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UNITED STATES DEPARTMENT OF AGRICULTURE



DEPARTMENT BULLETIN No. 1479



Washington, D. C.



MARCH, 1927

SPECULATIVE TRANSACTIONS IN
THE 1926 MAY WHEAT FUTURE

By

J. W. T. DUVEL, Chief

and

G. WRIGHT HOFFMAN, Assistant Marketing Specialist
Grain Futures Administration

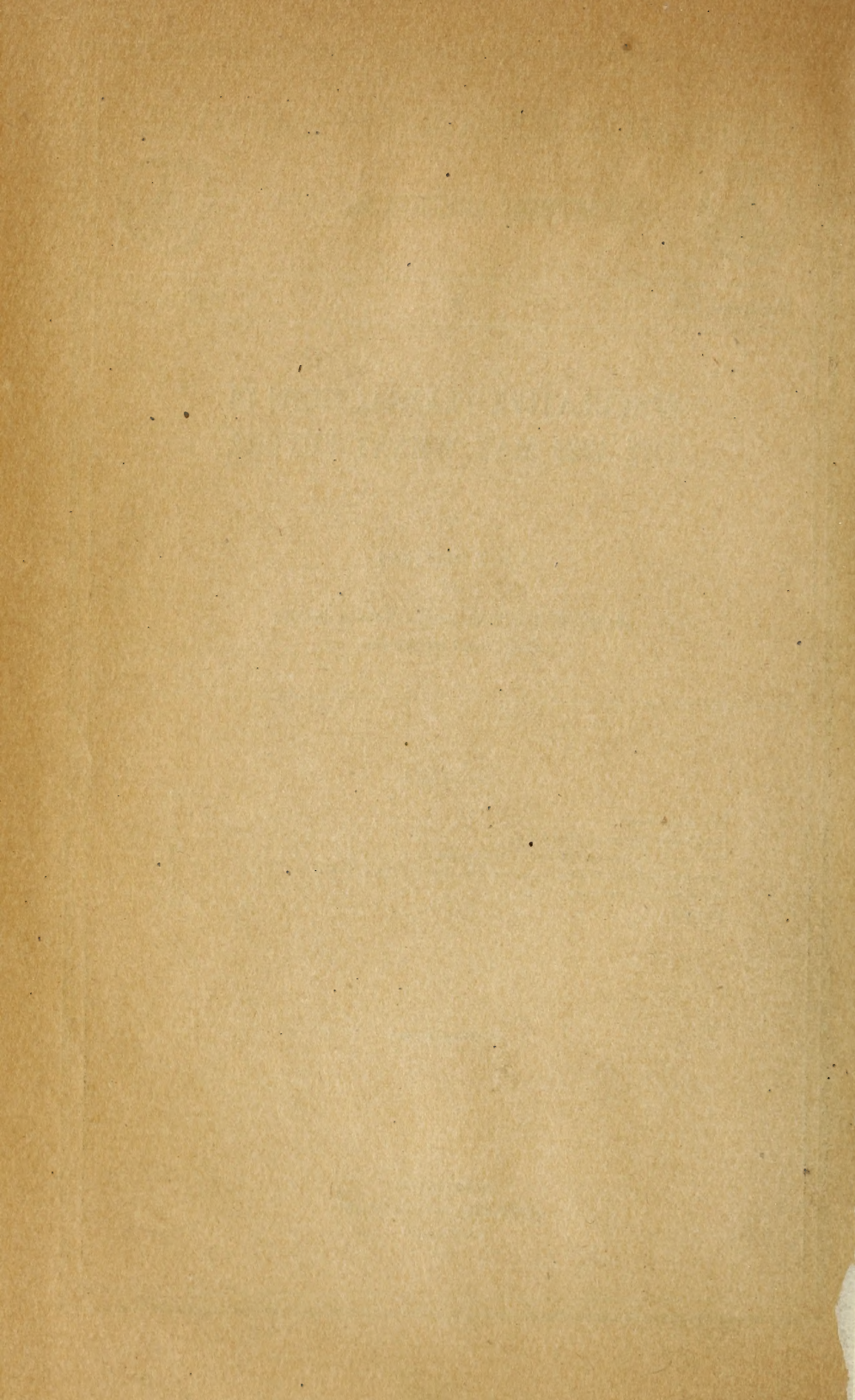
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NATURE AND SCOPE

SUMMARY OF A PREVIOUS INVESTIGATION

During the early months of 1925 the unusual and erratic fluctuations in wheat futures prices so paralyzed the grain trade generally that a Federal investigation was made by the Grain Futures Administration. The results of that investigation were published as Senate Document No. 135, entitled "Fluctuations in Wheat Futures."¹

That report covered the period from January 2 to April 18, 1925, and related to the trading operations and price changes in the 1925 May wheat future on the Chicago Board of Trade.

For the purpose of that investigation the "traders" were classified into groups designated as: Commission-house accounts, hedgers, scalpers, large speculators, spreaders, speculative scalpers, and miscellaneous. The trading operations of these various groups were then analyzed and contrasted one with another and with price changes. By grouping the accounts in this manner the character of the trading

¹ Sixty-ninth Congress, first session, June, 1926.

of each type was clearly shown both from day to day and for the period as a whole. Important among the results obtained were:

(1) The daily changes in the net position of the hedgers, scalpers, spreaders, and speculative scalpers did not show any marked relationship to the changes in wheat prices during the period under study.

(2) The changes in the net position from day to day of the large speculators, taken as a class, were found to be almost exactly opposite to the changes in the net position of the class designated as commission-house accounts and of the miscellaneous class. Expressed differently: Whenever the large speculators bought, either the commission-house class or the miscellaneous class or both sold; and whenever either one or the other or both of the latter classes bought the former class sold.

This second fact was of particular interest for the reason that in contrast to the class of large speculators, the commission-house and miscellaneous classes were made up primarily of small traders. They included for the most part those traders popularly known as the "general public." The opposite character of the trading of the large speculators to that of the small speculators became much more significant when it was found that the changes in the net position from day to day of the large speculator class bore a direct relation to the changes in the price of May wheat, while the changes in the net position of the commission-house and miscellaneous classes were inversely related to changes in price.

(3) In analyzing in detail the trading operations of the 302 traders constituting the class of large speculators, it was found that the market position and trading of this class was, for the most part dominated by the eight largest traders of the group. Each of these eight traders attained a position in May wheat, either long or short, of 2,000,000 bushels or over at some time during the period covered. Five of the eight traded on individual days to a net amount of 2,000,000 bushels or more. When these single-day operations were compared with the net change in the price of May wheat for the corresponding days, it was found that in 76 per cent of the cases the price moved in the same direction as the trading, i. e., if purchases, an advance in price; if sales, a decline in price.

The results obtained from the investigation which has just been summarized were important and far-reaching in significance. They were, however, based on a period of less than four months during which time the price changes were abnormal. In view of these facts additional study of the trading since the early part of 1925 has been made, the results of which are embodied in this bulletin.

The bulletin here presented is in substance a carrying forward of this earlier investigation to include the transactions in the 1926 May wheat future. The daily reports regularly received by the Grain Futures Administration from all classes of "traders" show that large-scale speculative operations carried on during the first four months of 1925 continued during the summer and fall and the following winter. Having already found from the earlier study that the trading of hedgers, scalpers, and spreaders does not directly relate to large price movements, the present study has been limited to purely speculative trading and principally to the operations of the eight individuals whose market positions exceeded 2,000,000 bushels. The present investigation covers only wheat futures as did the previous one and emphasizes in particular the trading and price movements in the 1926 May future.

EXPLANATION OF TERMS NOT COMMONLY USED BY THE TRADE

The terminology and subject matter of future trading is sufficiently difficult for the average reader to justify a brief review of the more important terms used in this bulletin. Most of the terms used in the reports of the Grain Futures Administration are terms used in the grain trade generally; but in certain instances, and especially in the combining of the trading of firms or traders, it has

been necessary to add new terms. In each instance when a new expression has been employed, the attempt has been to make it as nearly descriptive of the subject matter as possible.

The terms "long" and "short" are employed by the trade to designate the position of a trader in the market. A trader might buy during one day's trading 30,000 bushels of May wheat future and sell that day 10,000 bushels of the same future. He would then be net long at the close of trading 20,000 bushels, assuming he had no position, i. e., was "even," at the beginning of the day. If on the following day he should buy 5,000 bushels and sell 40,000 bushels of the same future, his net position would then be short 15,000 bushels at the close of trading on the second day.

From each of the clearing members of the Chicago Board of Trade daily reports are received by the Grain Futures Administration of the total purchases and total sales and of the aggregate of all long accounts and the aggregate of all short accounts. Thus for a given clearing firm, a particular day's business might show that its customers had bought a total of 1,205,000 bushels of May wheat and sold a total of 2,330,000 bushels of the same future. At the close of the day's trading this clearing firm's records would doubtless show some of its customers to be long and others to be short. Adding together all of the long accounts, and in turn all of the short accounts, an "aggregate long" figure and an "aggregate short" figure is obtained. The difference between the aggregate of the long and the aggregate of the short accounts gives the "combined net position" for the customers of the firm.

By adding the purchases together and the sales together of all of the clearing firms, the total volume for the board is obtained. The total of the sales should of course equal the total of the purchases. Likewise by adding together the aggregate long of all clearing firms and in turn the aggregate short of all clearing firms, the total "customers' open commitments" (contracts open at the close of trading, long or short, both sides being the same) is obtained. It should be added that the accounts on the books of clearing members are not all accounts of individuals. The accounts of nonclearing firms and correspondent commission firms outside of Chicago who have their own customers, some of which are long and others short, are treated on the books of the clearing member as a single account.

IMPORTANCE OF EIGHT LEADING SPECULATORS

This bulletin relates mainly to the trading of the eight largest speculators in the 1926 May wheat future on the Chicago Board of Trade. These eight were selected because they were the only traders whose net position reached at any one time 2,000,000 bushels or over in this particular future. In the 1925 May wheat future there were also only eight speculators whose position, long or short, reached 2,000,000 bushels or over. They were not, however, the identical eight, only five being in the market extensively in both futures. There were several firm accounts which exceed 1,000,000 bushels but did not reach the 2,000,000-bushel level. There were also several hedge accounts of considerable size, but being accounts growing out of cash-grain operations and changing in position relatively slowly from day to day, they are not here considered.

Figure 1 shows the relative importance of these eight traders contrasted with the Chicago market as a whole. The aggregate of the long and the aggregate of the short positions of the eight traders and the individual net positions of the largest two of the eight are shown compared with the total open commitments (one side only) in the 1926 May wheat future. The total open commitments shown in the chart on the long side might equally well have been drawn on the short side, since every contract open on the long side must also be carried by some one on the short side.

It can be readily seen that during the months of December, January, and February—months in which the open commitments in May wheat were largest—the fraction of the total long held by the eight traders was an important one. During these three months 19.7,

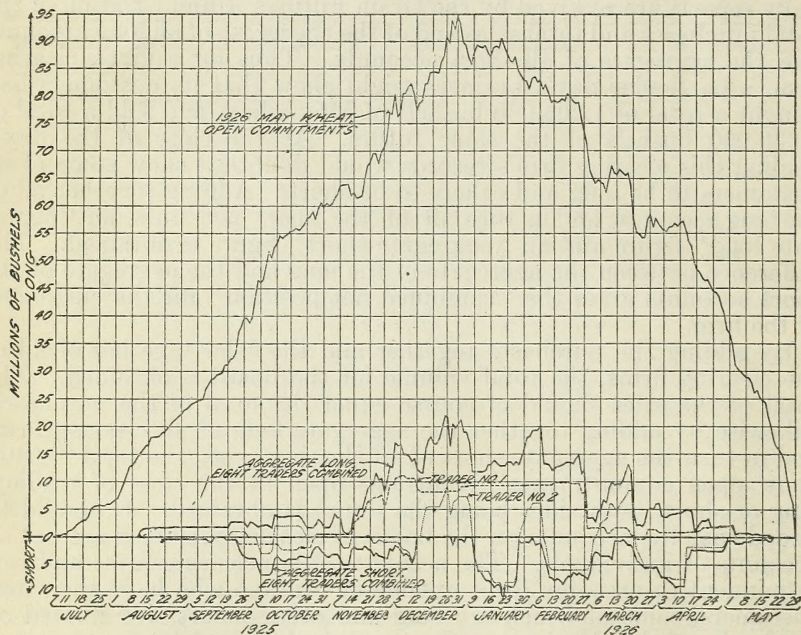


Fig. 1.—The total open commitments in the 1926 May wheat future compared with the aggregate commitments, long and short, of eight traders and of two individual traders

16, and 18.3 per cent, respectively, of the total long commitments in May wheat were held by the eight traders. There were 122 days on which either the aggregate long or the aggregate short of the eight traders exceeded 10 per cent of the total open commitments. On 21 of these 122 days, the aggregate long position of the eight traders exceeded 20 per cent of the total; and for one day, December 21, the aggregate long of the eight traders was over 25 per cent of the total open commitments. The aggregate long for December 21 of the eight traders amounted to 21,955,000 bushels out of the total open commitments in the market of 87,225,000 bushels.

Trader No. 1 measured by his position in the market was the largest of the eight speculators. During December, January, and February, his average long position exceeded 10 per cent of the total open commitments on the Chicago market. For two individual days—on

December 4 and 5—the amount held by this trader exceeded 14 per cent and on several other days it amounted to more than 12 per cent of the total open commitments. The maximum position this trader attained was on December 7, when he had accumulated a long line of 11,125,000 bushels of May wheat, which amounted to 13.8 per cent of the total commitments in May wheat on that date.

The position of trader No. 2 is characterized not so much by a large position maintained over a considerable period of time as by the pronounced extremes both long and short reached on individual days. Thus at the close of trading on December 26, this trader was long 8,900,000 bushels, this being 9.8 per cent of the total open commitments in May wheat. On January 21, he was short 9,910,000 bushels or 10.9 per cent of the total open commitments. On February 4, he was again long 6,100,000 bushels or 7.3 per cent of the total, followed by a short position on February 11 of 5,900,000 bushels or 7.5 per cent of the total. On March 19 he was again long 8,400,000 bushels or 13.2 per cent of the total and on April 9 he was short 7,700,000 bushels or 13.7 per cent of the total open commitments. When the transactions of traders No. 1 and No. 2 are combined they reach peaks in their net position of 17,225,000 bushels long on December 26, of 16,450,000 bushels long on January 6, and of 15,525,000 bushels long on February 5. These positions represent 18.8, 18.4, and 18.8 per cent, respectively, of the total open commitments.

The importance of these traders may also be measured by their net purchases or sales on individual days. Thus trader No. 1 bought 2,300,000 bushels of May wheat on December 1, sold 2,000,000 bushels on December 12, and on March 1, he sold 6,000,000 bushels. On March 1, another of the eight traders sold 4,500,000 bushels, the combined sales of these two traders amounting to 11.1 per cent of the total sales for that day in May wheat. Trader No. 2 bought or sold over 2,000,000 bushels on 19 different days during the life of the 1926 May wheat future. On October 9, he bought 4,500,000 bushels which amounted to 16.5 per cent of the total purchases of May wheat that day; on January 28, he bought 7,135,000 bushels amounting to 12.1 per cent of the total; on February 8, he sold 6,100,000 bushels and on March 20, 6,000,000 bushels which amounts were equivalent to 8.3 per cent and 10.6 per cent, respectively, of the total sales on each of those two days. Between January 7 and January 11, inclusive, this trader sold amounts of the May future aggregating net 13,700,000 bushels.

The facts here presented are intended to show only the importance of these eight large speculators in the Chicago wheat futures market. Their position seems of sufficient size to warrant further analysis regarding their trading operations and the influence of these upon wheat prices.

METHOD OF ANALYSIS

The question of what influence the trading operations of speculators have upon price can be approached from two angles. (1) A comparison of the net purchases or sales on individual days as they relate to accompanying price changes, or (2) a comparison of the course of the net position of the traders as it relates to price movements. The first method considers each day's trading as a separate unit. The second method takes into account not only the changes occurring each day but also the position long or short already accumulated. In the

following section the latter method—a comparison of the net position with price—has been used in an analysis of the trading of the eight large speculators. In a subsequent section their net trades are compared with the corresponding net price changes.

NET POSITION COMPARED WITH PRICE

THE PRICE AND OPEN COMMITMENTS IN THE 1926 MAY WHEAT FUTURE

The position long or short of the eight largest speculators on the Chicago Board of Trade is presented in this section and compared with the price of the May future for corresponding days. In so doing, account is taken not only of the net trading each day but also the position long or short previously accumulated.

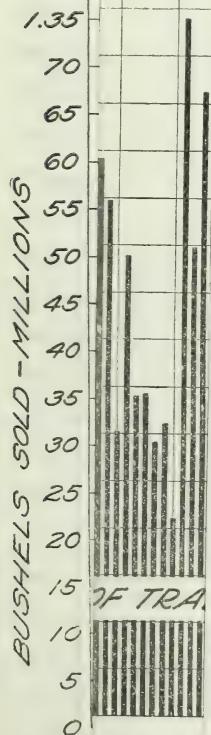
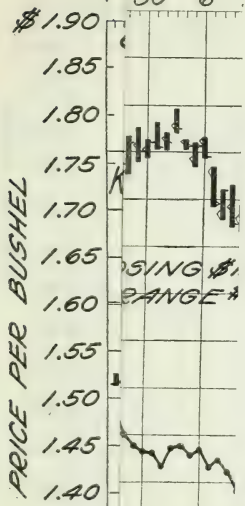
Figure 2 shows, by days, the course of prices for the 1926 May wheat future. The figures for these daily price changes are contained in Table 2 of the appendix. Included also on the chart is the daily volume of trading and the daily open commitments. In some respects the course of prices for the 1926 future is similar to that of the 1925 future. The price increased both years during the fall and early winter to a high for the "life" of the future; for both years, the price declined during February and March (with some important interruptions) to a low for the latter half of the future; and in both years the price rallied somewhat during April and May. The course of prices for the 1925 May wheat future is shown in Figure 3.

Although there is a marked similarity between the price movements during the two years, the price "swings" were not so large in the 1926 May as in the 1925 May future. The low for the 1925 future was \$1.19 $\frac{5}{8}$ on July 8, whereas the low for the 1926 future was \$1.34 $\frac{5}{8}$ on October 3. The high for the 1925 future was reached on January 28 at \$2.05 $\frac{7}{8}$, whereas the high of the 1926 May future occurred on December 29 at \$1.85 $\frac{1}{2}$. Following the high, the 1925 future declined to a second low on April 3 of \$1.36 $\frac{1}{2}$, whereas the 1926 future reached its second low on March 23 at \$1.53 $\frac{1}{2}$. From these low points each future turned upward, the 1925 May future closing at \$1.65 $\frac{3}{8}$ to \$1.66, whereas the 1926 May future closed at \$1.64 to \$1.65. The average closing price for the life of the 1925 May future was \$1.59, whereas that of the 1926 May future was \$1.60 $\frac{1}{4}$, a difference of only 1 $\frac{1}{4}$ cents. On the other hand the 1925 May showed a price range of 86 $\frac{1}{4}$ cents and the 1926 May of 50 $\frac{3}{8}$ cents.

The open commitments for the 1926 future reached their maximum on December 31 at 94,694,000 bushels, practically coincident with the peak in the May future price as shown in Figure 2. Thereafter the total open commitments declined rapidly, following in general the decline in price. In contrast, the maximum of the open commitments in the 1925 May future was on December 9, almost two months prior to the peak in price. On this date the total of the open commitments in May wheat was 107,472,000 bushels. Approximately this volume was maintained until January 12 and thereafter declined during January while the price continued upward.

The difference between these two years in the relation of open commitments to price is explained largely by the absence of a wide "public interest" in wheat futures during the winter of 1925-26. In the winter of 1924-25, large professional speculators as a group began liquidating their long holdings on January 12 and continued

BOAR
FEB
30 6



6 May wheat

DAILY TRANSACTIONS MAY WHEAT 1926 CHICAGO BOARD OF TRADE

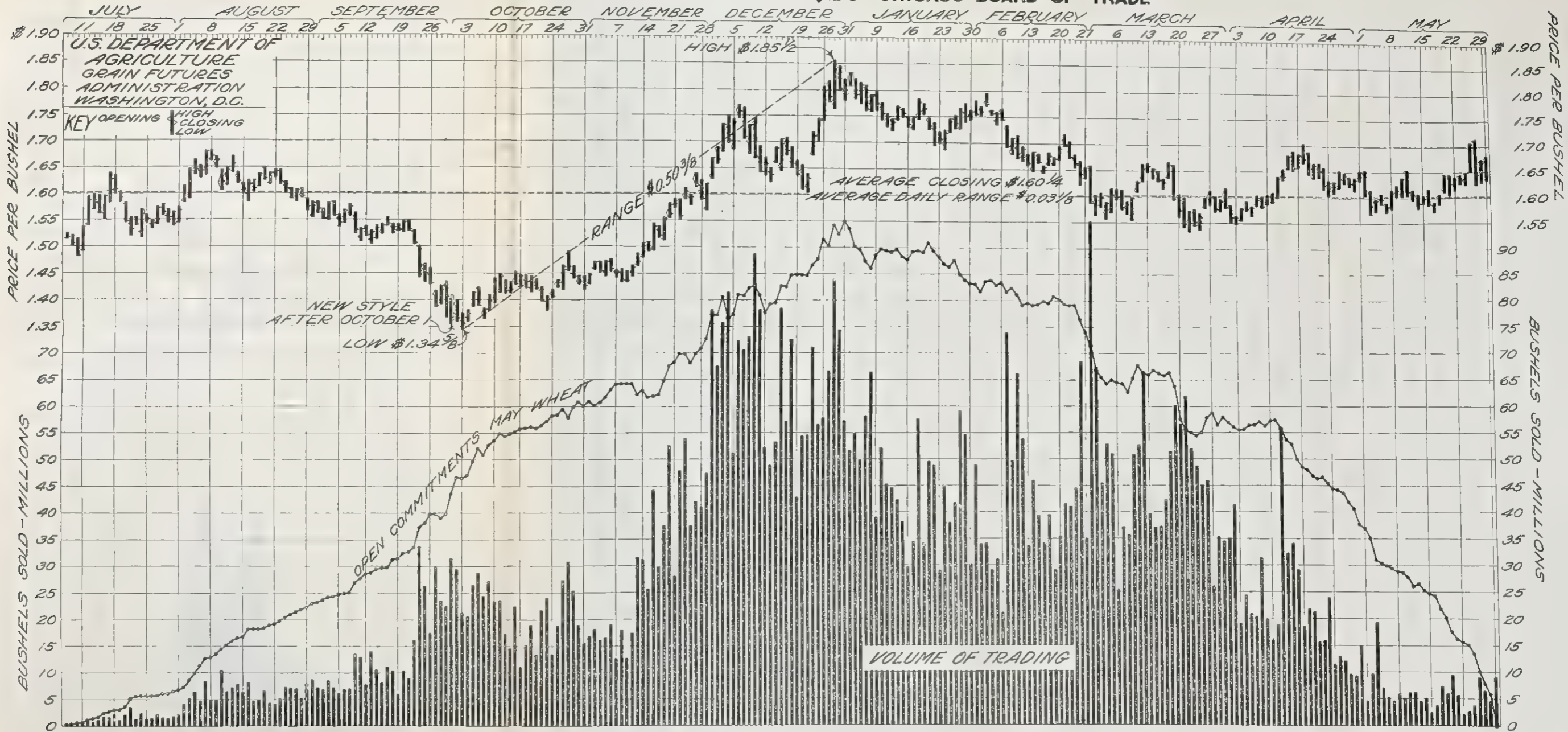


FIG. 2.—Opening, high, low, and closing prices compared with the volume of trading and open commitments for the 1926 May wheat future, Chicago Board of Trade.



TRADE

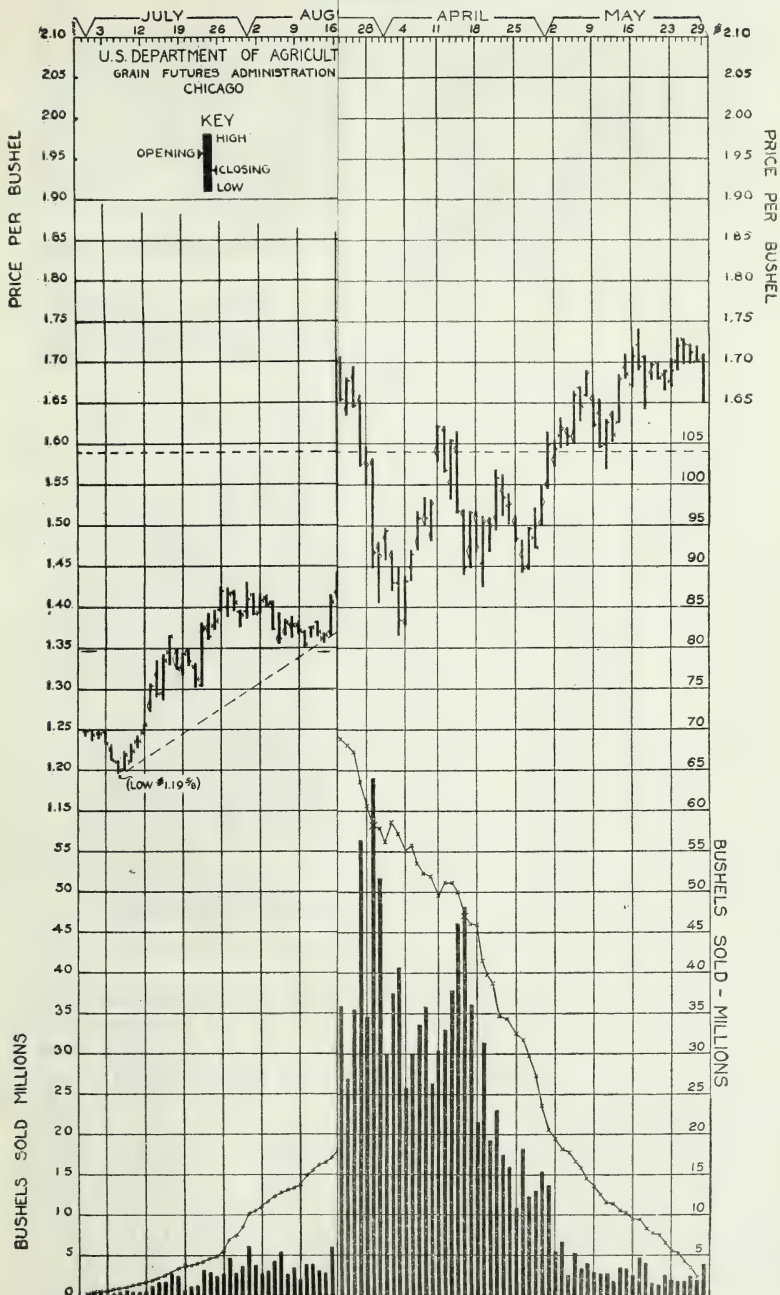


FIG Board of Trade

DAILY TRANSACTIONS MAY WHEAT 1925 CHICAGO BOARD OF TRADE

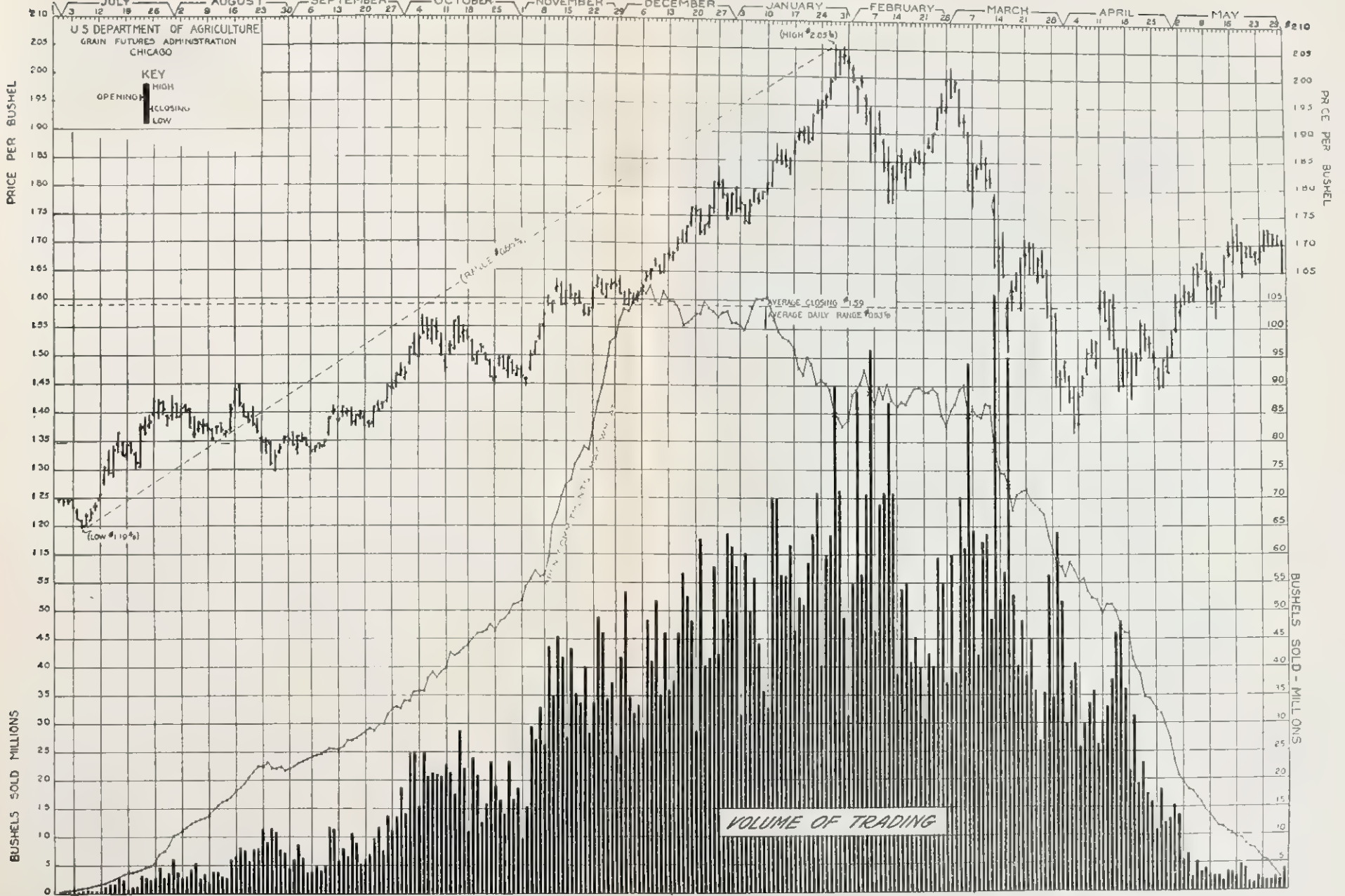


FIG. 3.—Opening, high, low, and closing prices compared with the volume of trading and open commitments for the 1925 May wheat future, Chicago Board of Trade

DAILY TRANSACTIONS MAY 1917



to do so throughout the remainder of the month. Their long position was assumed by an enthusiastic bullish public who continued to carry the price on upward. In the 1926 May future the last sharp advance in December was due almost entirely to the activities of professional speculators. However, in the absence of a widespread public interest the liquidation of large professional speculators was accompanied by a marked shrinkage in the total open commitments and a decline in price. Further reference to this point is made in the following section, where the position of the eight large speculators is presented with the 1926 May future price.

THE COMBINED POSITION OF EIGHT LEADING SPECULATORS COMPARED WITH PRICE

Figure 4 shows for the whole of the 1926 May wheat future the average closing price compared with the combined net position of the eight large speculators being considered in this bulletin. The block

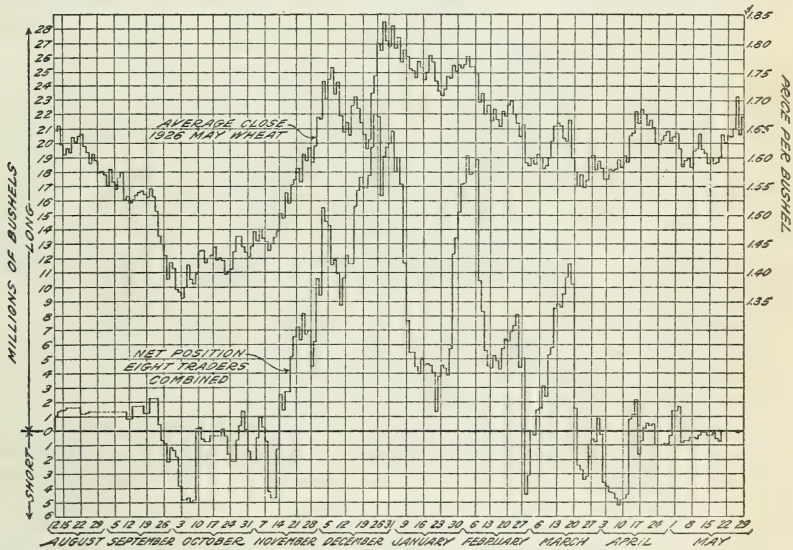


FIG. 4.—The combined net position of eight large speculators compared with the average closing price, by days, for the 1926 May wheat future

plan of plotting the data has been used to bring out clearly, not only the course of the price and the position of the traders, but also how each series changed each day. Thus the vertical bars on the price curve represent the net changes in price from the close of the previous day to the close of the date on which the bar appears. The vertical bars on the net position curve in turn represent the net change in the position of the group of traders (or the net trade) from the close of the previous day to the close of the date on which the bar is drawn. This makes possible a direct comparison of the net as well as the cumulative effect of each day's trading by this group upon the price.

With the exception of two short positions temporarily held the eight traders did not come into the market to any extent until the early part of November. From this point their net position increased rapidly on the long side until it reached a maximum on December 24, of 21,955,000 bushels. During this upward swing the May future price increased from a close on November 9 of \$1.43 $\frac{7}{8}$ to

a high of \$1.85½ on December 29, the average closing price on the latter day being \$1.84¼

The net long position of the eight then declined from a secondary high of 20,785,000 bushels on January 4 to a low of 1,345,000 bushels on January 21. The closing price during this downward swing declined from a secondary high closing of \$1.82¾ on January 4 to a low closing of \$1.70⅝ on January 23. The position and price then moved upward to a top for both on February 3, the position of the traders increasing to 19,145,000 bushels long and the closing price to \$1.77⅜. Swinging down again, the position of the traders reached a low of 4,400,000 bushels short on March 1, while the price reached a low of \$1.58 on March 8. Another peak in position of 11,590,000 bushels long was reached on March 18, with the closing price for the same date at a peak of \$1.66⅜. Declining again the net position moved to a low position of 3,365,000 bushels short on March 24, with a corresponding low closing price of \$1.54¾. Beyond this date the movements in position are smaller and show less relation to price changes.

Within the limits of each of these net position and price swings, daily net changes of large proportions occurred. In a subsequent section reference is made to the fact that for this particular future and for the eight traders shown there were 33 days on which net trades of 2,000,000 bushels or over were made, and that on 30 of these days the price moved in the same direction as the net trade. These days may be identified on Figure 4 and a direct comparison made with the net price changes.² The largest change occurred on March 1, when a net of over 9,000,000 bushels was sold, the price declining 6⅝ cents.

The movements in net position for the 1926 May future were at most points coincident in time with those of price. In this respect the operations of the large speculators differed in their effect upon the price in the 1926 future from that of the 1925 future. In the earlier year during the major movement which occurred in January, the price change lagged behind the change in the combined net position approximately two weeks. For the smaller movement in February the price lagged approximately one week. For movements in March and April the price change was approximately coincident in time with the changes in position. As pointed out in the preceding section, this difference between the two years was due to a much smaller public participation in the futures market during the winter of 1925-26 than during the previous winter. During the winter of 1924-25, the public was in part "shaken out" during February and completely so during the early part of March.

Whether the public is in the market or not to any unusual degree is an important point in determining the influence which large professional speculators can have upon price. Judged from the effect during these two years, prices will not move to as great extremes nor break as erratically when the public is not in the market to an unusual extent as when the public is participating heavily. Although the fluctuations in price are not as extreme in the absence of heavy participation by the public, the effect of large speculative operations

² These 33 net trades are given in Table 1. Their size will not check exactly with the changes in net position shown in Figure 4 for the reason that in determining net trades of 2,000,000 bushels or over for the eight traders only those net purchases or sales were included which amounted to 500,000 bushels or more. The net position changes are sufficiently close however to be easily identified.

upon the price is much more immediate and certain, except in cases when the operations of one or more large speculators are offset by the operations of other large traders who are simultaneously taking the opposite side of the market.

THE NET POSITION OF THE EIGHT TRADERS CORRELATED WITH PRICE

For the information of the technical reader there is presented herewith the results of a correlation of the position of these eight traders with the price of the 1926 future. Not all of the future was used in this correlation for the reason that during the early part and during the last part of the life of any future, trading is small, and the effect of the larger operations in one or more of the other active futures mainly controls the price. Thus, to account for the price decline during August and September, 1925, during which time

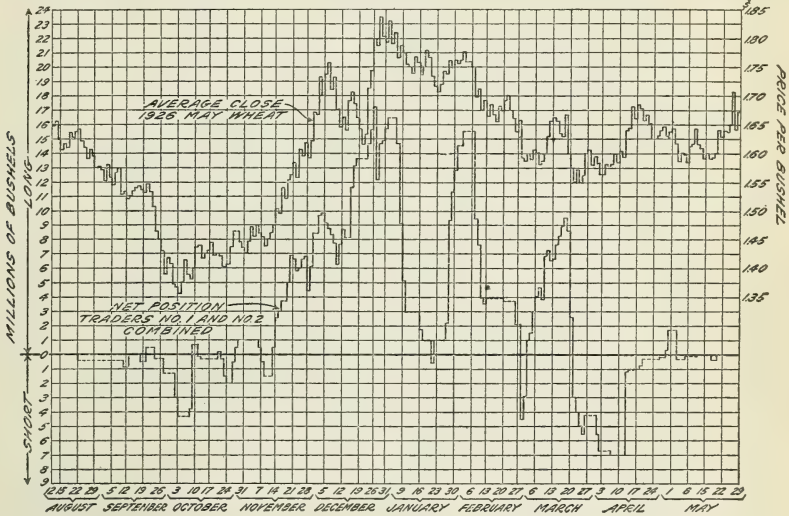


Fig. 5.—The combined net position of traders No. 1 and No. 2 compared with the average closing price, by days, for the 1926 May wheat future

trading was maintained in the 1925 September, the 1925 December, and the 1926 May futures, it would be necessary to study the trading operations in the September and December futures which were at that time relatively much more important than the May. Therefore, only that portion of the 1926 May wheat future was used which included the period during which the May carried a larger volume of open commitments than any other future. The period used began with October 22, 1925, and extended to April 29, 1926, inclusive, a period of 155 trading days.

Correlating the combined net position of the eight traders with the average closing price, by days, resulted in a direct correlation of +0.69, with a probable error of ± 0.03 .

THE INDIVIDUAL POSITIONS OF THE EIGHT LEADING SPECULATORS

The major movements in the combined position of the eight traders shown in Figure 4 reflect largely the operations of traders No. 1 and No. 2. This is clearly shown in Figure 5. With the exception of a

few comparatively minor variations, the net position curve of traders No. 1 and No. 2 combined is practically a duplicate of the position of the eight. Of the important movements in net position, trader No. 1 was accountable for the increase from November 13 to December 15.

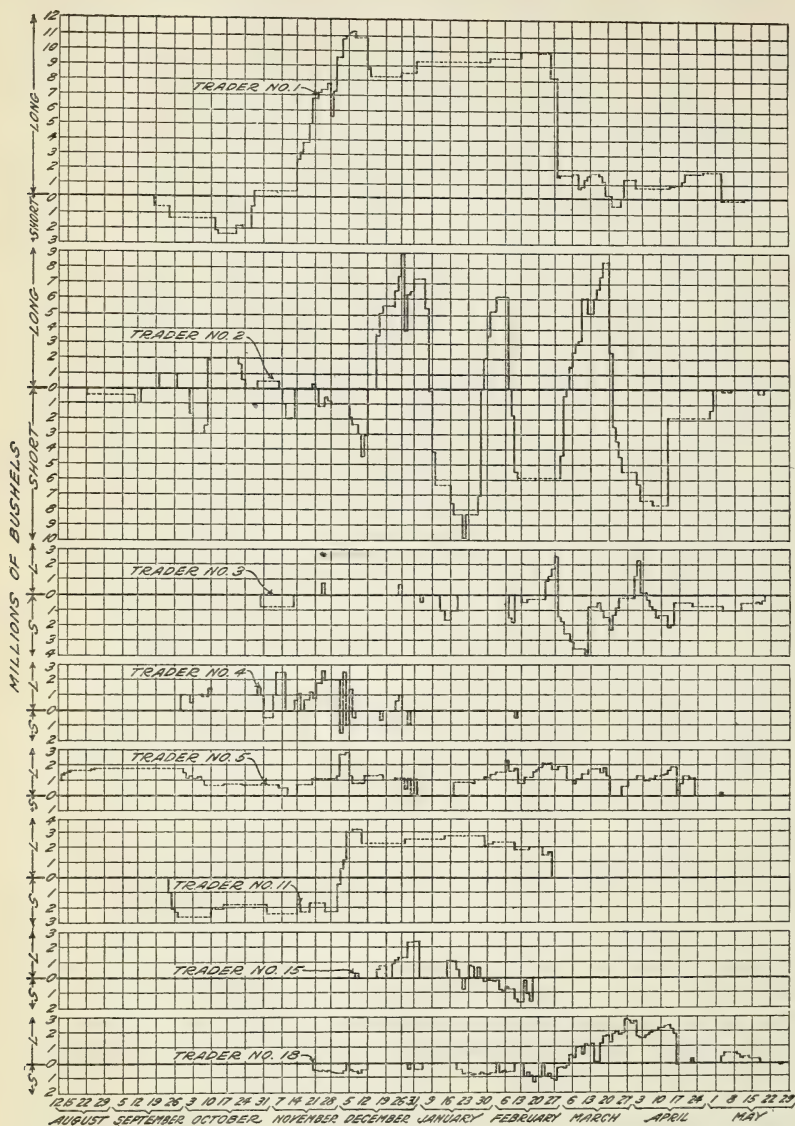


FIG. 6.—The net position long or short of each of the eight largest speculators in the 1926 May wheat future, by days, Chicago Board of Trade

Trader No. 2 then came into the market and was accountable for the additional increase to December 26, the decrease to January 21, the movement up to February 3, and down to February 13. On February 26 and March 1, trader No. 1 liquidated and was accounta-

ble for the decrease at this point. Trader No. 2 was accountable for the change upward from March 1 to March 18, and the ensuing downward movement to April 8.

These individual changes are more clearly seen by referring to the separate net positions of the eight traders, as shown in Figure 6. The positions of the eight are here drawn on the same scale in order that one may get a picture of their relative importance. The position of each of the eight, together with their combined net position, is also shown in comparative form in Table 1.

TABLE 1.—The net position in the 1926 May wheat future of eight leading traders, by days, from August 12, 1925, to May 29, 1926, inclusive
 [In thousands of bushels; i. e., 000 omitted]

Date	Trader No. 1		Trader No. 2		Trader No. 3		Trader No. 4		Trader No. 5		Trader No. 11		Trader No. 15		Trader No. 18		Combined aggregate		Combined net		
	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	
1925																					
Aug. 12																		1,100			1,100
13																		1,400			1,400
14																		1,465			1,465
15																		1,500			1,500
16																		1,650			1,650
17																		1,650			1,650
18																		1,650			1,650
19																		1,650			1,650
20																		1,650			1,650
21																		1,650			1,650
22				400														1,650	400		1,250
24				400														1,650	400		1,250
25				400														1,700	400		1,300
26				400														1,750	400		1,350
27				400														1,750	400		1,350
28				400														1,750	400		1,350
29				400														1,750	400		1,350
31				400														1,750	400		1,350
Average.				400														1,615	400		1,427
Sept. 1				400														1,750	400		1,350
2				400														1,750	400		1,350
3				400														1,750	400		1,350
4				400														1,750	400		1,350
5				500														1,750	400		1,350
6				500														1,750	400		1,350
7				500														1,750	400		1,350
8				400														1,750	400		1,350
9				400														1,750	400		1,350
10				400														1,750	400		1,350
11				900														1,750	900		850
12				900														1,750	900		850
14																		1,750			1,750
15																		1,750			1,750
16																		1,750			1,750
17																		1,750			1,750
18			500															1,750			1,250
19			500															1,750			1,250
21			500															1,750			1,250
22			500															1,750			1,250
23			500															1,750			1,250
24			1,300															1,750			2,300

SPECULATIVE TRANSACTIONS IN 1926 MAY WHEAT FUTURE 13

25	1,300	1,000			1,750	2,100	3,400	650
26	1,300	1,000			1,750	2,300	2,750	850
28	1,300				1,750	2,600	3,900	2,150
29	1,300		1,000		1,750	2,600	2,750	1,150
30	1,300		1,000		1,515	2,600	2,515	3,900
Average	936	1,000			1,741	2,200	1,357	1,237
Oct. 1	1,300		1,000		1,005	2,600	3,900	1,805
2	1,300		1,000		1,295	2,600	2,095	1,705
3	1,300		1,000		1,095	2,600	2,095	3,835
5	1,300		1,000		1,095	2,600	2,095	4,805
6	1,300		1,000		1,210	2,600	2,095	4,805
7	1,300		935		995	2,600	1,930	4,090
8	1,300	2,000	1,435		650	2,600	1,585	4,970
9	1,300	2,000	1,600		650	2,100	4,085	4,815
10	1,300	2,000	1,600		650	2,100	3,650	3,900
12	1,300	2,000	1,000		650	2,100	3,650	4,200
13	1,300	2,000	1,000		650	2,100	3,650	4,400
14	1,300	2,000	1,000		650	2,100	3,650	750
15	1,300	2,000	1,000		650	2,100	3,650	4,400
16	1,300	2,000	1,000		650	1,800	3,750	750
17	1,300	2,000	1,000		750	1,800	3,750	4,100
18	1,300	2,000	1,000		750	1,800	3,750	350
19	1,300	2,000	1,000		750	1,800	3,750	350
20	1,800	2,000	1,000		750	1,800	3,750	350
21	1,800	1,500	1,000		750	1,800	3,750	350
22	2,000	1,500	1,000		750	1,800	3,750	350
23	2,000	1,500	1,000		675	1,800	3,250	350
24	2,000	1,500	1,000		675	1,800	2,175	1,025
25	2,000	1,500	1,000		675	1,800	1,675	3,800
26	2,000	1,500	1,000		675	1,800	1,675	2,125
27	500	500	1,000		675	1,800	1,675	2,350
28	500	500	1,000		675	1,800	2,175	625
29	500	500	800		675	1,800	1,800	375
30	500	500	800		675	1,800	1,375	1,800
31	500	500	800		675	1,800	2,000	2,000
Average	1,714	1,566	800	1,012	791	2,092	4,245	1,425
Nov. 2	500	500	800		675	2,400	3,700	2,073
3	500	500	800		675	2,400	3,700	2,025
4	500	500	800		675	2,400	3,700	2,025
5	500	500	800		675	2,400	3,200	625
6	500	500	800		475	2,400	4,175	975
7	500	1,000	800		475	2,400	3,475	275
8	500	2,000	800		475	2,400	3,475	725
9	500	2,000	800		475	2,400	975	4,225
10	500	2,000	800		475	2,400	500	4,225
12	500	2,000	800		475	2,400	500	4,700
13	500	2,000	800		475	2,400	500	4,700
14	2,000	1,075	675		675	2,400	1,175	1,225
16	3,050	675	675		675	1,800	4,350	2,550
17	3,725	675	675		675	2,300	1,425	1,800
18	3,725	675	675		675	2,300	3,725	2,300
19	5,025	1,175	675		675	2,300	5,075	2,300
20	6,025	1,775	675		675	1,700	6,875	1,700
			300		1,075	1,700	8,775	5,175
							535	6,540

TABLE 1.—The net position in the 1926 May wheat future of eight leading traders, by days, from August 12, 1925, to May 29, 1926, inclusive—Continued

[In thousands of bushels; i. e., 000 omitted]

Date	Trader No. 1		Trader No. 2		Trader No. 3		Trader No. 4		Trader No. 5		Trader No. 11		Trader No. 15		Trader No. 18		Combined aggregate		Combined net		
	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	
1925																					
Nov. 21	6,625											1,700						9,475	2,245	7,230	
23	7,025	1,200									1,075							9,875	3,535	6,340	
24	7,225	1,200	750								1,075							11,025	3,500	7,525	
25	7,225	600									1,075							10,275	3,585	6,740	
27	7,025	800									2,300							10,675	3,600	7,075	
28	5,425	1,975									2,300							8,475	3,960	4,515	
30	7,125	975									2,300							10,175	3,965	6,210	
Average	3,392	460	750	800	1,622	500	805				2,191						5,424	3,313	4,580	2,519	
Dec. 1	9,425																	12,725	2,155	10,570	
2	9,425	975			2,025		1,275					450						12,620	3,205	9,415	
3	10,625	975			2,500	1,500	2,645				550							17,120	1,590	15,530	
4	10,825	975				1,000	2,645				1,350							16,525	1,975	14,550	
5	11,025						2,745				2,955							16,525	2,480	14,045	
7	11,125				1,490	500	775				3,155							16,745	3,505	11,550	
8	10,725	1,875					775				3,155							15,055	3,505	11,550	
9	10,725	2,375					775				3,155							14,655	3,005	11,900	
10	10,725	2,975					775				3,155							13,705	4,980	8,725	
11	10,725	3,100					775				2,205							14,205	3,595	10,610	
12	8,725						1,275				2,205							12,205		11,905	
14	8,125						1,275				2,205							11,005		11,605	
15	8,125						1,275				2,205							15,005		15,605	
16	8,125						1,275				2,205							15,005		15,605	
17	8,125	3,500					1,325				2,205							17,405	680	16,725	
18	8,125	5,500				680	1,025				2,205							17,005		17,605	
19	8,125	5,500					1,025				2,205							16,555		16,855	
21	8,125	5,500					1,025				2,205							16,555		16,855	
22	8,125	5,500					1,025				2,205							16,555		16,855	
23	8,125	6,500					1,125				2,205							17,740		17,740	
24	8,125	7,500			600		1,125				2,205							19,705		19,705	
26	8,325	8,900			1,000		1,125				2,205							21,955		21,955	
28	8,325	8,825					1,065				2,205							21,795		21,795	
30	8,325	6,325					365				2,505							16,325		16,325	
30	8,325	6,325				1,000	1,065				2,505							16,325		16,325	
31	8,325	7,325					45				2,505							19,735		19,735	
Average	9,113		700		1,523	936	1,206				2,327	450					16,396	2,533	15,129		

1926	4-	7, 325	1, 000	2, 505	2, 350	2, 505	21, 305	520	20, 785
Jan.	4-	7, 325	500	2, 505	2, 350	2, 505	21, 305	520	20, 785
	5-	7, 325		2, 505		2, 505	18, 955	1, 020	17, 935
	6-	7, 325		2, 505		2, 505	18, 955		18, 955
	7-	5, 325		2, 505		2, 505	17, 155		17, 155
	8-			2, 505		2, 505	11, 830	175	11, 655
	9-			2, 505		2, 505	11, 830	4, 175	7, 655
	11-			2, 505		2, 505	11, 830	6, 375	5, 455
	12-			2, 505		2, 505	11, 830	6, 375	5, 455
	13-			2, 505		2, 505	11, 830	7, 375	4, 455
	14-			2, 505		2, 505	12, 030	8, 075	3, 955
	15-			2, 705		2, 705	13, 135	8, 075	5, 060
	16-			2, 705		2, 705	13, 135	8, 575	4, 560
	18-			2, 705		2, 705	13, 960	9, 300	4, 660
	19-			2, 705		2, 705	505	13, 300	8, 805
	20-			2, 705		2, 705	510	12, 860	8, 810
	21-			2, 705		2, 705	780	12, 860	11, 515
	22-			2, 705		2, 705	745	10, 060	3, 780
	23-			2, 705		2, 705	825	12, 860	9, 345
	25-			2, 705		2, 705	720	13, 635	4, 680
	26-			2, 705		2, 705	845	13, 535	4, 355
	27-			2, 705		2, 705	810	13, 010	9, 180
	28-			2, 705		2, 705	810	13, 010	9, 145
	29-			2, 705		2, 705	715	13, 610	7, 045
	30-			2, 180		2, 180	715	13, 010	5, 715
				2, 180		2, 180	765	14, 485	12, 295
				2, 180		2, 180	820	16, 085	13, 420
				2, 180		2, 180	820	16, 085	15, 165
Average	9, 300	5, 467	1, 150	2, 578	1, 039	2, 578	697	6, 194	8, 369
Feb.	1-	5, 100		2, 200		2, 200	18, 095	940	17, 155
	2-	5, 100		2, 300		2, 300	18, 195	975	17, 220
	3-	6, 100		2, 300		2, 300	19, 345	205	19, 145
	4-	6, 100		2, 300		2, 300	19, 345	1, 520	17, 825
	5-	6, 100		2, 300		2, 300	19, 345	1, 300	17, 955
	6-	6, 100		2, 300		2, 300	19, 345	1, 345	18, 490
	8-	6, 100		2, 300		2, 300	19, 345	2, 850	18, 420
	9-			2, 300		2, 300	13, 300	4, 980	9, 320
	10-			2, 300		2, 300	13, 300	4, 980	9, 320
	11-			2, 300		2, 300	13, 300	4, 980	9, 320
	13-			2, 300		2, 300	13, 300	4, 980	9, 320
	15-			2, 300		2, 300	13, 300	4, 980	9, 320
	16-			2, 300		2, 300	13, 300	4, 980	9, 320
	17-			2, 300		2, 300	13, 300	4, 980	9, 320
	18-			2, 300		2, 300	13, 300	4, 980	9, 320
	19-			2, 300		2, 300	13, 300	4, 980	9, 320
	20-			2, 300		2, 300	13, 300	4, 980	9, 320
	22-			2, 300		2, 300	13, 300	4, 980	9, 320
	24-			2, 300		2, 300	13, 300	4, 980	9, 320
	25-			2, 300		2, 300	13, 300	4, 980	9, 320
	26-			2, 300		2, 300	13, 300	4, 980	9, 320
	27-			2, 300		2, 300	13, 300	4, 980	9, 320
Average	9, 438	5, 767	1, 610	2, 001	845	2, 001	807	5, 320	9, 364

TABLE 1.—The net position in the 1926 May wheat future of eight leading traders, by days, from August 12, 1925, to May 29, 1926, inclusive—Continued

[In thousands of bushels; i. e., 000 omitted]

Date	Trader No. 1		Trader No. 2		Trader No. 3		Trader No. 4		Trader No. 5		Trader No. 11		Trader No. 15		Trader No. 18		Combined aggregate		Combined net		
	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	
1926																					
Mar. 1	1,445		5,900		1,465				1,875									3,320	7,720		4,400
2	1,546		4,400		1,705				1,875									3,420	6,565		3,400
3	1,945		4,300		2,565				1,875									3,420	3,450		3,085
4	1,945				2,565				975									2,320	2,765		10
5	1,545				3,065				975									4,535	3,065		245
6	1,645		1,500		3,565													5,105	3,565		1,470
7	1,645		2,400		3,565													6,715	3,565		1,000
8	645		3,200		3,565				1,100									5,995	2,430		3,150
9	845		6,000		4,065				1,405									8,895	3,565		5,280
10	1,255		6,000		4,065				1,405									9,860	4,065		5,795
11	1,555		5,000		7,705				1,755									9,330	8,815		8,830
12	1,655		5,000		815				1,755									9,645	815		8,830
13	1,655		6,000		815				1,755									10,425	515		8,610
14	1,655		6,000		815				1,755									10,025	515		9,510
15	1,655		6,000		1,015				1,880									11,680	1,015		10,665
16	1,555		7,400		1,515				1,880									13,105	1,515		11,590
17	1,155		8,400		1,515				1,880									11,720	1,515		10,205
18	210		8,400		2,315				1,300									3,910	2,315		1,595
19	210		2,400		1,315													1,915	4,315		
20		500		2,500														2,110	4,815		2,400
21				3,500		815												2,110	4,815		2,705
22				4,500		215												1,850	5,215		2,705
23		500		4,500		215												1,850	5,215		3,365
24				5,500		215			600									2,545	5,715		3,170
25				5,500		215												2,545	5,715		3,170
26	1,300		5,500		215													4,805	5,715		910
27	1,300		5,500		215				1,075									2,770	5,715		570
28	1,300		5,500		215				1,075									4,945	5,715		770
29	1,300		5,500		1,285				1,075									6,415	5,500		915
30	1,300		6,300		2,285				1,275									6,060	6,300		
31	750		7,700		1,310				1,333									6,239	3,709		6,012
Average.	1,272	500	5,092	4,592	1,785	1,691			1,333									6,239	3,709		1,822
Apr. 1	750		7,400	185					1,275									3,840	7,400		3,560
3	750		7,400	185					1,275									3,840	7,400		3,560
5	750		7,400	185					1,275									3,840	7,400		3,560
6	750		7,400	185					1,275									3,840	7,400		3,560
7	750		7,400	185					1,275									3,840	7,400		3,560
8	750		7,400	185					1,275									3,840	7,400		3,560
9	750		7,400	185					1,275									3,840	7,400		3,560

10.	750	7,700	1,310	1,350				2,245	4,345	9,010	4,665
12.	750	7,700	1,310	1,425				2,410	4,585	9,010	4,425
13.	750	1,900	2,110	1,675				2,435	4,860	4,010	850
14.	850	1,900	1,900	1,900				2,220	4,970	3,810	1,160
15.	850	1,900	510	1,900				1,830	4,580	2,410	2,170
16.	950	1,900	510	800				950	1,750	2,555	1,605
17.	950	1,900	510	1,300				1,750	2,450	2,410	40
19.	1,150	1,900	510	1,300				2,450	2,410	2,410	540
20.	1,650	1,900	510	1,300				2,950	2,410	380	
21.	1,650	1,900	510	1,150				2,800	2,410	2,410	
22.	1,650	1,900	710	1,150				2,065	3,065	2,610	455
23.	1,650	1,900	710	1,150				265	1,650	2,610	
24.	1,650	1,900	710	1,300				1,650	1,650	2,610	960
26.	1,650	1,900	710	1,300				1,650	1,650	2,610	960
27.	1,750	1,900	710	1,300				1,750	1,750	2,610	860
28.	1,750	1,900	710	1,300				1,750	1,750	2,610	860
29.	1,750	1,400	710	1,300				1,750	1,750	2,110	360
30.	1,750	1,400	710	1,300				1,750	1,750	1,040	
Average.	1,166	4,004	881	1,291				1,915	3,055	4,660	2,752
May	1,750		710					1,750	1,750	710	1,040
1.	1,750		710					2,025	2,025	710	1,315
3.	1,750		710					455	455	1,295	810
4.	1,750	200	1,010	275				615	615	1,295	650
5.	1,750	200	1,010					615	615	1,295	650
6.	1,750	200	1,010					615	615	1,295	650
7.	1,750	200	1,010					615	615	1,065	450
8.	1,750	200	1,010					615	615	1,065	450
10.	1,750	200	1,010					535	535	1,065	450
11.	1,750	200	1,010					300	300	1,065	530
12.	1,750	200	510					400	300	565	285
13.	1,750	200	510					400	400	510	110
14.	1,750	200	510					400	400	510	110
15.	1,750	200	510					250	400	510	280
16.	1,750	200	510					250	250	510	280
17.	1,750	200	410					250	250	510	160
18.	1,750	355	460					250	250	410	160
19.	1,750	355	360					250	250	815	565
20.	1,750	355	360					250	250	715	715
21.	1,750	355	360					250	250	10	10
22.	1,750	355	360					250	250		
24.	1,750	355	360					250	250		
25.	1,750	355	360					250	250		
26.	1,750	355	360					250	250		
27.	1,750	355	360					250	250		
28.	1,750	355	360					250	250		
29.	1,750	355	360					250	250		
Average.	1,750	262	663	275				427	622	721	1,178
								15	15		376

Trader No. 1 accumulated the largest long line of the group, reaching at its maximum 11,125,000 bushels on December 7. He also is the outstanding trader of the group in consistently maintaining a market position indicative of a fixed opinion as to values.

The operations of trader No. 2 stand out as the most spectacular of the group. His trading is characterized by the extremes reached in market position on both the long and the short side. At least 12 times he apparently changed his opinion regarding the future course of prices. On three of these occasions a position of over 8,000,000 bushels was reached and on three others of over 5,000,000 bushels. If one assumes that this trader was attempting to anticipate price changes warranted by economic conditions, his operations indicate that he seldom had a settled opinion regarding the future course of prices. The erratic course of his trading strongly suggests instead that his object was not so much to anticipate changes in price levels as to attempt to direct the course of prices.

The operations of the other traders of the group are not individually of sufficient size to need separate comment. For this particular future, none of the remaining six reached a position of 5,000,000 bushels; only one reached the 4,000,000; and only two the 3,000,000 bushel level.

A common characteristic of all of the eight traders is that the number of days used in accumulating a position long or short was considerably more than the number of days used in liquidating or in covering. This can be seen from Figure 6 by observing the more gradual slope of each curve in moving away from the zero position than in returning. For traders No. 1 and No. 2 the ratio of accumulation to liquidation is 2 to 1; for the other six the ratio is roughly 3 to 2.

This method of trading may in some instances be due to forced liquidation or to covering. In most cases, however, it is based upon a theory of larger profits to the trader. In accumulating a position either long or short the trader does not need to maintain the degree of secrecy that is necessary in liquidating or in covering and especially after a considerable fraction of his "line" has been acquired. If in accumulating a long line coincident with an upward movement in price a wide following of small amateurs are encouraged to enter the market, the price will continue upward and sufficient buying strength added to permit the trader to liquidate with a minimum break or even an advance in price. Liquidation must be accomplished quickly and secretly, however, or the following built up while accumulating a "line" may also liquidate, and unusual price breaks result.

NET TRADES COMPARED WITH NET PRICE CHANGES

THE LARGE NET TRADES IN THE 1926 MAY WHEAT FUTURE

Thus far the net position long or short of the eight largest speculators on the Chicago Board of Trade has been compared with the futures price. In this comparison account was taken not only of the changes occurring each day in trading but also of the position long or short already accumulated. In the present section the net purchases or sales on individual days will be analyzed in their separate relation to net price changes. In so doing no account will be taken of a position long or short previously attained.

During the life of the 1926 May wheat future there were 33 days on which the eight speculators being considered bought or sold net at

least 2,000,000 bushels. These 33 days occurred within the period from October 2 to April 16, inclusive. On 30 of these 33 days the price of May wheat moved in the same direction as the net of purchases and sales; on the other 3 days the price moved in the opposite direction to the net of purchases and sales. The net trades compared with the price for these 33 days are shown separately in Table 2.

TABLE 2.—Days on which eight large speculators bought or sold net 2,000,000 bushels or more of the 1926 May wheat future, with the net change in the May future price for the same dates

Date	Trader number	Net purchase or sale		Position of trader at close of market		Net change in 1926 May future price ¹
		Bought or sold	Quantity	Long	Short	
Oct. 2.....	2	Sold.....	Bushels 1,700,000	Bushels	Bushels 1,700,000	
Do.....	4	do.....	500,000	500,000		
Net.....		do.....	2,200,000			-5½
Oct. 9.....	2	Bought.....	4,500,000	2,000,000		
Do.....	4	do.....	500,000	1,435,000		
Net.....		do.....	5,000,000			+1¼
Nov. 9.....	2	Sold.....	1,000,000		2,000,000	
Do.....	4	do.....	2,325,000	Even.	Even.	
Net.....		do.....	3,325,000			-1½
Nov. 13.....	2	Bought.....	2,000,000	Even.	Even.	
Do.....	3	do.....	800,000	Even.	Even.	
Do.....	4	do.....	515,000	675,000		
Net.....		do.....	3,315,000			+1½
Dec. 1.....	1	do.....	2,300,000	9,425,000		
Do.....	11	do.....	1,700,000		450,000	
Net.....		do.....	4,000,000			+5
Dec. 2.....	4	Sold.....	4,025,000		1,500,000	
Do.....	11	Bought.....	1,000,000	550,000		
Net.....		Sold.....	3,025,000			-¼
Dec. 3.....	1	Bought.....	900,000	10,625,000		
Do.....	4	do.....	4,500,000	2,500,000		
Do.....	11	do.....	800,000	1,350,000		
Net.....		do.....	6,200,000			+6½
Dec. 4.....	4	Sold.....	3,500,000		1,000,000	
Do.....	11	Bought.....	1,300,000	2,955,000		
Net.....		Sold.....	2,200,000			-3
Dec. 7.....	2	do.....	500,000		2,375,000	
Do.....	4	do.....	1,990,000		500,000	
Do.....	5	do.....	500,000	775,000		
Net.....		do.....	2,990,000			+2½
Dec. 10.....	2	do.....	1,500,000		4,475,000	
Do.....	11	do.....	500,000	2,205,000		
Net.....		do.....	2,000,000			-6
Dec. 16.....	2	Bought.....	3,500,000	3,500,000		
Dec. 28.....	2	Sold.....	5,075,000	3,825,000		
Do.....	5	do.....	640,000	365,000		
Net.....		do.....	5,715,000			-1¼

¹ The plus sign (+) is used to indicate an increase and the minus sign (-) a decrease in the May future price from the close of the day previous to the close of the date shown.

TABLE 2.—Days on which eight large speculators bought or sold net 2,000,000 bushels or more of the 1926 May wheat future, with the net change in the May future price for the same dates—Continued

Date	Trader number	Net purchase or sale		Position of trader at close of market		Net change in 1926 May future price
		Bought or sold	Quantity	Long	Short	
1925						
Dec. 29	2	Bought	<i>Bushels</i> 2,500,000	<i>Bushels</i> 6,325,000	<i>Bushels</i>	<i>Cents</i>
Do.	4	Sold	2,000,000		1,000,000	
Do.	5	Bought	540,000	1,065,000		
Do.	15	do	1,000,000	2,305,000		
Net		do	2,040,000			+5½
1926						
Jan. 5	15	Sold	2,050,000	Even.	Even.	-3½
Jan. 7	2	do	2,000,000	5,325,000		-4½
Jan. 8	2	do	5,500,000		175,000	+2¼
Jan. 9	2	do	4,000,000		4,175,000	-1¼
Jan. 11	2	do	2,200,000		6,375,000	-2½
Jan. 22	2	Bought	1,575,000		8,335,000	
Do.	15	do	1,025,000	Even.	Even.	
Net		do	2,600,000			-1¾
Jan. 28	2	do	7,135,000	Even.	Even.	
Do.	15	Sold	650,000	Even.	Even.	
Net		Bought	6,485,000			+2¼
Feb. 8	2	Sold	6,100,000	Even.	Even.	
Do.	3	do	1,500,000		1,500,000	
Net		do	7,600,000			-5
Feb. 10	2	do	3,700,000		5,500,000	
Do.	3	Bought	1,800,000	Even.	Even.	
Do.	15	Sold	650,000		1,400,000	
Net		do	2,550,000			-3½
Feb. 26	1	do	1,680,000	7,975,000		
Do.	3	Bought	500,000	1,735,000		
Do.	11	Sold	1,720,000	Even	Even	
Net		do	2,900,000			-2½
Mar. 1	1	do	6,000,000	1,445,000		
Do.	3	do	4,000,000		1,465,000	
Do.	18	Bought	830,000		355,000	
Net		Sold	9,170,000			-6½
Mar. 3	2	Bought	3,900,000		500,000	
Do.	3	Sold	800,000		2,565,000	
Net		Bought	3,100,000			+1½
Mar. 10	2	do	2,800,000	6,000,000		+1¼
Mar. 12	2	Sold	1,000,000	5,000,000		
Do.	3	Bought	3,250,000		815,000	
Net		do	2,250,000			+2½
Mar. 20	2	Sold	6,000,000	2,400,000		
Do.	3	do	800,000		2,315,000	
Do.	5	do	1,300,000	Even	Even	
Do.	18	do	510,000	1,300,000		
Net		do	8,610,000			-2¼
Mar. 22	2	do	4,900,000		2,500,000	
Do.	1	do	710,000		500,000	
Do.	3	Bought	1,000,000		1,315,000	
Do.	18	do	615,000	1,915,000		
Net		Sold	3,995,000			-2½

TABLE 2.—Days on which eight large speculators bought or sold net 2,000,000 bushels or more of the 1926 May wheat future, with the net change in the May future price for the same dates—Continued

Date	Trader number	Net purchase or sale		Position of trader at close of market		Net change in 1926 May future price
		Bought or sold	Quantity	Long	Short	
1926						
Mar. 26	1	Bought	Bushels 1,300,000	Bushels 1,300,000		
Do.	18	do	960,000	2,905,000		
Net		do	2,260,000			+3½¢
Apr. 1	2	Sold	1,100,000		7,400,000	
Do.	3	do	2,100,000	185,000		
Net		do	3,200,000			-2
Apr. 13	2	Bought	5,800,000		1,900,000	
Do.	3	Sold	800,000		2,110,000	
Net		Bought	5,000,000			+4½¢
Apr. 16	5	Sold	1,900,000	Even	Even	
Do.	18	do	1,975,000		145,000	
Net		do	3,875,000			-2¼¢

In the preparation of Table 2, where two or more traders bought or sold at least 500,000 bushels each on the same day, their trades were combined and only those days on which the net of all such trades amounted to 2,000,000 bushels or more were included. Attention should be called to the fact that while individual trades are entered as a single amount (e. g., sold 1,700,000 bushels), this does not mean that the traders bought or sold these amounts as single lots at one time. Rather, the amounts are the net sum of the day's trading.³

The results of the comparison presented in Table 2 show that whenever large trades aggregating 2,000,000 bushels or more occur within the limits of one trading day, the chances are 9 to 1 that the price will move in the same direction as the net of purchases and sales. In the previous investigation on "Fluctuations in wheat futures" covering the period January 2 to April 18, 1925, a similar comparison of "2,000,000-bushel-or-over" days with the May future price gave results of 12 days out of 15 or 80 per cent in which the price moved in the same direction as the net of purchases and sales. The results of these two comparisons confirm each other and together include a sufficient number of items to assure fairly reliable conclusions.

THE LARGE NET TRADES FOR THE PERIOD, APRIL 18, 1925-MAY 29, 1926

To further test the influence of large net trades upon price, the transactions of the eight large speculators were analyzed from April 18, 1925, to the close of the 1926 May wheat future. These data can be found in Table 3.

³ The data appearing in Table 2, together with net trades made in several other futures, may be found, in Table 3. In preparing the material for the latter table, it was necessary in many cases to supplement the information regularly received by the Grain Futures Administration with material obtained by going direct to the records of various firms. This was necessary for the reason that large speculators as well as the firms handling the trades of large speculators are required to report their position only when it is equal to or exceeds 500,000 bushels in any one wheat future. Because of the necessity of supplementing the net trade data, it will be found that the changes in the net position figures appearing in Table 1 will not in every case correspond with the net trades given in Tables 2 and 3.

TABLE 3.—The days on which eight speculative traders made purchases or sales to a net amount of 500,000 bushels or more in wheat futures, together with the net change in future prices, from April 18, 1925, to May 29, 1926

Date	Trader No.	1925 May future		1925 July future		1925 September future		1925 December future		Net purchases or sales, all futures combined ³	Net price change (dominant future) ⁴
		Net purchases or sales ¹	Net price change ²	Net purchases or sales ¹	Net price change ²	Net purchases or sales ¹	Net price change ²	Net purchases or sales ¹	Net price change ²		
1925		1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents
Apr. 18	2										
20	2	+2,600	-4 $\frac{1}{4}$ +3 $\frac{1}{8}$	-1,000	-3 $\frac{1}{2}$ +2	-600	-3			-1,600	-4 $\frac{1}{4}$ +3 $\frac{1}{2}$
21	2	+600		+600							
21	3			-500							
Net.		+600	-1 $\frac{1}{2}$ +5 $\frac{1}{8}$							+600	-1 $\frac{1}{2}$ +5 $\frac{1}{8}$
Apr. 22	2	+1,200				+500	+2 $\frac{3}{4}$			+1,700	+5 $\frac{1}{8}$
23	2			+1,200	-2 $\frac{1}{4}$					+1,200	-2 $\frac{1}{4}$
24	2			+2,800	-1 $\frac{1}{2}$					+2,800	-1 $\frac{1}{2}$
27	2			+850	-2 $\frac{1}{4}$					+850	-2 $\frac{1}{4}$
28	2			+800							
28	1			+500							
Net.				+1,300	+4 $\frac{1}{2}$					+1,300	+4 $\frac{1}{2}$
Apr. 29	1			+500							
29	3			+535							
Net.				+1,035	+1 $\frac{1}{4}$ +1 $\frac{1}{4}$					+1,035	+1 $\frac{1}{4}$ +1 $\frac{1}{4}$
Apr. 30	11			+600						+600	
May 1	2			+500							
1	1			+900							
1	3			+3,000							
Net.				+4,400	+8 $\frac{1}{4}$ -2 $\frac{1}{4}$					+4,400	+8 $\frac{1}{4}$ -2 $\frac{1}{4}$
May 5	2			-1,500	-2 $\frac{1}{4}$					-1,500	-2 $\frac{1}{4}$
6	2			-5,600	+3 $\frac{1}{4}$					-5,600	+3 $\frac{1}{4}$
7	3			+500	-1 $\frac{1}{2}$					+500	-1 $\frac{1}{2}$
8	2			-2,000	+3 $\frac{1}{4}$					-2,000	+3 $\frac{1}{4}$
9	2										
9	3			-1,000							
Net.				-2,885	-5 $\frac{1}{2}$ -2 $\frac{1}{2}$					-2,885	-5 $\frac{1}{2}$ -2 $\frac{1}{2}$
May 11	2			-1,500	-2 $\frac{1}{2}$	-1,000	-2 $\frac{1}{2}$			-2,500	-2 $\frac{1}{2}$
12	2			-800							
12	1			+505							
14	1 ¹			+895	+3 $\frac{3}{4}$ -1 $\frac{1}{4}$					+895	+3 $\frac{3}{4}$ -1 $\frac{1}{4}$
15	3			+1,015	-1 $\frac{1}{8}$					+1,015	-1 $\frac{1}{8}$
19	1	-620	-2 $\frac{1}{2}$		+1 $\frac{1}{8}$					-620	+1 $\frac{1}{8}$
22	3			-1,550	+1 $\frac{1}{8}$					-1,550	+1 $\frac{1}{8}$
25	2			+5,015		+1,000					
25	3			+965							
Net.				+5,980	+5 $\frac{3}{8}$ -3 $\frac{1}{8}$	+1,000	+5 $\frac{5}{8}$			+6,980	+5 $\frac{3}{8}$ -3 $\frac{1}{8}$
May 27	1			+600						+600	
29	3			-1,515	-2					-1,515	-2
June 1	3			-900	-2 $\frac{3}{8}$					-900	-2 $\frac{3}{8}$
2	2			+585		+2,000					
2	1			-2,800				+1,800			
Net.				-2,215	+1 $\frac{1}{4}$	+2,000	+1 $\frac{1}{2}$	+1,800	+1 $\frac{1}{2}$	+1,585	+1 $\frac{1}{4}$
June 3	2			+500							
3	3			+650							
Net.				+1,150	+3					+1,150	+3

¹ The plus sign (+) indicates a purchase and the minus sign (-) a sale.

² The plus sign (+) indicates an increase and the minus sign (-) a decrease in the futures price from the close of the day previous to the close of the date shown.

³ Whenever the net trading in a single future was less than 500,000 bushels, such quantity was not included in the net transaction of all futures combined.

⁴ The net price change used for each date was for that future whose open interest was largest.

TABLE 3.—The days on which eight speculative traders made purchases or sales to a net amount of 500,000 bushels or more in wheat futures, together with the net change in future prices, from April 18, 1925, to May 29, 1926—Continued

Date	Trader No.	1925 May future		1925 July future		1925 September future		1925 December future		Net purchases or sales, all futures combined	Net price change (dominant future)
		Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change		
1925 June 4	2	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents
4	3			+500		+800					
Net.				+500	+4 $\frac{1}{8}$	+800	+3 $\frac{3}{8}$			+1,300	+4 $\frac{1}{8}$
June 8	2			-1,000	-3 $\frac{3}{8}$					-1,000	-3 $\frac{3}{8}$
9	2				+1	-2,000	+7 $\frac{1}{8}$			-2,000	+1
10	2					-1,000					
10	3			-500							
Net.				-500	-4	-1,000	-3			-1,500	-4
		1926 May future									
1926 June 12	2					-2,500					
12	1			-525		+535					
Net.				-525	-1 $\frac{1}{2}$	-1,965	-2 $\frac{1}{2}$			-2,490	-2 $\frac{1}{2}$
June 15	2					+2,000					
15	1			-580				-900			
15	11			-600							
Net.				-1,180	-6 $\frac{3}{8}$	+2,000	-4 $\frac{1}{4}$	-900	-4 $\frac{3}{8}$		
June 16	2					+1,500					
16	1					-3,200					
16	3			+500							
16	11			-925							
Net.					-3 $\frac{1}{4}$	-1,700	-3 $\frac{3}{8}$			-1,700	-3 $\frac{3}{8}$
June 17	1					-1,600	+5 $\frac{1}{2}$	+600	+5 $\frac{3}{4}$	-1,000	+5 $\frac{1}{2}$
18	2					+800	- $\frac{1}{8}$			+800	- $\frac{1}{8}$
19	2					+1,000	+2 $\frac{3}{4}$			+1,000	+2 $\frac{3}{4}$
22	2					+1,000	-1 $\frac{1}{4}$	+500	-1	+1,500	-1 $\frac{1}{4}$
23	2						+1 $\frac{3}{4}$	+500	+1 $\frac{3}{8}$	+500	+1 $\frac{3}{4}$
25	1					-700	-3 $\frac{3}{8}$	-1,270	-3 $\frac{3}{4}$	-1,970	-3 $\frac{3}{8}$
26	2						+ $\frac{1}{8}$	+600	+ $\frac{1}{2}$	+600	+ $\frac{1}{8}$
29	1					-500	-4	-2,700	-4 $\frac{3}{8}$	-3,200	-4
July 10	1					+520	-2 $\frac{1}{2}$			+520	-2 $\frac{1}{2}$
16	2					+500	+3 $\frac{3}{8}$			+500	+3 $\frac{3}{8}$
17	2					+900					
17	11					+700					
Net.						+1,600	+3 $\frac{1}{4}$			+1,600	+3 $\frac{1}{4}$
July 22	1					-1,075					
22	3					-635					
Net.						-1,710	-1 $\frac{1}{2}$			-1,710	-1 $\frac{1}{2}$
July 24	3					+2,500					
24	11							+800			
Net.						+2,500	+2 $\frac{3}{4}$	+800	+2 $\frac{3}{8}$	+3,300	+2 $\frac{3}{8}$
July 31	11			-765	+8 $\frac{3}{4}$		-1 $\frac{1}{4}$			-765	-1 $\frac{1}{4}$
		1926 July future									
Aug. 3	2							-1,000			
3	1					+4,020		+1,800			
Net.						+4,020	+4 $\frac{1}{4}$	+800	+3 $\frac{3}{4}$	+4,820	+4 $\frac{1}{4}$
Aug. 4	1						+2 $\frac{1}{4}$	+1,500	+3 $\frac{1}{4}$	+1,500	+2 $\frac{1}{4}$
5	2					-4,895		-1,000			
5	1							+1,500			
Net.						-4,895	0	+500	0	-4,395	0

TABLE 3.—The days on which eight speculative traders made purchases or sales to a net amount of 500,000 bushels or more in wheat futures, together with the net change in future prices, from April 18, 1925, to May 29, 1926—Continued

Date	Trader No.	1925 May future		1925 July future		1925 September future		1925 December future		Net purchases or sales, all futures combined	Net price change (dominant future)
		Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change		
1925 Aug. 7	1	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents
	3					+1,455		+900			
Net						+1,455	+6 $\frac{1}{8}$	+900	+4 $\frac{1}{8}$	+2,355	+4 $\frac{1}{8}$
Aug. 11	2					-1,575	-5 $\frac{1}{8}$	+500	-4 $\frac{3}{8}$	-1,075	-4 $\frac{3}{8}$
12	2					-2,000	+4 $\frac{3}{4}$		+3	-2,000	+3
14	2					-500		-1,500			
14	3					-1,700					
14	4							-500			
Net						-2,200	-4 $\frac{3}{8}$	-2,000	-3 $\frac{3}{4}$	-4,200	-3 $\frac{3}{4}$
Aug. 17	1					-2,220					
17	3					+1,725		+500			
Net								+500	+7 $\frac{1}{8}$	+500	+7 $\frac{1}{8}$
Aug. 18	2					+1,200					
18	1							-700			
18	11					-520					
Net						+680	-2 $\frac{1}{8}$	-700	- $\frac{3}{4}$	-600	+2 $\frac{1}{8}$
Aug. 19	2							-600	+2 $\frac{1}{8}$	-600	+2 $\frac{1}{8}$
24	1					+585	-1 $\frac{7}{8}$		-2 $\frac{1}{8}$	+585	-2 $\frac{1}{8}$
25	3					-1,225	-1 $\frac{7}{8}$	-2,000	- $\frac{1}{4}$	-3,225	-1 $\frac{1}{4}$
26	2							-500			
26	3							-1,000			
Net								-1,500	-2	-1,500	-2
Aug. 27	1							-500	+1 $\frac{1}{8}$	-500	+1 $\frac{1}{8}$
28	3							-500	-1 $\frac{1}{4}$	-500	-1 $\frac{1}{4}$
31	2					+3,000		-600			
31	3							+1,000			
Net						+3,000	+1 $\frac{1}{8}$		0	+3,000	0
Sept. 1	2							-2,400			
1	1							-2,375			
1	3							+1,195			
Net								-3,580	- $\frac{5}{8}$	-3,580	- $\frac{5}{8}$
Sept. 5	3							-1,300			
5	4							+800			
Net								-500	-1 $\frac{1}{8}$	-500	-1 $\frac{1}{8}$
Sept. 8	4							+500	+2 $\frac{3}{8}$	+500	+2 $\frac{3}{8}$
10	1							-1,350	-4 $\frac{3}{8}$	-1,350	-4 $\frac{3}{8}$
11	2	-500									
11	4							-900			
Net		-500	+ $\frac{1}{2}$					-900	+3 $\frac{3}{8}$	-1,400	+3 $\frac{3}{8}$
Sept. 14	2	+900	+ $\frac{1}{2}$					+1,000	+ $\frac{1}{8}$	+1,900	+ $\frac{1}{8}$
15	2							+3,300	+ $\frac{1}{8}$	+3,300	+ $\frac{1}{8}$
16	2							+1,200	+ $\frac{5}{8}$	+1,200	+ $\frac{5}{8}$
17	3							+1,290	+ $\frac{1}{2}$	+1,290	+ $\frac{1}{2}$
18	1	-500									
18	3							-700			
Net		-500	- $\frac{5}{8}$					-700	-7 $\frac{1}{8}$	-1,200	-7 $\frac{1}{8}$
Sept. 19	2							+3,500	0	+3,500	0
21	2	+1,000	+1 $\frac{1}{2}$					+1,500	+1 $\frac{3}{8}$	+2,500	+1 $\frac{3}{8}$
24	1	-600									
24	3							+1,495			
24	11	-600									
Net		-1,200	-4 $\frac{1}{4}$					+1,495	-3		

TABLE 3.—The days on which eight speculative traders made purchases or sales to a net amount of 500,000 bushels or more in wheat futures, together with the net change in future prices, from April 18, 1925, to May 29, 1926—Continued

Date	Trader No.	1926 May future		1926 July future		1925 September future		1925 December future		Net purchases or sales, all futures combined	Net price change (dominant future)
		Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change		
1925		1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents
Sept. 25	11	-700	-1 $\frac{3}{8}$							-700	-1 $\frac{3}{8}$
28	2	-1,000	-4 $\frac{1}{4}$					-4,700	-4 $\frac{3}{8}$	-5,700	-4 $\frac{3}{8}$
29	4	+1,000	+3					-500	+2 $\frac{1}{8}$	+500	+2 $\frac{1}{8}$
						1926 September future					
Oct. 1	4							+500	-4	+500	-4
2	2	-1,700									
2	3							+625			
2	4	-500									
Net		-2,200	-5 $\frac{5}{8}$					+625	0	-1,575	0
Oct. 3	2	-1,300	-1					-1	-1	-1,300	-1
5	4							+500	+27 $\frac{3}{8}$	+500	+27 $\frac{3}{8}$
6	4							+1,000	+4 $\frac{1}{8}$	+1,000	+4 $\frac{1}{8}$
7	2							-800	-3 $\frac{1}{4}$	-800	-3 $\frac{1}{4}$
8	2	+500	-3 $\frac{1}{4}$					+800	-1	+1,300	-1
9	2	+4,500									
9	4	+500									
Net		+5,000	+1 $\frac{1}{4}$						+1 $\frac{1}{2}$	+5,000	+1 $\frac{1}{2}$
Oct. 10	2							+500			
10	11							+1,500			
10	11	+500									
Net		+500	+3 $\frac{7}{8}$					+2,000	+4 $\frac{3}{4}$	+2,500	+4 $\frac{3}{4}$
Oct. 13	2							+1,500			
13	1	-800						+1,200			
Net		-800	+1 $\frac{1}{8}$					+2,700	+11 $\frac{1}{2}$	+1,900	+11 $\frac{1}{2}$
Oct. 16	2							+1,000	+1 $\frac{1}{2}$	+1,000	+1 $\frac{1}{2}$
21	1	+500	-1 $\frac{1}{2}$					-1 $\frac{1}{2}$	-1 $\frac{1}{2}$	+500	-1 $\frac{1}{2}$
22	2	-500	-2 $\frac{3}{8}$					-3,000	-2 $\frac{7}{8}$	-3,500	-2 $\frac{3}{8}$
23	2	-1,000	+1 $\frac{1}{2}$							-1,000	+1 $\frac{1}{2}$
24	2	-500	+3 $\frac{1}{8}$							-500	+3 $\frac{1}{8}$
27	1	+800						+1,400			
27	4							+500			
Net		+800	+2 $\frac{3}{8}$					+1,900	+3 $\frac{3}{8}$	+2,700	+2 $\frac{3}{8}$
Oct. 28	1	+1,000									
28	3							+600			
28	4							-500			
Net		+1,000	0						-1 $\frac{1}{2}$	+1,000	0
Oct. 29	2	+500									
29	3							-600			
29	4	+500									
Net		+1,000	-1 $\frac{1}{8}$					-600	-1 $\frac{3}{4}$		
Oct. 30	3	-500									
30	4	-500						+500			
Net		-1,000	-7 $\frac{1}{8}$					+500	-2 $\frac{1}{8}$	-500	-7 $\frac{1}{8}$
Oct. 31	4	-1,280	-1 $\frac{1}{8}$							-1,280	-1 $\frac{1}{8}$
Nov. 3	2		+2 $\frac{1}{2}$					+600	+2 $\frac{3}{4}$	+600	+2 $\frac{1}{2}$
4	4	+1,325									
4	5							+825			
Net		+1,325	-1 $\frac{5}{8}$					+825	-2 $\frac{1}{4}$	+2,150	-1 $\frac{5}{8}$
5	4	+1,500	+1 $\frac{1}{8}$							+1,500	+1 $\frac{1}{8}$
6	2	-500	-1 $\frac{1}{2}$					-1,000	-1 $\frac{5}{8}$	-1,500	-1 $\frac{1}{2}$
7	2	-1,000	-1 $\frac{1}{2}$					-1,700	-1 $\frac{1}{8}$	-2,700	-1 $\frac{1}{2}$

TABLE 3.—The days on which eight speculative traders made purchases or sales to a net amount of 500,000 bushels or more in wheat futures, together with the net change in future prices, from April 18, 1925, to May 29, 1926—Continued

Date	Trader No.	1926 May future		1926 July future		1926 September future		1925 December future		Net purchases or sales, all futures combined	Net price change (dominant future)
		Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change		
1925		1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents
Dec. 7	2	-500									
7	4	-1,990									
7	5	-500									
Net.		-2,990	+2½¢							-2,990	+2½¢
Dec. 8	4	+500	-4¾¢							+500	-4¾¢
9	2	-600	+2¼¢							-600	+2¼¢
10	2	-1,500									
10	11	-500									
Net.		-2,000	-6							-2,000	-6
Dec. 11	2	+1,375									
11	5	+500									
Net.		+1,875	-2¾¢							+1,875	-2¾¢
Dec. 12	2	+3,100		+700							
12	1	-2,000									
12	18	+650									
Net.		+1,750	+1½¢	+700	+1¼¢					+2,450	+1½¢
Dec. 14	1	-600	-2½¢							-600	-2½¢
16	2	+3,500	+1½¢							+3,500	+1½¢
17	2	+1,500									
17	4	-680									
Net.		+820	-2							+820	-2
Dec. 18	2	+500		+1,000							
18	4	+600									
Net.		-1,100	-2½¢	+1,000	-1½¢					+2,100	-2½¢
Dec. 23	2	+1,000	+8							+1,000	+8
24	2	+1,000	+3							+1,000	+3
26	2	+1,400									
26	5	-700									
Net.		+700	+5½¢							+700	+5½¢
Dec. 28	2	-5,075									
28	5	-640									
Net.		-5,715	-1¼¢							-5,715	-1¼¢
Dec. 29	2	+2,500									
29	4	-2,000									
29	5	+540									
29	15	+1,000									
Net.		+2,040	+5¾¢							+2,040	+5¾¢
Dec. 30	4	+1,000									
30	5	-840									
31	2	+800	-1							+800	-1
								1926 December future			
1926											
Jan. 4	1	+800									
4	5	-1,175									
5	15	-2,050	-3½¢							-2,050	-3½¢
7	2	-2,000	-4¾¢							-2,000	-4¾¢
8	2	-5,500	+2¼¢	-1,000	+1½¢					-6,500	+2¼¢
9	2	-4,000	-1¼¢	-1,000	-1½¢					-5,000	-1¼¢
11	2	-2,200	-2½¢							-2,200	-2½¢
13	3	-500	-1½¢							-500	-1½¢
14	3	-700	+2½¢							-700	+2½¢
15	15	+505	-1½¢							+505	-1½¢
16	2	-1,200									
16	3	+700									
Net.		-500	-2½¢							-500	-2½¢

TABLE 3.—The days on which eight speculative traders made purchases or sales to a net amount of 500,000 bushels or more in wheat futures, together with the net change in future prices, from April 18, 1925, to May 29, 1926—Continued

Date	Trader No.	1926 May future		1926 July future		1926 September future		1926 December future		Net purchases or sales, all futures combined	Net price change (dominant future)
		Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change		
1926		1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents
Mar. 5	2	+1,500									
5	3	-500									
5	18	+715		-620							
Net.		+1,715	+1¾	-620	0					+1,095	+1¾
Mar. 6	2	+900									
6	3	+500									
8	2	+600									
8	18	+650									
Net.		+1,250	-17½							+1,250	-17½
Mar. 9	1	-1,000	+½							-1,000	+½
10	2	+2,800	+1¼							+2,800	+1¼
11	3	-500									
11	18	+605									
12	2	-1,000									
12	3	+3,250									
Net.		+2,250	+2½							+2,250	+2½
Mar. 15	2	+1,000									
15	18	-1,220									
16	2	+600	-2½							+600	-2½
17	2	+800									
17	3	-500									
17	18	+1,230									
Net.		+1,530	-½							+1,530	-½
Mar. 18	2	+1,000									
18	3	-500									
Net.		+500	+3½							+500	+3½
Mar. 19	1	-945									
19	5	-530									
Net.		-1,475	-6½							-1,475	-6½
Mar. 20	2	-6,000									
20	3	-800									
20	5	-1,300									
20	18	-510									
Net.		-8,610	-2¼							-8,610	-2¼
Mar. 22	2	-4,900									
22	1	-710		-2,355							
22	3	+1,000									
22	18	+615									
Net.		-3,995	-2½	-2,355	-3½					-6,350	-2½
Mar. 23	2	-1,000									
23	3	+500									
23	1			-1,200							
Net.		-500	+2½	-1,200	+1½					-1,700	+2½
Mar. 24	2	-1,000									
24	3	+600									
25	2	-1,000									
25	1	+500									
25	5	+600									
26	1	+1,300									
26	18	+960		+600		-755					
Net.		+2,260	+3¾	+600	+2¾	-755	+1½			+2,105	+3¾
Mar. 27	2		+¼	-1,000	-1½					-1,000	+¼
30	3	+1,500	+1½							+1,500	+1½

TABLE 3.—The days on which eight speculative traders made purchases or sales to a net amount of 500,000 bushels or more in wheat futures, together with the net change in future prices, from April 18, 1925, to May 29, 1926—Continued

Date	Trader No.	1926 May future		1926 July future		1926 September future		1926 December future		Net purchases or sales, all futures combined	Net price change (dominant future)
		Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change		
1926		1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents
Mar. 31	2	-800									
31	1	-550									
31	3	+1,000									
31	18	-1,005									
Net.		-1,355	-1½%							-1,355	-1½%
Apr. 1	2	-1,100		-500							
1	3	-2,100									
1	1			-500							
Net.		-3,200	-2	-1,000	-1½%					-4,200	-2
Apr. 5	3	-530	+1¾%	+1,530	+1½%					+1,000	+1¾%
6	3		-½%	+1,215	0					+1,215	-½%
7	3		+½%	+500	+¼%					+500	+½%
8	3	-550	+1½%							-550	+1½%
10	3		+2	+500	+1½%					+500	+2
13	2	+5,800		+1,300							
13	3	-800									
Net.		+5,000	+4½%	+1,300	+3					+6,300	+4½%
Apr. 14	2			+700							
14	3			+500							
Net.			+¾%	+1,200	-¾					+1,200	+¾%
Apr. 15	3	+1,400	+3¾%							+1,400	+3¾%
16	5	-1,900									
16	18	-1,975				+760					
16	3			+700							
Net.		-3,875	-2½%	+700	+½%	+760	-1			-2,415	-2½%
Apr. 17	5	+800	+2½%							+800	+2½%
19	5	+500									
19	3			+550							
Net.		+500	-¾%	+550	-½%					+1,050	-¾%
Apr. 20	1	+500									
20	2			-1,000							
Net.		+500	-1½%	-1,000	-¾%					-500	-1½%
Apr. 21	18		+¾%	-805	+2¼%					-805	+¾%
22	3			-4,245							
22	18			+1,010							
Net.			-1¼%	-3,235	-3½%					-3,235	-1¼%
Apr. 23	5	-1,150									
23	2			-1,000							
23	3			+590							
Net.		-1,150	-2¾%		-¾%					-1,150	-2¾%
Apr. 26	3		+¾%	+1,000	+2					+1,000	+¾%
29	2	+500									
29	3			-4,300							
Net.		+500	-1½%	-4,300	-2½%					-3,800	-1½%
Apr. 30	2	+1,400		+1,900							
30	3			-1,500							
Net.		+1,400	+¾%		+1½%					+1,400	+1½%
May 3	2			-2,400							
3	3			+1,990							
4	1	-1,805		-900							
4	3			-1,000		-500					
Net.		-1,805	-3½%	-1,900	-1½%	-500	-1¾%			-4,205	-1½%
May 5	3			-805	+1½%					-805	+1½%
6	2			+1,400							
6	3			+500							
Net.				+1,900	+¾%					+1,900	+¾%

TABLE 3.—The days on which eight speculative traders made purchases or sales to a net amount of 500,000 bushels or more in wheat futures, together with the net change in future prices, from April 18, 1925, to May 29, 1926—Continued

Date	Trader No.	1926 May future		1926 July future		1926 September future		1926 December future		Net purchases or sales, all futures combined	Net price change (dominant future)
		Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change	Net purchases or sales	Net price change		
1926		1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents	1,000 bu.	Cents
May 7	2			+1,900							
7	3			-800							
Net...				+1,100	-1½%					+1,100	-1½%
May 8	2			+1,700							
8	3			-500							
Net...				+1,200	+¼%					+1,200	+¼%
May 11	3	+500	+2½%	-500	+1½%						
12	1			-600							
12	2			-5,000							
12	3			+1,500							
12	18			+665							
Net...				-3,435	-3¼%					-3,435	-3¼%
May 13	3			-600	-¼%					-600	-¼%
14	2			-900							
14	3			-785							
14	5			-925							
Net...				-2,610	-1¼%					-2,610	-1¼%
May 17	2			-500							
17	3			+995							
18	3			-500	+¼%					-500	+¼%
19	3			-720							
19	18			+615							
20	1			-800							
20	2			+3,800							
20	3			-900							
Net...				+2,100	+2¼%					+2,100	+2¼%
May 22	1			+900							
22	5			+1,100							
Net...				+2,000	+1					+2,000	+1
May 24	3			+2,965	+½%					+2,965	+½%
25	2			+700							
25	5			-610							
26	5			+500							
26	18			-785							
27	1			-2,200							
27	2			-700							
27	3			-1,000							
27	18			+1,570							
Net...				-2,330	-3½%					-2,330	-3½%
May 28	1			-1,100							
28	3			+3,500							
Net...				+2,400	+1½%					+2,400	+1½%
May 29	3			-500	-1					-500	-1

Some explanation is needed regarding the preparation of Table 3. April 18, 1925 was chosen as a starting point because it was up to this point that the earlier report on "Fluctuations in wheat futures" extended. In preparing the table only those net trades which aggregated 500,000 bushels or more by an individual within a single day were included. These net trades of the eight speculators were then entered according to amount, whether purchases or sales, the days on which they were made and the future in which they were made.

TABLE 5.—*The number of days on which the net of individual purchases and sales of 500,000 bushels or over and the futures price moved in the same direction, for wheat, for eight large speculators, all futures combined, from April 18, 1925, to May 29, 1926*

Net of purchases and sales	Total number of days	Days on which price and net of purchases and sales moved in same direction		Days on which price and net of purchases and sales moved in opposite direction	
		Number	Per cent	Number	Per cent
500,000 bushels or over.....	219	156	71	63	29
1,000,000 bushels or over.....	154	119	77	35	23
2,000,000 bushels or over.....	75	62	83	13	17
3,000,000 bushels or over.....	36	31	86	5	14
4,000,000 bushels or over.....	22	19	86	3	14
5,000,000 bushels or over.....	14	12	86	2	14
6,000,000 bushels or over.....	9	8	89	1	11
7,000,000 bushels or over.....	4	4	100	-----	-----
8,000,000 bushels or over.....	3	3	100	-----	-----
9,000,000 bushels or over.....	1	1	100	-----	-----

Summarized, the data show: (1) That the larger the net purchase or the net sale made within the limits of one trading day, the more certain it becomes that the price will move in the same direction; (2) when net trades exceed the 2,000,000 bushel limit, the chances are not less than 4 to 1 that the price will move in the same direction as the net purchase or sale—if a purchase, upward, if a sale downward.

QUANTITATIVE RELATION OF LARGE NET TRADES TO NET PRICE CHANGES

In the preceding comparison, no attempt was made to measure quantitatively the effect of the size of the trade upon the net change in price. To answer this, account must be taken not only of the days on which net trades move in the same (or opposite) direction, but the extent to which the movements correspond.

Table 3 shows that while trades and price usually move in the same direction, the amount of the price movement corresponding to each net trade varies quite widely for trades of approximately the same size. Also for the period covered, April 18, 1925, to May 29, 1926, net trades of at least 500,000 bushels (when all futures are combined) occurred on only 65 per cent of the days. On the other 35 per cent no large net trades were made, yet price changes occurred on those days and on many of them changes of considerable size.

The answer to the question of the quantitative effect of trades upon price is to be found in the fact that while unusually large trades affect the futures price, there are also other and important price factors at work. Actual supplies at terminal and country points, estimates of on-coming crops, reports and opinions on weather conditions, and foreign and domestic demand all play an important part in determining the price. To make therefore a close quantitative comparison between net trades and price, allowance must be made for the other important market factors. Having taken some account of the other important influences, it is believed that a closer quantitative relationship between price and net trades would result.

To illustrate the force of other market factors upon price, two selected dates are here reviewed. For the period covered in the preceding analysis—from April 18, 1925, to May 29, 1926—there were

two days on which the net of purchases and sales exceeded 5,000,000 bushels and the price moved in the opposite direction to the net trade. The first of these days was May 6, 1925. On that day trader No. 2 liquidated a long position of 5,600,000 bushels of July wheat. The price of July wheat rose $3\frac{1}{4}$ cents from the close on May 5 to the close on May 6. The explanation, in part at least, of this rise in price in the face of unusually large individual selling, is to be found in the news of the day. Of outstanding importance was the report of export sales of wheat to Spain of 3,500,000 bushels "resulting in vigorous buying of July by a leading seaboard house". Firmness in the export market and light receipts furnished additional support.

The other date was January 8, 1926, when trader No. 2 sold 5,500,000 bushels of May wheat and 1,000,000 bushels of July wheat, both sales being largely liquidation of long accounts, while on the same date the price moved up $2\frac{1}{4}$ cents. On this date a series of

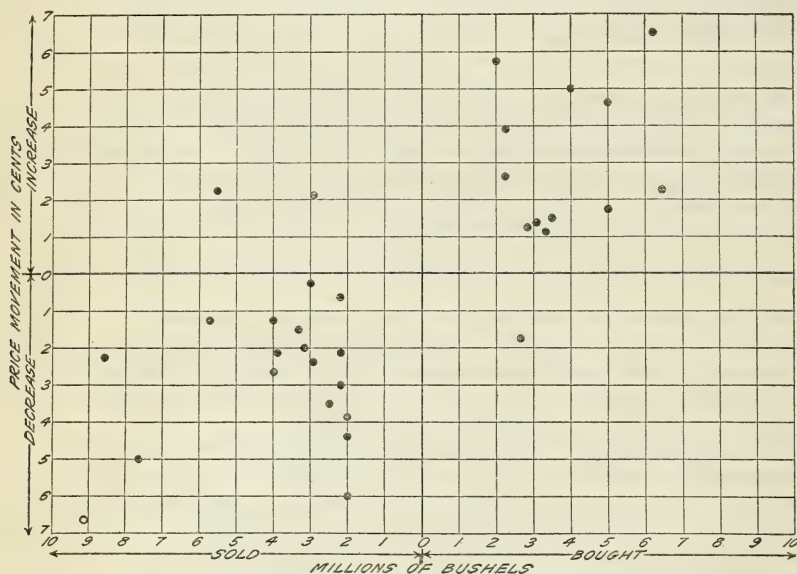


Fig. 7.—Dot chart showing the relation between net purchases or sales aggregating 2,000,000 bushels or over and net price changes, in the 1926 May wheat future

market factors combined to support the price. Cash grain premiums increased, good demand for spot offerings, Liverpool cables not as weak as expected, and reports indicating a smaller crop in Argentina were factors of varying weight. How much these factors contributed to the upward movement in price is difficult to state. January 8 followed a four day recession in price from a high on January 4, of $\$1.83\frac{1}{4}$ to a low on January 8, of $\$1.75\frac{3}{4}$. This decline in itself undoubtedly encouraged buying support in considerable volume by that large army of small speculators continually trying and being encouraged to buy on minor "breaks" and sell out on an advance of a few cents.

To illustrate quantitatively the degree of correspondence between large net trades and price, Figure 7 has been prepared. This chart shows the thirty-three "2,000,000-bushel-or-over" days in the 1926 May wheat future with the corresponding price change for each day. If the price changes in each of the 33 cases bore a direct and pro-

portional relation to the quantity bought or sold, the dots in the chart would form along a straight line or some well-defined curve running diagonally from the lower left-hand to the upper right-hand part of the chart. Instead, however, the dots are scattered considerably and indicate only a general relationship between net quantities bought or sold and corresponding net price changes.

To measure statistically the extent of correspondence between the large net trades and price changes included in this study, correlation has been used. This takes into account not only the number of cases moving in the same and in opposite directions, but also the extent of movement in each case.

For the period April 18, 1925, to May 29, 1926, the net purchases and sales of over 500,000 bushels (all futures combined) were correlated with the corresponding net price changes. The data used appear in the last two columns of Table 3. The results show a positive correlation of $+0.54$, with a probable error of ± 0.03 . By using only those days on which the net of purchases and sales was 1,000,000 bushels or more, a correlation of $+0.59$ with a probable error ± 0.03 was obtained. Finally, by comparing only those days having net trades of 2,000,000 bushels or over, a correlation of $+0.66$, with a probable error of ± 0.04 was obtained. These correlations indicate a significant direct relationship between the size of the net trades and the net changes in price. They indicate also that the larger the net trade not only the more certain it becomes that the price will move in the same direction, but also that it will move in proportion to the size of the trade.

OPERATIONS OF SMALL TRADERS COMPARED WITH THOSE OF LARGE TRADERS

SAMPLING AND CLASSIFYING MATERIAL

As a concluding section of this study there is presented some information regarding the manner in which the members of other groups trade in grain futures. It would be of interest to know how many people come into or leave the market with each price movement, their usual occupation, their financial capacity, and their previous experience in the cash grain and the grain-futures markets. Classifying the traders, it would be of interest to know just what group or groups of traders profit and what groups lose, and the amount of money, gross and net, needed currently to maintain organized speculation in grain. Comprehensive information of this kind would reach to the fundamental issues, and would go far toward answering the whole question of the economic usefulness of future trading. To attain such a perspective, repeated sampling and testing of information is necessary, together with a gradual widening of the scope of each survey. The information in this section, although not complete, is illustrative of the way in which small traders responded to the operations of the large speculators in the 1926 May wheat future. Although only samples of the market are presented, they are believed to be representative and to suggest some of the factors regularly at work in organized future trading.

If one were to arrange, in the order of their size, the positions long or short of all of the traders in the market for one date, it would be found that thousands of the traders had positions that were long or

short not more than 5,000 or 10,000 bushels each; the number having a position of from 10,000 to 25,000 might run into the hundreds; and as the size of the market position increased, the number of traders would rapidly decrease, those heading the list with a position of, say, 1,000,000 bushels or over being very few in number. If plotted, the curve would slope upward, but at an accelerated rate like a curve of money incomes or a curve showing rates of mortality.

If then, after having arranged the traders in the order of the size of their trades, one were to attempt to say just where traders of small size end and those of average size begin, and what portion should be called large traders, difficulty would be encountered. One would have to do what is generally done, viz, arbitrarily establish points of grouping. This discussion of sampling and classifying material has been given to facilitate the presentation of Figures 8 and 9.

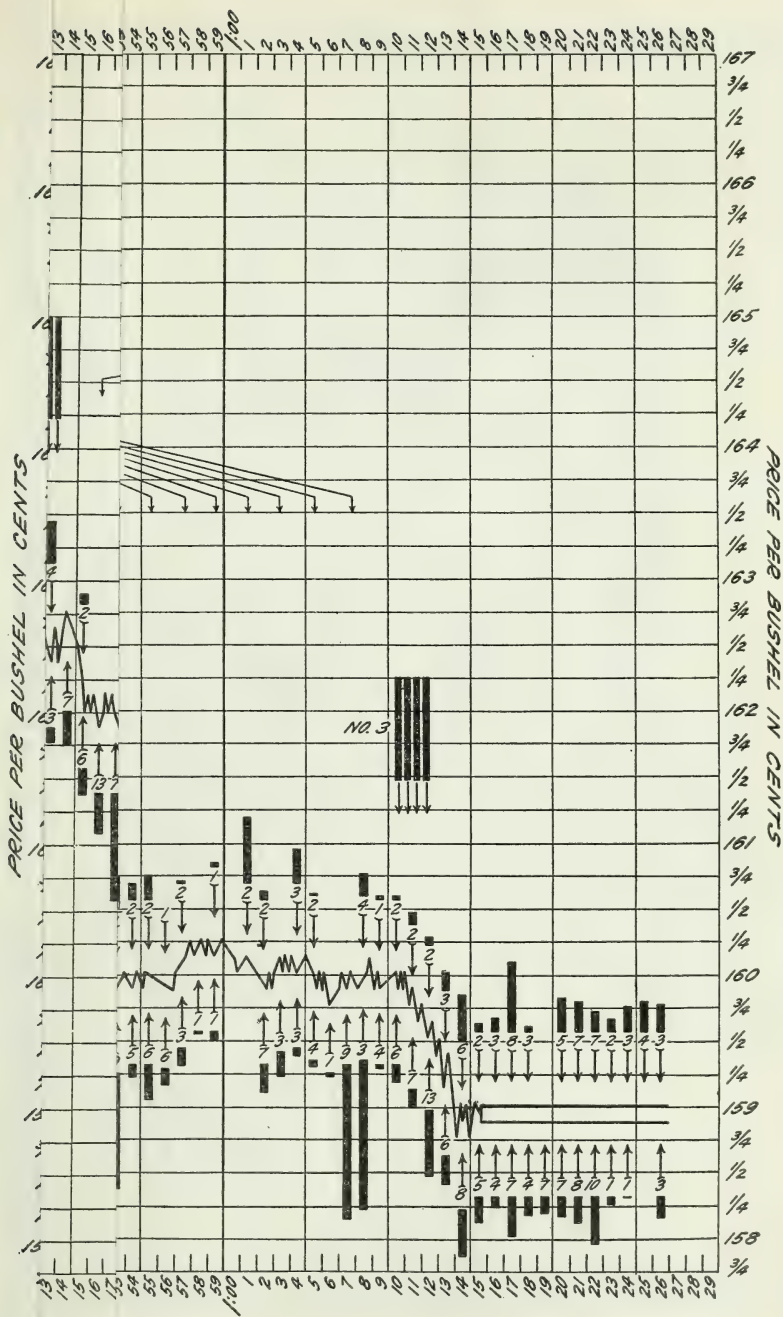
SMALL TRADER OPERATIONS ON AN INDIVIDUAL DAY

In order to present a detailed picture of how a portion of the market responds to the operations of leading speculators, Figure 8 has been prepared. It shows the course of the May wheat price on March 1, 1926. It shows, in addition, at what time and in what amounts the orders handled through two leading commission houses came on the market. Finally, it shows the general limits and amounts of sales or purchases of the two leading speculators that day.

The day chosen for this study should not be thought of as an average day. It was a day in which the price moved down from the opening to the closing 7 cents and in which two traders together sold net 10,000,000 bushels of May wheat futures. It was chosen on account of its unusual price movement and individual large trades in order to give a picture of the market on a "big" day. The price curve shows every recorded change in price during the day.

The choice of the two clearing firms whose trading is shown was dictated by the character of the business which each handled. They are both large wire houses having branches extending to important trading centers throughout the United States and Canada. Almost all of their business comes in over their private wires, very little being local business in and around Chicago. Judging from the orders received on March 1 (the average size for the day being 7,491 bushels) and the known character of the two firms, their business is representative of the small and medium sized speculative trade of the board. Sales aggregating 1,750,000 bushels made by trader No. 3 through one of the firms are not included in calculating this average. These sales, together with others made by trader No. 3 through other firms, totaling in all 4,500,000 bushels, are handled separately with those of trader No. 1 in order to contrast them with the many small orders executed.

In preparing the material for Figure 8, it was necessary to go direct to the telegraphic orders received during the day by each of the two firms. From these orders, the following information for each trade was obtained: (1) Whether a purchase or a sale; (2) the amount; (3) for whose account; (4) the price; (5) the type of order, i. e., whether market, stop, open, or limited; (6) the time filed; and (7) the time executed. The last two items of information are recorded by the use of a 10-second time clock, so that it was possible, when taken in conjunction with the price, to identify the time at which the trades were made in the pit within fairly narrow limits.



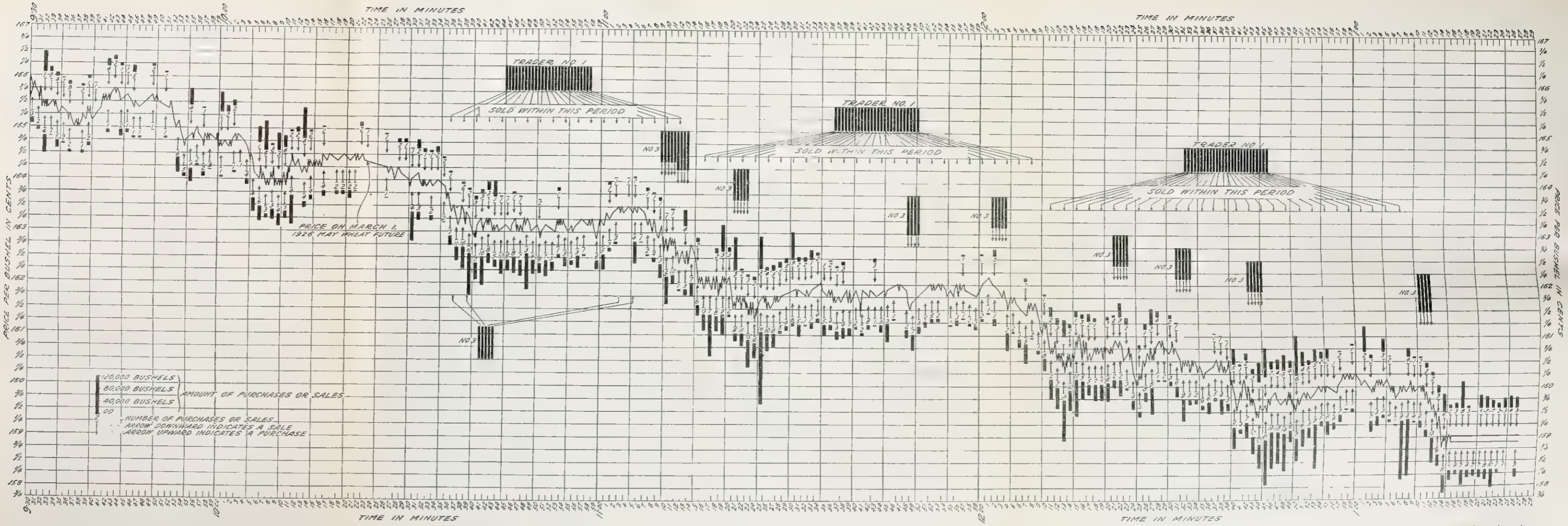


FIG. 8.—The course of the 1926 May wheat future price on March 1, showing the manner in which small or medium sized orders came on the market compared with the orders of two large speculators



For the two large traders whose transactions are shown in Figure 8, time records were not complete. For trader No. 1, no record was kept by the firms handling his business of the time his orders were filed or executed. In fact, no written orders were used by this trader in making his sales that day. His orders were given orally to the brokers and records of amounts and prices obtained later from the brokers' cards. For trader No. 3, time records were available for most of his business, though not as close to the time at which the trades were made in the pit as might be expected. When taken in conjunction with the price, however, the time of execution could be identified within fairly narrow limits. For trader No. 1, time of execution could be determined by the price, but only within comparatively wide limits and these are indicated on the chart by means of arrows.

Figure 8 shows, by intervals of one minute, just when the small and medium-sized orders, representative of the "general public," came on the market. It shows at what time the purchases were made (indicated by arrows upward) and at what time the sales were made (indicated by arrows downward). It also shows the quantity and the number of purchases and sales each moment in comparison with the movement in price together with the sales and purchases of the two large traders. One observation to be made is that the purchases by the small traders greatly exceeded the sales. For this particular day the combined purchases of the small traders amounted to 7,152,000 bushels, while the sales amounted to only 3,351,000 bushels. On the other hand traders No. 1 and No. 3 combined sold 10,500,000 bushels and brought 500,000 bushels. The fact that the purchases by the small traders exceeded the sales is in line with the usual practice of small traders, coming into the market on small recessions in anticipation of a reaction.

Another observation is that with each downward price movement there follows a noticeable increase in buying and selling by the small traders. These buying and selling "waves," it will be observed, do not occur while the downward "swing" is in progress, but immediately following it. They occurred especially following the price recessions from 10.04 to 10.05, from 10.35 to 10.37, from 11.07 to 11.15, from 12.02 to 12.11, and from 12.40 to 12.43 o'clock. The apparent explanation as it relates to those sending in buying orders is that as price recessions took place they bought with the expectation of a reaction upward in a short while. For those who were selling and who were decidedly in the minority, the occasion for their sales was probably due in most cases to a desire to limit further loss. In either case, the small-trade clientele of these two firms appeared to be largely followers rather than forecasters of market movements in price. The chart would be considerably more valuable were it possible to identify the sales of trader No. 1 within exact limits of time. Whether they occurred largely at the points of price movement, or preceded or followed each movement could not be determined. Because the small-trader transactions largely followed price declines, it does not necessarily follow that the large sales did. They may have been carried for a brief interval largely by pit scalpers who in turn sold to the small and medium-sized speculators.

How much of a sample of the small and medium-sized speculative trade is shown in Figure 8 is somewhat problematical. Of the total volume of trading of 93,439,000 bushels on the Chicago market that

day, their trading amounted to 7,152,000 bushels bought, or 7.6 per cent of the total purchases, and 3,351,000 bushels sold, or 3.6 per cent of the total sales. Included in the total figure of 93,439,000, however, is an item of over 10,000,000 sold by the two largest traders or over 10 per cent of the total sales for the day. Also included in the total is a large element of scalping trades and a smaller volume of spreading and hedging trades. For the period covered in the investigation of the 1925 May wheat future from January 2 to April 18, 1925, the fraction of the total volume of trading made by the groups representing the small and medium-sized speculative traders was 45 per cent of the total volume. Using this as a basis of estimate, the business of these two firms constitutes a sample of over 12 per cent of the total trading. As a conservative estimate these two firms handle at least 10 per cent of the total volume of small or medium-sized speculative trade.

Table 6 gives a summary of the number and amounts of the trades made through these two firms and in Table 3 of the appendix will be found the same information in a more detailed form. Table 4 of the appendix shows the price changes occurring during the day. A fact of outstanding importance in Table 6 is that the small orders—job lots and 5's and 10's—constitute such a large fraction of the total number and amount. In point of numbers, over 88 per cent of the orders executed were for 10,000 bushels or less, 33 per cent of the orders were for 1,000 or 2,000 bushels, and as much as 39 per cent of the total number were job lots. In amount, over 53 per cent were for 10,000 bushels or less, while approximately 9 per cent were job lots. If these percentages are at all representative of the everyday trading of the "general public," their trades are indeed small in separate amounts in comparison with the transactions of the leading professional speculators.

TABLE 6.—*The number and amounts of trades¹ in the 1926 May wheat future made through two clearing members of the Chicago Board of Trade on March 1, 1926*

Size of trade	Purchases		Sales		Total trades			
	Number	Amount	Number	Amount	Number	Per cent (cumulative)	Amount	Per cent (cumulative)
Job lots:		1,000 bus.		1,000 bus.			1,000 bus.	
1,000 bushels each.....	230	230	73	73	303	21.6	303	2.9
2,000 bushels each.....	109	218	52	104	161	33.1	322	6.0
3,000 bushels or over.....	57	200	31	107	88	39.3	307	8.9
Total.....	396	648	156	284	552	39.3	932	8.9
Regular lots:								
5,000 bushels each.....	335	1,675	110	550	445	71.0	2,225	30.0
10,000 bushels each.....	180	1,800	70	700	250	88.9	2,500	53.8
15,000 bushels each.....	17	255	14	210	31	91.1	465	58.2
20,000 bushels each.....	29	580	23	460	52	94.8	1,040	68.2
25,000 bushels each.....	12	300	6	150	18	96.1	450	72.4
30,000 bushels each.....	11	330	3	90	14	97.1	420	76.4
35,000 bushels each.....	1	35	1	35	2	97.2	70	77.1
40,000 bushels each.....	3	120	1	40	4	97.5	160	78.6
45,000 bushels each.....	1	45	2	90	3	97.7	135	79.9
50,000 bushels each.....	14	700	7	350	21	99.2	1,050	89.9
55,000 bushels or over.....	6	670	5	390	11	100.0	1,060	100.0
Total.....	609	6,510	242	3,065	851	60.7	9,575	91.1
Grand total.....	1,005	7,158	398	3,349	1,403	100.0	10,507	100.0

¹ Does not include purchases or sales made on bids at a nominal price at the close. Does not include old style contracts, which amounted to less than 3 per cent of the total trading in May wheat. Does not include a sale by trader No. 3 of 1,750,000 bushels.

NET POSITION OF 15 FIRMS COMPARED WITH NET POSITION OF 8 LEADING SPECULATORS

Figure 9 shows the combined net position curve of the 8 large speculators compared with that of the 15 selected clearing firms of the Chicago Board of Trade. It is not necessary to explain further the composition of the trading of the 8 leading speculators. The 15 clearing firms used were selected to represent the small or medium-sized traders. These 15 firms all have customers who trade in varying quantities. They do not include, however, any of the trading of the 8 large speculators. They were selected out of the list of over 100 clearing members of the Chicago Board of Trade because the bulk of their business is known to come from small or medium-sized traders. Also, these 15 firms were selected because their customers do primarily a speculative rather than a hedging, scalping, or spreading business. The market position of these 15 clearing firms is shown in Table 1 of the appendix.

Contrasting the curve of the 8 large speculators with that of the 15 clearing firms, it will be seen that the market position of the small traders moves in general in the opposite direction to that of the large traders. It is clear that on days on which large traders sell, someone must buy; and since hedgers change their position only gradually, and scalpers "even up" at the close of the day, and spreaders are concerned only with relative price changes, it follows that the group that must buy are the smaller speculators. The significant observation to be made from Figure 9 is the opposite relation which the two net position curves bear to the price curve. The net position curve of the 8 traders changes almost always in direct relation to the price changes; that of the 15 firms in inverse relation to the price. The direct relationship between the price and the net position of the 8 largest traders has already been considered (p. 7). When statistically compared they were found to directly correlate to the extent of a $+0.69$, with a probable error of ± 0.03 . When the 15 firms representing the small speculative traders are correlated with the price, they are found to correlate inversely to the extent of a -0.74 , with a probable error of ± 0.02 . Both of these correlations were made for the period October 22, 1925, to and including April 29, 1926, the period during which the total open commitments in May wheat exceeded the open commitments in any of the other futures.

SUMMARY AND CONCLUSIONS

The material presented and analyzed in the preceding pages may now be briefly summarized as follows: When the trading of the 8 largest speculators in the 1926 May wheat future on the Chicago Board of Trade is compared with price changes, it directly relates to the movements in price. This is true whether considered within the trading day, from one trading day to the next, or for the course of trading over a longer period of time. The larger the net trading or net position of individual speculators, the more certain it becomes that the trading will directly influence prices. In contrast, futures prices generally move in the opposite direction to the "operations" of the small and medium-sized "general public" trader. This likewise is true within an individual day, from one day to the next and over longer periods of time.

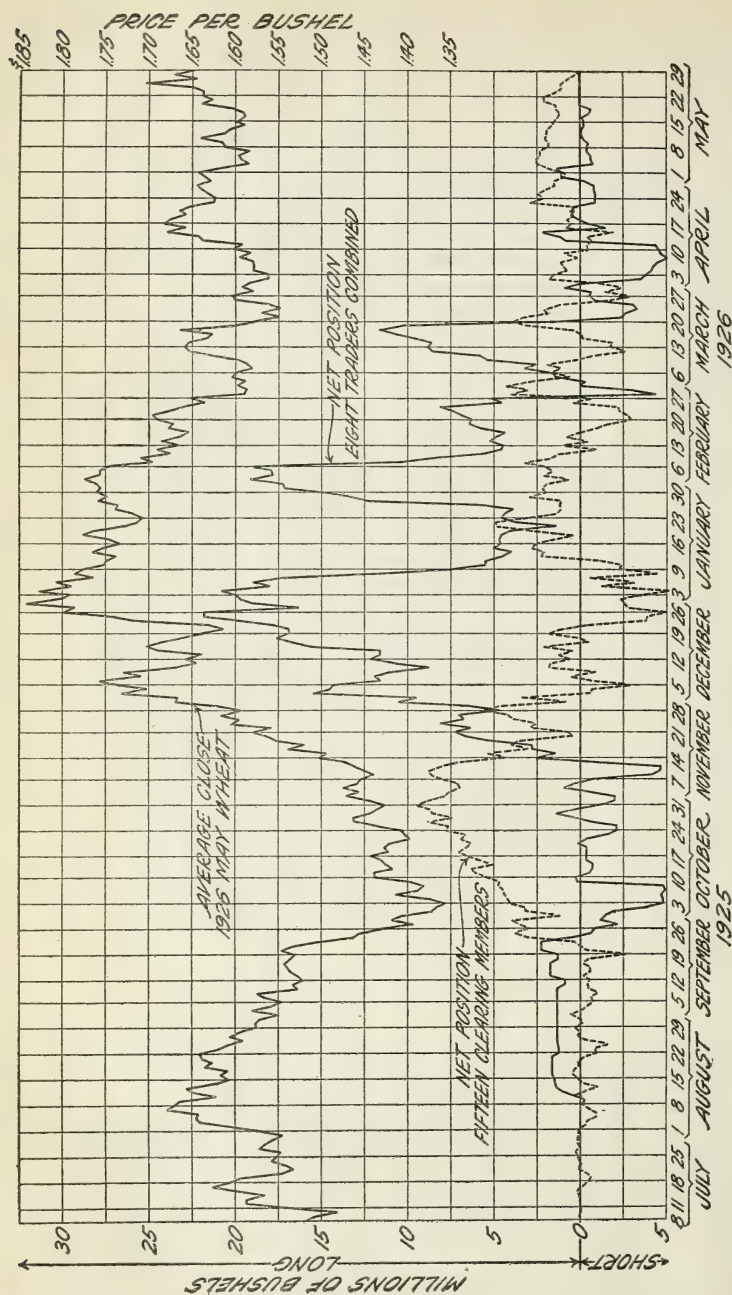


FIG. 9.—The combined net position of 8 large speculators compared with the combined net position of 15 clearing firms of the Chicago Board of Trade, by days, for the 1926 May wheat future

In considering the significance of the relation which these groups bear to the price, the natural inference is that the large trader is generally right and the small or medium-sized trader is generally wrong in his market operations. In the absence of specific purchase and sales prices for the trading of each group so that an actual measure of their profit or loss could be made, this conclusion can not be definitely demonstrated. If, for example, the relationship between the purchases and sales of large traders were so perfect that the price moved up and down in exact proportion to their market position, they would financially always "break even." In actual practice this is of course not the case. On some days they do not change their position while the price moves up or down. On days on which they do change their position, some are changes to an unusual extent and effect the price, while others are small and show no consistent effect.

An outstanding observation that can be made is that the volume of purchases or sales is not in itself an adequate explanation for price movements. It has often been said by adverse critics of exchanges that speculators short-selling millions of bushels of grain permanently depress the price. The proponents of organized speculation have answered that this could not be since these same short sellers must later buy to an equal extent. Both arguments have very little merit. For every sale, there must at the same instant be a purchase; for sales in large volume, there must at the same instant be purchases in equally large volume. If, therefore, either buying or selling in itself were an adequate explanation of price changes, the price obviously would never move up or down.

The information already presented indicates that the manner in which sales or purchases are made rather than mere quantity, vitally affects the course of prices. Table 2 shows that there is a vast difference between selling 5,000,000 bushels of wheat futures during the course of one day and the same operation spread over several days. Figure 8 shows the vital difference between a purchase or sale of 5,000,000 bushels made by several hundred small traders sending in orders intermittently to be executed "at the market," and the purchase or sale of an equal amount by one or two individuals closely directing the manner in which their orders are executed and noting their effect upon the price.

Close analogies are to be found in the field of cooperative bargaining. For individual laborers to call upon their employer intermittently in an effort to raise their wage scale may have little effect, but to join together and call in a body under shrewd leadership may result differently. Similarly in the sale of any commodity, where offered on the market by hundreds of producers in small uncertain quantities at irregular intervals, the effect upon the market price is much more uncertain than if sold by a single controlling influence and in accordance with a definite prearranged plan.

Opinions regarding supply and demand determine prices in grain-future markets as in any other market. On the side of supply there are opinions of existing supplies of grain and these are fairly accurately grounded in fact. There are also opinions as to the future or potential supplies both of grain and of grain futures. On the side of demand opinions regarding the usual factors of foreign and domestic purchasing power, changing tastes for alternative foods and substi-

tutes, together with opinions regarding probable purchases of grain futures, are the factors of importance.

Of these factors the most difficult to estimate even roughly are those relating to probable sales or purchases of grain futures. The supply of a particular grain future which may be offered on the market at any moment, without any possible way of predicting it, is practically unlimited. There is no direct relationship whatever, other than for a short period during the current delivery month, between the supply of actual grain available for the market and the supply of grain futures which may be sold. Likewise, there is no direct relationship between the demand for actual grain and the volume of buying which may at any time enter the futures market. In this respect the buying and selling of futures differs in degree at least from the purchase and sale of actual grain. In the latter case the total supply is limited by the actual stock times the rapidity of turnover; in grain futures the "stock" may be any amount and the rapidity of turnover very high.

It is because of this lack of any natural limit to futures trading growing out of the needs of commerce in the merchandizing of any given crop that it is subject so often to abuse. Information already presented shows that the futures price moves with the net purchases and sales of a few leading speculators. The reason why the price so moves is because large amounts are bought or sold at a single time followed by additional large units. There is apparently no limit to the volume of buying or to the volume of selling and as a result market resistance or support weakens.

The remedy for this condition has already been suggested in an earlier report of the Grain Futures Administration on "Fluctuations in wheat futures." Some limitation on the size of lines long or short and upon the extent to which an individual speculator may buy or sell within the limits of a trading day is necessary. In addition it seems advisable to place some limitation upon the extent to which prices of grain futures may fluctuate within a single day. These conclusions are based on the assumption (1) that the grain trade and the farmers desire a greater degree of price stability than now exists and (2) that supply and demand factors growing out of actual grain conditions should have a relatively greater, and futures trading of itself a relatively lesser importance in determining grain prices.

The operations on the part of large speculators were on a larger scale in the 1926 May wheat future than in the 1925 future. Had the public participated in the 1926 May to the same reckless degree as in the 1925 May, there is every reason to believe price fluctuations would have been equally as wide or possibly wider in extent.

The results of this study confirm and strengthen the conclusions presented in the previous report, and the recommendations based on the earlier investigation are even more applicable to this bulletin in the light of the facts here set forth. These recommendations are as follows:

A limitation of some kind on the size of lines, long or short, and especially on the extent of buying or selling within a day by speculative traders seems inevitable if there is to be eliminated from the market those hazards which are so unmistakably reflected as existing whenever excessively large lines are held by individuals.

It is believed that an effective limitation upon the trading operations of large speculators would prevent at the outset the accumulation of a "line" of excessive proportions either long or short. In addition, it should tend to insure a more gradual accumulation or liquidation and thus make for greater stability of prices and

more orderly price movements. This will be necessary if the futures market shall best serve hedgers and others who have need of it in the process of moving grain from the farms of this country to the consumers of this and other countries.

* * * Attention may be directed once more to the arbitrary limitations upon unnatural price fluctuations. This is just one more means to discourage harmful practices and prevent erratic fluctuations. Any and all such limitations are in themselves artificial and unnatural, of course, but in dealing with unnatural and artificial means to move prices out of their normal course, we may be justified perhaps in using artificial and more or less arbitrary means by which to keep them within the reasonable bounds of natural movement as governed by the legitimate forces of supply and demand.

Both of these are problems which should be solved by the exchanges themselves. But whatever the solution it is evident that large trading operations obviously designed to influence prices, and especially operations which involve heavy swings at frequent intervals from one side of the market to the other have neither economic nor moral justification. It seems equally true that a futures market in which an individual trader may buy or sell within a single trading day a quantity equivalent to 10 or 12 per cent of the total trading for the day in the dominant future is not a market based on the supply of or the demand for actual grain.

APPENDIX

TABLE 1.—The aggregate of all long and of all short accounts and the combined net position in the 1926 May wheat future¹ of the customers of 15 clearing members of the Chicago Board of Trade, together with the total open commitments for the market, by days, from July 8, 1925, to May 29, 1926

[In thousands of bushels, i. e., 000 omitted]

Date	Total open commitments in May wheat (long or short)	15 clearing firms				Date	Total open commitments in May wheat (long or short)	15 clearing firms					
		Aggregate position		Combined net position				Aggregate position	Combined net position				
		Long	Short	Long	Short					Long	Short	Long	Short
1925						1925							
July 8..	94	17	24	-----	7	Sept. 9..	24,910	8,742	9,754	-----	1,012		
9..	175	54	51	-----	3	10..	26,790	9,994	10,470	-----	476		
10..	422	88	139	-----	51	11..	27,657	10,042	10,480	-----	438		
11..	488	102	141	-----	39	12..	28,498	10,523	11,108	-----	585		
13..	1,090	180	191	-----	11	14..	28,671	10,355	10,519	-----	164		
14..	1,252	243	247	-----	4	15..	29,349	10,503	11,115	-----	612		
15..	1,624	443	382	-----	61	16..	29,451	10,394	10,966	-----	572		
16..	2,257	864	714	-----	150	17..	29,696	10,128	11,264	-----	136		
17..	2,528	719	1,008	-----	289	18..	31,183	10,960	11,588	-----	628		
18..	2,988	814	1,351	-----	537	19..	31,211	8,774	11,556	-----	2,782		
20..	2,989	765	1,381	-----	616	21..	32,241	11,637	12,008	-----	371		
21..	3,520	1,062	1,383	-----	321	22..	32,455	9,686	9,680	-----	6		
22..	5,097	1,707	1,652	-----	55	23..	33,291	12,609	11,251	-----	1,358		
23..	5,466	1,751	1,822	-----	71	24..	37,160	14,426	11,291	-----	3,135		
24..	5,562	1,930	1,920	-----	10	25..	37,990	15,065	11,235	-----	3,830		
25..	5,673	2,042	1,887	-----	155	26..	39,410	15,321	12,377	-----	2,944		
27..	5,598	2,059	1,808	-----	251	28..	39,568	15,247	11,708	-----	3,539		
28..	5,598	1,861	1,869	-----	8	29..	38,720	15,064	11,115	-----	3,949		
29..	5,877	2,060	1,894	-----	166	30..	39,651	12,473	11,314	-----	1,159		
30..	5,944	1,834	1,701	-----	133	Oct. 1..	43,301	16,410	13,252	-----	3,158		
Aug. 31..	6,385	2,178	2,063	-----	115	2..	46,409	18,410	15,212	-----	3,198		
1..	6,674	2,215	2,136	-----	79	3..	46,261	18,419	14,340	-----	4,079		
3..	7,112	2,145	2,460	-----	305	5..	46,772	18,994	14,799	-----	4,195		
4..	8,479	2,374	2,810	-----	436	6..	49,229	19,859	15,462	-----	4,397		
5..	9,711	2,491	3,422	-----	931	7..	51,799	20,002	15,548	-----	4,454		
6..	11,213	2,770	3,710	-----	940	8..	50,567	20,209	15,464	-----	4,745		
7..	12,523	3,565	4,115	-----	550	9..	52,430	20,686	16,001	-----	4,685		
8..	12,842	3,795	3,939	-----	144	10..	53,250	21,319	15,970	-----	5,349		
10..	13,456	4,045	4,322	-----	277	13..	54,607	21,760	15,699	-----	6,061		
11..	14,446	4,971	4,633	-----	338	14..	54,166	21,495	15,094	-----	6,391		
12..	15,131	4,911	5,194	-----	283	15..	54,664	20,757	15,484	-----	5,273		
13..	15,855	4,634	5,678	-----	1,044	16..	54,964	21,308	15,559	-----	5,749		
14..	16,482	5,328	5,421	-----	93	17..	55,490	21,934	15,368	-----	6,566		
15..	16,552	5,477	5,297	-----	180	19..	55,599	22,222	15,190	-----	7,032		
17..	18,033	6,119	5,640	-----	479	20..	55,953	22,148	15,532	-----	6,616		
18..	18,120	6,240	5,852	-----	388	21..	55,662	22,069	15,786	-----	6,339		
19..	18,182	6,117	6,044	-----	73	22..	56,138	22,427	15,531	-----	6,896		
20..	18,230	6,353	6,229	-----	124	23..	56,739	22,516	15,829	-----	6,687		
21..	18,827	6,400	6,676	-----	276	24..	57,869	23,170	15,427	-----	7,743		
22..	19,072	6,270	7,200	-----	930	26..	58,031	22,859	15,239	-----	7,620		
24..	19,689	6,410	7,282	-----	872	27..	59,062	24,760	15,894	-----	8,866		
25..	20,331	5,578	7,239	-----	1,661	28..	57,647	23,264	15,843	-----	7,421		
26..	20,884	6,967	7,261	-----	294	29..	59,531	24,372	15,878	-----	8,494		
27..	21,272	7,486	7,321	-----	165	30..	60,634	24,742	15,998	-----	8,744		
28..	21,750	7,645	7,559	-----	86	31..	59,748	24,955	15,524	-----	9,431		
29..	22,128	8,106	7,820	-----	289	Nov. 2..	60,534	25,045	16,246	-----	8,799		
31..	22,971	8,135	8,286	-----	151	3..	59,998	24,255	16,389	-----	7,866		
Sept. 1..	23,152	8,413	8,407	-----	6	4..	60,425	24,622	17,039	-----	7,583		
2..	23,530	8,699	8,188	-----	511	5..	61,493	24,058	17,132	-----	6,926		
3..	24,150	7,918	8,046	-----	128	6..	62,788	24,067	16,954	-----	7,113		
4..	24,318	8,748	9,176	-----	428	7..	63,769	24,391	16,461	-----	7,930		
5..	24,679	8,753	9,491	-----	738	9..	63,949	25,999	16,993	-----	8,606		
8..	24,739	8,632	9,269	-----	637	10..	63,977	25,952	17,161	-----	8,791		

¹ Old style and new style contracts combined.

TABLE 2.—The opening, high, low, and closing prices of the 1926 May wheat future with the net change in price, by days, from July 8, 1925, to May 29, 1926—Con.

(In cents per bushel)

Date	Opening	High	Low	Closing	Net change from close of previous day	Date	Opening	High	Low	Closing	Net change from close of previous day
1926						1926					
Apr. 3...	156 1/4-5 3/4	156 3/8	154 7/8	156 1/8-1/4	0	May 3...	165 1/4-4 3/4	165 1/2	160 5/8	161 3/8-5/8	-2 5/8
5...	155 3/4-9 5/8	158	155 5/8	157 3/4-8	+1 3/8	4...	161 1/4-1	161 1/2	156 3/4	158 1/4-9 5/8	-3 1/8
6...	158 1/2-9	159 1/4	157 1/2	157 3/4-7 1/2	-1 1/8	5...	159 1/2-1 1/4	159 3/4	157 3/8	159 5/8-1 1/2	+1
7...	157 1/4-8 1/2	158 1/4	156 1/2	158-7 1/2	+1 3/8	6...	160-59 3/4	160 3/4	158 3/8	159 5/8-7 1/2	+1 1/4
8...	158 3/4-9	160 3/8	158 3/8	159 5/8-1 1/2	+1 1/8	7...	159-8 3/4	159	157 1/4	158 1/8-3 1/8	-1 1/8
9...	159 3/4-60	160	158	158 3/8-1 1/4	-1 1/4	8...	158 1/2-1 1/2	161 1/2	157 1/4	161 1/4-1	+2 1/2
10...	158 3/4-9 1/4	160 1/8	158 3/4	160 1/4-3 1/2	+2	10...	161 1/4-60 1/2	162 1/2	160 3/4	161 1/8-5 3/8	+1 3/8
12...	160-3 1/4	160 7/8	159 3/8	159 1/2-2 1/4	-1 1/8	11...	161-60 1/2	164	160 3/4	163 3/4-4	+2 3/8
13...	160-1 1/4	164 1/8	160	163 3/4-2 1/4	+4 3/8	12...	165-1 1/2	165 1/2	160 3/4	161 1/4-3 1/4	-2 3/8
14...	164-1 1/2	165 5/8	163 3/8	164 1/4-4	+1 3/8	13...	160 3/4-1 1/4	161 3/8	159 1/2	160 5/8-3 1/4	-3 3/8
15...	165 1/4-6 1/2	168 1/4	165 1/2	167 7/8-8	+3 3/4	14...	160 5/8-1 1/4	160 3/8	158	157 3/8-9	-1 3/4
16...	168-9	169	165 1/4	165 3/8-7 1/2	-2 1/4	15...	159-8 3/4	160 1/2	158 7/8	160-59 3/4	+1
17...	166-1 1/4	168 1/2	165 3/4	168 3/8-7 1/2	+2 1/2	17...	160 1/2-7 3/8	161 3/8	158 1/2	158 3/4-9	+1
19...	168 1/4-7 1/2	170 1/2	166 3/4	167 3/8-8 1/2	-1 1/4	18...	158 1/2-7 1/8	159 1/4	157 1/4	159 5/8-9	+1 1/8
20...	168 1/2-9	169	164 1/2	165 1/2-7 1/2	-1 1/4	19...	160-7 1/2	160 3/4	158 3/4	160-7 1/4	+1 1/8
21...	164 1/2-3 3/4	166 3/4	163 3/4	166 1/4-1 1/2	+1 1/4	20...	161 3/4-2	164 1/2	161 1/4	163 3/4-4	+3 3/4
22...	165 1/2-8	166 3/4	163 3/4	165 3/8-2 1/4	-1 1/4	21...	164 1/2-4	164 3/4	160 3/2	162 1/2-7 1/4	-1 1/4
23...	165-3 1/2	167 1/2	161 3/4	162 3/8-2 1/4	-2 3/4	22...	162 1/2-1 1/2	164	161 1/2	163 1/4-4	+1 1/8
24...	162 3/4-3 1/2	163 3/8	160 3/2	162 3/8-2 1/4	-1 3/8	24...	164 1/4-4	164 1/2	162 3/4	163 3/4-7 1/4	-1 1/8
26...	162 3/4-3 1/4	163 3/4	161	163-2 1/4	+1 1/4	25...	163 3/4-7 1/4	165	162 1/2	164 3/8-5	+1 1/4
27...	162 1/2-2	163 1/2	162	163 7/8-2 1/4	+1 1/4	26...	165-2 1/2	170 1/4	165	170 1/4-7 1/4	+5 5/8
28...	163 3/4-2 1/2	164 3/8	163	164 1/2-2 1/4	+1 1/8	27...	171-1 1/2	171 1/2	162 1/2	163 3/4-5	-6 1/8
29...	164-3 1/2	164 3/8	162 3/4	162 3/4-2 1/4	-1 1/8	28...	166-7 1/2	167 1/2	163	166 1/2-7 1/2	+2 5/8
30...	163-2 3/4	164	161 1/2	163 3/8-2 1/2	+1 3/4	29...	167-8	168	163 1/2	164-5	-2 1/2
May. 1...	164	165 1/4	163 3/8	164 1/4-7 1/2	+1 3/8						

TABLE 3.—The number and amounts of trades¹ in the 1926 May wheat future received by two clearing members of the Chicago Board of Trade on March 1, 1926, by minutes

Time in minutes	Bought					Sold						
	Job lots			Regular lots		Job lots			Regular lots			
	1,000 bushels each	2,000 bushels each	Other job lots in actual amounts	5,000 bushels each	10,000 bushels each	Other regular lots in actual amounts	1,000 bushels each	2,000 bushels each	Other job lots in actual amounts	5,000 bushels each	10,000 bushels each	Other regular lots in actual amounts
9.30			Bushels		Bushels			Bushels			Bushels	
9.31			6,000	3								
9.32	1	1						30,000				20,000
9.32								20,000				20,000
9.33	1										1	
9.34		3		1	1		1	1	3,000			
9.35			4,000				2				2	
9.36	1			1			5	3				
9.37												
9.38					1		2				1	
9.39		1			1							1
9.40							1					
9.41												
9.42					1		1				2	1
9.43									3,000			
9.44					2							1
9.45					1		1					
9.46				1	1		1	1	3,000		1	1
9.47												
9.48												
9.49	1										2	

¹ For new style contracts only which amounted to over 97 per cent of the total volume in May wheat. Does not include purchases or sales on bids made at a nominal price at the close.

TABLE 3.—The number and amounts of trades in the 1926 May wheat future received by two clearing members of the Chicago Board of Trade on March 1, 1926, by minutes—Continued

Time in minutes	Bought						Sold					
	Job lots			Regular lots			Job lots			Regular lots		
	1,000 bush-els each	2,000 bush-els each	Other job lots in actual amounts	5,000 bush-els each	10,000 bush-els each	Other regular lots in actual amounts	1,000 bush-els each	2,000 bush-els each	Other job lots in actual amounts	5,000 bush-els each	10,000 bush-els each	Other regular lots in actual amounts
10.44	1	2	Bushels 3,000	5	1	Bushels		1	Bushels			Bushels
10.45	1	1		2	2		1					
10.46	3	1			3	15,000						
10.47		2		1	4			1	6,000			
10.48	1				1	100,000						
10.49	2				1	30,000						
10.50	2	1	3,000	4			2					
10.50			3,000									
10.51				4	3							
10.52	2			1	2							
10.53					1						1	
10.54			3,000		1	15,000						
10.55	1	1			1							
10.56		1			1	25,000						
10.57				1								
10.58												
10.59	1			5								
11.00		1		1	2	20,000						
11.01	1		4,000	1							1	
11.02	2			1			1					
11.03												
11.04							1					
11.05		1		1	1	50,000			1			
11.06	1											
11.07		2									1	
11.08	1	1		2					1			
11.09	1	1				40,000				1		
11.10				1	3	50,000	1					
11.11	6	1	3,000	1	1				1			
11.12				1								
11.13			3,000	1	1				2			20,000
11.13												20,000
11.14	1			4	2							
11.15	1		3,000	2		15,000			3,000		1	
11.15			3,000									
11.16	3	1	3,000	5	1							
11.16			3,000									
11.16			3,000									
11.17				4	1	50,000						
11.17						50,000						
11.18	1			5	2				1	1		
11.19			6,000	5	3		1		6,000	1	1	60,000
11.20	1			1			1	1			1	
11.21	2	1		2	1		1		1			100,000
11.22	4	2		4	1			1	3,000			
11.23	2	1		8	4		1	1		1		
11.24				5		20,000	1				1	
11.25	2	1	3,000	3	5	25,000	1	1				100,000
11.25			3,000			25,000						
11.25						100,000						
11.26	1	1		4	3			3		1		
11.27	2	1		2	3		1	1				15,000
11.28	4			1			1	1		3		
11.29	3				1		1	1	3,000	2		
11.30	4	1	4,000				2	2			3	25,000
11.30												25,000
11.31	1			2	1	15,000			3,000		1	
11.32				1					3,000		1	
11.33	1		3,000	3								30,000
11.34	3			2	1				3,000	1		
11.35	2			2		20,000	1					
11.36	1			3			1		3,000			
11.37				1	2					1		

TABLE 3.—The number and amounts of trades in the 1926 May wheat future received by two clearing members of the Chicago Board of Trade on March 1, 1926, by minutes—Continued

Time in minutes	Bought						Sold					
	Job lots			Regular lots			Job lots			Regular lots		
	1 000 bush-els each	2 000 bush-els each	Other job lots in actual amounts	5 000 bush-els each	10,000 bush-els each	Other regular lots in actual amounts	1,000 bush-els each	2,000 bush-els each	Other job lots in actual amounts	5,000 bush-els each	10,000 bush-els each	Other regular lots in actual amounts
1.20	2	1	Bushels	4		Bushels		3		1	1	Bushels
1.21	5	1		2		15,000	2	1	3,000	2		20,000
1.22	5	1		3		35,000	3	1		2	1	20,000
1.23					1		1					15,000
1.24	1						1				1	20,000
1.25								1			2	15,000
1.26				1	2		1	1		2		20,000
Total number of trades	230	109	57	335	180	94	73	52	31	110	70	62
Total amounts (in thousands of bushels)	230	218	200	1,675	1,800	3,035	73	104	107	550	700	1,815

TABLE 4.—Ten-second record of price changes in the 1926 May wheat future (new style) for March 1, 1926¹

Time (in seconds)	Price	Time (in seconds)	Price	Time (in seconds)	Price	Time (in seconds)	Price
Opening	165½-166	9.40.00	165¼	9.55.50	164¾	10.06.50	164½
9.30.40	165¾	9.40.40	165¼	9.56.00	164¾	10.06.50	164
9.30.50	165¾	9.41.20	165¾	9.56.30	165	10.07.00	164½
9.31.00	165¾	9.41.20	165½	9.56.40	164¾	10.07.20	164
9.31.30	165¾	9.41.40	165¾	9.57.20	164¾	10.07.30	163¾
9.31.30	165½	9.41.50	165½	9.57.30	164¾	10.07.40	164
9.31.50	165¾	9.42.00	165¾	9.57.30	164¾	10.07.50	163¾
9.31.50	165¾	9.42.20	165½	9.57.30	164¾	10.08.10	164
9.31.50	165½	9.42.40	165¾	9.58.00	164¾	10.08.10	164½
9.32.00	165¾	9.42.40	165½	9.58.10	164¾	10.08.30	164
9.32.20	165½	9.42.50	165¾	9.58.20	164¾	10.08.40	164½
9.32.20	165¾	9.43.30	165¾	9.58.30	164¾	10.08.40	164
9.32.20	165½	9.43.30	165¾	9.59.30	164¾	10.08.50	163¾
9.32.30	165¾	9.43.50	165¾	9.59.30	164¾	10.08.50	164
9.32.40	165½	9.44.10	165¾	9.59.50	164¾	10.09.20	163¾
9.32.50	165¾	9.44.20	165½	10.00.00	164¾	10.09.30	164
9.33.50	165½	9.45.30	165¾	10.00.00	164¾	10.09.30	163¾
9.34.00	165¾	9.46.10	165½	10.00.00	164¾	10.09.40	164
9.34.00	165½	9.46.30	165¾	10.00.20	164¾	10.10.00	163¾
9.34.20	165¾	9.46.30	165½	10.00.40	164¾	10.10.00	164
9.34.40	165¾	9.47.20	165¾	10.01.00	164¾	10.10.20	164½
9.35.20	165¾	9.48.20	165½	10.01.40	164¾	10.10.30	164
9.36.10	165¾	9.49.20	165¾	10.01.50	164¾	10.10.30	163¾
9.36.20	165¾	9.49.40	165½	10.02.00	164¾	10.10.40	164
9.36.30	165¾	9.50.00	165¾	10.02.00	164¾	10.10.40	164½
9.36.50	165¾	9.50.20	165½	10.02.40	164¾	10.10.40	164
9.37.10	165	9.52.00	165¾	10.02.50	164¾	10.10.50	164½
9.37.30	165¾	9.52.20	165½	10.03.10	164¾	10.10.50	164½
9.37.30	165	9.52.30	165¾	10.03.40	164¾	10.11.00	164½
9.37.40	165¾	9.52.40	165½	10.04.30	164¾	10.11.10	164½
9.37.50	165	9.52.50	165¾	10.04.50	164¾	10.11.30	164½
9.38.30	165¾	9.53.10	165	10.05.00	164¾	10.11.40	164½
9.38.30	165¾	9.53.40	165¾	10.05.10	164¾	10.11.40	164½
9.39.00	165¾	9.52.50	165	10.05.20	164¾	10.12.00	164½
9.39.00	165¾	9.54.00	164¾	10.05.30	164¾	10.12.30	164½
9.39.00	165¾	9.54.20	164¾	10.05.40	164¾	10.12.50	164½
9.39.30	165¾	9.54.30	164¾	10.06.30	164	10.13.10	164½
9.39.30	165¾	9.54.30	164¾	10.06.30	164½	10.13.30	164½
9.39.40	165¾	9.55.50	164¾	10.06.30	164¾	10.13.50	164½

¹ Data supplied by the quotation department of the Chicago Board of Trade.

TABLE 4.—Ten-second record of price changes in the 1926 May wheat future (new style) for March 1, 1926—Continued

Time (in seconds)	Price	Time (in seconds)	Price	Time (in seconds)	Price	Time (in seconds)	Price
	<i>Cents</i>		<i>Cente</i>		<i>Cents</i>		<i>Cents</i>
1.05.30 ----	160	1.09.00 ----	160	1.12.00 ----	159 ³ / ₄	1.13.50 ----	159
1.05.40 ----	159 ⁷ / ₈	1.09.10 ----	159 ⁷ / ₈	1.12.10 ----	159 ⁵ / ₈	1.14.10 ----	158 ⁷ / ₈
1.05.50 ----	160	1.09.20 ----	160	1.12.10 ----	159 ¹ / ₂	1.14.10 ----	158 ³ / ₄
1.06.00 ----	159 ⁷ / ₈	1.09.30 ----	159 ⁷ / ₈	1.12.50 ----	159 ⁵ / ₈	1.14.10 ----	158 ⁷ / ₈
1.06.10 ----	160	1.10.30 ----	160	1.12.50 ----	159 ¹ / ₂	1.14.20 ----	159
1.06.10 ----	159 ⁷ / ₈	1.10.30 ----	159 ⁷ / ₈	1.13.00 ----	159 ³ / ₈	1.14.20 ----	158 ⁷ / ₈
1.06.20 ----	159 ³ / ₄	1.10.30 ----	160	1.13.00 ----	159 ¹ / ₂	1.14.30 ----	159
1.07.00 ----	159 ⁷ / ₈	1.10.50 ----	159 ⁷ / ₈	1.13.00 ----	159 ³ / ₈	1.14.40 ----	158 ⁷ / ₈
1.07.00 ----	160	1.10.50 ----	160	1.13.10 ----	159 ¹ / ₄	1.14.50 ----	158 ³ / ₄
1.07.30 ----	159 ⁷ / ₈	1.11.10 ----	159 ⁷ / ₈	1.13.20 ----	159 ¹ / ₂	1.15.00 ----	158 ⁷ / ₈
1.07.40 ----	160	1.11.20 ----	159 ³ / ₄	1.13.30 ----	159 ¹ / ₄	1.15.00 ----	159
1.08.20 ----	159 ⁷ / ₈	1.11.30 ----	159 ⁷ / ₈	1.13.30 ----	159 ³ / ₈	Close	159-158 ³ / ₄
1.08.50 ----	160	1.11.30 ----	159 ³ / ₄	1.13.40 ----	159 ¹ / ₄	High	166
1.08.50 ----	160 ¹ / ₈	1.11.40 ----	159 ⁵ / ₈	1.13.50 ----	159 ¹ / ₂	Low	158 ³ / ₄

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