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# W H E A T   S T U D I E S

## OF THE FOOD RESEARCH INSTITUTE

VOL. III, NO. 5

MARCH 1927

### THE McNARY-HAUGEN PLAN AS APPLIED TO WHEAT

#### LIMITATIONS IMPOSED BY THE PRESENT TARIFF

**W**HAT could a federal Board accomplish, in the way of raising the growers' price of wheat, by undertaking full operations with an equalization fee behind the present tariff of 42 cents a bushel? Price advances would be checked by competition of Canadian wheat imported over the duty. The possibility of increasing domestic terminal prices under the present tariff is narrowly limited, for Canadian wheat already commands a price premium at American mills by reason of its inherent superiority to American spring wheats, and American wheats already enjoy some price enhancement because of the tariff.

A study of Winnipeg and Minneapolis prices during the past three crop years indicates that prices of American spring wheats at Buffalo, the natural import threshold, could not be raised, except in unusual years, by more than 10 or 12 cents a bushel. Prices of spring and winter wheats at most other markets could not be raised appreciably further without stimulating wheat imports and disrupting regional competitive relations in the milling industry. So slight an advance in prices to growers, partially offset by equalization fees, would hardly justify undertaking the experiment.

The latest bills contain substantial concessions to opponents of the central features of the plan, and include two alternatives or supplements to full operation with the equalization fee, notably loans to co-operatives and price insurance. The existence of these alternatives would impose heavier responsibilities upon the Board and decrease its chances of success, without promising larger price enhancement to growers.

STANFORD UNIVERSITY, CALIFORNIA

March 1927

# W H E A T   S T U D I E S

OF THE

## FOOD RESEARCH INSTITUTE

The central feature of the series is a periodic analysis of the world wheat situation, with special reference to the outlook for supplies, requirements, trade, and prices. Each volume includes a comprehensive review of the preceding crop year, and three surveys of current developments at intervals of about four months. These issues contain a careful selection of relevant statistical material, presented in detail in appendix tables for reference purposes, and in summary form in text tables and charts.

Each volume also includes six special studies bearing on the interpretation of the wheat situation and outlook or upon important problems of national policy. Typical subjects are listed on the fourth cover page of this issue.

The series is designed to serve the needs of all serious students of the wheat market, in business, government, and academic circles, by summarizing and interpreting basic facts and presenting current developments in due perspective.

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**FOOD RESEARCH INSTITUTE**  
**STANFORD UNIVERSITY, CALIFORNIA**

**DIRECTORS**

CARL LUCAS ALSBERG

JOSEPH STANCLIFFE DAVIS

ALONZO ENGLEBERT TAYLOR

The Food Research Institute was established at Stanford University in 1921 jointly by the Carnegie Corporation of New York and the Trustees of Leland Stanford Junior University, for research in the production, distribution, and consumption of food.

# THE McNARY-HAUGEN PLAN AS APPLIED TO WHEAT

## LIMITATIONS IMPOSED BY THE PRESENT TARIFF

In the preceding study of "The McNary-Haugen Plan as Applied to Wheat" (WHEAT STUDIES, February 1927, Vol. III, No. 4), we conducted our analysis on the assumption that the administrative board would successfully undertake to maintain a level of domestic prices some 50 cents above the Winnipeg price. Fifty cents happens to be roughly the amount of the present tariff duty of 42 cents a bushel plus the average shipping cost from Fort William-Port Arthur to American ports on the Great Lakes. This figure is modest in comparison with the expectations of many influential proponents of the measure, including Chairman Haugen of the House Committee on Agriculture. We employed it in preference to higher figures because it has been commonly used in debates and hearings, and because of our desire to consider the proposals in the most reasonable light.

It has been frequently assumed that a Wheat Board could maintain domestic prices at a margin of 50 cents over the Canadian price, with the present duty remaining at 42 cents a bushel. This assumption, as we shall see, is quite unfounded. In fact, the Board could not enhance American prices, behind the present tariff wall, to any such extent. If the Board were technically competent and well advised, it would recognize this limitation early in its career; otherwise it would experience severe disappointment as it proceeded. Sooner or later it would therefore face the alternatives of seeking from Congress a substantial increase in tariff rates (or an embargo on Canadian wheat), or of accepting the situation and making the best of it.

With respect to the first alternative, we note the striking fact that legislation has

been urged in the interest of a substantially higher wheat price without being accompanied by legislation for a higher tariff that is the *conditio sine qua non* of that higher price. The inadequacy of the present tariff was implicitly recognized in the Haugen bill (H.R. 11603, April 26, 1926, Section 18), which contained a clause empowering the President to place an embargo on the importation of wheat. Entirely apart from the merits of the specific proposal, it would seem to be legislative unwisdom to enact

a far-reaching innovation under circumstances that inherently and implicitly make the anticipated and desired result impossible. And yet this is the precise position in which the proposition stands at the present time.

In our previous analysis we predicated the existence of a power of embargo or such increase in the tariff duty as would permit the Board to main-

tain the assumed margin. Although the fundamental purpose of the proponents of the measure has not changed, the pending bills make no reference to price standards. They seem to imply that the Board would operate under the existing tariff.

In the present study, therefore, we consider in some detail the practical limitations upon the power of the Board to advance the domestic price of wheat under the present tariff. We discuss what the Board could be expected to accomplish within these limitations, and wherein its operating problems and the economic consequences of the measure would differ from those discussed on the other basic assumption. In a supplementary section we have included some observations on the latest bills, with special reference to the modifications of the plan which they have introduced.

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Our analysis rests in part upon an intensive study of American importation of Canadian wheat covering the crop years 1923-24 to 1925-26. In a previous issue of *WHEAT STUDIES* (November 1926, Vol. III, No. 1) we set forth the nature of our wheat imports from Canada, the reasons for the persistence of this trade, the channels through which it takes place, and the considerations which determine its extent. A quantity of detailed price data pertinent to the problem was assembled and studied, and in part published. The different problem here considered requires the use of much of the same material and frequent reference to the earlier study, but a different point of approach.

Throughout the public discussions of the proposed policies there has been a singular absence of concrete analysis. There has

been talk of wheat as if it were all alike; of the world price as if one could put his finger upon it; of an American price, as if it were independent of location, variety, grade, and milling quality. There has been little or no reference to differences among American wheats, or between American and Canadian wheats. There has been no adequate consideration of the processes of millers, the merchandising practices attending their operations, their competition in different regions. It is with such concrete matters that a Farm Board, operating in wheat directly or indirectly, would have to deal. Clarity on these points is essential to a sound formulation of the policy which a Farm Board is to administer. Among other things, it is a prerequisite for ascertaining how far American wheat prices could be raised behind the present tariff barrier.

## I. FUNDAMENTAL LIMITATIONS UPON PRICE INCREASES

Before entering upon the study of pertinent price data, it is desirable to present some broad considerations of a non-statistical character.

If the effort were made to raise American prices of wheat behind the tariff wall, the limiting factor would be the importation of Canadian wheat over the tariff. This wheat competes primarily in Buffalo, and to a lesser extent in other ports on the Great Lakes, with American spring wheats and hard winter wheats. The limitation would be directly effective on spring wheats, for which Minneapolis is the outstanding public market. Less directly the limitation would affect endeavors to enhance the prices of hard winter and soft red winter wheats.

Assuming no embargo on imports of Canadian wheat, a Wheat Board could, through its purchases of current surpluses over millers' demands, drive up the price of wheat in American ports on the Great Lakes to the point at which millers would find it just worth while to buy Canadian wheat and pay the duty and shipment costs thereon. Domestic prices could be maintained at a level such that Canadian wheat would trickle into American ports on the Great Lakes and sell for not over 50 cents a bushel (42 cents duty plus 8 cents ship-

ment costs) above the Winnipeg price of this wheat. Above this point domestic prices could not be raised, for at higher prices Canadian wheat would flow in larger quantities, millers would buy this in preference to American wheats, and the Wheat Board would have to purchase most of the American wheat offered.

This would not mean, however, that American wheats would sell, for example at Buffalo, for 50 cents a bushel over the Winnipeg price of Canadian wheat, even when Canadian wheats were being imported; for, by and large, Canadian wheats are intrinsically superior, from the millers' standpoint, to American spring wheats.<sup>1</sup> Canadian hard spring wheat is heavier, cleaner, and has a higher percentage of vitreous kernels, contains a higher percentage of protein, and produces more flour per bushel than does American hard spring wheat. This superiority, grade for grade and for the crop as a whole, exists practically always. It varies from year to year; but year in and year out, for customary uses by American millers, elevator-run No. 3 Manitoba Northern is about the equal of

<sup>1</sup> More fully discussed in "American Importation of Canadian Wheat," *WHEAT STUDIES*, November 1926, III, 9-12.

average choice No. 1 Dark Northern. To compare No. 1 Manitoba Northern with No. 1 Dark Northern would be misleading from the standpoint of the qualities and of the amounts of those grades that are present in the crops of the two countries. In less degree this is true also of No. 2 Manitoba Northern.<sup>1</sup> Canada has always a large surplus of premium-grade hard spring wheat; on the other hand, with our high standards of flour milling, we have usually some deficiency of premium soft red winter, of premium hard winter, and particularly of premium hard spring wheat.

This situation is the basis of the buying practices of mills.<sup>2</sup> The mills have their blending formulas and flour standards, which they preserve within a price. Whenever these standards cannot be exactly preserved (on account of too great scarcity and too high price of particular wheats), the most effective and the least expensive adaptation is made. Under some circumstances it pays a mill to import No. 1 Manitoba Northern rather than No. 3 Manitoba Northern as an alternative to seeking out fancy high-protein Montana hard wheat.

As a result of these conditions, millers in Buffalo and other ports on the Great Lakes can afford to pay a higher price per bushel for Canadian wheats, c.i.f. duty-paid, than for American wheats. The degree of superiority varies from year to year, and even within a season; so also does the premium that mills are ready to pay for Canadian wheats. But some premium, amounting to several cents a bushel, the mills are always ready to pay. This premium would persist if a Wheat Board were to bid up American wheat prices.

Moreover, if the Wheat Board were to drive up American wheat prices to a point

at which Canadian wheat would flow in, and to maintain prices of American wheats in Buffalo at a level of say 40 cents above the Winnipeg price, this would not cause a 40-cent enhancement of American wheat prices. Already, under the present tariff, without controlled marketing, prices of American wheats rule above Winnipeg prices. It is not in accord with experience to assert that the wheat tariff is or has been ineffective, or that the price of the entire American crop has been fixed by the price of the fraction exported. The tariff has had some price effect, though, as in the case of many manufactured goods, it has not caused domestic prices to rise by the full extent of the duty plus inward shipment costs. Our export surplus has tended to depress domestic prices, but it has not caused the entire crop to be sold at export prices, as has so often been alleged.

The precise extent to which the tariff has been effective in raising American wheat prices at terminals or to the growers, we are not in a position to say. Sir Josiah Stamp, in his comments on the situation, used a hypothetical figure of 20 cents a bushel.<sup>3</sup> Secretary Jardine has recently stated:<sup>4</sup>

Since the enactment of the emergency tariff in May, 1921, the annual average price for No. 1 dark northern spring wheat at Minneapolis has been from 16 to 27 cents a bushel above the level of No. 2 northern Manitoba at Winnipeg (two approximately comparable grades of wheat), except for a few months when our heavy 1924 crop, coupled with a light foreign crop, put us substantially on an export basis.

The Secretary of Agriculture made a particularized comparison; it seems probable that the margin between No. 1 Dark Northern Spring and No. 2 Manitoba Northern would not be the same as for the entire spring-wheat crops of the two countries. Moreover, the Secretary specifically excluded a period when we were practically on an export basis; for the entire period the margin would have been smaller. Furthermore, it seems certain that American spring-wheat prices are more favorably influenced by the tariff than are the other representative milling wheats; and that the relatively low price of Pacific wheats, durums, and undesirable varieties of winter wheats would

<sup>1</sup> See footnote (4), below.

<sup>2</sup> More fully discussed in *WHEAT STUDIES*, November 1926, III, 12-18.

<sup>3</sup> *Congressional Record*, May 25, 1926, p. 9915.

<sup>4</sup> In an address before the Kansas Day Club, Topeka, Kansas, January 29, 1927. On the basis of the descriptive definitions of the legal grades, No. 1 Dark Northern Spring would seem to be comparable with No. 2 Manitoba; but it is the experience of American millers familiar with the grinding of both wheats, that elevator-run No. 3 Manitoba Northern is comparable with, or a little better than, the general run of No. 1 Dark Northern for the customary purposes of American mills.

still further reduce the weighted average. Experienced observers in the trade, while unwilling to be quoted for publication, have expressed the opinion that the average price difference between Canadian and American wheats runs from 10 to 15 cents a bushel, or somewhat lower or higher in an occasional year.

Certainly the figure would vary from year to year. If, however, some such figures represent the effective enhancement of American wheat prices due to the present tariff, without controlled marketing, and in view of the intrinsic superiority of Canadian wheat expressed in premiums for this wheat, it is clear that the Wheat Board, operating with the present tariff, would be unable to enhance American wheat prices by anything like 50 cents a bushel.

Strong support to this inference is afforded by the actual importations of wheat during the past three crop years. In each of the past three years some Canadian wheat has been imported over the tariff barrier to be milled for domestic consumption. In 1923-24, when until April 1924 the duty was 30 cents a bushel, these imports were quite substantial. Imports have not been large since the duty was raised from 30 to 42 cents a bushel, and they have occurred largely within rather limited portions of the year. In view of these importations, it is clearly to be inferred that the limits to the process of enhancing domestic prices must have been narrow. Had the margin been really wide, no Canadian wheat would have been imported for domestic consumption: the duty would have been prohibitive.

Now the American wheat grower is essentially interested, not in the margin between American and Canadian prices, whatever it is or could be made to be, but in the net price advantage that he could secure under the proposed plan as compared with what he would receive without it. It is this advantage that we propose to appraise, as nearly as can be done with available data.

#### THE PROBLEM OF A WHEAT BOARD

This is not a mere academic question. If the pending bills were enacted into law, declared constitutional, and the scheme

placed in operation under a Wheat Board acting through denominated agencies, the Board would have to formulate its policy and procedure in part on the consideration of three important variables: (1) the intrinsic milling superiority of Canadian hard spring wheat; (2) the existing enhancement of American wheat prices in consequence of the tariff; and (3) the existing regional relationships within the American milling industry in connection with freight rates on wheats and flour and with the geographical distribution of wheat production. The Board would know that the American price could not be raised as much as 50 cents above the Canadian price, because American wheat is intrinsically inferior to Canadian wheat. The Board would know historically that since the establishment of the present tariff duty the weighted American price has never approached 42 cents over the Canadian price, but that, because of the existing tariff and other factors, it has been higher than the Canadian price in several recent years. The Board would naturally seek to learn how far it would be possible, in the particular year of operation, to raise American wheat prices behind the tariff wall, in the light of the influence of the three varying factors that have been mentioned. Looking at these three variables in the past, the Board would obtain some idea of what could be expected in the future.

The extent of intrinsic superiority of Canadian wheat is ordinarily established empirically quite soon after the harvest, since the mills have the advantage of their previous experiences. Something corresponding to the intrinsic superiority of Canadian wheat would be revealed to the Board by the premiums on protein being quoted in the Minneapolis market. If, for example, 14 per cent protein were quoted with a premium of 15 cents a bushel, that price would roughly correspond to the millers' estimate of the value of elevator-run No. 1 Manitoba Northern. From the American millers' standpoint, Canadian wheat is under-priced in Winnipeg, to an extent that represents the equivalent of a substantial reduction in the duty. The Board would find that this difference existed every year, and it could become ac-

quainted with the extent of its variation in past years.

The difference between the price levels of American and Canadian hard wheats cannot be determined until the close of the crop year, even for spring wheats; but a rough measure of the seasonal difference could be reached fairly early in the period of heavy autumnal marketing. The Board could get a general idea of how much the difference had been in past years, and make an estimate of the current difference. The price advantage held by American wheat at present would naturally minimize the scope of action of the Board behind the tariff wall. The actual test of the scope would be a market test, and the indicator would be the duty-paid importation of Canadian wheat.

The Board would further operate under limitations imposed by existing relationships in the milling industry. In the course of time we have developed regional relations in wheat growing and flour milling that are the expression of soil and climate, distribution of population, and evolution of freight-rate structure. The freight-rate structure is hardly subject to change during the year and the distribution of population changes slowly. The flour market is relatively stable for the different types of flour and the different classes of population. Great variations occur, however, in the quantities and qualities of the wheat crops of the different regions. Since milling capacity is everywhere excessive, these regional variations in quantities and qualities of the wheat crop result in annual variations in the regional activities of flour mills, the total outturn of flour and the distribution in consumptive channels remaining relatively constant. The Board would need to determine, as an act of policy, whether these regional adjustments should be left to themselves at the contemplated higher price level, or whether the Board should contemplate arbitrary alterations in, or stabilization of, flour milling in the different regions. To secure the co-operation of the milling industry the Board would be strongly impelled to interfere as little as possible with the relationships that would exist without it. In any event, the inevitable regional variations in quantities and quali-

ties of the wheat crop produce variations in regional prices that inevitably would modify the primary tactics of the Board in driving up the domestic price of wheat at other points than at the threshold of import.

A Wheat Board might conceivably elect to follow a purely experimental method, and determine by trial and error how far it could drive up domestic prices in each of the several regions of the country. If it were well advised, however, it would study the occurrences of recent years for the purpose of instruction. Certainly it would do this if it contained experienced grain traders or flour millers among its membership or on its staff of experts.

In order to determine, for a given year, what might be the behavior of the three variables that have been described, the Board could ask what had been their behavior during previous seasons. This the Board could test out on the basis of available price material. It could first inquire in what periods and to what extent duty-paid importation had taken place. It could attempt to correlate such importation with price differentials prevailing at the time of importation, and for periods of no importation the Board could attempt to determine at what price differentials importations did not occur. Selecting comparable Canadian and American spring wheats at a common point undisturbed by transportation charges, the Board could determine for a completed season the margin between the price of duty-paid Canadian wheat and domestic wheat. This margin, broadly considered, would represent the difference between (1) 42 cents and (2) the sum of the price advantage of American wheat and of the intrinsic superiority of Canadian wheat in terms of price. This difference would represent hypothetically the maximum amount of price increase possible. The Board could then determine by scrutiny of these margins, or spreads, particularly in relation to their seasonal behavior, what might have been expected as a result of a price-raising procedure.

Having thus roughly determined what might have been possible in a particular completed year, for example 1923-24, the Board would have something to guide it in the event of the appearance of another year



in which the quantities and qualities of wheat in the two countries resembled those of 1923-24. If the Board were able to secure representative samples of crop years, such an orientation would enable it, in advance of empirical results and indeed in preparation for them, to modify its procedures in accordance with the behavior of the variables in a particular crop year.

In the following analysis we have attempted a portion of such a study as a Wheat Board would find it useful or perhaps necessary to make as a basis for intelligent determination of policies and

procedures. In this discussion we proceed first to consider how far it would have been possible, in each of the past three crop years, to drive up prices of American wheats at Buffalo. For transportation reasons, Buffalo is the principal import threshold.<sup>1</sup> It lies on the natural route of Canadian wheat shipped through the United States to overseas export markets. Shipment costs on Canadian wheat to Buffalo are no higher than to other American milling centers along the Great Lakes. After considering the case at Buffalo, we shall be able to consider other wheats and other milling centers.

## II. LIMITS SUGGESTED BY VARIOUS PRICE COMPARISONS FOR BUFFALO

The discussion can be made most concrete if we first phrase the problem as follows: How great an advance in prices of American wheats at Buffalo could have been secured during the past three crop years, with the present tariff, if a Wheat Board had been in full operation under the plan now proposed?

Price comparisons for Buffalo can be made simply and with substantial accuracy, in the absence of published quotations in Buffalo itself, if one takes Winnipeg prices of Canadian spring wheat, plus 42 cents, and Minneapolis prices of American spring wheat. No allowance for freight is necessary, for costs of shipping American wheat from Duluth or Minneapolis to Buffalo are roughly equal to costs of shipping Canadian wheat from the head of the lakes (as quoted at Winnipeg) to Buffalo.<sup>2</sup>

The past three years are especially valuable for such comparisons because they present three different situations each of which is likely to recur. The first year, 1923-24, was one of a bumper crop in Canada and a moderately large but low-quality crop in the United States. In 1924-25 the Canadian crop was short and poor,

and the American crop large and good. In 1925-26 the Canadian crop was large, the American crop short, but both were of good quality.

The analysis would be exceedingly simple if all wheats were the same in Canada and in the United States; if crops and crop conditions were uniform from one crop year to another; and if marketing proceeded at a uniform or predictable rate. These conditions do not exist. In both countries crops vary greatly, in size and in quality, from year to year. In Canada wheats are very homogeneous as to type, vary considerably in grade and quality, but are on the whole distinctly superior in quality to the spring wheats of the United States. In this country there are many spring wheats, exhibiting extreme variations in quality and in price. The rate of marketing varies greatly from year to year.

There is therefore no single series of quotations within the narrow range of Canadian prices that can be directly compared, on the basis of milling values, with any single series of quotations within the wide range of American prices. It is therefore necessary to make a number of price comparisons, all of them containing one kind of bias or another, and to use these critically, as checks upon one another and in combination, to reach a reasonably trustworthy appraisal.

We have made six separate comparisons, using in each case weekly averages of daily

<sup>1</sup> For fuller discussion, see "American Importation of Canadian Wheat," *WHEAT STUDIES*, November 1926, III, 18-23.

<sup>2</sup> Duluth prices are about the same as Minneapolis prices, but much less comprehensive and representative. On the general subject, see *WHEAT STUDIES*, November 1926, III, 18-32.

prices,<sup>1</sup> for the three years from July 1923 to June 1926. Although the spring-wheat crop year runs roughly from September to August, we have used the July-June year because it is the milling year and because it would probably be the crop year upon which a Wheat Board would operate. The detailed comparisons are shown in appendix tables, and the margins shown by the different comparisons are summarized in Table 1, pp. 243-44.

#### SERIES COMPARED

As a preliminary to drawing inferences from the comparisons, it is necessary to indicate the nature of the series compared and certain qualifications affecting each.

I. *Comparison of Futures Prices.*—We first compare prices of the nearest future at Winnipeg, plus 42 cents, with prices of the nearest future at Minneapolis. At first sight, this might seem a rational as well as a convenient procedure, and the margins shown are comparatively wide. This comparison, however, is vitiated by several facts. The wheats deliverable on futures contracts are quite different in the two markets; the relations between cash prices and futures in each country, and the relations between the futures in the two countries, vary from year to year.

In Canada, a miller can accept delivery of wheat under a hedge, knowing that he will receive elevator-run No. 1 Manitoba Northern, or other official grade under a stated differential. The deliverable wheats are mixed to some extent, but are nevertheless representative high-grade wheats that the miller can readily use in his milling operations.

In the United States, however, a miller can rarely afford to accept delivery on a hedge, for he knows that he would receive low-quality mixed No. 1 Dark Northern wheat, or mixed lower grades at stated differentials. These would represent the milling culls of the spring-wheat region. Most mills are averse to purchasing such wheats in the cash grain market, and they can be utilized

to advantage only to mix with high-grade wheats in an extensive milling program. Only the largest mills could afford to take delivery of even a moderate amount of such wheats. The average value of these wheats would be substantially below the weighted average price of cash sales, and usually in the lowest ranges of cash prices of the day. During the periods of the May and July futures the wheat deliverable on future contracts would be worth to the miller relatively much less than the wheats he had been purchasing throughout the autumn and winter.

How misleading would be any inference from comparison of futures prices is shown by a comparison of the difference in each country between futures and cash closing prices, using for Minneapolis the high cash closing price that most nearly corresponds to the cash closing price in Winnipeg. In Winnipeg during the crop year 1923-24, the average price of futures was 1.1 cents below the cash closing price; in 1924-25, it was 1.7 cents; and in 1925-26, it was 3.2 cents. In Minneapolis, on the contrary, for the crop of 1923-24, the average price of the futures was 16.8 cents below that of the high cash closing price; in 1924-25, it was 30.3 cents; and in 1925-26 it was 20.7 cents. Contrasted with Canada, the future in Minneapolis stands relatively considerably too low.

How such a use of prices of futures might lead to an absurd conclusion may further be illustrated for the year 1924-25. Ordinarily, the yearly average of futures prices in Winnipeg stands considerably below the corresponding figure for Minneapolis; for example, it was 11.2 cents lower in 1923-24 and 7.0 cents lower in 1925-26; but in 1924-25 the Winnipeg price stood 12.3 cents above the Minneapolis price. If, now, one were to add 42 cents to the Winnipeg price for 1924-25, 164.3 cents, this would give a figure of 206.3 cents as the point to which the American price of 152.0 might hypothetically be driven. But the average cash closing price of No. 1 wheat in Winnipeg for the year was 166.0, which, plus 42 cents, gives 208 cents. The average of high cash closing prices in Minneapolis was 182.3 cents, which subtracted from 208 cents leaves 25.7 cents as the margin between cash closing prices, whereas on the basis of futures, the margin

<sup>1</sup> Comparisons of daily data could readily be made. As we have tested it, however, the additional labor would yield results essentially the same as we have secured by the use of weekly averages.

would have been 54.3 cents. Thus, due to an unusual position of futures in Winnipeg, the use of futures to judge of the possibility of bidding up the price leads to a result twice as large as demonstrably could be accomplished on the basis of cash closing prices.

This all means that a Wheat Board, if it sought to use futures prices as the basis of driving up American cash prices, would soon find itself without the support of mills in competition with each other; for the mills would know to what price-point the milling value of the wheat was related and they would not pass that price-point. The consideration of these various merchandising factors leads to the conclusion that a comparison of futures prices in Minneapolis and Winnipeg cannot be employed to judge of the extent to which American prices might have been driven up in the past or as a rule of action for a Wheat Board in the future.

II. *Comparisons of Top Cash Prices.*—Second, we compare the cash closing prices of No. 1 Manitoba Northern, plus 42 cents, with the highest cash closing prices quoted for No. 1 Dark Northern Spring at Minneapolis. These are comparisons of high-grade wheats. A large amount of Canadian wheat grades No. 1; there is much less No. 1 Dark Northern Spring of the quality represented in the highest cash closing prices. The margins shown are too wide because elevator-run No. 1 Manitoba is intrinsically much superior to the general run of No. 1 Dark Northern Spring, and in most years superior to the qualities of this grade that are covered by the highest quotations used. A fairer comparison would be made by using prices of No. 1 Hard Spring wheat, or Fancy Montana, which regularly command premiums over No. 1 Dark Northern; but the quantities of these wheats are usually so limited that complete and representative series of quotations cannot be secured. The upward bias of these figures is smaller than in the comparison of futures prices, but it renders impossible the direct use of these margins to indicate how far a Wheat Board might have driven up domestic prices of No. 1 Dark Northern.

III. *Comparisons of Fairly Comparable Wheats.*—Third, we compare daily low cash prices of No. 3 Manitoba Northern at Winnipeg, plus 42 cents, and the weighted average of cash sales of No. 1 Dark Northern Spring at Minneapolis. These are fairly comparable wheats. The latter series, as computed by the U. S. Department of Agriculture, is quite representative because of the large volume, but includes a large amount of low-quality No. 1 wheat.<sup>1</sup> No. 3 Manitoba Northern is intrinsically comparable with the general run of No. 1 Dark Northern, with a tendency to advantage, varying from year to year, in favor of the Canadian wheat. For this reason, and since the range between daily highs and lows for No. 3 at Winnipeg is not large, we have used daily lows in Winnipeg instead of daily highs or the average of the two.

IV. *Comparison of High Cash Sales.*—Fourth, we compare high cash sales of No. 3 Manitoba Northern at Winnipeg, plus 42 cents, with high cash sales of No. 1 Dark Northern at Minneapolis. The high cash price at Winnipeg represents the best of elevator-run; the high cash sales price at Minneapolis represents fancy milling samples within No. 1. Here again are fairly comparable wheats, with less bias either way than appears in the two preceding comparisons. But in a year of a short American crop, as in 1925-26, the bias may favor the American wheats.

V. *Comparison of Cash Closing Prices.*—Fifth, we compare cash closing prices of No. 3 Manitoba Northern at Winnipeg, plus 42 cents, with high cash closing prices of No. 1 Dark Northern at Minneapolis. The cash closing price in Winnipeg is a single figure, representative of elevator-run average No. 3 Manitoba. At Minneapolis, instead of a single figure, we have three ranges—"ordinary to good," "good to choice," "choice to fancy." The latter includes the higher qualities of No. 1 Dark Northern and is surpassed only by Hard Spring and special Montana wheats. As a rule, this is the class that most nearly corresponds, for the

<sup>1</sup> Some hard spring wheats, purchased by mills in the country, do not appear in the Minneapolis market, and the average quality of these wheats is above the average of the crop.

miller, to No. 3 wheat purchasable at cash closing prices in Winnipeg.

VI. *Comparisons of High Cash Prices and Quotations.*—Finally we compare the high cash price of No. 3 Manitoba Northern at Winnipeg, plus 42 cents, with the high quotations (of a range of varying qualities) on the basis of the nearest future, of No. 1 Dark Northern Spring at Minneapolis. Minneapolis prices represent millers' quotations rather than those of grain dealers or exporters, and as there are no regularly published quotations of this character in Winnipeg, we use for comparison the fairly comparable high cash prices at Winnipeg.

SUMMARY OF COMPARISONS

The weekly margins between the Winnipeg prices (plus 42 cents a bushel) and the Minneapolis prices, on the six different bases of comparison, are summarized in Table 1. The results are far from identical because the several comparisons utilize somewhat different wheat values and forms of quotation.

The margins shown by the first comparison are very much wider than in any of the others, and, for the reasons already stated, they afford no direct basis for judging the extent to which prices could have been driven up by a Wheat Board. The second comparison is subject to the same sort of bias, though in lesser degree, and affords a very narrow basis for judging the limits of price-raising tactics. The last four comparisons, though showing different margins, are more representative and therefore more significant. The annual averages for the last five bases, and the averages of the five in each crop year, run as follows, in cents per bushel:

	1923-24	1924-25	1925-26
Basis II .....	15.1	25.7	17.5
Basis III .....	11.5	33.3	15.8
Basis IV .....	8.2	16.1	5.5
Basis V .....	7.8	16.4	8.8
Basis VI .....	8.5	16.9	12.2
Average .....	10.2	21.7	12.0

These figures suggest that in 1924-25, with an unusually short crop in Canada and a large crop in the United States, American

TABLE 1.—MARGINS BETWEEN WINNIPEG PRICES, PLUS 42 CENTS, AND MINNEAPOLIS PRICES, ON SIX DIFFERENT BASES\* (Cents per bushel)

Week ending	Basis I	Basis II	Basis III	Basis IV	Basis V	Basis VI	Ave. of II-VI
1923							
July 7...	47.0	20.0	28.9	15.9	14.5	17.1	19.3
July 14...	45.6	18.1	25.5	12.8	11.8	11.5	15.9
July 21...	46.8	19.8	25.8	14.9	12.6	12.4	17.1
July 28...	44.1	17.5	22.0	11.3	10.3	9.9	14.2
Aug. 4...	34.7	15.7	20.7	9.5	8.5	8.4	12.6
Aug. 11...	30.2	20.6	22.1	14.7	13.7	14.3	17.1
Aug. 18...	27.4	24.4	22.6	15.6	17.3	17.6	19.5
Aug. 25...	29.3	32.0	28.7	25.7	23.7	24.5	26.9
Sept. 1...	28.0	30.1	24.0	21.0	20.1	21.8	23.4
Sept. 8...	26.3	27.3	19.2	18.7	17.9	19.6	20.5
Sept. 15...	24.6	23.5	13.5	13.9	13.3	16.1	16.1
Sept. 22...	25.3	18.0	13.5	13.3	12.7	14.8	14.5
Sept. 29...	24.9	13.7	9.1	7.8	7.9	8.7	9.4
Oct. 6...	22.4	13.7	9.9	8.4	8.3	8.4	9.7
Oct. 13...	22.4	12.0	7.7	6.0	5.9	7.2	7.8
Oct. 20...	23.4	11.5	5.6	3.8	4.0	5.0	6.0
Oct. 27...	24.4	11.1	4.2	3.1	3.1	3.7	5.0
Nov. 3...	27.0	13.2	7.5	5.4	5.2	5.9	7.4
Nov. 10...	28.5	18.0	12.5	9.3	10.0	10.6	12.1
Nov. 17...	30.1	19.7	13.9	11.6	11.5	12.5	13.3
Nov. 24...	30.3	19.1	12.9	11.1	10.8	10.8	12.9
Dec. 1...	29.0	16.5	10.2	7.9	8.0	8.6	10.2
Dec. 8...	25.0	13.4	7.2	5.4	4.7	6.0	7.3
Dec. 15...	25.3	11.6	5.5	4.5	3.7	5.1	6.1
Dec. 22...	26.9	13.7	8.7	6.0	5.7	6.7	8.2
Dec. 29...	27.3	14.3	9.7	7.2	6.4	6.9	8.9
1924							
Jan. 5...	28.5	12.7	6.5	5.3	4.7	5.3	6.9
Jan. 12...	30.6	12.7	6.7	4.9	4.8	5.1	6.8
Jan. 19...	30.4	11.6	6.8	5.0	4.0	5.5	6.6
Jan. 26...	30.1	11.5	7.2	4.6	3.9	4.4	6.3
Feb. 2...	29.6	10.6	6.6	4.3	3.4	3.8	5.7
Feb. 9...	30.1	11.5	7.3	5.2	4.6	5.9	6.9
Feb. 16...	30.4	12.6	8.2	5.7	5.7	7.2	7.9
Feb. 23...	30.0	11.9	7.0	4.1	4.6	5.1	6.5
Mar. 1...	30.1	11.9	8.1	5.4	4.3	5.5	7.0
Mar. 8...	28.3	9.6	6.6	2.0	2.1	1.8	4.4
Mar. 15...	29.1	10.6	5.5	3.3	3.5	3.7	5.3
Mar. 22...	28.9	10.2	6.1	3.6	3.3	3.8	5.4
Mar. 29...	29.5	11.6	7.0	4.0	4.4	5.7	6.5
Apr. 5...	28.8	11.4	6.4	4.2	4.2	4.4	6.1
Apr. 12...	30.1	12.3	7.8	6.1	5.0	5.2	7.3
Apr. 19...	31.1	12.5	8.8	5.3	5.3	6.1	7.6
Apr. 26...	30.3	10.3	5.4	4.5	3.1	4.6	5.6
May 3...	32.3	12.5	9.0	6.7	5.7	6.2	8.0
May 10...	32.2	12.5	8.0	5.9	5.9	6.1	7.7
May 17...	32.4	12.5	8.6	5.7	5.8	5.6	7.6
May 24...	34.5	14.3	9.7	8.1	7.7	8.4	9.6
May 31...	35.0	14.5	10.9	8.5	7.9	8.8	10.1
June 7...	37.7	17.6	13.1	10.4	10.9	11.0	12.6
June 14...	36.9	14.3	10.9	7.9	7.3	7.6	9.6
June 21...	39.4	12.8	8.0	6.2	5.8	6.2	7.8
June 28...	39.9	11.8	8.8	4.5	4.2	4.3	6.7
Average...	30.8	15.1	11.5	8.2	7.8	8.5	10.2

\* Data from Appendix Tables I-VI.



prices of spring wheats might have been driven up some 22 cents a bushel, but that in years like 1923-24 or 1925-26 the extent of possible advance in American prices of spring wheat would be much less, say from 10 to 12 cents a bushel. So far as averages can represent so complex a relationship, we feel that these fairly represent the possibilities of the situation.

It is desirable, however, to go behind the annual averages. Glancing over the weekly averages shown in Table 1, one observes that, except in 1924-25, the average American price was within 10 cents of the duty-paid Canadian price during a strikingly large number of weeks, and in a surprising number of weeks within 5 cents of that price. Table 2 presents a distribution of the

Canadian wheat was available in volume, and that on the whole the margins are much narrower in October-March than during April-September.

Since margins were lowest, as a rule, when wheats were available in largest quantity, one would infer that mills would be in a position to stock up at these seasons, and would be less active purchasers at other seasons, so that the lower rather than the higher margins would represent more truly the actual limitations. Since, however, there were many weeks in which the margin was much wider than 10 cents, it may be suggested that in these weeks prices could have been driven up so much farther that the average advance might have been greater than the average figures

TABLE 2.—NUMBER OF WEEKS SHOWING INDICATED MARGINS BETWEEN WINNIPEG PRICES (PLUS 42 CENTS) AND MINNEAPOLIS PRICES, COMPARED ON BASES II-VI, 1923-24 TO 1925-26\*

Margin (Cents)	1923-24 Weeks showing margin indicated					1924-25 Weeks showing margin indicated					1925-26 Weeks showing margin indicated				
	Basis II	Basis III	Basis IV	Basis V	Basis VI	Basis II	Basis III	Basis IV	Basis V	Basis VI	Basis II	Basis III	Basis IV	Basis V	Basis VI
45.1 to 50.....	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..
40.1 to 45.....	..	..	..	..	..	1	6	..	..	..	..	..	..	..	..
35.1 to 40.....	..	..	..	..	..	15	13	..	..	2	1	..	..	..	..
30.1 to 35.....	2	..	..	..	..	5	18	8	6	5	7	4	..	..	..
25.1 to 30.....	1	4	1	..	..	6	6	6	11	11	8	4	..	1	3
20.1 to 25.....	3	5	1	2	2	4	4	7	5	6	5	10	2	8	9
15.1 to 20.....	11	1	3	2	4	11	1	4	5	3	9	7	12	9	12
10.1 to 15.....	34	9	9	10	8	9	2	6	5	5	10	10	8	6	5
5.1 to 10.....	1	32	23	18	28	1	..	12	11	8	4	13	5	9	10
0.1 to 5.....	..	1	15	20	10	..	..	7	8	10	5	4	9	8	9
— 4.9 to 0.....	..	..	..	..	..	..	..	2	1	2	3	..	7	7	3
— 9.9 to — 5.....	..	..	..	..	..	..	..	..	..	..	..	..	4	2	1
— 14.9 to — 10.....	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..
— 19.9 to — 15.....	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..

\* Computed from data in Table 1, pp. 243-44.

margins in each of the three crop years, for the last five bases of comparison. This table shows that in 1923-24 there were comparatively few weeks in which margins were higher than 15 cents, on any of these bases, and that predominantly the margins were not over 10 cents. The number of weeks with higher margins was somewhat larger in 1925-26, and much higher in 1924-25, on account of different relations between the crops in the two countries. Reference to Table 1 makes it clear that, for the most part, the weeks showing the widest margins occurred before new-crop

we have shown. This possibility merits some consideration, in connection with the seasonal factors at work.

#### SEASONAL BEHAVIOR

Scanning the three years of weekly average margins shown by the last five bases of comparison in Table 1, one observes certain common tendencies suggesting the operation of seasonal factors. With one exception in Basis III, the movements of the margins are essentially identical in direction, though differing somewhat in onset,

degree, and duration. Characteristically, spreads are wide in the few months before new Canadian wheat comes to market, but in September they decline sharply. At the lower level, the spreads remain relatively comparable until spring, when they widen. The points of transition are fairly sharp, though varying somewhat from basis to basis. During the year 1923-24, the period of low spread was from October until June; during 1924-25, the period of low spread did not begin until December and did not last beyond April; during 1925-26 the period of low spread appeared in September, but did not last beyond March. The one significant exception was the spread on Basis III during 1924-25, which declined less than the spreads on other bases of comparison. This aberrant behavior is not easy to explain; it was probably due largely to the failure of premiums to affect the weighted Minneapolis price as much as they affected the quotations employed in the other four comparisons.

How can one account for the common tendency? Just before the spring wheat comes to harvest, the price of old spring wheat is likely to be high relative to that of new winter wheat. As soon as the American spring-wheat crop is harvested, just before the Canadian harvest, Canadian wheat may be high relative to ours; but the interval is short. The heavy country marketing of spring wheat occurs during September-November, in order to take advantage of lake navigation. During this period of heavy receipts at terminal markets, American and Canadian spring wheats are likely to establish the price relations that will be characteristic of the crop year. During the winter months, when lake navigation is closed, with large amounts of Canadian wheat lying in store at lake ports, the Canadian price tends to be low relative to the American price. Following the resumption of lake navigation in April, and the subsequent overseas flow of wheat from lake storage, the price of Canadian wheat may rise relative to that of spring wheat in the United States.

Now would it be possible for a Wheat Board to take advantage of the seasonal relationships in such a way as to raise the domestic price of wheat by more than the

average figures we have reached? No conclusive answer to this question can be given, but a study of the price material in connection with the rate of marketing and milling practices lends no support to this view.

In the early part of the period of marketing of domestic spring wheat, the margins between Winnipeg cash prices (plus duty) and Minneapolis cash prices are relatively wide, because one compares old-crop Canadian wheat with new-crop American wheat. If at this time the Wheat Board should bid up the price of wheat in the country, it would force American mills either to pay the higher price or to lay in less wheat. The mills, knowing that later they could choose between Canadian wheat and domestic wheat, would presumably adapt their purchases and operations to this circumstance and await the period when the spreads were naturally low and Canadian importations readily available. This procedure might raise the arithmetic average of the prices for the period, but not the weighted average, for mill purchases would be reduced at higher prices and increased at lower prices.

Moreover, millers have other tests than wheat prices; they have flour prices at home and in Canada. They would naturally employ buying tactics based on their recognition of the fact that the margin between American and Canadian prices is subject to considerable seasonal variation.

The chief restriction upon the price-raising tactics of the Wheat Board would lie in the heavy autumnal marketing of Canadian wheat, which makes it then relatively cheap and fills the storage space in upper and lower lake ports. This movement the Board could not hope to modify. If it attempted to buy up American wheat in the fall and hold it until Canadian wheat was relatively high, it would run counter to established milling practices. When, during the fall and early winter, the spread between American and Canadian prices is low, the mills would lay in wheat and the Board could not stop them unless, holding the entire domestic crop in a pool, it were to refuse to sell American wheat to mills except for hand-to-mouth operations. Such tactics would still further narrow the spread in the period of active marketing, and mills

would import earlier than they otherwise would. Later, when the spread is wider, naturally mills would only buy on a hand-to-mouth basis, and would refuse to accumulate stocks. Only by a rationing of the mills with domestic wheats could the Board minimize sales of domestic wheat when the spread was narrow and enlarge them when the spread was wide, and even thus only by stimulation of imports from Canada. This would involve, among other things, abolition of the normal curve of milling, at what cost to mills and flour buyers cannot be foreseen.

The outcome would not be the same in different years, and might vary widely under different circumstances in crop yields and qualities in the different regions. But it would be hazardous for wheat growers to stake anything on the assumption that domestic prices might be driven up, on the average for the spring-wheat crop, as far as they could be driven up in the weeks of maximum influence. It would be safer to assume that an average figure would represent the most that could be accomplished. Against the weeks in which it would be

possible to drive the price up higher must be balanced the weeks in which it would not be possible to drive up so much. The actual result might easily be below the average, for the weeks of active marketing and low spreads have more actual significance than the weeks of light marketing.

We feel the conclusion is irresistible that, during two of the last three crop years, when the Canadian crop was representative, an appraisal of the prices current on the two sides of the international boundary indicates that the maximum effect of a successful administration of the equalization fee with the tariff of 42 cents would have been an increase, in the price of American spring wheats at Buffalo, of something like 12 cents a bushel.

This conclusion is reinforced by the consideration that both in 1923-24 and 1925-26, Canadian wheats were imported over a tariff of 42 cents a bushel, though in small amounts and at irregular intervals. It could not have required a radical advance in American prices to attract considerably larger and more continuous importations over the 42-cent duty.<sup>1</sup>

### III. LIMITATIONS IN OTHER MARKETS

Thus far we have considered only American spring wheat at Buffalo. Some consideration must be given to other markets than

<sup>1</sup> In the recent discussions of the latest bills, it has been suggested that it might be held legally possible to apply the equalization fee to imported as well as to domestic wheat. If this were done, it would have the effect of raising the tariff duty by the amount of the equalization fee. With a substantially higher tariff, such as we predicated in our previous discussion, a high equalization fee might represent so great an addition to the tariff duty as to make it prohibitive. In operations under the present tariff, however, prices could not be raised sufficiently to involve heavy losses on exports, and the equalization fee required to cover these losses would not be large. Assuming that in an ordinary year the price of domestic wheat behind the tariff wall of 42 cents might be raised by some 12 cents a bushel, the equalization fee necessary to cover the losses on exports under such circumstances would be small, possibly 4 or 5 cents a bushel. Only to some such extent, hypothetically, would a wider scope be afforded for the operations of the Board, if it were held legally proper to apply the equalization fee to imported wheat. Moreover, the application of the fee to imported wheat would stimulate importation of flour, unless the fee were applied also to imported flour.

<sup>2</sup> A rough average. See WHEAT STUDIES, III, 18-23.

Buffalo and to other wheats than spring wheats. The Board might conceivably undertake to drive up prices in other areas higher than it could maintain them at Buffalo. The discussion can be conducted, for the most part, on the basis of representative grades of spring and winter wheats, namely No. 1 Dark Northern Spring, No. 2 Hard Winter, and No. 2 Soft Red Winter.

#### THE SITUATION AT MINNEAPOLIS

In the Minneapolis district, American spring wheats are substantially cheaper than comparable Canadian spring wheats, duty-paid, on account of the difference in transportation costs. Shipment costs on Canadian wheat coming in from Fort William to Minneapolis and Chicago are about as high as the charges to Buffalo, while the charges on domestic spring wheat are some 8 cents lower than to Buffalo.<sup>2</sup> In order to make the comparison for the Minneapolis-Chicago district, as we have made it for



Buffalo, one would need to add to Winnipeg prices not only 42 cents for the duty but 8 cents for shipment costs and compare these figures with the Minneapolis prices.

What would be the result if, under these circumstances, the Board should undertake to drive up the price of domestic wheat at Minneapolis 8 cents more than at Buffalo? The miller's incentive to buy wheat in Minneapolis depends upon his market for flour. If, hypothetically, flour should be milled in Minnesota out of wheat costing 8 cents more than wheat milled in Buffalo, this would increase the price of flour in Minnesota, by a definite differential over that in Buffalo. Under these circumstances, Buffalo mills would ship west and southwest almost to Chicago, invading the central territory of Minnesota mills. Hence the mills of the lower lake region would gain in flour output and in expansion of flour territory at the expense of Minnesota mills.<sup>1</sup> In fact, however, an increase in Minneapolis prices of domestic spring wheat would correspondingly increase prices of this wheat at Buffalo. If persisted in, this would prevent Buffalo mills from using domestic spring wheat and require them to depend upon imported Canadian wheat and domestic winter wheats. The actual outcome would be that Minnesota mills could not afford to pay the higher prices for domestic spring wheat because they could not profitably market the flour.

#### OTHER WHEATS THAN SPRING WHEATS

Considerations relating to flour markets would interpose limitations upon price elevation in the different winter-wheat regions. Apart from differentials for variety and quality, hard winter wheat meets hard spring wheat on a c.i.f. basis in the mills of the northern states extending from Minneapolis to Buffalo. Thus, under existing conditions, Kansas mills can market their flour in central and eastern trunk territory. If the price of Kansas wheat were to be driven up out of line with spring wheat c.i.f. mills

<sup>1</sup> The unfavorable action on the western mills might be minimized somewhat by the prices for feed. The lower outturn of flour would be accompanied by a lower outturn of mill feed, which would raise the price of mill feed and enable the miller to pass to the grain owner a part of the burden of price increase.

from Minneapolis to Buffalo, flours milled in Kansas would be out of line (preferential freight rates disregarded) in central and eastern trunk territory.

On paper, the Board might undertake to raise the price of wheat at Kansas City up to one of three successive levels. The lowest level would be to an extent proportional to the price increase in hard spring wheat, so as to maintain the normal parity of hard winter and hard spring wheats c.i.f. mills in states adjacent to the Great Lakes. The second level would be to the point where Kansas wheat would be too dear to compete with hard spring wheat in mills from Minneapolis to Buffalo, but not dear enough to warrant shipment of spring wheat to the southwest mills. The third level would be such an elevation as would bring Canadian spring wheat, duty-paid, to Kansas City.

Practical considerations, however, would limit the Board to the first of these objectives. If the price of hard winter wheat were driven up at Kansas City, this would make it so dear at Buffalo that Buffalo mills would import Canadian wheat in substitution; if persisted in, the flour from imported wheat would encroach on the customary markets of hard winter-wheat flour. If it were attempted to hold the price of wheat in Kansas City 8 cents over the relative price of comparable wheat in Buffalo, this would cost the Kansas mills their eastern markets, and would enable Buffalo mills to ship flour westward practically to the Mississippi River.

Anything of this sort would be impracticable. The mills would not willingly adapt their purchases to distorted flour markets, and we may be sure that growers in the different regions would support the mills in their resistance to the introduction of inequitable relations. The Board would wish to avoid the effects of abnormal regional wheat prices on flour production, and conversely also the effects of abnormal regional flour production on wheat prices. We take it, therefore, that the Board could not maintain unusual differentials between regions on different varieties and grades of wheat.

For administrative reasons, it would be necessary to have differentials between varieties and grades corresponding to flour values, and it would be necessary to main-

tain differentials between regions in order not to disrupt flour markets and introduce artificial inequalities. Thus in practice the different representative hard wheats would be expected to bear to each other about the same relations at the enhanced price level that they do normally.

This lower-lake mill district uses soft red winter as well as hard red winter wheat from the Southwest. In certain years, driving the price of hard spring wheat up to the point where Canadian spring wheat would come in at Buffalo would directly react upon the prices of soft red winter, in other years this might not be directly apparent; the behavior would depend upon the relative positions of premium wheats of the three varieties.

During 1925-26, hard spring wheat coming in from Canada would have reacted more against hard winter wheat from the Southwest than against soft red winter wheat coming from east of the Missouri; in 1923-24 this relationship would have been reversed. Broadly considered, however, the more Canadian wheat entering the lake milling district east of Toledo, the less demand the mills would have for winter wheats, within the range of adaptability of their milling blends. And since Canadian wheats lend themselves admirably to the production of strong bakers' flours, the possibility of grinding Canadian wheats would enable the mills in the Buffalo district to push their flour marketing both southward and westward. For soft wheats as well as hard wheats, notably higher prices could be secured at interior points only by letting in more Canadian wheat at Buffalo, increasing the exportable surplus to be sold at a loss, and disturbing the relations among milling centers.

If it attempted to secure *for each region* the maximum price that could be exacted from millers, the Wheat Board would find itself, to some extent in all years and in some years to a critical extent, arousing abnormal competitions between the wheats of different regions, creating artificial eddies and currents of flour commerce that would react adversely on the sales of certain mills with relation to their output, capacity, and customary areas of distribution. At best the Board would be charged

with doing this, and it would certainly feel constrained to reduce to a minimum the grounds for such charges.

#### CONCLUSION

For the most part, therefore, the Wheat Board could not drive up prices of wheats in other markets farther than it could drive up the price of domestic spring wheat at Buffalo. For local areas it might occasionally do more. For example, if the southwestern crop should happen to be short and below par in protein, the premiums on high-protein would rise and the Kansas mills might be willing to pay a somewhat higher price, up to the point where outside wheat and flour would flow into the market area of the Kansas mills. In the case of the Pacific Coast, the respective costs of transportation over the Rocky Mountains and via Vancouver might occasionally enable the Wheat Board to drive up the price of wheat substantially.

We infer that under circumstances such as have prevailed during the past three years, the maximum effect achievable would have been attained with hard wheats. In view of bakers' preferences for hard wheat flour, as much could hardly have been accomplished in the driving up of the weighted price of soft winter wheat. On account of the relations of transportation, Buffalo would be regarded as the major datum-line for price-raising operations, and the achievable increase in price one would expect to be registered there. Since, therefore, the actual prices of two of the past three crop years do not permit us to believe that the price of No. 1 Dark Northern Spring wheat could have been driven up more than 12 cents above the price that was attained on the competitive market, we conclude that the maximum attainable for the whole crop with the tariff of 42 cents could not have exceeded 12 cents. This indicates that if a substantially higher price is to be aimed at, the tariff duty on wheat must be raised considerably higher as the first basis of action. Such increase of the tariff, it may be observed, would represent the abandonment of the formula that lies at the basis of the sliding-scale provision of the present tariff law—

namely, that the tariff duty is to correspond to the demonstrated difference in production costs at home and abroad.

The foregoing discussion has been restricted to the consideration of No. 1 Dark Northern spring wheat and the comparable grades of winter wheats in their relations to No. 3 Manitoba Northern or better Canadian wheats. It is hardly to be expected that the prices of lower grades passing into domestic use could be raised as much as

those of representative milling wheats, because, with the prevailing high standards of the domestic flour market, the low grades would remain relatively undesirable. We conclude, therefore, that the weighted increase for the crop would be less than for the representative milling wheats, and any figure arrived at for No. 1 Dark Northern could safely be taken to represent the maximum to be attained for the crop.

#### IV. RESULTS OF OPERATIONS WITHIN THE LIMITS INDICATED

What may be expected to happen if the proposed measures were adopted for the purpose of removing the exportable surplus, assessing losses on it back to growers through an equalization fee, and driving up the domestic price of wheat behind the present tariff wall of 42 cents? Assuming an increase of only 12 cents per bushel over the present price, instead of an increase of 50 cents, how different would be the operating problems of the Board and the effects upon consumers? What would be the net gains to growers with such a price increase? What would be the effect upon wheat acreage?

So far as operating problems are concerned, the Wheat Board would be in much the same position regardless of the extent to which it could raise the domestic price. Its problems of purchases, stocks, and carryover might be somewhat less pressing and serious; the difficulties, responsibilities, and dangers would naturally be smaller; but the difference would not be in kind, but only in degree, and not to any large degree. The losses on exports indeed would be smaller, but the administrative costs would be much the same. Certainly the overhead would bulk large in comparison with the gains secured to growers. Some of the inherent difficulties of the scheme, such as the maintenance of trading in wheat futures, might be quite as pronounced behind the present tariff wall as behind a higher one. A collapse through inefficient management would still be possible.

An increase of 12 cents a bushel in the terminal price of wheat would have re-

sulted in an increase in the price of flour of possibly 60 cents per barrel. We take it that this would have had no effect on consumption. One may question whether an increase in the price of flour of 60 cents a barrel during recent years would have even aroused the interest of consumers.

In order to judge of the advantages that might have accrued to growers had the equalization fee been applied to wheat for the purpose of raising the domestic price since the war, let us make several rough assumptions. Let us assume that the farm price of wheat would be raised to the same extent as terminal prices.<sup>1</sup> Let us assume that in five of the six crop years since the war the domestic price could have been raised 12 cents a bushel above the figure actually received, and in one year (1924-25) 22 cents a bushel. Let us further assume the equalization fee paid by growers to have been 4 cents a bushel, thus reducing the net gain to 8 and 18 cents per bushel respectively. According to the United States Department of Agriculture, the estimated farm price of wheat in the five years before the war was 88.7 cents a bushel. Using this as the base-line, and adding the assumed gains to the figures for farm price of wheat of the Department of Agriculture, we secure figures given in Table 3, ex-

<sup>1</sup> The natural inference would be that at any higher price level the farm prices, by regions, varieties, and grades, would bear the same relations to each other as at present, with natural variations from year to year. It is possible that, on account of the segregation of export wheats, growers of hard winter wheats, Pacific wheats, and durum wheats might reap a relative advantage in increase of farm prices.

pressed both in cents per bushel and in relation to the 5-year pre-war average.

Obviously there would have been some gain, assuming that the procedure had not affected wheat acreage. But it is safe to say the predicated gains would not have been

TABLE 3.—EFFECT OF ASSUMED GAINS TO GROWERS ON AVERAGE FARM PRICES OF WHEAT, 1920-26\*

Crop year	Crop year ave. prices (Cents per bushel)		Relation to 1909-14 ave. (Per cent)	
	Average farm price	Same plus assumed gain	Average farm price	Same plus assumed gain
1920-21.....	182.9	190.9	206	215
1921-22.....	104.4	112.4	118	127
1922-23.....	98.0	106.0	110	119
1923-24.....	92.4	100.4	104	113
1924-25.....	127.8	145.8	144	164
1925-26.....	145.9	153.9	164	173

\* Average farm prices as computed by U.S. Department of Agriculture.

regarded as realizing anything approaching satisfactory prices, in the years of lowest wheat prices, if one is to take at even a fraction of its face value the distress of wheat growers as portrayed during the past five years. It is interesting to remark that, without the predicated increases, the farm price attained, in 1925-26, a higher degree of advance over the pre-war average than did the index of commodity prices at wholesale. This, however, was primarily the result of higher world prices of wheat in 1924-25 and a high price for a short American crop behind the tariff wall in 1925-26. The additional gain that might have been secured by a Wheat Board under the existing tariff would not have figured heavily beside the increases that actually occurred.

What would be the result on wheat acreage to be expected if behind the present tariff wall the price of wheat were to be raised 12 cents a bushel? One must appraise both price-influence and policy-influence. The higher price of wheat during the crop years 1924-26 has already found expression in a substantial increase in planted acreage. Prices during these two years were considerably more than 12 cents above the level of the previous three years; the arithmetic average of the weighted

farm prices of the crop years 1924-25 and 1925-26 was 136.8, contrasted with 98.3, the average for the crop years 1921-22, 1922-23, and 1923-24. Naturally, this improvement in price has led to some expansion in acreage despite reported farm abandonment. A further addition of 12 cents would be expected to exert some additional incentive to wheat acreage; but how much is conjectural, depending upon the position of the competing coarse grains that are now standing at a relatively low price level.<sup>1</sup>

The second influence is of importance, though indeterminate. The mere adoption of a price-raising policy through legislative enactment would be accepted by farmers in areas adapted to wheat growing as a promise of higher prices upon which dependence could be placed, at least for several years. This would mean increased acreage. The increase in wheat acreage to be anticipated, in the event of the establishment of a Wheat Board endeavoring to raise the domestic price as high as possible behind the present tariff wall, would be much smaller than that to be anticipated if the tariff were raised high enough to enable the Wheat Board as a stated policy to contemplate driving the price up to 50 cents above the Canadian price. The tendency would be the same in kind, but much more limited in degree. Since the assumed enhancement of price would be less, even a very moderate increase of acreage would nullify the advantage achieved.

Advocates of the measure, if convinced of the soundness of these conclusions, might still argue first, that even if the scheme promises modest direct results under the present tariff, indirect results of a positive nature are to be anticipated; and second that the scheme may be regarded as an emergency device, to be called into play only when there is prospect of serious price depression. The indirect results commonly suggested are two: the facilitation of the development of co-operative marketing, and the raising of the world price of wheat through centralized control of export. As an emergency device, operations would be

<sup>1</sup> Compare, for illustration of current opinion, the editorial statement on Iowa in *Wallace's Farmer*, January 28, 1927, p. 7. "Moreover, we undoubtedly have at least a million too many acres of corn."

undertaken not regularly, or in seasons when American prices were relatively high or close to the Canadian price plus duty, but in the event of a large crop tending to put domestic prices down to a low level of export prices. Advocates of this view would agree that so long as farm prices for wheat are anything like the figures reported by the United States Department of Agriculture for the crop of 1925-26 (\$1.46), or even for the crop of 1924-25 (\$1.28), the operation of the equalization fee in respect to wheat might well be deferred and the machinery held in abeyance for use if, as, and when the American price for wheat should decline substantially below the figures for the past two years.

Regardless of the merit of the above suggestions, it may fairly be urged that a

review of the literature of wheat-growers' distress indicates that such an outcome of the operations of the McNary-Haugen plan does not correspond to what wheat growers have been led to expect. If "equalization for agriculture" can be urged as the motive for the introduction of a far-reaching innovation in the marketing of a major crop, it ought to be as easily urged as the basis of demand for legislative enactment of a higher tariff duty.

From every point of view and in all directions, the result of an undertaking to drive up the price of wheat behind the present tariff wall would be modest; too modest, in all probability, to meet the expectations of wheat growers and too modest also in the minds of opponents to justify so far-reaching an innovation.

## V. SUMMARY AND CONCLUSIONS

The present study, like the preceding one, considers the McNary-Haugen plan as applied to wheat from the standpoint of its workability. We have not undertaken to consider the real or supposed justification for such a departure in our national agricultural policy. Rather we have sought to learn how the measures, if adopted and intelligently applied, could be expected to work, on certain reasonable assumptions.

In the first study we proceeded on the assumption that the proposed central Board would undertake, with such tariff changes as would be required, to raise the level of American wheat prices 50 cents above the level of Canadian wheat prices at Winnipeg. We reached the conclusion that the Board would face huge and complicated administrative problems, but that these might be successfully solved by an able working Board, if it avoided the temptation to magnify its operations and secured the co-operation of the trades and industries involved. We concluded further that the addition to costs of living, in consequence of the inevitable and considerable enhancement of flour prices, would be considerably greater than the net gain to the growers but would not cause material contraction in consumption of wheat prod-

ucts. On the other hand, we could not escape the conclusion that the predicated increase in prices to growers would afford a substantial stimulus to expansion of wheat acreage, partly at the expense of other crops, partly from uncultivated land now in farms, partly from new land brought under cultivation. The natural result of this expansion, within a brief period of years, eventually retarded but not prevented by increases in the equalization fee, would be such an increase in our wheat surplus as to depress world wheat prices, including the Winnipeg price. The joint effect of reduced world prices and increased equalization fee would be that net returns to growers would be little or no higher than if the measures had not been adopted. The failure of the experiment would leave American agriculture a fresh problem of readjustment of acreage and production, the more painful and difficult because of the extension of wheat cultivation over new lands.

In the present study we have considered a more limited question: What could a Wheat Board accomplish, in the way of price enhancement to growers, under the existing tariff of 42 cents a bushel? It could raise prices only to the point at which duty-paid Canadian wheat would compete with

American wheats at American mills. Clearly no such increase as 50 cents a bushel, or even 40 cents a bushel, would be possible at the natural import thresholds, for Canadian wheat is so superior to American wheats as to command a price premium, and already, without centralized control of the surplus, American hard spring wheats range in price considerably higher than if no tariff were in existence. The fact that some Canadian wheat has been imported over the duty, for domestic consumption, in each of the past three years, suggests that the margin of possible increase in American prices under the existing tariff is not large.

A detailed study of Winnipeg and Minneapolis prices, during the past three crop years, points to the conclusion that at Buffalo, the natural threshold of entry of Canadian wheat, an increase of 10 or 12 cents a bushel in the price of American hard spring wheat is all that the Board could have achieved in 1923-24 or 1925-26. In 1924-25, when the world crop was below normal, the Canadian crop unusually short, and the American crop exceptionally good, the increase might have been 10 cents more, but such a year is distinctly less typical than the other two. A Wheat Board could not raise spring-wheat prices at other markets by a materially larger amount, without marked disturbance to the milling industry.

The extent to which prices of winter wheats could be enhanced is difficult to predict. If the Board disregarded regional relationships of flour mills and tendencies to price differentials that would operate without controlled marketing, it could doubtless raise prices of some other wheats and in some regions—notably in the Southwest and on the Pacific Coast—by a larger extent than it could raise prices of hard spring wheats at Buffalo. But such a policy would seriously alter the conditions on which the mills compete; it would jeopardize the co-operation of the milling industry, which would be well-nigh essential to the Board, and would otherwise magnify its administrative difficulties. In effect, we conclude that the Board would be unable to raise domestic wheat prices as a whole by appreciably more than it could raise the price of hard spring wheats at Buffalo.

Now a prospective enhancement of American wheat prices of 12 cents a bushel in ordinary years, as a result of the operations of a Wheat Board under the existing tariff, would be very different from an enhancement of 40 or 50 cents a bushel. It would have no appreciable effect upon consumers and consumption. The net gain to growers, after deduction of equalization fees, would probably be well below 10 cents a bushel. The direct effect of such an increase on acreage would not be marked, but the mere adoption of a price-raising policy could be expected to afford a certain stimulus. The administrative problems of the Board, however, would not be much smaller, and the overhead costs would bulk relatively larger, than with a larger price increase. Altogether the results would be highly disappointing to growers, and from a national standpoint could hardly be regarded as sufficient to justify so comprehensive an experiment.

In our discussion we have ignored, for the most part, the supposed advantages from stabilization of wheat prices and from promoting the development of wheat co-operatives. In fact, if not in appearance, these are distinctly secondary objectives of the plan. Whatever the possibilities of success in these directions—and we have no grounds for expecting large success except at heavy costs—we consider that it would not be sufficient to modify the judgment of the plan as a whole.

In short, our conclusion is that the McNary-Haugen plan as applied to wheat would not merely involve huge administrative problems and encounter dangers of failure in administration; but that even if the administrative difficulties were surmounted, it would fail, sooner or later, to attain the desired objectives. Behind the present tariff wall too little could be accomplished to justify undertaking the experiment. With a substantially higher tariff, early successes promise to lead to such expansion of wheat acreage and production as to nullify, within a few years, the advantage to growers, and to leave a fresh problem of painful readjustment of American agriculture. At this cost, temporary gains would be dearly bought.

## VI. ADDENDUM: OBSERVATIONS ON THE LATEST BILLS

The foregoing discussion has dealt, not primarily with the McNary and Haugen bills under consideration in the present session of Congress, but with the central features of the McNary-Haugen plan (as applied to wheat) as they have appeared in successive formulations. Our interpretation of the proposals has been based predominantly not upon the discussion of the latest bills, which has been limited in amount and not completely available, but upon the more extended hearings, debates, and other discussion of preceding formulations. Before leaving the subject, however, it is desirable to bring our analysis more nearly down to date.

On February 11, while this study was in proof, the Senate passed the McNary bill, with certain material amendments to which some reference must be made; and on February 17 the House passed this bill, without further amendment, in substitution for the similar Haugen bill. In both houses the measure was forced to vote without adequate consideration of the meaning and implications of the amendments.

In view of the latest discussions and eleventh-hour modifications, it might seem at first sight that the analysis we have made is not altogether relevant. Emphasis has been laid, of late, not upon the price-raising objectives and methods which we have considered to be the heart of the McNary-Haugen plan, but upon other features which have been brought into the bill, in part in order to win the support of opponents of previous bills. Nevertheless, the powers of the Board, if somewhat inconclusive, remain sufficiently broad to cover practically all that we have considered. The Board could, if it chose to do so, interpret its task in the light of the earlier discussions, and undertake, with the support of producers of the commodity and with the aid of the equalization fee, to raise the level of wheat prices as far as possible behind the present tariff wall, or even higher if it could secure an increase of the tariff or an embargo on wheat imports. The Board would naturally consider these possibilities, and our analysis is entirely pertinent to

such a consideration. But there are other possibilities open to the Board under the bill as passed, and one of these, at least, merits brief examination.

## TRANSFORMATION OF THE PROPOSAL

From the standpoint of the proponents of the earlier measures, notably the McNary-Haugen bill of January 16 and April 10, 1924, and the Haugen bill of April 26, 1926, the latest bills seem to us to represent both an emasculation and a shift in viewpoint. They represent an emasculation in that directive provisions have been replaced by permissive provisions. No policy of surplus control, no price standard, no clear-cut methods of operation are imposed upon the Board. Rather, it is given broad powers and a wide discretion in the use of these powers; but in the exercise of these powers it is subject to more checks than under previous bills. The shift in viewpoint is represented by the transformation of an emergency measure into one designed to establish permanent machinery for control of surpluses, by substituting for an administrative export commission a board representative of and working through and in co-operation with growers and their organizations, and by the emphasis on orderly marketing and price stabilization instead of on raising prices of products to a desired level. The changes have resulted in some degree from altered circumstances in agriculture and from clarification through study and discussion; but in large measure they have resulted from yielding to opposition on grounds of political expediency and from compromises with farmer organizations some of which are engaged in co-operative marketing.

The earlier bills were urged by many influential proponents as absolutely essential on the ground that effective co-operative marketing of wheat was inherently impracticable in the far-flung United States; the latest bills are supported as an indispensable method of making country-wide co-operative marketing of wheat practicable here. Furthermore, the Haugen bill of April 1926 contained no significant alternative to full operation with the equalization fee and,

as introduced, contained provisions designed to make those operations fully effective; the latest bills contain important alternatives to full operation and in this sense make the equalization fee merely permissive. To the pioneer proponents of the plan who regarded the equalization fee as indispensable, the change would seem to mean that they have given up the carcass for the hide, or that at all events, in case the bill is signed, they must continue agitation in furtherance of effective action.

Under the final bill, as we have seen, no reference is made to price standards. No mention of the tariff yardstick is made. The President is no longer directed to issue a proclamation imposing an embargo on imports of a commodity, whenever during operation in that commodity it appears that importations are increasing, or are likely to increase, losses borne by the equalization fund. The importance attributed to this provision is illustrated by the remark of Chairman Haugen of the House Committee on Agriculture at a hearing of the Committee on March 6, 1926:<sup>1</sup> “. . . unless the proposed bill provides for a tariff adjustment we might as well put it in the wastebasket.”

Moreover, the Board cannot commence operations in any commodity promptly on its own initiative, upon finding that “there is or may be during the ensuing year a surplus above domestic requirements” sufficient to render the tariff inoperative in whole or in part. According to Senator McNary’s interpretation of his bill, the Board must previously find *both* that there is “an excess . . . over domestic needs” *and also* “that there is a surplus above the requirements for orderly marketing;”<sup>2</sup> though his bill as introduced reads “either . . . or” instead of “both . . . and . . .” Even if there were “in the country a stifling and depressing surplus” of a commodity, the Board could undertake full operations only with the approval (1) of members of the Board representing land bank districts which produce over 50 per cent of the crop, (2) of the advisory council created for that commodity, and (3) of “a substantial number of co-operative associations or other

organizations representing the producers” of the commodity. According to late amendments, the Board must be satisfied that over 50 per cent of producers desire full operations; and when less than 50 per cent of the producers of a commodity in a state are members of co-operative associations dealing in it, state conventions of the producers must be called to secure their approval. At present there is no state in which 50 per cent of the wheat growers are members of wheat co-operatives. It would seem that these provisions would create difficulties and delays in entering upon full operations, and often lead the Board to choose an alternative course.

Under the final bill at least four courses would be open to the Board if it found conditions such as under the earlier bills would have justified commencing operations in a commodity: (1) it could do nothing; (2) to the growers and their organizations it could recommend procedures which it deemed appropriate; (3) it could seek the approval of the denominated bodies for beginning full operations, and if successful, levy an equalization fee and proceed to assist co-operatives in disposing of surpluses; or (4) it could make loans to these organizations out of the revolving fund, “for the purpose of assisting . . . in controlling the surplus . . . in excess of the requirements for orderly marketing,” without undertaking full operations or levying an equalization fee. Moreover, the bill as it finally passed both houses offered a fifth option, namely a sort of price insurance under governmental guaranty supported by premiums collected on the crop. This provision was added in the face of arguments that such price insurance would be found, in practice, incompatible with the equalization fee, and that its adoption would necessitate amendment of the Federal Farm Loan Act. In effect, it would be an additional alternative to the equalization fee procedure.

From following the second course the Board could hope to accomplish little more than under the first. The third course is the one we have already discussed in detail. Concerning the fourth, however, a few words must be said, for it is a new departure in the latest bills, though such a power was a prominent feature of the Fess-

<sup>1</sup> Serial C, Part 5, p. 175.

<sup>2</sup> *Congressional Record*, February 4, 1927, p. 3038.



Tincher bill which was defeated in the preceding session of Congress.

#### OPERATIONS THROUGH LOANS TO CO-OPERATIVES

Senator McNary, speaking in the Senate on February 4, 1927,<sup>1</sup> undertook to emphasize the fact that the "bill makes the imposition of the equalization fee permissive, to a great extent, and not compulsory" and to elaborate the provision "which authorizes and empowers this board to loan money to co-operatives, to withhold the surplus, and promote orderly marketing by paying interest at 4 per cent per annum on the moneys advanced." He continued:

Right here permit me to say that there are two ways of handling the surplus problem. One is by a withholding of the surplus, from which perhaps there would be a gain, the surplus being sold a little later, when the market was hungry. It might be held for a few weeks, or a few months, or for the period of a year.

Let me illustrate to the Senator from Ohio: It might be that under the loan provisions of the bill the board could loan to some co-operative organization \$10,000,000 to withhold a quantity of wheat that seemed to depress the market, and thereby, after it was withdrawn, permit the domestic price to go to the point where it would go on account of economic pressure created by the removal of the surplus.

This co-operative organization might hold that wheat for three months and sell it at a profit. There would be a gain there, a gain more than equal to the penalty imposed by the 4 per cent interest. Consequently, there would be no loss in that case. But of course if there is a loss, *and that loss should be largely incident to selling the surplus* [italics ours] in the market where world competition enters and fixes the price, there would be a loss, and of course it would be necessary to impose the equalization fee, a situation which the board would determine prior to the commencement of operations.

Under the language of the bill, there is no limitation upon the amounts which may thus be loaned from the revolving fund and no provision regarding terms of repayment, as in the case of loans (limited to \$25,000,000 and repayable in annual instalments within 20 years) made for the purchase or construction of storage or processing facilities. In granting such loans the Board could make its own terms and conditions—if it

chose, apparently, without consulting the advisory council, the growers, or their co-operatives. The latitude accorded to the Board, in Section 12 (a) of the Senate bill, is really extraordinary; nor is this latitude abridged in Section 13, which deals with the examination of accounts by the Comptroller-General. In view of the difficulty of initiating and carrying on full operations in wheat, with an equalization fee, the Board might be strongly tempted to operate, with the greater freedom open to it, under the loan provision described.

It must be pointed out that the contemplated operations by co-operatives with the aid of such loans, if undertaken by private traders, would be properly designated as speculation in cash wheat. The essential nature of the transaction is in no way altered by invoking such phrases as "orderly marketing" or "stabilization" by co-operative organizations. Any profits from such a speculation would accrue to the co-operative undertaking it, after payment of 4 per cent interest.

With respect to possible losses, the bill as it finally passed seems open to two constructions. Interpreted in one way, the Board could loan to co-operatives without reference to coverage of possible losses arising out of transactions in a particular crop year, and without power later to impose an equalization fee on the commodity to cover the losses; this would leave it to the co-operative association to cover losses as best it could and effect repayment of the loan from the revolving fund. Serious losses might bankrupt the co-operative, and thereby entail a partial dissipation of the revolving fund, or, short of this, might tie up a considerable part of it in frozen loans. According to the other interpretation, the Farm Board could exact from the co-operative association and the advisory board an agreement, as a condition of the loan, that in the event of losses these should be met from the equalization fund built up by the subsequent imposition of an equalization fee. This of course would mean that the equalization fee would be imposed upon one crop to cover the losses on a previous crop, which might seem to be inequitable to producers, the more so if the co-operative in question represented only part of the

<sup>1</sup> *Congressional Record*, February 4, 1927, pp. 3038-39.

producers.<sup>1</sup> But some inequity would exist in either case, because if the co-operative association had to make up losses through direct dealing with members, this also would involve having losses on one crop covered by proceeds from a subsequent crop. The safeguarding of the capital of the Board would, however, be different under the two procedures.

It must be remarked that, in the preceding session of Congress, advocates of the Haugen bill strongly opposed another bill which had as its central feature the control of the surplus through loans to co-operatives, contending that nothing substantial could be achieved under such a measure, and that nothing unsubstantial would satisfy farmers' needs and demands. Latterly, apparently, the disposition of the sponsors of the latest bills is to magnify the option of operating by loans to co-operatives, and to emphasize the view that the equalization fee, and full operations of the Board are permissive and not mandatory. The lapse of the equalization fee would mean also the lapse of the plan of raising the domestic price behind the tariff wall. So long as full operation with the equalization fee is foregone, operations would consist of government assistance to co-operative marketing with centralization of selling and some measure of stabilization of prices.

But can one suspect that dropping the idea of embargo and the tariff yardstick implies a relinquishment of hopes for substantial enhancement of prices and the acceptance of more stable prices behind the present tariff wall as the maximum possible achievement? The equalization fee has owed its prominence largely to the unshakable conviction and unremitting persistence of a group of advocates who have continuously contended that the segregation of the surplus, the raising of domestic prices, and the equalization fee constitute

the very heart of any genuine movement for farm relief. These advocates have contended that no noteworthy relief for agriculture could be attained except by raising the domestic price behind the tariff wall; that, given appropriate machinery, farmers insisted on paying the losses on exports of their products, disdaining any direct or indirect subsidy or bounty by the government, and proposed to make no other use of government money than as a temporary loan with interest. The equalization fee was to them as steam to the locomotive. In the report of the bill when committed to the Committee of the Whole House on January 18, 1927, Chairman Haugen stated (page 24): "The equalization fee, then, is an indispensable link in providing a system for the orderly flow of the current of interstate and foreign commerce in basic agricultural commodities." To make the equalization fee permissive and not mandatory is therefore equivalent, from the standpoint of the leading advocates of the measure, to altering the plan in a fundamental particular.

#### CONCLUSION

As presented to the President for his consideration, the bill has the appearance of a "shot-gun prescription," with three separate types of active operations: (1) segregation of exports with the use of the equalization fee; (2) loans to co-operatives to effect orderly marketing and stabilize prices; and (3) price insurance under governmental guaranty. One is led to wonder whether the inclusion of three diverse remedies within one bill was the result of conviction that three diverse kinds of agricultural distress called for three separate or alternative remedies, or represented merely an act of expediency in reconciling diverse political elements. One can hardly escape the conclusion that political considerations were effective in securing the passage of a bill bearing the name that has been conjured with, regardless of how it might work, and even at the expense of essential features of the plan previously endorsed by farm organizations.

The actual outcome of operations under the final bill cannot be predicted. If the

<sup>1</sup> It is interesting to observe that on the day following the address of Senator McNary in the Senate quoted above, Congressman Dickinson made the statement in the House of Representatives (*Congressional Record*, February 5, 1927, p. 3135) to the effect that the theory "that farmer co-operatives can and should stabilize markets through control of surplus by means of loans" is "unsound, because it involves imposing upon a fraction of a group the cost of a service to the entire group."

Board were, of its own initiative or under pressure from growers, to undertake to put into operation the original and fundamental features of the plan which have been persistently urged, and seek, with the aid of the equalization fee, to advance prices behind the present tariff wall or a higher one, it would face the problems, with respect to wheat, that we have discussed in detail; and the results, we are constrained to conclude, would be, eventually if not immediately, disappointing to wheat growers. If the Board were to limit its operations to loans to co-operatives, it would run considerable hazards for small gains, and the results would probably be equally disappointing to growers, perhaps

more so, in so far as direct influence on the average price of wheat is concerned. The plan of price insurance, which is very different from price valorization, is too new to permit of prompt appraisal. If the Board were *directed* to operate on one plan or on another, the responsibility for its success or failure would be divided between the Board, as administrator of the measure, and Congress, which passed it. With no clear policy imposed upon it by Congress, the Board, with the agricultural agencies whose approval it must obtain, would have the much heavier responsibility of determining broad policies as well as executing those policies; and the prospect of failure would be increased.

*This study is the work of Alonzo E. Taylor and Joseph S. Davis, assisted by Elizabeth M. Brand*

# APPENDIX

TABLE I.—COMPARISON BETWEEN CLOSING FUTURES PRICES OF WHEAT AT WINNIPEG, PLUS 42 CENTS,  
AND CLOSING FUTURES PRICES AT MINNEAPOLIS\*

(Weekly averages of daily data, in cents per bushel)

Week ending	Winnipeg plus 42 cents	Minneapolis	Margin	Week ending	Winnipeg plus 42 cents	Minneapolis	Margin	Week ending	Winnipeg plus 42 cents	Minneapolis	Margin
<b>1923</b>				<b>1924</b>				<b>1925</b>			
July 7...	153.9	106.9	47.0	July 5...	164.9	123.1	41.8	July 4...	199.4	144.8	54.6
July 14...	150.2	104.6	45.6	July 12...	165.3	121.4	43.9	July 11...	200.8	149.1	51.7
July 21...	148.8	102.0	46.8	July 19...	178.0	131.1	46.9	July 18...	208.6	160.1	48.5
July 28...	149.6	105.5	44.1	July 26...	185.3	132.1	53.2	July 25...	203.9	156.1	47.8
Aug. 4...	141.4	106.7	34.7	Aug. 2...	187.8	134.8	53.0	Aug. 1...	199.4	154.8	44.6
Aug. 11...	138.6	108.4	30.2	Aug. 9...	179.8	131.9	47.9	Aug. 8...	189.2	159.0	30.2
Aug. 18...	140.7	113.3	27.4	Aug. 16...	179.6	130.5	49.1	Aug. 15...	186.9	158.7	28.2
Aug. 25...	143.8	114.5	29.3	Aug. 23...	176.2	130.1	46.1	Aug. 22...	186.7	157.8	28.9
Sept. 1...	143.2	115.2	28.0	Aug. 30...	170.6	124.9	45.7	Aug. 29...	183.6	155.0	28.6
Sept. 8...	141.7	115.4	26.3	Sept. 6...	171.2	124.0	47.2	Sept. 5...	176.3	151.6	24.7
Sept. 15...	137.6	113.0	24.6	Sept. 13...	174.7	125.2	49.5	Sept. 12...	176.6	150.6	26.0
Sept. 22...	137.7	112.4	25.3	Sept. 20...	178.3	128.1	50.2	Sept. 19...	175.3	149.3	26.0
Sept. 29...	138.6	113.7	24.9	Sept. 27...	183.2	131.0	52.2	Sept. 26...	170.0	143.8	26.2
Oct. 6...	139.6	117.2	22.4	Oct. 4...	195.8	140.7	55.1	Oct. 3...	162.9	136.8	26.1
Oct. 13...	140.5	118.1	22.4	Oct. 11...	203.8	146.0	57.8	Oct. 10...	165.8	139.6	26.2
Oct. 20...	138.4	115.0	23.4	Oct. 18...	203.6	146.7	56.9	Oct. 17...	167.8	142.5	25.3
Oct. 27...	138.6	114.2	24.4	Oct. 25...	198.0	141.0	57.0	Oct. 24...	169.9	142.6	27.3
Nov. 3...	139.8	112.8	27.0	Nov. 1...	193.3	139.2	54.1	Oct. 31...	175.4	145.1	30.3
Nov. 10...	139.5	111.0	28.5	Nov. 8...	197.6	143.7	53.9	Nov. 7...	176.9	146.5	30.4
Nov. 17...	139.3	109.2	30.1	Nov. 15...	206.7	150.9	55.8	Nov. 14...	178.2	147.0	31.2
Nov. 24...	139.5	109.2	30.3	Nov. 22...	205.6	149.6	56.0	Nov. 21...	183.4	151.5	31.9
Dec. 1...	137.1	108.1	29.0	Nov. 29...	205.5	152.3	53.2	Nov. 28...	192.8	154.9	37.9
Dec. 8...	135.3	110.3	25.0	Dec. 6...	201.2	152.9	48.3	Dec. 5...	198.9	165.8	33.1
Dec. 15...	134.3	109.0	25.3	Dec. 13...	206.6	159.3	47.3	Dec. 12...	198.3	166.2	32.1
Dec. 22...	134.1	107.2	26.9	Dec. 20...	214.9	166.1	48.8	Dec. 19...	193.6	164.5	29.1
Dec. 29...	134.4	107.1	27.3	Dec. 27...	222.1	169.3	52.8	Dec. 26...	191.5	164.6	26.9
<b>1924</b>				<b>1925</b>				<b>1926</b>			
Jan. 5...	140.9	112.4	28.5	Jan. 3...	225.7	171.2	54.5	Jan. 2...	202.2	176.9	25.3
Jan. 12...	144.0	113.4	30.6	Jan. 10...	229.3	174.7	54.6	Jan. 9...	204.1	171.0	33.1
Jan. 19...	143.7	113.3	30.4	Jan. 17...	235.2	179.5	55.7	Jan. 16...	200.1	167.5	32.6
Jan. 26...	143.4	113.3	30.1	Jan. 24...	240.5	185.1	55.4	Jan. 23...	199.5	166.5	33.0
Feb. 2...	144.6	115.0	29.6	Jan. 31...	255.8	195.7	60.1	Jan. 30...	199.4	166.5	32.9
Feb. 9...	146.1	116.0	30.1	Feb. 7...	245.0	186.8	58.2	Feb. 6...	202.8	167.4	35.4
Feb. 16...	145.2	114.8	30.4	Feb. 14...	236.0	176.5	59.5	Feb. 13...	197.9	161.0	36.9
Feb. 23...	145.5	115.5	30.0	Feb. 21...	238.1	177.6	60.5	Feb. 20...	196.7	159.9	36.8
Mar. 1...	145.1	115.0	30.1	Feb. 28...	243.5	184.9	58.6	Feb. 27...	194.3	158.9	35.4
Mar. 8...	144.9	116.6	28.3	Mar. 7...	241.6	181.8	59.8	Mar. 6...	187.6	152.9	34.7
Mar. 15...	142.4	113.3	29.1	Mar. 14...	227.6	171.1	56.5	Mar. 13...	189.5	155.0	34.5
Mar. 22...	142.2	113.3	28.9	Mar. 21...	208.0	154.8	53.2	Mar. 20...	191.4	155.3	36.1
Mar. 29...	139.8	110.3	29.5	Mar. 28...	208.6	154.6	54.0	Mar. 27...	189.6	150.9	38.7
Apr. 5...	140.1	111.3	28.8	Apr. 4...	187.8	136.7	51.1	Apr. 3...	190.3	151.2	39.1
Apr. 12...	140.7	110.6	30.1	Apr. 11...	196.3	144.2	52.1	Apr. 10...	192.0	153.0	39.0
Apr. 19...	141.5	110.4	31.1	Apr. 18...	198.5	143.9	54.6	Apr. 17...	196.7	157.8	38.9
Apr. 26...	141.5	111.2	30.3	Apr. 25...	200.1	142.7	57.4	Apr. 24...	200.4	158.2	42.2
May 3...	143.0	110.7	32.3	May 2...	203.5	144.4	59.1	May 1...	198.2	157.4	40.8
May 10...	144.5	112.3	32.2	May 9...	218.4	154.8	63.6	May 8...	194.5	154.8	39.7
May 17...	144.8	112.4	32.4	May 16...	220.0	156.4	63.6	May 15...	194.7	155.7	39.0
May 24...	147.1	112.6	34.5	May 23...	229.6	161.1	68.5	May 22...	193.6	155.4	38.2
May 31...	148.7	113.7	35.0	May 30...	235.3	165.4	69.9	May 29...	195.1	157.2	37.9
June 7...	148.7	111.0	37.7	June 6...	220.3	163.1	57.2	June 5...	190.8	147.0	43.8
June 14...	152.7	115.8	36.9	June 13...	218.6	162.4	56.2	June 12...	193.7	153.6	40.1
June 21...	159.6	120.2	39.4	June 20...	207.4	154.9	52.5	June 19...	193.6	151.9	41.7
June 28...	161.2	121.3	39.9	June 27...	206.7	153.8	52.9	June 26...	191.2	148.4	42.8
Average...	143.0	112.2	30.8	Average...	206.3	152.0	54.3	Average...	190.2	155.2	35.0

\* Based upon detailed data published in WHEAT STUDIES, November 1926, III, 36-75. Figures in parentheses ( ) represent negative margins, i.e., indicate that Winnipeg prices plus 42 cents were below Minneapolis prices.

## THE McNARY-HAUGEN PLAN AS APPLIED TO WHEAT

TABLE II.—COMPARISON BETWEEN CASH CLOSING PRICES OF NO. 1 MANITOBA NORTHERN AT WINNIPEG, PLUS 42 CENTS, AND HIGH CASH CLOSING PRICES OF NO. 1 DARK NORTHERN SPRING AT MINNEAPOLIS\*

(Weekly averages of daily data, in cents per bushel)

Week ending	Winnipeg plus 42 cents	Minneapolis	Margin	Week ending	Winnipeg plus 42 cents	Minneapolis	Margin	Week ending	Winnipeg plus 42 cents	Minneapolis	Margin
1923				1924				1925			
July 7...	153.9	133.9	20.0	July 5...	164.9	150.6	14.3	July 4...	200.9	175.0	25.9
July 14...	150.2	132.1	18.1	July 12...	165.2	148.9	16.3	July 11...	202.9	179.1	23.8
July 21...	148.8	129.0	19.8	July 19...	178.0	156.2	21.8	July 18...	208.8	190.4	18.4
July 28...	149.6	132.1	17.5	July 26...	186.4	156.4	30.0	July 25...	203.9	187.3	16.6
Aug. 4...	148.9	133.2	15.7	Aug. 2...	192.8	157.1	35.7	Aug. 1...	202.9	184.3	18.6
Aug. 11...	150.0	129.4	20.6	Aug. 9...	190.5	154.9	35.6	Aug. 8...	213.2	191.0	22.2
Aug. 18...	153.5	129.1	24.4	Aug. 16...	188.7	153.3	35.4	Aug. 15...	210.8	184.8	26.0
Aug. 25...	160.5	128.5	32.0	Aug. 23...	182.0	150.1	31.9	Aug. 22...	212.7	176.1	36.6
Sept. 1...	159.5	129.4	30.1	Aug. 30...	178.6	142.4	36.2	Aug. 29...	205.2	173.0	32.2
Sept. 8...	158.3	131.0	27.3	Sept. 6...	178.1	139.0	39.1	Sept. 5...	194.2	172.8	21.4
Sept. 15...	151.3	127.8	23.5	Sept. 13...	180.7	140.7	40.0	Sept. 12...	187.2	169.6	17.6
Sept. 22...	143.1	125.1	18.0	Sept. 20...	184.8	146.7	38.1	Sept. 19...	177.6	170.1	7.5
Sept. 29...	139.9	126.2	13.7	Sept. 27...	188.6	151.2	37.4	Sept. 26...	170.4	166.4	4.0
Oct. 6...	140.9	127.2	13.7	Oct. 4...	198.6	161.4	37.2	Oct. 3...	163.0	161.9	1.1
Oct. 13...	141.1	129.1	12.0	Oct. 11...	206.2	166.0	40.2	Oct. 10...	166.0	168.1	(2.1)
Oct. 20...	138.5	127.0	11.5	Oct. 18...	205.3	167.0	38.3	Oct. 17...	168.2	173.1	(4.9)
Oct. 27...	138.7	127.6	11.1	Oct. 25...	198.9	161.2	37.7	Oct. 24...	170.2	172.1	(1.9)
Nov. 3...	139.8	126.6	13.2	Nov. 1...	195.0	160.0	35.0	Oct. 31...	175.4	175.1	.3
Nov. 10...	139.5	121.5	18.0	Nov. 8...	201.7	163.8	37.9	Nov. 7...	178.1	175.3	2.8
Nov. 17...	139.5	119.8	19.7	Nov. 15...	210.4	172.9	37.5	Nov. 14...	179.0	174.6	4.4
Nov. 24...	139.8	120.7	19.1	Nov. 22...	208.3	171.6	36.7	Nov. 21...	183.9	177.5	6.4
Dec. 1...	137.6	121.1	16.5	Nov. 29...	207.4	174.3	33.1	Nov. 28...	193.3	178.9	14.4
Dec. 8...	137.7	124.3	13.4	Dec. 6...	204.3	176.1	28.2	Dec. 5...	203.5	188.3	15.2
Dec. 15...	134.4	122.8	11.6	Dec. 13...	209.9	184.1	25.8	Dec. 12...	201.4	186.9	14.5
Dec. 22...	134.1	120.4	13.7	Dec. 20...	217.0	201.6	15.4	Dec. 19...	194.1	182.5	11.6
Dec. 29...	134.3	120.0	14.3	Dec. 27...	224.3	205.4	18.9	Dec. 26...	191.6	181.5	10.1
1924				1925				1926			
Jan. 5...	136.2	123.5	12.7	Jan. 3...	226.0	211.8	14.2	Jan. 2...	201.9	193.6	8.3
Jan. 12...	138.6	125.9	12.7	Jan. 10...	228.7	216.7	12.0	Jan. 9...	200.7	192.0	8.7
Jan. 19...	138.9	127.3	11.6	Jan. 17...	235.0	221.4	13.6	Jan. 16...	197.2	186.5	10.7
Jan. 26...	138.8	127.3	11.5	Jan. 24...	239.4	223.2	16.2	Jan. 23...	197.4	184.1	13.3
Feb. 2...	140.3	129.7	10.6	Jan. 31...	253.5	232.0	21.5	Jan. 30...	198.6	185.4	13.2
Feb. 9...	141.9	130.4	11.5	Feb. 7...	242.6	223.5	19.1	Feb. 6...	201.9	186.2	15.7
Feb. 16...	141.4	128.8	12.6	Feb. 14...	233.9	216.5	17.4	Feb. 13...	196.7	179.0	17.7
Feb. 23...	142.0	130.1	11.9	Feb. 21...	236.1	217.7	18.4	Feb. 20...	195.3	177.9	17.4
Mar. 1...	141.9	130.0	11.9	Feb. 28...	241.2	226.1	15.1	Feb. 27...	192.9	177.9	15.0
Mar. 8...	142.0	132.4	9.6	Mar. 7...	239.6	222.1	17.5	Mar. 6...	186.2	171.2	15.0
Mar. 15...	139.9	129.3	10.6	Mar. 14...	226.4	208.8	17.6	Mar. 13...	189.5	175.7	13.8
Mar. 22...	140.1	129.9	10.2	Mar. 21...	207.7	193.4	14.3	Mar. 20...	192.6	174.6	18.0
Mar. 29...	138.1	126.5	11.6	Mar. 28...	208.7	196.4	12.3	Mar. 27...	191.6	167.1	24.5
Apr. 5...	138.7	127.3	11.4	Apr. 4...	187.6	180.7	6.9	Apr. 3...	193.2	165.6	27.6
Apr. 12...	139.7	127.4	12.3	Apr. 11...	198.5	188.2	10.3	Apr. 10...	195.2	166.0	29.2
Apr. 19...	140.9	128.4	12.5	Apr. 18...	201.0	187.9	13.1	Apr. 17...	199.4	171.7	27.7
Apr. 26...	141.0	130.7	10.3	Apr. 25...	200.9	186.5	14.4	Apr. 24...	202.9	171.1	31.8
May 3...	143.0	130.5	12.5	May 2...	203.9	184.9	19.0	May 1...	200.6	169.4	31.2
May 10...	144.8	132.3	12.5	May 9...	218.4	193.6	24.8	May 8...	196.2	165.7	30.5
May 17...	145.0	132.5	12.5	May 16...	220.0	194.1	25.9	May 15...	196.0	165.0	31.0
May 24...	147.7	133.4	14.3	May 23...	229.6	198.2	31.4	May 22...	194.9	164.1	30.8
May 31...	148.9	134.4	14.5	May 30...	234.7	195.1	39.6	May 29...	195.7	164.5	31.2
June 7...	148.9	131.3	17.6	June 6...	222.8	192.1	30.7	June 5...	193.0	164.2	28.8
June 14...	152.5	138.2	14.3	June 13...	219.2	192.1	27.1	June 12...	196.7	174.6	22.1
June 21...	159.5	146.7	12.8	June 20...	207.9	181.9	26.0	June 19...	196.8	171.7	25.1
June 28...	161.1	149.3	11.8	June 27...	207.5	184.1	23.4	June 26...	194.2	164.9	29.3
Average...	144.1	129.0	15.1	Average...	208.0	182.3	25.7	Average...	193.4	175.9	17.5

\* See footnote to Appendix Table I.

TABLE III.—COMPARISON BETWEEN LOW CASH SALES PRICES OF NO. 3 MANITOBA NORTHERN AT WINNIPEG, PLUS 42 CENTS, AND WEIGHTED AVERAGE OF CASH SALES PRICES OF NO. 1 DARK NORTHERN SPRING AT MINNEAPOLIS\*  
(Weekly averages of daily data, in cents per bushel)

Week ending	Winnipeg plus 42 cents	Minneapolis	Margin	Week ending	Winnipeg plus 42 cents	Minneapolis	Margin	Week ending	Winnipeg plus 42 cents	Minneapolis	Margin
1923				1924				1925			
July 7...	147.9	119.0	28.9	July 5...	156.4	145.0	11.4	July 4...	190.8	157.6	33.2
July 14...	143.8	118.3	25.5	July 12...	156.3	142.2	14.1	July 11...	191.6	159.8	31.8
July 21...	140.8	115.0	25.8	July 19...	167.4	148.7	18.7	July 18...	198.9	172.0	26.9
July 28...	142.0	120.0	22.0	July 26...	175.0	150.2	24.8	July 25...	195.5	170.3	25.2
Aug. 4...	141.1	120.4	20.7	Aug. 2...	183.3	151.8	31.5	Aug. 1...	193.8	169.8	24.0
Aug. 11...	142.7	120.6	22.1	Aug. 9...	180.6	150.2	30.4	Aug. 8...	204.4	175.7	28.7
Aug. 18...	145.9	123.3	22.6	Aug. 16...	177.7	141.5	36.2	Aug. 15...	203.6	169.2	34.4
Aug. 25...	151.0	122.3	28.7	Aug. 23...	174.7	138.7	36.0	Aug. 22...	202.8	168.7	34.1
Sept. 1...	149.3	125.3	24.0	Aug. 30...	169.3	134.3	35.0	Aug. 29...	195.9	166.2	29.7
Sept. 8...	148.6	129.4	19.2	Sept. 6...	168.9	132.2	36.7	Sept. 5...	187.7	163.0	24.7
Sept. 15...	140.7	127.2	13.5	Sept. 13...	173.2	132.7	40.5	Sept. 12...	179.7	159.6	20.1
Sept. 22...	137.3	123.8	13.5	Sept. 20...	178.9	137.5	41.4	Sept. 19...	171.5	160.2	11.3
Sept. 29...	133.6	124.5	9.1	Sept. 27...	182.7	139.5	43.2	Sept. 26...	164.4	156.2	8.2
Oct. 6...	134.7	124.8	9.9	Oct. 4...	188.9	148.5	40.4	Oct. 3...	157.5	151.5	6.0
Oct. 13...	134.7	127.0	7.7	Oct. 11...	195.4	153.7	41.7	Oct. 10...	159.3	155.5	3.8
Oct. 20...	130.9	125.3	5.6	Oct. 18...	193.7	155.0	38.7	Oct. 17...	160.3	159.5	.8
Oct. 27...	130.4	126.2	4.2	Oct. 25...	189.2	150.2	39.0	Oct. 24...	161.4	160.5	.9
Nov. 3...	131.3	123.8	7.5	Nov. 1...	185.0	146.3	38.7	Oct. 31...	166.0	162.7	3.3
Nov. 10...	131.2	118.7	12.5	Nov. 8...	186.2	148.0	38.2	Nov. 7...	170.1	163.7	6.4
Nov. 17...	130.9	117.0	13.9	Nov. 15...	197.2	160.0	37.2	Nov. 14...	171.8	163.8	8.0
Nov. 24...	131.1	118.2	12.9	Nov. 22...	196.4	148.2	48.2	Nov. 21...	175.3	167.3	8.0
Dec. 1...	128.8	118.6	10.2	Nov. 29...	196.9	160.2	36.7	Nov. 28...	184.8	171.0	13.8
Dec. 8...	128.7	121.5	7.2	Dec. 6...	192.1	162.5	29.6	Dec. 5...	194.8	178.8	16.0
Dec. 15...	126.3	120.8	5.5	Dec. 13...	198.2	167.7	30.5	Dec. 12...	191.4	177.8	13.6
Dec. 22...	126.0	117.3	8.7	Dec. 20...	205.4	176.5	28.9	Dec. 19...	184.4	173.5	10.9
Dec. 29...	125.7	116.0	9.7	Dec. 27...	213.0	179.6	33.4	Dec. 26...	180.8	173.5	7.3
1924				1925				1926			
Jan. 5...	127.7	121.2	6.5	Jan. 3...	214.4	186.6	27.8	Jan. 2...	192.0	184.8	7.2
Jan. 12...	130.2	123.5	6.7	Jan. 10...	215.9	188.5	27.4	Jan. 9...	190.1	183.3	6.8
Jan. 19...	131.0	124.2	6.8	Jan. 17...	221.7	192.0	29.7	Jan. 16...	186.0	177.0	9.0
Jan. 26...	131.0	123.8	7.2	Jan. 24...	227.3	196.0	31.3	Jan. 23...	186.3	176.0	10.3
Feb. 2...	132.6	126.0	6.6	Jan. 31...	240.3	207.0	33.3	Jan. 30...	186.6	177.0	9.6
Feb. 9...	134.6	127.3	7.3	Feb. 7...	231.4	196.5	34.9	Feb. 6...	190.6	180.2	10.4
Feb. 16...	134.2	126.0	8.2	Feb. 14...	223.6	188.4	35.2	Feb. 13...	185.7	170.8	14.9
Feb. 23...	134.4	127.4	7.0	Feb. 21...	226.8	189.3	37.5	Feb. 20...	184.3	171.0	13.3
Mar. 1...	134.1	126.0	8.1	Feb. 28...	231.2	196.8	34.4	Feb. 27...	183.1	173.6	9.5
Mar. 8...	134.3	127.7	6.6	Mar. 7...	230.4	198.5	31.9	Mar. 6...	175.6	166.7	8.9
Mar. 15...	132.5	127.0	5.5	Mar. 14...	216.2	184.8	31.4	Mar. 13...	178.1	170.3	7.8
Mar. 22...	132.8	126.7	6.1	Mar. 21...	197.6	165.7	31.9	Mar. 20...	181.2	169.5	11.7
Mar. 29...	130.7	123.7	7.0	Mar. 28...	198.3	167.5	30.8	Mar. 27...	179.1	161.5	17.6
Apr. 5...	131.1	124.7	6.4	Apr. 4...	176.5	152.8	23.7	Apr. 3...	180.9	162.8	18.1
Apr. 12...	132.3	124.5	7.8	Apr. 11...	185.9	161.2	24.7	Apr. 10...	182.0	163.5	18.5
Apr. 19...	133.4	124.6	8.8	Apr. 18...	188.6	166.3	22.3	Apr. 17...	187.2	169.7	17.5
Apr. 26...	133.6	128.2	5.4	Apr. 25...	190.3	160.8	29.5	Apr. 24...	191.3	169.7	21.6
May 3...	135.5	126.5	9.0	May 2...	193.6	161.2	32.4	May 1...	189.2	167.0	22.2
May 10...	138.0	130.0	8.0	May 9...	208.4	170.2	38.2	May 8...	185.7	165.0	20.7
May 17...	137.8	129.2	8.6	May 16...	209.4	170.0	39.4	May 15...	186.0	164.8	21.2
May 24...	140.5	130.8	9.7	May 23...	220.3	177.2	43.1	May 22...	185.0	163.7	21.3
May 31...	142.1	131.2	10.9	May 30...	223.7	177.8	45.9	May 29...	186.1	163.7	22.4
June 7...	141.6	128.5	13.1	June 6...	211.0	176.0	35.0	June 5...	182.9	163.4	19.5
June 14...	144.6	133.7	10.9	June 13...	210.0	175.2	34.8	June 12...	186.8	173.8	13.0
June 21...	151.5	143.5	8.0	June 20...	198.2	166.7	31.5	June 19...	187.2	171.5	15.7
June 28...	152.6	143.8	8.8	June 27...	197.7	166.7	31.0	June 26...	184.6	162.7	21.9
Average...	136.4	124.9	11.5	Average...	197.5	164.2	33.3	Average...	183.7	167.9	15.8

\* See footnote to Appendix Table I.

TABLE IV.—COMPARISON BETWEEN HIGH CASH SALES PRICES OF NO. 3 MANITOBA NORTHERN AT WINNIPEG, PLUS 42 CENTS, AND HIGH CASH SALES PRICES OF NO. 1 DARK NORTHERN SPRING AT MINNEAPOLIS\*

(Weekly averages of daily data, in cents per bushel)

Week ending	Winnipeg plus 42 cents	Minneapolis	Margin	Week ending	Winnipeg plus 42 cents	Minneapolis	Margin	Week ending	Winnipeg plus 42 cents	Minneapolis	Margin
1923				1924				1925			
July 7...	149.1	133.2	15.9	July 5...	158.4	151.4	7.0	July 4...	192.0	177.1	14.9
July 14...	145.7	132.9	12.8	July 12...	158.8	149.2	9.6	July 11...	194.2	179.0	15.2
July 21...	142.7	127.8	14.9	July 19...	170.7	155.7	15.0	July 18...	201.7	196.5	5.2
July 28...	143.5	132.2	11.3	July 26...	179.1	157.1	22.0	July 25...	197.4	185.7	11.7
Aug. 4...	143.0	133.5	9.5	Aug. 2...	186.0	155.8	30.2	Aug. 1...	196.0	187.6	8.4
Aug. 11...	143.6	128.9	14.7	Aug. 9...	183.1	156.0	27.1	Aug. 8...	207.1	189.7	17.4
Aug. 18...	147.2	131.6	15.6	Aug. 16...	180.0	150.2	29.8	Aug. 15...	205.5	182.5	23.0
Aug. 25...	153.2	127.5	25.7	Aug. 23...	177.3	151.0	26.3	Aug. 22...	205.6	184.6	21.0
Sept. 1...	151.0	130.0	21.0	Aug. 30...	171.8	144.1	27.7	Aug. 29...	199.4	182.8	16.6
Sept. 8...	151.0	132.3	18.7	Sept. 6...	171.6	140.3	31.3	Sept. 5...	191.0	179.8	11.2
Sept. 15...	144.2	130.3	13.9	Sept. 13...	174.6	141.5	33.1	Sept. 12...	182.5	176.0	6.5
Sept. 22...	140.3	127.0	13.3	Sept. 20...	180.6	147.0	33.6	Sept. 19...	173.5	177.2	(3.7)
Sept. 29...	135.5	127.7	7.8	Sept. 27...	184.2	151.5	32.7	Sept. 26...	167.3	174.0	(6.7)
Oct. 6...	136.6	128.2	8.4	Oct. 4...	192.6	162.1	30.5	Oct. 3...	160.0	170.7	(10.7)
Oct. 13...	136.6	130.6	6.0	Oct. 11...	201.3	168.0	33.3	Oct. 10...	161.7	173.9	(12.2)
Oct. 20...	132.3	128.5	3.8	Oct. 18...	197.3	169.4	27.9	Oct. 17...	162.3	179.1	(16.8)
Oct. 27...	131.8	128.7	3.1	Oct. 25...	192.0	168.9	23.1	Oct. 24...	163.2	178.4	(15.2)
Nov. 3...	132.7	127.3	5.4	Nov. 1...	187.4	163.9	23.5	Oct. 31...	168.9	181.5	(12.6)
Nov. 10...	132.6	123.3	9.3	Nov. 8...	190.3	169.2	21.1	Nov. 7...	172.4	181.9	(9.5)
Nov. 17...	132.3	120.7	11.6	Nov. 15...	200.7	177.2	23.5	Nov. 14...	173.2	182.7	(9.5)
Nov. 24...	132.8	121.7	11.1	Nov. 22...	199.2	174.3	24.9	Nov. 21...	177.7	183.3	(5.6)
Dec. 1...	130.7	122.8	7.9	Nov. 29...	199.7	177.1	22.6	Nov. 28...	188.9	186.2	2.7
Dec. 8...	130.3	124.9	5.4	Dec. 6...	194.9	178.2	16.7	Dec. 5...	199.0	193.2	5.8
Dec. 15...	128.1	123.6	4.5	Dec. 13...	201.2	189.1	12.1	Dec. 12...	197.5	195.0	2.5
Dec. 22...	127.3	121.3	6.0	Dec. 20...	207.6	202.8	4.8	Dec. 19...	187.4	189.4	(2.0)
Dec. 29...	126.9	119.7	7.2	Dec. 27...	215.3	203.5	11.8	Dec. 26...	184.8	188.8	(4.0)
1924				1925				1926			
Jan. 5...	129.0	124.3	5.3	Jan. 3...	216.8	213.9	2.9	Jan. 2...	195.1	199.1	(4.0)
Jan. 12...	131.7	126.8	4.9	Jan. 10...	218.4	212.0	6.4	Jan. 9...	192.0	194.9	(2.9)
Jan. 19...	132.8	127.8	5.0	Jan. 17...	224.2	223.0	1.2	Jan. 16...	187.2	189.5	(2.3)
Jan. 26...	132.1	127.5	4.6	Jan. 24...	228.9	227.7	1.2	Jan. 23...	187.2	187.2	0.0
Feb. 2...	134.0	129.7	4.3	Jan. 31...	243.6	240.6	3.0	Jan. 30...	188.2	187.1	1.1
Feb. 9...	136.4	131.2	5.2	Feb. 7...	233.8	229.9	3.9	Feb. 6...	191.8	189.2	2.6
Feb. 16...	136.0	130.3	5.7	Feb. 14...	227.2	221.3	5.9	Feb. 13...	187.0	182.3	4.7
Feb. 23...	135.9	131.8	4.1	Feb. 21...	228.6	219.8	8.8	Feb. 20...	185.5	181.3	4.2
Mar. 1...	135.5	130.1	5.4	Feb. 28...	233.5	224.3	9.2	Feb. 27...	184.2	183.9	.3
Mar. 8...	134.9	132.9	2.0	Mar. 7...	234.6	228.6	6.0	Mar. 6...	177.5	176.8	.7
Mar. 15...	134.0	130.7	3.3	Mar. 14...	217.5	217.6	(.1)	Mar. 13...	179.6	178.8	.8
Mar. 22...	133.9	130.3	3.6	Mar. 21...	200.4	195.2	5.2	Mar. 20...	182.2	176.2	6.0
Mar. 29...	132.0	128.0	4.0	Mar. 28...	201.7	191.7	10.0	Mar. 27...	181.0	169.6	11.4
Apr. 5...	132.0	127.8	4.2	Apr. 4...	181.3	176.1	5.2	Apr. 3...	181.9	167.9	14.0
Apr. 12...	133.0	126.9	6.1	Apr. 11...	189.1	192.6	(3.5)	Apr. 10...	183.7	167.8	15.9
Apr. 19...	134.7	129.4	5.3	Apr. 18...	194.8	187.1	7.7	Apr. 17...	188.7	173.8	14.9
Apr. 26...	135.6	131.1	4.5	Apr. 25...	193.2	188.5	4.7	Apr. 24...	193.6	173.7	19.9
May 3...	136.9	130.2	6.7	May 2...	196.2	188.3	7.9	May 1...	190.6	172.7	17.9
May 10...	139.4	133.5	5.9	May 9...	213.0	195.0	18.0	May 8...	187.1	169.2	17.9
May 17...	139.0	133.3	5.7	May 16...	212.3	194.0	18.3	May 15...	187.6	167.9	19.7
May 24...	142.2	134.1	8.1	May 23...	223.6	194.7	28.9	May 22...	186.1	167.3	18.8
May 31...	143.7	135.2	8.5	May 30...	229.9	195.3	34.6	May 29...	188.0	168.4	19.6
June 7...	143.3	132.9	10.4	June 6...	213.6	198.9	14.7	June 5...	184.7	168.8	15.9
June 14...	146.5	138.6	7.9	June 13...	211.1	195.7	15.4	June 12...	188.6	178.4	10.2
June 21...	153.7	147.5	6.2	June 20...	200.3	190.2	10.1	June 19...	188.2	176.4	11.8
June 28...	154.1	149.6	4.5	June 27...	200.2	187.5	12.7	June 26...	185.7	170.2	15.5
Average...	137.9	129.7	8.2	Average...	200.4	184.3	16.1	Average...	185.8	180.3	5.5

\* See footnote to Appendix Table I.

TABLE V.—COMPARISON BETWEEN CASH CLOSING PRICES OF NO. 3 MANITOBA NORTHERN AT WINNIPEG, PLUS 42 CENTS, AND HIGH CASH CLOSING PRICES OF NO. 1 DARK NORTHERN SPRING AT MINNEAPOLIS\*

(Weekly averages of daily data, in cents per bushel)

Week ending	Winnipeg plus 42 cents	Minneapolis	Margin	Week ending	Winnipeg plus 42 cents	Minneapolis	Margin	Week ending	Winnipeg plus 42 cents	Minneapolis	Margin
1923				1924				1925			
July 7...	148.4	133.9	14.5	July 5...	157.2	150.6	6.6	July 4...	191.4	175.0	16.4
July 14...	143.9	132.1	11.8	July 12...	157.3	148.9	8.4	July 11...	192.9	179.1	13.8
July 21...	141.6	129.0	12.6	July 19...	170.0	156.2	13.8	July 18...	200.7	190.4	10.3
July 28...	142.4	132.1	10.3	July 26...	178.0	156.4	21.6	July 25...	196.1	187.3	8.8
Aug. 4...	141.7	133.2	8.5	Aug. 2...	183.9	157.1	26.8	Aug. 1...	194.9	184.3	10.6
Aug. 11...	143.1	129.4	13.7	Aug. 9...	181.1	154.9	26.2	Aug. 8...	206.4	191.0	15.4
Aug. 18...	146.4	129.1	17.3	Aug. 16...	178.7	153.3	25.4	Aug. 15...	204.9	184.8	20.1
Aug. 25...	152.2	128.5	23.7	Aug. 23...	174.8	150.1	24.7	Aug. 22...	204.3	176.1	28.2
Sept. 1...	149.5	129.4	20.1	Aug. 30...	170.3	142.4	27.9	Aug. 29...	196.7	173.0	23.7
Sept. 8...	148.9	131.0	17.9	Sept. 6...	169.6	139.0	30.6	Sept. 5...	188.6	172.8	15.8
Sept. 15...	141.1	127.8	13.3	Sept. 13...	174.1	140.7	33.4	Sept. 12...	180.4	169.6	10.8
Sept. 22...	137.8	125.1	12.7	Sept. 20...	179.2	146.7	32.5	Sept. 19...	172.2	170.1	2.1
Sept. 29...	134.1	126.2	7.9	Sept. 27...	183.5	151.2	32.3	Sept. 26...	165.2	166.4	(1.2)
Oct. 6...	135.5	127.2	8.3	Oct. 4...	190.9	161.4	29.5	Oct. 3...	158.1	161.9	(3.8)
Oct. 13...	135.0	129.1	5.9	Oct. 11...	196.3	166.0	30.3	Oct. 10...	160.9	168.1	(7.2)
Oct. 20...	131.0	127.0	4.0	Oct. 18...	195.6	167.0	28.6	Oct. 17...	161.0	173.1	(12.1)
Oct. 27...	130.7	127.6	3.1	Oct. 25...	190.0	161.2	28.8	Oct. 24...	162.0	172.1	(10.1)
Nov. 3...	131.8	126.6	5.2	Nov. 1...	185.3	160.0	25.3	Oct. 31...	167.3	175.1	(7.8)
Nov. 10...	131.5	121.5	10.0	Nov. 8...	189.7	163.8	25.9	Nov. 7...	171.4	175.3	(3.9)
Nov. 17...	131.3	119.8	11.5	Nov. 15...	198.7	172.9	25.8	Nov. 14...	172.5	174.6	(2.1)
Nov. 24...	131.5	120.7	10.8	Nov. 22...	197.6	171.6	26.0	Nov. 21...	176.7	177.5	(.8)
Dec. 1...	129.1	121.1	8.0	Nov. 29...	197.3	174.3	23.0	Nov. 28...	186.8	178.9	7.9
Dec. 8...	129.0	124.3	4.7	Dec. 6...	193.3	176.1	17.2	Dec. 5...	197.2	188.3	8.9
Dec. 15...	126.5	122.8	3.7	Dec. 13...	199.0	184.1	14.9	Dec. 12...	192.6	186.9	5.7
Dec. 22...	126.1	120.4	5.7	Dec. 20...	207.0	201.6	5.4	Dec. 19...	185.8	182.5	3.3
Dec. 29...	126.4	120.0	6.4	Dec. 27...	214.1	205.4	8.7	Dec. 26...	183.5	181.5	2.0
1924				1925				1926			
Jan. 5...	128.2	123.5	4.7	Jan. 3...	215.1	211.8	3.3	Jan. 2...	193.5	193.6	(.1)
Jan. 12...	130.7	125.9	4.8	Jan. 10...	216.8	216.7	.1	Jan. 9...	191.0	192.0	(1.0)
Jan. 19...	131.3	127.3	4.0	Jan. 17...	223.3	221.4	1.9	Jan. 16...	186.7	186.5	.2
Jan. 26...	131.2	127.3	3.9	Jan. 24...	227.9	223.2	4.7	Jan. 23...	186.9	184.1	2.8
Feb. 2...	133.1	129.7	3.4	Jan. 31...	242.1	232.0	10.1	Jan. 30...	187.5	185.4	2.1
Feb. 9...	135.0	130.4	4.6	Feb. 7...	231.5	223.5	8.0	Feb. 6...	190.9	186.2	4.7
Feb. 16...	134.5	128.8	5.7	Feb. 14...	224.1	216.5	7.6	Feb. 13...	186.1	179.0	7.1
Feb. 23...	134.7	130.1	4.6	Feb. 21...	227.4	217.7	9.7	Feb. 20...	185.3	177.9	7.4
Mar. 1...	134.3	130.0	4.3	Feb. 28...	232.9	226.1	6.8	Feb. 27...	183.1	177.9	5.2
Mar. 8...	134.5	132.4	2.1	Mar. 7...	230.9	222.1	8.8	Mar. 6...	176.6	171.2	5.4
Mar. 15...	132.8	129.3	3.5	Mar. 14...	217.0	208.8	8.2	Mar. 13...	179.3	175.7	3.6
Mar. 22...	133.2	129.9	3.3	Mar. 21...	197.8	193.4	4.4	Mar. 20...	181.5	174.6	6.9
Mar. 29...	130.9	126.5	4.4	Mar. 28...	199.0	196.4	2.6	Mar. 27...	180.1	167.1	13.0
Apr. 5...	131.5	127.3	4.2	Apr. 4...	178.6	180.7	(2.1)	Apr. 3...	181.2	165.6	15.6
Apr. 12...	132.4	127.4	5.0	Apr. 11...	188.5	188.2	.3	Apr. 10...	183.3	166.0	17.3
Apr. 19...	133.7	128.4	5.3	Apr. 18...	190.9	187.9	3.0	Apr. 17...	188.2	171.7	16.5
Apr. 26...	133.8	130.7	3.1	Apr. 25...	192.2	186.5	5.7	Apr. 24...	192.0	171.1	20.9
May 3...	136.2	130.5	5.7	May 2...	195.4	184.9	10.5	May 1...	190.0	169.4	20.6
May 10...	138.2	132.3	5.9	May 9...	210.4	193.6	16.8	May 8...	186.5	165.7	20.8
May 17...	138.3	132.5	5.8	May 16...	212.0	194.1	17.9	May 15...	186.7	165.0	21.7
May 24...	141.1	133.4	7.7	May 23...	221.6	198.2	23.4	May 22...	185.6	164.1	21.5
May 31...	142.3	134.4	7.9	May 30...	225.9	195.1	30.8	May 29...	187.1	164.5	22.6
June 7...	142.2	131.3	10.9	June 6...	212.5	192.1	20.4	June 5...	183.9	164.2	19.7
June 14...	145.5	138.2	7.3	June 13...	210.7	192.1	18.6	June 12...	187.7	174.6	13.1
June 21...	152.5	146.7	5.8	June 20...	198.9	181.9	17.0	June 19...	187.6	171.7	15.9
June 28...	153.5	149.3	4.2	June 27...	198.3	184.1	14.2	June 26...	184.9	164.9	20.0
Average...	136.8	129.0	7.8	Average...	198.7	182.3	16.4	Average...	184.7	175.9	8.8

\* See footnote to Appendix Table I.



TABLE VI.—COMPARISON BETWEEN HIGH CASH SALES PRICES OF NO. 3 MANITOBA NORTHERN AT WINNIPEG, PLUS 42 CENTS, AND HIGH QUOTATIONS (ON BASIS OF FUTURES) OF NO. 1 DARK NORTHERN SPRING AT MINNEAPOLIS\*

(Weekly averages of daily data, in cents per bushel)

Week ending	Winnipeg plus 42 cents	Minneapolis	Margin	Week ending	Winnipeg plus 42 cents	Minneapolis	Margin	Week ending	Winnipeg plus 42 cents	Minneapolis	Margin
1923				1924				1925			
July 7...	149.1	132.1	17.1	July 5...	158.4	151.1	7.3	July 4...	192.0	172.8	19.2
July 14...	145.7	134.2	11.5	July 12...	158.8	149.4	9.4	July 11...	194.2	177.1	17.1
July 21...	142.7	130.3	12.4	July 19...	170.7	156.7	14.0	July 18...	201.7	188.8	12.9
July 28...	143.5	133.6	9.9	July 26...	179.1	156.7	22.4	July 25...	197.4	185.2	12.2
Aug. 4...	143.0	134.6	8.4	Aug. 2...	186.0	156.9	29.1	Aug. 1...	196.0	184.8	11.2
Aug. 11...	143.6	129.3	14.3	Aug. 9...	183.1	154.7	28.4	Aug. 8...	207.1	190.3	16.8
Aug. 18...	147.2	129.6	17.6	Aug. 16...	180.0	151.7	28.3	Aug. 15...	205.5	182.8	22.7
Aug. 25...	153.2	128.7	24.5	Aug. 23...	177.3	148.0	29.3	Aug. 22...	205.6	177.8	27.8
Sept. 1...	151.0	129.2	21.8	Aug. 30...	171.8	144.9	26.9	Aug. 29...	199.4	173.0	26.4
Sept. 8...	151.0	131.4	19.6	Sept. 6...	171.6	140.8	30.8	Sept. 5...	191.0	168.6	22.4
Sept. 15...	144.2	128.1	16.1	Sept. 13...	174.6	140.5	34.1	Sept. 12...	182.5	166.6	15.9
Sept. 22...	140.3	125.5	14.8	Sept. 20...	180.6	146.2	34.4	Sept. 19...	173.5	166.6	6.9
Sept. 29...	135.5	126.8	8.7	Sept. 27...	184.2	148.2	36.0	Sept. 26...	167.3	162.9	4.4
Oct. 6...	136.6	128.2	8.4	Oct. 4...	192.6	159.9	32.7	Oct. 3...	160.0	159.5	.5
Oct. 13...	136.6	129.4	7.2	Oct. 11...	201.3	167.2	34.1	Oct. 10...	161.7	164.3	(2.6)
Oct. 20...	132.3	127.3	5.0	Oct. 18...	197.3	168.7	28.6	Oct. 17...	162.3	167.8	(5.5)
Oct. 27...	131.8	128.1	3.7	Oct. 25...	192.0	162.5	29.5	Oct. 24...	163.2	167.6	(4.4)
Nov. 3...	132.7	126.8	5.9	Nov. 1...	187.4	159.7	27.7	Oct. 31...	168.9	171.6	(2.7)
Nov. 10...	132.6	122.0	10.6	Nov. 8...	190.3	163.7	26.6	Nov. 7...	172.4	171.5	.9
Nov. 17...	132.3	119.8	12.5	Nov. 15...	200.7	172.9	27.8	Nov. 14...	173.2	171.8	1.4
Nov. 24...	132.8	122.0	10.8	Nov. 22...	199.2	172.3	26.9	Nov. 21...	177.7	173.6	4.1
Dec. 1...	130.7	122.1	8.6	Nov. 29...	199.7	175.5	24.2	Nov. 28...	188.9	175.1	13.8
Dec. 8...	130.3	124.3	6.0	Dec. 6...	194.9	178.3	16.6	Dec. 5...	199.0	183.4	15.6
Dec. 15...	128.1	123.0	5.1	Dec. 13...	201.2	193.5	7.7	Dec. 12...	197.5	182.1	15.4
Dec. 22...	127.3	120.6	6.7	Dec. 20...	207.6	205.8	1.8	Dec. 19...	187.4	177.7	9.7
Dec. 29...	126.9	120.0	6.9	Dec. 27...	215.3	212.1	3.2	Dec. 26...	184.8	179.5	5.3
1924				1925				1926			
Jan. 5...	129.0	123.7	5.3	Jan. 3...	216.8	214.8	2.0	Jan. 2...	195.1	190.8	4.3
Jan. 12...	131.7	126.6	5.1	Jan. 10...	218.4	216.7	1.7	Jan. 9...	192.0	189.5	2.5
Jan. 19...	132.8	127.3	5.5	Jan. 17...	224.2	221.5	2.7	Jan. 16...	187.2	184.5	2.7
Jan. 26...	132.1	127.7	4.4	Jan. 24...	228.9	226.2	2.7	Jan. 23...	187.2	181.1	6.1
Feb. 2...	134.0	130.2	3.8	Jan. 31...	243.6	234.2	9.4	Jan. 30...	188.2	183.4	4.8
Feb. 9...	136.4	130.5	5.9	Feb. 7...	233.8	225.8	8.0	Jan. 6...	191.8	185.2	6.6
Feb. 16...	136.0	128.8	7.2	Feb. 14...	227.2	216.5	10.7	Feb. 13...	187.0	177.0	10.0
Feb. 23...	135.9	130.8	5.1	Feb. 21...	228.6	218.1	10.5	Feb. 20...	185.5	175.6	9.9
Mar. 1...	135.5	130.0	5.5	Feb. 28...	233.5	227.1	6.4	Feb. 27...	184.2	175.7	8.5
Mar. 8...	134.9	133.1	1.8	Mar. 7...	234.6	223.8	10.8	Mar. 6...	177.5	170.0	7.5
Mar. 15...	134.0	130.3	3.7	Mar. 14...	217.5	211.5	6.0	Mar. 13...	179.6	173.5	6.1
Mar. 22...	133.9	130.1	3.8	Mar. 21...	200.4	196.1	4.3	Mar. 20...	182.2	171.6	10.6
Mar. 29...	132.0	126.3	5.7	Mar. 28...	201.7	200.1	1.6	Mar. 27...	181.0	164.4	16.6
Apr. 5...	132.0	127.6	4.4	Apr. 4...	181.3	183.2	(1.9)	Apr. 3...	181.9	163.0	18.9
Apr. 12...	133.0	127.8	5.2	Apr. 11...	189.1	192.0	(2.9)	Apr. 10...	183.7	164.1	19.6
Apr. 19...	134.7	128.6	6.1	Apr. 18...	194.8	191.9	2.9	Apr. 17...	188.7	170.2	18.5
Apr. 26...	135.6	131.0	4.6	Apr. 25...	193.2	190.4	2.8	Apr. 24...	193.6	170.0	23.6
May 3...	136.9	130.7	6.2	May 2...	196.2	186.9	9.3	May 1...	190.6	167.6	23.0
May 10...	139.4	133.3	6.1	May 9...	213.0	195.3	17.7	May 8...	187.1	165.7	21.4
May 17...	139.0	133.4	5.6	May 16...	212.3	197.6	14.7	May 15...	187.6	164.5	23.1
May 24...	142.2	133.8	8.4	May 23...	223.6	202.7	20.9	May 22...	186.1	162.8	23.3
May 31...	143.7	134.9	8.8	May 30...	229.9	193.9	36.0	May 29...	188.0	162.9	25.1
June 7...	143.3	132.3	11.0	June 6...	213.6	190.4	23.2	May 29...	184.7	163.2	21.5
June 14...	146.5	138.9	7.6	June 13...	211.1	190.1	21.0	June 12...	188.6	173.3	15.3
June 21...	153.7	147.5	6.2	June 20...	200.3	180.0	20.3	June 19...	188.2	171.0	17.2
June 28...	154.1	149.8	4.3	June 27...	200.2	180.8	19.4	June 26...	185.7	162.9	22.8
Average...	138.0	129.5	8.5	Average...	200.5	183.6	16.9	Average...	185.8	173.6	12.2

\* See footnote to Appendix Table I.

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