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AGRICULTURAL EXTENSION DIVISION
UNIVERSITY OF MINNESOTA

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MINNESOTA FARM BUSINESS NOTES

No. 156

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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 sixteen principal Minnesota agricultural products in 1935 will be about 236 million dollars. To this should be added 20 million dollars in benefit payments received thru the Agricultural Adjustment Administration, making a total of 256 million dollars for sales. This is an increase of 36 million dollars over the estimated gross cash income for 1934.

Cash expenses for farm operation, which include taxes and interest, appear to have been about 132 million dollars. The net cash income from farm operation thus appears to have been about 104 million dollars, which with the benefit payments makes a total of 124 million dollars of net income from farm operation and benefit payments. This is 28 million dollars above net income in 1934. Annual data for the past twelve years are given in Table 1, and data for earlier years back to 1910 will be found in Minnesota Farm Business Notes No. 121.

Table 1

Gross Cash Income, Cash Operating Expenses and Net Cash Income for Agriculture,
Minnesota, 1924-1935

Year	Gross cash sales	Cash operating expenses	Net cash income from operation	Benefit payments	Net cash income per farm - operation plus benefit
1924	342	192	150	-	869
1925	395	194	201	-	1,152
1926	398	191	207	-	1,183
1927	366	190	176	-	1,005
1928	367	195	172	-	981
1929	384	197	187	-	1,069
1930	332	189	143	-	819
1931	233	165	68	-	390
1932	155	140	15	-	87
1933	164	124	40	-	231
1934	209*	124	85	11	537
1935	236*	132*	104	20 (estimate)	800

*Preliminary.

The gross cash income is the total of the sales of the sixteen principal 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. The 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 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.

Volume of Agricultural Production

Minnesota agriculture expanded its production somewhat at 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. The drouth and the adjustment programs in 1934, however, resulted in a decline of 8 points in the index of physical quantity of gross cash sales and of 13 points in the index of harvested acres. The number of animal units on farms on January 1, 1935, was the smallest in many years. These data are given in Table 2.

Table 2

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
Average of 1924-25-26	100	100	100
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	112
1934	95	89	113
1935	-	110*	98

*Preliminary: Part of this increase may be due to more complete reporting of crop acres.

The index of the physical quantity of gross cash sales is composed of the quantities of the sixteen products included in the estimate of 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.

Changes due to the weather and other factors have considerably exceeded the influence of the agricultural adjustment programs on the volume of production in Minnesota in the past two years. Changes due to the Adjustment Administration

have been computed by applying average yields or weights in the specified years to the contracted reductions. No allowance has been made for crops which may have been produced on the contracted acreage. Total production includes both crops and livestock regardless of utilization, weighted by 1933 prices, and is, in consequence, not comparable with the index of the quantity of gross cash sales.

Table 3

Effect of Weather and Other Factors, and the Agricultural Adjustment Program
on Production in Agriculture in Minnesota in 1934-1935
(1933 = 100)

Year	Total volume of pro- duction	Changes from 1933 production due to	
		Agricultural adjustment	Weather and other factors
1933	100	0	0
1934	76	-5	-19
1935	117	-4	+21

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, however, have sufficient reliability to indicate the general magnitude of the decline in values and equities which occurred during the depression and the subsequent increase in these amounts. The inventory value of the 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 4

Inventory Value of Farm Property and Mortgage Indebtedness in Minnesota
1925-1935

Year	Inventory value of farm property	Estimated total indebtedness	Property value less mortgage indebtedness
	(million dollars)	(million dollars)	(million dollars)
1925	\$2,758	\$672	\$2,086
1930	2,625	640	1,985
1931	2,159	630	1,529
1932	1,780	605	1,175
1933	1,459	575	884
1934	1,506	565	941
1935	1,646	555	1,091

Total inventory values declined slowly from 1925 to 1930. A decline of about 260 million dollars in real estate values was offset in part by an increase of about 140 million dollars in the inventory of livestock and machinery. All property classes declined rapidly between 1930 and 1933, and in 1933 the total value was approximately half that of 1925. Recent recoveries of about 187 million dollars have been due largely to an increase in real estate value and livestock inventories. The indebtedness declined almost continuously thruout the period. The difference between the inventory value of farm property and the 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 was declining slowly prior to the depression and decreased markedly during the depression. It has increased about 207 million dollars since the low of 1933.

MINNESOTA FARM PRICES FOR NOVEMBER 1935

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

The index number of Minnesota farm prices for the month of November, 1935 was 76.2. 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 1930 -	77.3
" 1925 -	105.1	" 1931 -	53.4
" 1926 -	104.4	" 1932 -	38.5
" 1927 -	96.3	" 1933 -	48.5
" 1928 -	96.4	" 1934 -	67.9*
" 1929 -	99.1	" 1935 -	76.2*

*Preliminary

The price of 76.2 for the past month is the net result of increases and decreases in the prices of farm products in November 1935 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, 1935, with Comparisons*

	Nov. 15, 1935	Oct. 15, 1935	Nov. 15, 1934	Av. Nov. 1924-25- 26	% Nov. 15, 1935 is of Oct. 15, 1935	% Nov. 15, 1935 is of Nov. 15, 1934	% Nov. 15, 1935 is of Nov. 15, 1924-25-26
Wheat	\$.97	\$ 1.05	\$.99	\$ 1.32	92	98	73
Corn	.45	.56	.74	.66	80	61	68
Oats	.21	.22	.49	.36	95	43	58
Barley	.37	.38	.85	.58	97	44	64
Rye	.37	.39	.64	.95	95	58	39
Flax	1.57	1.56	1.64	2.22	101	96	71
Potatoes	.29	.24	.35	.89	121	83	33
Hogs	8.60	9.90	4.85	10.06	87	177	85
Cattle	6.10	6.50	3.85	5.67	94	158	108
Calves	7.80	8.00	5.00	8.63	98	156	90
Lambs-sheep	7.93	7.86	5.41	10.90	101	147	73
Chickens	.142	.14	.10	.158	101	142	90
Eggs	.27	.25	.25	.41	110	106	66
Butterfat	.31	.27	.28	.45	115	111	69
Hay	5.54	5.38	14.50	11.81	103	38	47
Milk	1.66	1.56	1.51	2.29	106	110	72

*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. 1935	Oct. 1935	Nov. 1934	Av. Nov. 1924-26
U.S. farm price index	78.8	79.0	74.5	100.0
Minnesota farm price index	76.2	72.8	67.9	100.0
U.S. purchasing power of farm products	98.1	97.7	89.9	100.0
Minnesota purchasing power of farm products	94.9	90.0	81.9	100.0
U.S. hog-corn ratio	15.1	13.3	6.7	13.4
Minnesota hog-corn ratio	19.1	17.7	6.6	15.6
Minnesota egg-grain ratio	24.5	19.9	17.0	26.2
Minnesota butterfat-farm-grain ratio	43.0	34.1	18.2	40.7

*Explanations of the computation of these data are given in Farm Business Notes No. 144.