	0.98	0.21	1.98	1.32
June	17.93	1.48	19.41	4.71	0.70	2.29	1.62	2.33	2.21	0.65	0.83	0.10	1.58	1.41
July	17.67	....	.....	....	....	1.75	....	2.59	3.26	....	....	....	....	....
1931–32 ..	240.75	20.16	260.91	135.31	32.93	23.22	79.16	46.43	31.16	17.55	8.70	6.83	33.08	21.11
1932–33[b] .	216.58	18.50	235.08	47.20	10.90	4.68	30.90	40.48	27.33	11.60	8.50	3.30	23.40	19.00

B. NET IMPORTS (*Continued*)

Month or period	Austria	Czecho-Slovakia	Greece	Spain	Portugal	Finland	Latvia	Estonia	Lithuania	Four Baltic States	Egypt	Japan	New Zealand	South Africa
Aug.	0.69	0.49	1.70	0.84	0.23	0.41	0.02	0.00	(0.01)	0.42	0.01	(0.09)	0.44	0.16
Sept. ...	0.76	0.29	1.54	5.38	0.26	0.41	0.00	0.00	0.00	0.41	0.20	0.12	0.25	
Oct.	0.95	0.16	1.73	0.15	0.03	0.40	0.00	0.00	(0.01)	0.39		0.24	0.07	0.04
Nov.	0.95	0.03	1.75	0.35	0.23	0.50	0.00	0.00	0.00	0.50	0.03	0.03	0.13	0.02
Dec.	1.24	0.24	1.69	0.00	0.07	0.44	0.00	0.00	(0.10)	0.43	0.05	0.43	0.33	0.02
Jan.	1.11	0.93	1.55	0.00	0.07	0.20	0.00	0.00	0.00	0.20		(0.07)	0.31	0.02
Feb.	1.00	0.75	1.24	0.00	0.07	0.23	0.00	0.00	(0.01)	0.22	0.09	0.60		
Mar.	1.11	0.79	2.34	0.00	0.12	0.37	0.00	0.00	(0.01)	0.36		1.30	0.03	0.00
Apr.	0.96	1.02	1.07	0.00	0.18	0.31	0.00	0.00	0.00	0.31	0.02	0.35	0.05	0.02
May	1.37	1.94	1.77	(0.00)	0.09	0.39	0.00	0.00	(0.00)	0.39	....	0.30	....	....
June	....	2.62	....	0.00	0.06	0.38	0.00	0.00	(0.00)	0.38	....	0.25	....	....
1931–32 ..	13.72	24.78	23.68	10.76	2.80	4.51	0.96	0.44	(0.10)	5.81	7.44	20.44	0.99	1.75
1932–33[b] .	13.20	10.80	19.40	6.70	1.45	4.40	0.02	0.00	(0.05)	4.37	0.55	3.70	1.75	0.30

* Data from official sources and International Institute of Agriculture. Dots (...) indicate data are not available. Figures in parentheses represent: under A, net imports; under B, net exports.

[a] Includes shipments to possessions.

[b] Includes estimates for monthly data that are missing.

[c] Net imports in "Commerce général."

TABLE VIII.—WHEAT VISIBLE SUPPLIES, APRIL–AUGUST 1933, WITH COMPARISONS*

(Million bushels)

Date	Total	United States grain		Canadian grain		Total North America	Afloat to Europe	U.K. ports	Total U.K. and afloat	Australia	Argentina
		United States	Canada	Canada	United States						
Apr. 1, 1928.....	344.0	68.8	1.0	133.6	16.1	219.4	68.4	7.7	76.1	36.0	12.5
1929.....	462.9	124.8	1.6	166.0	23.7	316.1	71.0	8.0	79.0	53.0	14.8
1930.....	469.0	153.1	5.8	171.9	24.4	355.2	34.2	13.0	47.2	56.0	10.6
1931.....	554.3	213.6	5.3	170.3	11.1	400.3	48.0	12.6	60.6	84.2	9.2
1932.....	583.9	207.2	27.6	179.9	11.7	419.4	58.7	15.4	74.1	75.0	15.4
1933.....	525.9	135.6	6.4	220.8	6.0	368.8	52.4	10.0	62.4	81.5	13.2
Aug. 1, 1928.....	201.6	63.1	2.3	52.4	13.6	131.4	44.7	10.1	54.8	9.5	5.9
1929.....	325.4	136.4	2.3	83.8	22.9	245.4	37.6	6.2	43.8	20.0	16.2
1930.....	357.7	161.9	4.0	89.5	16.1	271.5	39.2	6.5	45.7	33.5	7.0
1931.....	442.9	233.6	22.9	105.8	5.5	367.8	37.9	10.6	48.5	20.0	6.6
1932.....	385.8	175.9	15.4	116.8	4.7	312.8	31.4	10.9	42.3	24.5	6.2
1933.....	423.2	135.0	3.7	190.4	6.7	335.8	31.6	11.4	43.0	31.5	12.9
1933											
Apr. 1.....	525.9	135.6	6.4	220.8	6.0	368.8	52.4	10.0	62.4	81.5	13.2
8.....	512.5	133.2	6.4	220.2	5.7	365.5	47.6	10.6	58.2	75.2	13.6
15.....	501.3	131.0	6.3	219.9	4.9	362.1	45.4	10.7	56.1	70.2	12.9
22.....	482.7	127.7	5.8	217.5	3.1	354.1	41.5	9.6	51.1	63.5	14.0
29.....	478.9	124.4	5.4	217.3	2.5	349.6	40.9	12.5	53.4	61.5	14.4
May 6.....	470.7	121.0	5.0	214.0	3.0	343.0	41.7	12.8	54.5	58.5	14.7
13.....	462.1	119.1	4.9	209.3	3.0	336.3	41.2	13.2	54.4	56.0	15.4
20.....	453.6	117.4	4.8	205.0	3.3	330.5	42.1	12.8	54.9	53.5	14.7
27.....	446.1	116.6	4.8	199.7	3.8	324.9	42.2	13.3	55.5	51.0	14.7
June 3.....	440.1	117.5	4.8	196.5	4.6	323.4	39.4	12.4	51.8	50.2	14.7
10.....	428.9	119.3	4.5	188.2	4.3	316.3	37.3	12.6	49.9	48.0	14.7
17.....	430.2	121.6	4.4	188.8	4.3	319.1	36.8	13.1	49.9	46.5	14.7
24.....	431.6	122.7	4.0	191.6	4.4	322.7	37.0	13.1	50.1	44.8	14.0
July 1.....	427.6	123.6	4.1	195.0	4.3	327.0	31.6	12.3	43.9	42.0	14.7
8.....	429.0	124.8	4.0	196.1	5.1	330.0	32.8	12.6	45.4	39.2	14.4
15.....	427.4	127.5	4.0	193.8	6.8	332.1	32.6	12.0	44.6	36.7	14.0
22.....	421.3	129.7	3.8	191.8	6.2	331.5	33.1	12.1	45.2	34.0	13.6
29.....	423.2	135.0	3.7	190.4	6.7	335.8	31.6	11.4	43.0	31.5	12.9
Aug. 5.....	423.3	138.4	3.7	189.5	6.4	338.0	32.9	10.4	43.3	29.5	12.5
12.....	420.1	140.4	3.7	189.3	5.7	339.1	33.5	9.3	42.8	25.8	12.4
19.....	415.7	143.7	3.7	186.5	5.3	339.2	32.1	9.4	41.5	22.5	12.5
26.....	425.1	148.2	3.7	191.2	5.3	348.4	34.0	10.4	44.4	20.5	11.8
Sept. 2.....	430.1	151.7	3.7	194.0	4.8	352.4	34.7	10.2	44.9	19.6	11.4

* *Commercial Stocks of Grain in Store in Principal U.S. Markets; Daily Trade Bulletin* (Chicago); *Canadian Grain Statistics;* and *Corn Trade News.*

TABLE IX.—UNITED STATES AND CANADIAN CARRYOVERS OF WHEAT, FROM 1927*

(Million bushels)

Year	United States (July 1)						Canada (July 31)						
	On farms	In country mills and elevators	Commercial stocks	In city mills[a]	Total four positions	U.S. grain in Canada	On farms	In country mills and elevators	In terminal elevators	In transit	In flour mills	Total five positions	Canadian grain in U.S.[b]
1927.....	26.7	21.8	21.1	48.3	117.9	1.4	4.2	1.5	35.6	2.3	4.2	47.8	4.8
1928.....	19.6	19.3	38.6	42.8	120.3	2.5	4.2	4.7	48.9	13.7	6.1	77.6	13.6
1929.....	45.4	41.5	90.4	64.5	241.8	3.3	5.6	6.3	76.3	8.7	7.5	104.4	22.9
1930.....	59.5	60.2	109.3	73.9[c]	302.9	4.7	5.3	16.8	69.3	12.8	6.9	111.1	16.1
1931.....	37.3	30.3	204.0	52.4[c]	324.0	15.3	19.5	34.1	71.1	7.3	2.1[d]	134.1	5.5
1932.....	90.3	41.6	168.4	81.8[c]	382.1	15.9	7.5	33.5	78.6	9.3	2.0[d]	131.8	4.7
1933.....	79.6	61.5	123.6	121.2[c]	385.9	4.1	12.3	77.9	109.3	9.0	3.2[d]	211.7	6.7

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

[a] In and in transit to mills.

[b] In bond for export as wheat; excludes some bonded wheat in transit by rail.

[c] Includes wheat "stored for others" as follows, in million bushels: 1930, 12.5; 1931, 18.4; 1932, 7.2; 1933, 10.0.

[d] In Eastern Division only. Stocks in Western Division mills included with stocks in country mills.

TABLE X.—PRICES OF REPRESENTATIVE WHEATS IN BRITISH MARKETS AND PRINCIPAL EXPORTING COUNTRIES, WEEKLY FROM APRIL 1933*

(U.S. cents per bushel)

Week ending	British parcels	Liverpool				United States						Canada		Argentina
		No. 1 Manitoba	No. 3 Manitoba[a]	Argentine Rosafé	Australian f.a.q.	Lowest contract cash: Chicago	All classes and grades: 6 markets	No. 2 Hard Winter Kansas City	No. 2 Red Winter St. Louis	No. 1 Northern Spring Minneapolis	No. 2 Amber Durum Minneapolis	Weighted average Winnipeg	No. 3 Manitoba Winnipeg	78 kilo Buenos Aires
Apr. 1....	47	53	49	43	48	54	55	50	56	55	59	40	38	34
8....	48	53	50	43	48	57	58	54	60	58	62	41	39	35
15....	49	54	51	43	48	60	62	58	65	62	67	42	41	35
*15....	*49*	*54*	*50*	*43*	*48*	*60*	*61*	*57*	*64*	*61*	*66*	*42*	*40*	*34*
22....	52	56	53	44	50	65	67	63	71	68	68	46	45	36
29....	55	66	62	51	57	69	71	66	75	72	75	50	48	40
May 6....	60	65	62	52	58	73	74	71	80	75	78	54	52	43
13....	64	68[ab]	65	55	61	73	74	72	82	75	75	55	53	45
*13....	*54*	*58[ab]*	*56*	*47*	*52*	*62*	*63*	*61*	*70*	*64*	*64*	*47*	*45*	*38*
20....	60	68	64	55	61	72	74	71	81	74	73	55	53	44
27....	60	64	61	53	60	71	71	68	78	73	70	54	52	43
June 3....	61	68	64	56	64	71	74	69	81	75	72	56	54	45
10....	63	68	65	56	64	73	74	71	76	75	68	56	54	45
17....	61	69	65	57	66	74	74	72	75	76	70	57	55	45
*17....	*50*	*56*	*53*	*47*	*54*	*61*	*61*	*59*	*62*	*63*	*58*	*47*	*45*	*37*
24....	64	71	68	58	67	78	77	75	77	80	73	60	57	47
July 1....	67	78[ab]	73[b]	64	72	91	93	91	93	94	91	67	64	51
8....	77	83	81[b]	68	76	97	99	98	99	103	103	74	71	57
15....	82	90	85[b]	75	82	106	104	102	107	111	115	84	80	63
*15....	*57*	*63*	*60[b]*	*52*	*58*	*74*	*73*	*71*	*75*	*78*	*81*	*59*	*56*	*44*
22....	84	103	99[b]	81	89	104	108	106	108	115	120	80	76	64
29....	79	85	81	72	81	94	93	90	94	100	101	76	72	60
Aug. 5....	74	83	77[b]	69	78	94	94	92	93	100	104	76	73	59
12....	68	84	81[b]	68	77	96	97	94	96	99	105	72	68	56
19....	70	76	70[b]	61	70	87	90	84	86	90	95	65	62	..
*19....	*52*	*57*	*52[b]*	*45*	*53*	*65*	*67*	*62*	*64*	*67*	*70*	*48*	*46*	..
26....	65	76	70[b]	60	70	86	90	86	88	90	103	66	62	..

* For sources and methods of computation, see WHEAT STUDIES, December 1932, Table XXXIV, and May 1933, Table VIII. Figures in italics represent approximate gold prices. Dots (...) indicate data not now available.

[a] Wheat shipped from Vancouver. [b] Parcels to London.

TABLE XI.—MONTHLY AVERAGE PRICES OF DOMESTIC WHEAT IN EUROPE, JANUARY–JULY, FROM 1928*

(U.S. cents per bushel)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Jan.	Feb.	Mar.	Apr.	May	June	July
	GERMANY (BERLIN)							FRANCE (PARIS)						
1928.....	152	149	159	172	173	166	160	164	163	172	181	195	191	182
1929.....	135	140	144	145	141	139	162	165	169	172	170	168	167	170
1930.....	160	152	155	175	187	195	187	144	137	141	141	135	140	171
1931.....	168	177	186	187	183	176	155	179	187	190	197	195	199	186
1932.....	146	158	161	170	176	165	154	168	173	178	182	184	180	179
1933.....	120	125	129	130	147	150	170	115	114	110	109	123	125	175
1933.....	*121*	*125*	*128*	*124*	*125*	*122*	*122*	*115*	*114*	*110*	*104*	*105*	*102*	*125*
	ITALY (MILAN)							GREAT BRITAIN						
1928.....	193	194	200	209	214	210	177	129	126	127	134	143	143	141
1929.....	192	196	195	193	189	191	177	125	127	127	128	129	125	135
1930.....	194	189	186	194	196	202	177	124	116	108	113	114	111	108
1931.....	149	154	149	152	160	143	131	73	67	67	69	75	78	82
1932.....	150	163	167	166	169	157	137	54	53	59	60	61	62	61
1933.....	156	150[a]	147	146	157	155	172[a]	48	49	47	50	61	71	83
1933.....	*157*	*150[a]*	*146*	*140*	*134*	*126*	*124[a]*	*48*	*49*	*47*	*48*	*52*	*58*	*60*

* For sources and methods of computation, see WHEAT STUDIES, December 1932, Table XXXV. Figures in italics indicate approximate gold prices.

[a] Three-week average.

TABLE XII.—WHEAT DISPOSITION ESTIMATES, ANNUALLY FROM 1927–28*

(Million bushels)

Year	Domestic supplies			Domestic disappearance				Surplus over domestic use[d]	Net exports	End-year stocks[a]
	Initial stocks[a]	New crop	Total	Milled (net)	Seed use	Balancing item[b]	Total[c]			
	A. UNITED STATES (July–June)									
1927–28	118	875	993	503	93	84	680	313	193	120
1928–29	120	926	1,046	510	85	64	659	387	145	242
1929–30	242	813	1,055	508	85	16	609	446	143	303
1930–31	303	857	1,160	492	82	147	721	439[e]	115[e]	324
1931–32	324	900	1,224	485	81	150	716	508[e]	126[e]	382
1932–33[f]	363	727	1,090	480	76	136	692	398	38	360
1932–33[g]	382	726	1,108	487	80	119	686	422	36	386
	B. CANADA (August–July)									
1927–28	48	480	528	42	42	33	117	411	333	78
1928–29	78	567	645	44	44	47	135	510	406	104
1929–30	104	305	409	43	44	26	113	296	185	111
1930–31	111	421	532	43	36[h]	61	140	392	258	134
1931–32	134	321	455	42	37[h]	37	116	339	207	132
1932–33[f]	131	429	560	41	36[h]	32	110	450	290	160
1932–33[g]	132	429	561	41	36[h]	9[i]	86	475	263	212
	C. AUSTRALIA (August–July)									
1927–28	35	118	153	32	15	—1	46	107	71	36
1928–29	36	160	196	29	15	2	46	150	109	41
1929–30	41	127	168	32	18	7	57	111	63	48
1930–31	48	214	262	32	14	4	50	212	152	60
1931–32	60	191	251	32	15	—3	46	205	156	49
1932–33[f]	49	216	265	32	15	4	51	214	155	59
1932–33[g]	49	216	265	32	14	4	50	215	150	65
	D. ARGENTINA (August–July)									
1927–28	69	282	351	60	25	—8	77	274	179	95
1928–29	95	349	444	61	23	8	92	352	222	130
1929–30	130	163	293	60	26	—9	77	216	151	65
1930–31	65	236	301	60	21	16	97	204	124	80
1931–32	80	220	300	60	24	11	95	205	140	65
1932–33[f]	65	235	300	61	24	5	90	210	135	75
1932–33[g]	65	235	300	61	22	11	94	206	131	75

* Based on official data so far as possible; see WHEAT STUDIES, December 1932, Table XXXI.

[a] Including revised official data on farm stocks in the United States, except our May forecast for 1932–33; the official revisions were largest (an increase of 19 million bushels) with regard to the stocks on July 1, 1932.

Australian stocks are here estimated on a new basis, in which we employ new official data on total stocks as of November 30 each year instead of unofficial data on visible supplies as of December 1. The effect is to raise the level of stocks by 9 to 14 million bushels.

[b] Total domestic disappearance minus quantities milled for food and used for seed.

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

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

[e] Too low; does not include some wheat shipped to Canada and eventually exported from there.

[f] Estimates as of May 1933.

[g] Estimates as of September 1933.

[h] Probably too low for comparison with earlier years.

[i] Since this item is 37 million bushels less than official estimates of wheat fed on farms, unmerchantable, and lost in cleaning, substantial underestimate of the 1932 crop is indicated. Officially, the crop is tentatively stated to have been underestimated 20–25 million bushels.

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