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AGRICULTURAL EXTENSION DIVISION
UNIVERSITY OF MINNESOTA

W. C. Coffey, Acting Director

MINNESOTA FARM BUSINESS NOTES

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

FARM INCOME IN MINNESOTA
Prepared by Warren C. Waite

Present indications are that the gross cash income from the sale of the principal Minnesota agricultural products in 1933 will be about 185 million dollars. This is 20 million dollars above the preliminary estimate of 165 million dollars for 1932, and about half the average annual cash income of 382 million dollars in the period 1925-1929.

Cash expenses for farm operation, which include taxes and interest, appear to be about 142 million dollars. This is 7 million dollars less than the estimated expenses of 149 million dollars in 1932 and about three-fourths of the average annual cash expense of 194 million dollars in the period 1925-1929.

Net cash income for 1933 will be about 43 million dollars. This is the amount the farmers have available for payment for their own labor and return on capital investment; or, in other words, the amount available for family living and saving. The 1933 net cash income is 27 million dollars greater than the income of 16 million dollars in 1932, but less than one-fourth of the average annual net cash income of 188 million dollars for the period 1925-1929.

Annual data for the past ten years are given in Table 1.

Table 1

Gross Cash Income, Cash Operating Expenses and Net Cash Income
for Agriculture in Minnesota, 1924-1933

Year	Gross cash sales (million dollars)	Cash expenses (million dollars)	Net cash income (million dollars)	Net cash income per farm (dollars)
1924	\$342	\$188	\$154	\$892
1925	395	195	200	1146
1926	398	189	209	1195
1927	366	193	173	988
1928	367	192	175	999
1929	384	199	185	1057
1930	332	171	161	922
1931	233	159	74	424
1932	165*	149*	16*	92*
1933	185*	142*	43*	248*

*Preliminary.

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W. C. Coffey, Acting Director, Agricultural Extension Division, Department of Agriculture,
University of Minnesota, cooperating with U.S. Department of Agriculture.

The gross cash income is the total of the sales of the sixteen principal Minnesota agricultural products: butterfat, hogs, cattle, wheat, eggs, milk, corn, flax, oats, barley, potatoes, calves, chickens, hay, rye and lambs-sheep. The amounts of the principal products sold each month multiplied by their farm price constitute the cash income for each month. The sum of the twelve calendar months is the estimated annual cash income. A number of minor crops have been omitted. These figures do not represent the total value of agricultural production and no allowance has been made either for the value of farm products used by the farm family or for changes of inventory value of livestock or crops. Cash income obtained from other sources than the sale of farm products is not included.

The cash expenses are the sum of the annual estimates for the following twenty items: taxes, interest on indebtedness, hired labor, stocker and feeder cattle, hogs and sheep, veterinary charges, stallion fees, threshing, twine, sacks, spray materials, gasoline, auto and truck licenses, machine repairs, building repairs, farm papers, organization fees, insurance, fertilizer and electricity. These data represent the cash operating expenses of farmers and do not represent all of the cash outlay.

Changes in Inventory Values of Farm Property

Estimates of the inventory value of farm property are subject to a considerable margin of error. The estimates below have sufficient reliability, however, to indicate the magnitude of the decline in values and equities which has occurred during the depression. The inventory value of farm property as computed here is the sum of the estimated value of farm real estate, livestock on farms, and farm machinery at the prevailing prices for the particular time. The mortgage indebtedness includes both real estate and chattel mortgages.

Table 2

Inventory Value of Farm Property and Mortgage Indebtedness
in Minnesota, 1924-1933

Year	Inventory value of farm property (million dollars)	Mortgage indebtedness (million dollars)	Property value less mortgage indebtedness (million dollars)	Index of equity of property holders (1925-29 = 100)
1924	\$2913	\$629	\$2284	112
1925	2758	636	2122	104
1926	2744	631	2113	104
1927	2608	610	1998	98
1928	2560	602	1958	96
1929	2563	604	1959	96
1930	2625	596	2029	100
1931	2159	573	1589	78
1932	1780	566	1214	60
1933	1459	560	899	44

Total inventory values declined slowly from 1924 to 1930. A decline of about 500 million dollars in real estate values was offset in part by an increase of about 150 million dollars in the inventory of livestock and machinery. In the last three years declines were marked in all of the property classes. The mortgage indebtedness declined almost continuously throughout the period. The difference between the inventory value of farm property and the mortgage indebtedness represents

the equity of the agricultural property holders. Caution is needed in interpreting this item as it is composed of a diverse group of interests. The equity of holders of agricultural property declined slowly in the early part of the period and markedly in recent years. In terms of dollars these equities are now about 44 per cent of their average in the period 1925 to 1929. In the earlier portion of the ten-year period, the equities represented about 77 per cent of the inventory value of farm property while at present they represent about 62 per cent.

This decline in inventory values of agricultural property has been an important factor in the growth of unrest in agriculture. For many decades prior to 1920 inventory values of agricultural property had increased, and the farmer was content with a small net cash income because he saw a constant increase in the value of his property and the prospect of a competence when he retired. With declining inventory values, this prospect is changed and a larger cash income is required in order to provide the farmer with the means of securing the same property values upon his retirement from actual farming.

Volume of Agricultural Production

Minnesota agriculture has expanded its volume of production somewhat since the beginning of the depression, probably in large part the result of an attempt by farmers to offset lower prices by a larger physical volume of sales. This is indicated by the index of the physical quantity of gross cash sales, the index of the harvested acres in crops and the index of the number of animal units on farms on January 1. These data are given in Table 3.

Table 3

Indexes Indicating the Volume of Agricultural Production in Minnesota
(1924-1926 = 100)

Year	Index of physical quantity of gross cash sales	Index of harvested crop acres	Index of animal units on farms January 1
1924	102	99	102
1925	100	101	99
1926	98	100	99
1927	94	97	99
1928	96	97	98
1929	96	99	100
1930	97	101	104
1931	104	104	108
1932	106	103	111
1933	103	102	111

The index of the physical quantity of gross cash sales is composed of the quantities of the sixteen products included in the estimate of the gross cash income, each product weighted by its corresponding prices. The index of harvested crops includes the acreage of wheat, corn, oats, barley, rye, potatoes and flax. The index of animal units reduces the farm animals to a common unit. Each cow, horse or mule is counted as a unit, and likewise five hogs, or seven sheep.

MINNESOTA FARM PRICES FOR NOVEMBER 1933

Prepared by Adena E. Terras

The index number of Minnesota farm prices for the month of November 1933 was 50.3. When the average of farm prices of the three Novembers 1924-25-26 is represented by 100, the indexes for November of each year from 1924 to date are as follows:

November 1924 -	91.9	November 1929 -	36.1
" 1925 -	105.1	" 1930 -	72.7
" 1926 -	104.4	" 1931 -	49.5
" 1927 -	96.3	" 1932 -	34.2*
" 1928 -	96.4	" 1933 -	50.3*

*Preliminary

The price index of 50.3 for the past month is the net result of increases and decreases in the prices of farm products in November 1933 over the average of November 1924-25-26 weighted according to their relative importance.

Average Farm Prices Used in Computing the Minnesota Farm Price Index,
November 15, 1933, with Comparisons*

	Nov. 15, 1933	Oct. 15, 1933	Nov. 15, 1932	Av. Nov. 1924-25- 26	% Nov. 15, 1933 is of Oct. 15, 1933	% Nov. 15, 1933 is of Nov. 15, 1932	% Nov. 15, 1933 is of Nov. 15, 1924-25-26
Wheat	\$.74	\$.63	\$.36	\$1.32	117	206	56
Corn	.32	.26	.15	.66	123	213	48
Oats	.27	.21	.10	.36	129	270	75
Barley	.44	.44	.20	.58	100	220	76
Rye	.51	.48	.20	.95	106	255	54
Flax	1.59	1.53	.92	2.22	104	173	72
Potatoes	.41	.41	.21	.89	100	195	46
Hogs	3.60	4.15	2.85	10.06	87	126	36
Cattle	3.30	3.65	4.00	5.67	90	83	58
Calves	4.70	4.85	4.20	8.63	97	112	54
Lambs-sheep	5.08	5.16	4.18	10.90	98	122	47
Chickens	.059	.065	.077	.158	91	77	37
Eggs	.20	.16	.24	.41	125	83	49
Butterfat	.23	.22	.20	.45	105	115	51
Hay	6.86	7.34	6.42	11.81	93	107	58
Milk	1.18	1.23	1.14	2.29	96	104	52

*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*

	Nov. 1933	Oct. 1933	Nov. 1932	Av. Nov. 1924-26
U.S. farm price index	51.8	51.1	39.4	100.0
Minnesota farm price index	50.3	56.3	37.6	100.0
U.S. purchasing power of farm products	69.0	69.1	58.8	100.0
Minnesota purchasing power of farm products	67.1	76.1	56.1	100.0
U.S. hog-corn ratio	9.1	10.7	15.7	13.4
Minnesota hog-corn ratio	11.3	16.0	19.0	15.6
Minnesota egg-grain ratio	8.6	9.8	59.2	26.2
Minnesota butterfat-farm grain ratio	29.0	32.7	60.6	40.7

*Explanations of the computation of these data are given in Farm Business Notes No. 126.