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AGRICULTURAL EXTENSION DIVISION
UNIVERSITY OF MINNESOTA

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MINNESOTA FARM BUSINESS NOTES

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Prepared by the Division of Agricultural Economics
University Farm, St. Paul, Minnesota

CROP PRICE MOVEMENTS FOLLOWING HARVEST

Prepared by Rex W. Cox

The seasonal movements of the prices of many agricultural products, particularly crops, are featured by a lack of regularity or uniformity from year to year. While the tendency exists for prices to rise during the months following the harvest period, the movement not only varies in amount but often it is in a reverse direction. This is shown in Table 1 in which the Minnesota farm prices of wheat, corn, oats, flax, and potatoes eight months after harvest are compared with the price prevailing in the harvest month for the sixteen-year period, 1921-1937. The absence of a uniform seasonal movement is particularly evident in the case of corn and potatoes. For example, the Minnesota price of corn eight months after harvest was less than 85 per cent of the price in the harvest month in three years of the sixteen-year period and 145 per cent or more in six years.

Table 1

Prices Received by Minnesota Farmers Eight Months after Harvest Compared
with the Price Received in the Harvest Month

Price eight months after harvest as a percentage of price in harvest month	Wheat	Corn	Oats	Flax	Potatoes*
	(Number of years)				
Less than 75	0	0	0	0	1
75 - 84	2	3	2	2	0
85 - 94	4	0	3	3	2
95 - 104	3	2	1	3	1
105 - 114	6	2	3	3	3
115 - 124	1	0	3	1	2
125 - 134	0	3	3	2	4
135 - 144	0	0	0	1	0
145 and more	0	6	1	1	3

*In the case of potatoes, the price in May or seven months after harvest has been compared with the price in October.

The variability in the seasonal movement of prices is illustrated in more detail in Table 2, in which the number of increases and decreases in price from a specified month to the second succeeding month is recorded. A comparison of the number of increases or decreases with the number of possible changes which total sixteen in any period provides some indication of the probability of an underlying movement at that time of the year. In those cases where the advances or the declines are eleven or more, there are evidently underlying factors which normally may be expected to produce a seasonal movement in the indicated direction.

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University of Minnesota, cooperating with U.S. Department of Agriculture.

Table 2

Direction of the Changes in Minnesota Farm Prices during
Specified Periods of the Year, 1921-1937

Period of year	Direction of Price Movement*									
	Wheat		Corn		Oats		Flax		Potatoes	
	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down
	(Number of years)									
Aug. - Oct.	6	8	-	-	6	7	-	-	-	-
Sept. - Nov.	6	9	-	-	7	6	9	8	-	-
Oct. - Dec.	6	9	-	-	12	3	8	6	7	6
Nov. - Jan.	12	4	9	5	14	0	11	5	12	2
Dec. - Feb.	11	4	10	5	9	5	10	5	10	3
Jan. - Mar.	8	4	7	8	5	6	6	9	9	5
Feb. - Apr.	5	11	7	8	9	6	5	11	9	5
Mar. - May	-	-	8	5	-	-	8	8	8	7
Apr. - June	-	-	9	5	-	-	-	-	-	-
May - July	-	-	10	4	-	-	-	-	-	-

*The price changes have been recorded only for those months included in the usual marketing season. In some periods, the number of up and down movements totals less than sixteen because there were one or more years in which no price change occurred.

Examination of the direction of the changes in wheat prices from August to October, September to November, and October to December shows that the declines exceeded the advances in each of the periods, but the declines were not sufficient in number so as to indicate a normal seasonal tendency at this time of the year. On the other hand, there appears to be a tendency for prices to advance from November to January and from December to February, and for price to decline from February to April. The April price was lower than the February price in eleven out of sixteen years.

The seasonal movement of corn prices again is shown to be very irregular from year to year. The only time within the usual marketing season, when a normal seasonal tendency is approached, is found in the upward movement from December to February and from May to July.

The seasonal movement of oat prices shows a definite tendency upward from October to December and from November to January. There is no evidence of a regular movement either upward or downward in the other two-month periods which have been examined.

There appears to be a normal tendency for flax prices to rise from November to January and possibly also from December to February and to decline from February to April.

The upward movement of potato prices from November to January and from December to February is quite regular in occurrence. The chances of a decline during these months are relatively small.

The five commodities all show sufficient variation in their respective price movements among years so that no one uniform policy of holding can be established which will insure maximum gains in all years. Evidently, maximum gains can be obtained only by the proper selection of the time in the year in which to sell. However, no infallible rules have been found by which the individual can select or forecast the most profitable time of sale.

The discussion which follows presents a comparison of the prices obtained from actual sales made by Minnesota farmers with the price that would have been obtained from various alternatives with respect to the timing of sales during the

years, 1921-1936. In Table 3, the average weighted price received from actual sales made during the nine months, including and immediately following the harvest month, is compared with three alternatives, namely: (1) the price in the harvest month, (2) the price that would have been obtained from a uniform distribution of marketings in the nine months, and (3) the highest of the monthly prices within this period. In these comparisons, it is assumed that the changed marketings would not have influenced the prices in the respective months.

Table 3

Comparison of Average Price Received by Minnesota Farmers from Actual Marketings with Various Alternative Marketings, 1921-1936

Crop	Price received from actual sales as a percentage of price in harvest month		Price received from uniform distribution of sales as a percentage of price received from actual sales		Highest price of nine months as a percentage of price received from actual sales	
	Average	No. of times	Average	No. of times	Average	No. of times
	per cent	above 100 per cent	per cent	above 100 per cent	per cent	above 100 per cent
Wheat	98	6	99	5	111	5
Corn	112	9	99	6	123	11
Oats	103	7	101	9	113	10
Flax	103	7	101	8	112	7
Potatoes*	110	12	104	6	121	12

*In the case of potatoes, the calculations are based on the eight-month period, October to May.

The farmer who sold his wheat at rates proportional to the sales made by farmers in the state as a whole failed to gain by his holding practices even with no consideration given to holding costs. The price received from actual sales averaged 98 per cent of the price in the harvest month and was higher than the latter in only six of the fifteen years studied. In the case of oats and flax, the advantage of the price received from actual sales over the price of the harvest month was slight and not sufficient to pay the costs involved in holding. The prices of corn and potatoes received from actual sales averaged 12 and 10 per cent higher than the respective prices in the harvest month, although a part of the apparent gain from holding as actually practiced was offset by costs of holding. The holding practice was profitable in nine years in the case of corn, and twelve years in the case of potatoes.

It is significant to note that a uniform distribution of the sales of wheat, corn, oats and flax over a nine-month period would have resulted in returns differing but slightly from those received from actual sales. A uniform distribution of potato sales over an eight-month period would have resulted in an average gain of 4 per cent, although a part of the latter would be offset by any additional storage loss and costs. It is realized that a program of uniform marketings would be difficult to effect because of climatic conditions in the state.

If the individual farmer had been so fortunate as to sell in the month of highest price during the nine-month period, his returns would have been increased substantially. The gain from the sale of corn and potatoes would have averaged 23 and 21 per cent higher than the respective prices received by the farmers or a group. The chances of this happening are very slight.

MINNESOTA FARM PRICES FOR SEPTEMBER, 1937

Prepared by W. C. Waite and W. B. Garver

The index number of Minnesota farm prices for the month of September, 1937 was 87. When the average of farm prices of the three Septembers, 1924-25-26 is represented by 100, the indexes for September of each year from 1924 to date are as follows:

September 1924 -	94	September 1931 -	55
" 1925 -	103	" 1932 -	41
" 1926 -	103	" 1933 -	58
" 1927 -	100	" 1934 -	78
" 1928 -	101	" 1935 -	74
" 1929 -	110	" 1936 -	99*
" 1930 -	84	" 1937 -	87*

*Preliminary

The price index of 87 for the past month is the net result of increases and decreases in the prices of farm products in September, 1937 over the average of September, 1924-25-26 weighted according to their relative importance.

Average Farm Prices Used in Computing the Minnesota Farm Price Index,

September 15, 1937, with Comparisons*

	Sept. 15, 1937	Aug. 15, 1937	Sept. 15, 1936	Av. Sept. 1924-25- 26	% Sept. 15, 1937 is of Aug. 15, 1937	% Sept. 15, 1937 is of Sept. 15, 1936	% Sept. 15, 1937 is of Sept. 15, 1924-25-26
Wheat	\$1.04	\$1.14	\$1.18	\$1.24	91	88	84
Corn	.90	.97	.98	.91	93	92	99
Oats	.24	.23	.38	.36	104	63	67
Barley	.52	.50	.93	.56	104	56	93
Rye	.65	.69	.71	.77	94	92	84
Flax	1.90	1.84	1.88	2.19	103	101	87
Potatoes	.42	.75	1.30	.84	56	32	50
Hogs	10.90	11.80	10.00	10.59	92	109	103
Cattle	8.00	8.30	6.20	6.12	96	129	131
Cabres	8.80	8.70	7.60	9.17	101	116	96
Lambs-sheep	8.86	8.78	7.87	10.92	101	113	81
Chickens	.16	.155	.132	.179	103	121	89
Eggs	.183	.175	.209	.29	105	88	63
Butterfat	.35	.33	.37	.41	106	95	85
Hay	5.95	5.68	8.90	12.00	105	67	50
Milk	1.80	1.75	1.98	2.21	103	91	81

*Except for milk, these are the average prices for Minnesota as reported by the United States Department of Agriculture.

Indexes and Ratios of Minnesota Agriculture*

	Sept. 1937	Aug. 1937	Sept. 1936	Av. Sept. 1924-26
U.S. farm price index	86.0	87.0	90.0	100.0
Minnesota farm price index	87.0	87.0	99.0	100.0
U.S. purchasing power of farm products	101.0	100.0	108.0	100.0
Minnesota purchasing power of farm products	101.0	100.0	119.0	100.0
U.S. hog-corn ratio	11.2	11.2	9.2	11.7
Minnesota hog-corn ratio	12.1	12.2	10.3	12.9
Minnesota egg-grain ratio	12.4	11.0	12.4	17.5
Minnesota butterfat-farm-grain ratio	33.4	31.3	24.4	35.4

*Explanations of the computation of these data may be had upon request.