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F.W. Peck, Director

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CHANGES IN THE EARNINGS OF DAIRY FARMERS OF SOUTHEASTERN MINNESOTA  
DURING THE PAST EIGHT YEARS

Prepared by G. A. Pond and W. P. Ranney

Dairy farmers, in common with all others, have experienced wide fluctuations in their earnings during the past eight years. Even in normal times the farmer's receipts and expenses vary widely from year to year but during the past eight years violent changes in the prices of farm products together with the severest drouth in the history of the state have greatly accentuated these year-to-year variations. Farm account records kept by a group of 150 dairy farmers in southeastern Minnesota serve to illustrate this situation.

Table 1

Average Receipts, Expenses and Labor Earnings per Farm, 1929-1936

Year	1929	1930	1931	1932	1933	1934	1935	1936
Size of farm, acres	176	183	198	201	202	209	202	207
Receipts:								
Cattle	\$2451	\$1974	\$1736	\$1319	\$1368	\$1700	\$1921	\$2214
Hogs	1287	1323	1024	502	510	603	793	1198
Poultry	416	407	374	333	376	552	652	769
Crops	527	433	323	288	395	535	637	874
Miscellaneous	362	339	347	312	287	431	555	652
A.A.A. payments	-	-	-	-	-	371	241	182
Total cash receipts	5043	4476	3804	2754	2936	4192	4799	5889
Inventory change	847	*-375	*-971	*-919	505	611	294	1316
Farm produce used in house	326	304	242	197	193	223	265	299
Total receipts	6216	4405	3075	2032	3634	5026	5358	7504
Expenses:								
Machinery, power & bldgs.	1015	863	645	460	469	619	936	1259
Hired labor	293	262	275	220	208	252	322	374
Feed	376	309	380	282	200	392	438	534
Livestock expense	390	404	294	206	226	303	606	523
Crop expense	199	202	200	129	107	161	195	187
Taxes, insurance & misc.	341	350	383	372	300	300	288	296
Total cash expenses	2614	2390	2177	1669	1510	2027	2785	3173
Board of hired labor	110	113	100	68	71	82	121	153
Est. wages for family labor	361	381	257	229	241	190	229	247
Interest at 5%	1274	1278	1153	834	826	872	859	1017
Total expenses	4359	4162	3697	2800	2648	3171	3994	4590
Operator's labor earnings	1857	243	*-622	*-768	986	1855	1364	2914

\*Minus sign denotes loss.

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Some facts regarding the earnings of these farmers for the eight-year period, 1929-1936, are shown in Table 1. There was some change in the farms included each year as some were dropped and others added. The increase in size of farms reflects in part this change in farms and in part an increase in the size of farms due to the purchase or rental of additional land. In this tabulation increases in inventory valuations during the year and the value of farm products used in the home have been included in gross receipts. Decreases of inventory have been deducted. These inventory valuations are in part the result of changes in the prices of livestock and feeds and in part the result of changes in numbers or quantities during the year. Gross expenses include, in addition to cash outlay for farm operation and maintenance, allowances for the cost of boarding hired workers and for the services of members of the family, who receive no regular wage. It also includes an interest charge on the entire capital used in the farm business. Since some of the farms were rented in whole or part and many of those operated by owners were mortgaged in varying amounts, the earnings have been computed on a "full owner" basis. The labor earnings figure represents the return left the farmer as payment for his services as a laborer and manager after deducting the expenses including an allowance for the use of the entire capital invested in the farm business. This adjustment makes the earnings more nearly comparable from year to year. The minus figures for 1931 and 1932 do not necessarily indicate that these farmers actually incurred financial deficits but rather that their income was insufficient to meet the charges listed and still leave anything for their own services.

Both cash receipts and total receipts declined to a low point in 1932 and by 1936 had advanced to almost exactly the 1929 level if adjustment is made for differences in size of farm. Changes in income from livestock was in part the result of price changes and in part caused by changes in the volume of production. Butter-fat prices declined from 50 cents per pound in 1929 to 22 cents in 1932 and 1933, and increased to 37 cents by 1936. Prices of hogs likewise varied from \$9.60 in 1929 to \$3.18 in 1932, and back up to \$9.26 in 1936. The numbers of cattle per farm were increased 25 per cent from 1929 to 1936 and of hens 32 per cent. The production of hogs was increased 42 per cent up to 1931 but declined to only a little over half that level in 1935. By 1936 hog production was nearly back to the 1929 level but still considerably below that of 1931. Price changes accounted for some of the variations in crop receipts. In later years increased sales of winter wheat, malting barley and special seed crops combined with higher prices served to increase crop income. Miscellaneous receipts were increased in later years largely as the result of increased income from sheep and from payments for services rendered in connection with the agricultural adjustment and soil conservation programs. These programs also contributed directly to the income during the last three years.

Expenses declined less than income but the decline lasted one year longer. The increase since the low point has also been less than that of income. Repairs and replacements of buildings and machinery were curtailed as income declined but the need that accumulated was reflected in increased expenditures as soon as income permitted. Payments for labor followed the wage level but were also affected by forced economy during the low income period when the farmer and his family carried a heavier load themselves and postponed maintenance and repair work wherever possible. Feed purchases varied with prices and crop yields. Feed shortage due to the drouth in 1934 and 1936 necessitated the purchase of more feed the last three years. Livestock expense followed the price level except that normal replacements of breeding stock were postponed during the low price period but were made later. Crop expense followed the price level fairly closely. Taxes, insurance, and overhead expense continued to increase after other items of expense had started to decline and have varied but little during the past four years. They represent an unusually inflexible type of expense.

These data indicate the general trend in the income, expense and earnings of dairy farmers in southeastern Minnesota during the recent severe depression cycle. These farmers, however, represent a level of earnings above the average of the region. The fact that they are keeping complete financial records indicates that they are farmers of more than average business ability. They have also, as the result of studying their records, been able to weather the depression with less loss and to recover somewhat more rapidly than others without records to guide them. A careful analysis of their records from year to year indicates a definite gain in efficiency during the eight-year period. Dairy production has been maintained in spite of the drouth stricken pastures of recent years without increased feeding. The feed required to produce 100 pounds of hogs has been decreased 10 per cent. Egg production per hen has been increased 35 per cent. There have been marked improvements in the cropping system. The output of work per worker has been increased more than 20 per cent. Just how much these factors tend to raise their earnings above the average of the area is difficult to estimate. Undoubtedly other farmers were also increasing their efficiency. Last summer a survey of the earnings of a group of dairy farmers in this section indicated that for the year ending April 30, 1936, the average earnings of those farmers who were not keeping farm accounts was \$1334 per year. The earning of those who had kept records from one to three years was \$1840 and of those who had been using their records as a guide to their business operations for from five to eight years, \$2340. Altho it can hardly be claimed that the use of the records accounted for all of the difference in earnings among these groups, it undoubtedly was a factor of some importance. This factor must be considered in evaluating the representativeness of the earnings data presented in the article.

Table 2

Range in Operator Labor Earnings per Farm

	1929	1930	1931	1932	1933	1934	1935	1936
Lowest	*\$-551	*\$-2326	*\$-4005	*\$-3046	*\$-588	*\$-41	*\$-671	\$265
Average	1857	243	*-622	*-768	986	1855	1364	2914
Highest	5933	2980	2325	2623	6438	7053	8987	12027

\*Minus sign (-) denotes loss.

In addition to the variations in the average earnings from year to year as shown in Table 1, there was a wide range in earnings each year between the most successful farmer and the least successful one. This is indicated in Table 2. The past year was the only one in which every farmer had some return for his labor and management. On the other hand, even in the least favorable years certain farmers were able to earn a fair remuneration for their services. These variations in earnings among different farmers are in part the result of differences in weather, disease and insect damage, and other factors outside the farmer's control. To a much larger extent they are due to factors of management over which the farmer has considerable control such as size of business, choice and yield of crops, kind, quality and production of livestock, and efficiency in the use of labor and the control of overhead expense. In farming, as in any other business, superior management has its reward.

# MINNESOTA FARM PRICES FOR APRIL 1937

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

The index number of Minnesota farm prices for the month of April, 1937 was 101. When the average of farm prices of the three Aprils 1924-25-26 is represented by 100, the indexes for April of each year from 1924 to date are as follows:

April 1924 -	82	April 1931 -	71
" 1925 -	106	" 1932 -	46
" 1926 -	112	" 1933 -	40
" 1927 -	110	" 1934 -	53
" 1928 -	106	" 1935 -	92
" 1929 -	112	" 1936 -	84*
" 1930 -	101	" 1937 -	101*

\*Preliminary

The price index of 101 for the past month is the net result of increases and decreases in the prices of farm products in April, 1937 over the average of April, 1924-25-26 weighted according to their relative importance.

## Average Farm Prices Used in Computing the Minnesota Farm Price Index, April 15, 1937, with Comparisons\*

	Apr. 15, 1937	Mar. 15, 1937	Apr. 15, 1936	Av. Apr. 1924-25- 26	% Apr. 15, 1937 is of Mar. 15, 1937	% Apr. 15, 1937 is of Apr. 15, 1936	% Apr. 15, 1937 is of Apr. 15, 1924-25-26
Wheat	\$1.35	\$1.30	\$.91	\$1.29	104	148	105
Corn	1.19	1.06	.45	.64	112	264	186
Oats	.47	.45	.20	.35	104	235	134
Barley	.93	.93	.41	.57	100	227	163
Rye	.99	.94	.38	.73	105	261	136
Flax	2.00	2.00	1.52	2.29	100	132	87
Potatoes	1.35	1.45	.55	.95	93	245	142
Hogs	9.30	9.40	9.70	9.69	99	96	96
Cattle	7.20	7.20	6.50	6.09	100	111	118
Calves	7.90	8.00	7.70	8.51	99	103	93
Lambs-sheep	9.36	9.56	8.67	11.44	98	108	82
Chickens	.11	.108	.145	.183	102	76	60
Eggs	.193	.19	.157	.22	101	123	88
Butterfat	.35	.37	.33	.42	95	106	83
Hay	9.92	9.50	4.90	11.62	104	202	85
Milk	1.85	1.90	1.62	1.98	97	114	93

\*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\*

	April 1937	March 1937	April 1936	Av. April 1924-26
U.S. farm price index	94.0	91.0	76.0	100.0
Minnesota farm price index	101.0	104.0	84.0	100.0
U.S. purchasing power of farm products	110.0	109.0	98.0	100.0
Minnesota purchasing power of farm products	119.0	124.0	109.0	100.0
U.S. hog-corn ratio	7.6	8.7	16.4	12.4
Minnesota hog-corn ratio	7.8	8.9	21.6	15.5
Minnesota egg-grain ratio	9.5	10.0	14.9	12.7
Minnesota butterfat-farm-grain ratio	20.0	22.3	45.4	36.8

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