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AGRICULTURAL EXTENSION DIVISION
UNIVERSITY OF MINNESOTA

F. W. Peck, Director

MINNESOTA FARM BUSINESS NOTES

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Prepared by the Division of Agricultural Economics
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EARNINGS ON MINNESOTA FARMS

Prepared by W. P. Ranney, G. A. Sallee, and S. B. Cleland

Farm records kept by 211 farmers in three parts of Minnesota in co-operation with the Department of Agriculture, University of Minnesota, indicate that the earnings of most Minnesota farmers in 1932 were insufficient to cover operating expenses plus a five per cent return on capital, leaving no return to the operator as wages for his work or that of members of his family. Only 55 out of these 211 farmers obtained any remuneration for family labor and only 38

Table 1

Receipts, Expenses, and Earnings for Minnesota Farms, 1932

Part of state:	Average per Farm		
	Southeastern	West Central	Northern
Fiscal year:	Jan.1 to Dec.31	Mar.1 to Feb.28	Apr.1 to Mar.31
Number of farms:	143	24	44
Cash Receipts:			
Dairy products	\$978	\$304	\$438
Cattle	341	713	84
Hogs	502	376	60
Sheep and wool	37	84	44
Poultry and eggs	333	331	135
Crops	288	472	244
Miscellaneous	275	238	274
	\$2754	\$2518	\$1279
Cash Expenses:			
Power and machinery	394	383	244
Buildings, fencing and tiling	66	57	33
Hired labor	220	132	60
Feed	282	168	110
Livestock expense	206	327	75
Crop	129	143	70
Taxes	298	280	112
Miscellaneous	74	46	25
	1669	1536	729
Net cash income	1085	982	550
Farm produce used in house	197	188	211
Total income less cash expense	1282	1170	761
Decrease in inventory	919	1098	281
Board for hired labor	68	74	32
Interest @ 5% on farm inventory	834	854	405
Wages for unpaid family labor	229	297	248
	2050	2323	966
Operator's labor earnings	-768	-1153	-205

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had anything left for their own labor after making a moderate allowance for other members of the family. Most of these farmers are more efficient managers than the average of their respective counties, as in general only the better farmers are interested in keeping accounts and in making a farm business analysis. Altho these farms averaged larger in size, they are representative of the types of farming prevailing in their respective areas.

Average farm financial statements are presented in Table 1. The farmers in this study included the following groups: farm owners, part owners, cash tenants and stock share tenants. Some were entirely out of debt while a few had practically no equity. For purpose of comparison, all financial statements were worked on a full owner basis. The value of the house the operator lived in, any expenses on it, and any rental value for it are omitted in calculating the earnings. All interest and rent payments actually made are omitted from the cash expenses. The net cash income is the difference between cash receipts and cash expenses when calculated as indicated. In arriving at the operator's labor earnings, it is necessary to consider the non-cash receipts, such as the value of farm produce used in the house and any net increase in inventory, and the non-cash expenses, such as the value of the board furnished to hired laborers, any net decrease in inventory, interest on the total farm investment and a fair wage for the work done by members of the family, as well as the cash receipts and expenses.

The change in the farm inventory represents the combined affect of both changes in physical quantities and in unit prices. During 1932, there was a net decrease in inventory largely because of declining prices. Altho cash receipts exceeded cash expenses by a considerable margin, the non-cash expenses were so large that when they were deducted there was nothing left to pay the operator for his labor.

The southeastern Minnesota records are from 143 dairy farms in Dodge, Freeborn, Goodhue, Le Sueur, Mower, Rice, Steele, and Waseca Counties. Cream for manufacture into butter was the principal dairy product sold from these farms, the skimmilk being retained on the farms and fed to hogs and poultry. Approximately one-half of the cash receipts were from dairy products and dairy cattle, and about one-third from other livestock and livestock products. The net cash income of these farms averaged \$1085; but after considering, in addition, non-cash receipts and expenses, as shown in Table 1, these farmers lacked, on the average, \$768 of meeting expenses and five per cent interest and received nothing for their own labor.

The 24 records for west central Minnesota are from diversified farms in Stevens County, and are representative of the farms in that area. The average cash receipts from crops made up a larger proportion of the total cash receipts than in southeastern Minnesota, in spite of the fact that crop yields were greatly reduced by drouth in Stevens County in 1932, whereas yields were above normal in the southeastern area. However, the west central records tell a story similar to that for the southeast records, viz.: very few farmers were able to meet expenses and the five per cent interest charge.

The 44 northern Minnesota records were from farms in Beltrami, Carlton, Clearwater, Hubbard, Itasca, Polk, St. Louis, and Wadena Counties. On the average, two-fifths of the cash receipts on these farms were for dairy products and dairy cattle, one-fifth for crops, and one-fifth for work done off the farm. These farms did not show as large losses as those for the other two areas of the state. However, these farmers were more closely selected on the basis of good farm organization than were those keeping records in the other areas. Also, since the investments were smaller, the interest charge was less, and as less feeds and livestock were raised and on hand at inventory time, the average decrease in inventory was

much less than for the other two areas. On the other hand, the net cash income averaged only \$550 in northern Minnesota compared with approximately \$1000 in the other two parts of the state. Some of the differences in financial returns between the three areas may be explained by the data presented in Table 2.

Table 2

Livestock, Acres, and Crop Yields, 1932			
Part of state:	Average per Farm Keeping Records		
	Southeastern	West Central	Northern
Number of dairy cows	18.2	—*	10.4
Animal units other productive livestock	21.7	42.0	8.3
Acres in corn, small grain, and flax	92.6	220.2	28.6
Acres in hay, fodder, and silage	41.3	66.7	41.4
Acres in other crops	4.3	2.2	8.2
Acres in pasture	45.2	44.8	70.7
Acres in timber, farmstead, roads and waste	18.0	17.7	35.4
Total acres in farm	201.4	351.6	184.3
Yield per acre - corn, bu.	51.3	28.8	22.9
Yield per acre - oats, bu.	54.8	45.2	33.5
Yield per acre - alfalfa, tons	2.8	1.0	1.8

*Dairy cows included with other livestock as only part of the farmers kept dairy cows.

Recent Trend in Earnings

Records have been kept in southeastern Minnesota since 1928, in the west central area one year, and in northern Minnesota two years. For the purpose of showing the five-year trend in receipts, expenses, and earnings, a summary is presented of these items for thirty dairy farmers in southeastern Minnesota who have continued through the last five years with the same acreage each year. Facts concerning the size of business, production and prices received on these farms are given in Table 3.

Table 3

Size of Business, Production, and Prices for 30 Dairy Farms in Southeastern Minnesota

Size:	Average per Farm				
	1928	1929	1930	1931	1932
Acres, total	183	183	183	183	183
Cows, number	15.2	15.9	16.7	16.6	17.4
Hogs produced, lbs.	15257	16564	18733	19281	16185
Hens, number	167	168	205	223	233
Production:					
Butterfat, per cow	238	260	258	253	250
Pigs, per litter	6.2	6.8	5.8	5.8	6.2
Eggs, per hen	100	112	120	119	108
Yield - corn, bu.	42	49	51	35	52
Yield - oats, bu.	33	38	45	29	53
Yield - alfalfa, tons	2.0	2.7	2.7	2.2	3.3
Prices:					
Butterfat, per lb.	\$.50	\$.49	\$.37	\$.30	\$.22
Hogs, per 100 lbs.	8.54	9.35	8.42	5.19	3.21
Eggs, per doz.	.27	.28	.22	.15	.13

The data in Table 3 show some very pronounced variations in production and prices over the last five-year period, particularly in total weight of hogs produced, number of hens kept, crop yields, and in prices received for products sold. These variations account for some of the changes in cash receipts and expenses on these farms during the same period. Table 4 shows the average cash receipts and expenses each year from 1928 to 1932, and the percentage change from year to year.

Table 4

Net Cash Income for 30 Dairy Farms in Southeastern Minnesota									
	Average per Farm					% Change from Previous Year			
	1928	1929	1930	1931	1932	1929	1930	1931	1932
Cash Receipts:									
Dairy products	\$1811	\$1898	\$1589	\$1156	\$886	+4.8	-1.6	-27.2	-23.4
Dairy cattle	859	770	709	501	345	-10.4	-7.9	-29.3	-31.1
Hogs	1341	1715	1780	1057	519	+27.9	+3.8	-40.6	-50.9
Poultry and eggs	572	647	714	586	486	+13.1	+10.4	-17.9	-17.1
Crops	565	579	501	355	357	+2.5	-13.5	-29.1	+6
Miscellaneous	325	421	343	267	220	+29.5	-18.5	-22.2	-17.6
Total cash receipts	5473	6030	5636	3922	2813	+10.2	-6.5	-30.4	-28.3
Cash Expenses:									
Power and machinery	610	869	809	491	359	+42.5	-6.9	-39.3	-26.9
Buildings and improvements	212	351	186	89	62	+65.6	-47.0	-52.2	-30.3
Hired labor	397	385	399	316	212	-3.0	+3.6	-20.8	-32.9
Feed	687	576	598	363	294	-16.2	+3.8	-39.3	-19.0
Livestock expense	411	444	489	226	177	+8.0	+10.1	-53.8	-21.7
Crop	167	183	197	169	101	+9.6	+7.7	-14.2	-40.2
Taxes	280	283	303	290	272	+1.1	+7.1	-4.3	-6.2
Miscellaneous	69	80	82	76	71	+15.9	+2.5	-7.3	-6.6
Total cash expenses	2833	3171	3063	2020	1548	+11.9	-3.4	-34.1	-23.4
Net cash income	2640	2859	2573	1902	1265	+8.3	-10.0	-26.1	-33.5

The greatest variation in the various items of cash receipts was for hogs. Altho production of hogs fluctuated, the variation in cash receipts was due more to the fluctuation in the price received than in the production. The receipts for poultry and eggs have declined less relatively than those for other livestock and livestock products, partly because the prices have declined less and partly due to an increase in the size of flocks. The earliest and most pronounced adjustments of expenses in response to changes in receipts were made in buildings and improvements, and next in machinery. A marked decrease in crop expense in 1932 was due partly to the almost complete elimination of purchases of fertilizers. The smallest changes in the expense items were for taxes, as tax adjustments move slowly.

The total cash expenses increased more proportionately from 1928 to 1929 than did cash receipts. Since then, on the downward trend, cash expenses have shown a smaller percentage decrease in two years out of the three with the total percentage decline for the three-year period greater for receipts than for expenses. The net cash income followed this general trend with the percentage decrease since 1929 becoming larger each year.

Net cash income does not reflect accurately what the operator earns for his labor and management. Non-cash receipts and expenses as well as the cash items are considered in figuring operator's labor earnings. The changes in operator's labor earnings are shown in Table 5.

Table 5

Operator's Labor Earnings on 30 Dairy Farms in Southeastern Minnesota					
	Average per Farm				
	1928	1929	1930	1931	1932
Net cash income (see Table 4)	\$2640	\$2859	\$2573	\$1902	\$1265
Increase in farm inventory	337	1009	-	-	-
Farm produce used in house	362	356	323	246	190
Total income less cash expense	3339	4224	2896	2148	1455
Decrease in farm inventory	-	-	468	1048	999
Board for hired labor	133	133	163	103	74
Interest at 5% on farm inventory	1379	1432	1438	1100	820
Wages for unpaid family labor	285	294	306	195	166
Total other charges	1797	1859	2375	2446	2059
Operator's labor earnings	1542	2365	521	-298	-604

The value of farm produce used in the house has been declining due to lower prices per unit. This, together with lower prices for purchased foodstuffs, resulted in lower costs for board for hired labor. The latter was figured at \$20 per month in 1928, 1929, and 1930, \$15 in 1931, and \$10 in 1932. As a result of this lower rate, the total charge for board for hired labor was much lower in 1931 and 1932. Similarly, the rate charged for unpaid family labor was reduced from \$60 per month in 1928, 1929, and 1930 to \$45 in 1931 and \$30 in 1932. The interest charge has been less the last two years because the total value of the farm assets has declined. The value of bare land was reduced approximately 40 per cent in 1931, and 25 per cent in 1932; and the value of improvements was reduced 25 per cent in 1932. Dairy cows were also revalued on a lower basis in 1932. These decreases in values of assets were not included in the inventory changes shown in Table 5. The latter reflect the normal depreciation on buildings, machinery, work stock, and dairy cows, and changes in the market price of other livestock and of feed and supplies.

However, even these limited changes in inventory values were so pronounced as to make the operator's labor earnings fluctuate much more widely than the net cash income. The variation in the latter from 1929 to 1932 was \$1594, while that in the operator's labor earnings was \$2969. In 1931 and 1932, these thirty farmers, on the average, received nothing for their own labor and for the services of members of their families, and failed to make five per cent interest on a greatly reduced investment. In addition, they incurred large capital losses due to falling prices.

MINNESOTA FARM PRICES FOR MAY 1933

Prepared by Adena E. Erickson

The index number of Minnesota farm prices for the month of May 1933 was 48.64. When the average of farm prices of the three Mays 1924-25-26 is represented by 100, the indexes for May of each year from 1924 to date are as follows:

May 1924 - 84.3
 " 1925 - 106.1
 " 1926 - 110.1
 " 1927 - 109.0
 " 1928 - 113.4

May 1929 - 112.6
 " 1930 - 98.2
 " 1931 - 63.5
 " 1932 - 43.1*
 " 1933 - 48.6*

*Preliminary

The price index of 48.6 for the past month is the net result of decreases in the prices of farm products in May 1933 over the average of May 1924-25-26 weighted according to their relative importance.

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

	May 15, 1933	Apr. 15, 1933	May 15, 1932	Av. May 1924-25- 26	% May 15, 1933 is of Apr. 15, 1933	% May 15, 1933 is of May 15, 1932	% May 15, 1933 is of May 15, 1924-25-26
Wheat	\$.59	\$.46	\$.49	\$1.31	128	120	45
Corn	.29	.20	.30	.65	145	97	45
Oats	.18	.13	.20	.35	138	90	51
Barley	.32	.23	.32	.59	139	100	54
Rye	.39	.30	.29	.75	130	134	52
Flax	1.22	1.00	1.08	2.32	122	113	53
Potatoes	.27	.26	.32	.83	104	84	33
Hogs	3.90	3.15	2.70	9.60	124	144	41
Cattle	3.80	3.35	3.70	6.38	113	103	60
Calves	4.50	4.15	4.40	8.07	108	102	56
Lambs-sheep	4.67	4.25	4.43	11.39	110	105	41
Chickens	.086	.082	.105	.189	105	82	46
Eggs	.11	.09	.10	.22	122	110	50
Butterfat	.21	.18	.18	.40	117	117	53
Hay	6.14	5.92	9.26	11.49	104	66	53
Milk	.86	.89	1.08	1.95	97	80	44

*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*

	May 1933	April 1933	May 1932	Av. May 1924-26
U.S. farm price index	44.9	37.6	40.6	100.0
Minnesota farm price index	48.6	39.9	43.1	100.0
U.S. purchasing power of farm products	70.2	58.8	57.5	100.0
Minnesota purchasing power of farm products	75.9	62.3	60.7	100.0
U.S. hog-corn ratio	10.0	11.4	9.8	-
Minnesota hog-corn ratio	13.4	15.8	9.0	15.1
Minnesota egg-grain ratio	15.5	17.1	14.9	14.4
Minnesota butterfat-farm grain ratio	36.2	43.9	29.0	34.5

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