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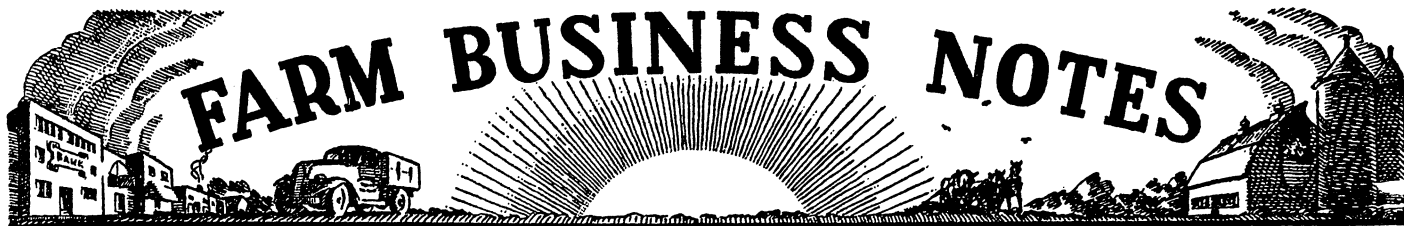
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Earnings of Minnesota Farmers in 1940

GEORGE A. POND and TRUMAN R. NODLAND

More than 600 farmers in Minnesota kept farm account records in 1940 in cooperation with the University Department of Agriculture. These records give some interesting information on the level of farmers' earnings that year and on differences in the level of earnings among different parts of the state and among farms of different types. The location by counties of the farmers supplying this information is shown in figure 1. They are grouped into six different research and extension projects. One of these, Group B, is a detailed accounting study and the other five are supplemented farm account book studies.

Groups A and B are located in the counties along the Mississippi River where considerable land is too steep for cultivation and erosion control is a definite problem on many farms. A larger proportion of the crop land is in hay and pasture and less in corn than in the case of farms in Groups C, D, and E. Dairy cattle are the principal source of income with hogs and poultry also of considerable importance. From 75 to 80 per cent of the cash income is from livestock and livestock products and only 6 to 7 per cent from crop sales. The average value of land and buildings per acre on these farms is a little over \$50 and the entire capital per acre about \$75.

Group C farms are, with few exceptions, located in a less rolling area where a larger proportion of the land is tillable than in the counties farther east. Crop yields are the highest of any section of the state. Cultivated crops, principally corn, occupy 27 per cent of the tillable land on these farms, hay and pasture about one third, and the balance is in small grain. Dairy farms predominate in this area and most of the farmers supplying these records maintain herds of well-bred dairy cattle. The average number of milk cows per farm is 17. On some farms dual purpose herds are kept and on others beef cattle are of some importance. Hogs and poultry follow dairy cattle closely as sources of income. Only 10 per cent of the cash income is derived from the sale of cash crops. The average value of land and buildings per acre on these farms is \$70 and the average total farm investment is \$105 per acre.

Groups D and E farms are located in the same general section although farms in Group E extend somewhat

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farther north. This area is more nearly level than those previously described and a large proportion of it is tillable. About 30 per cent of the tillable land is in corn and other cultivated crops, 47 per cent in small grain, and the balance in hay and pasture. About two thirds of the income is from livestock and livestock products and one fifth from crops. Sales of beef cattle are the

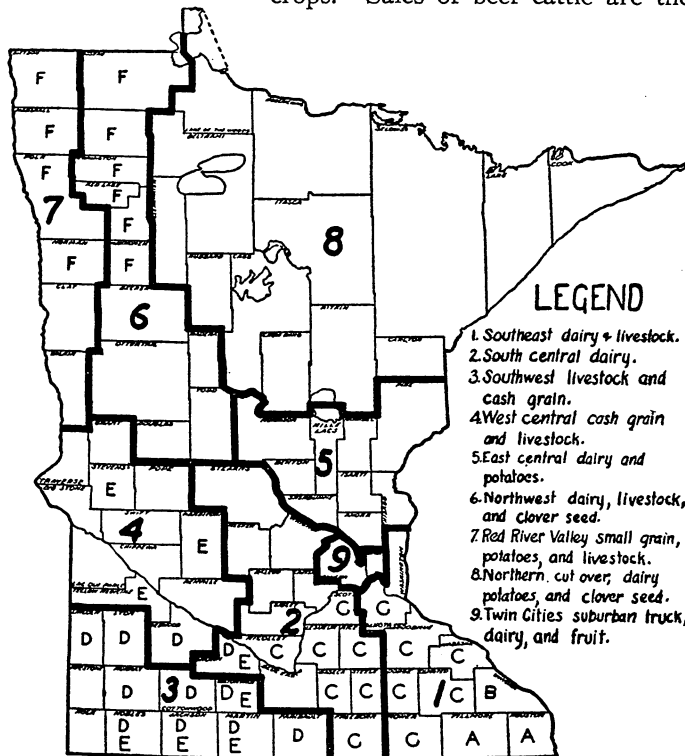


FIG. 1. LOCATION OF GROUPS AND TYPE-OF-FARMING AREAS

- Group A. Soil Conservation Farm Management Service (75 farms)
- Group B. Detailed Accounting Route (20 farms)
- Group C. Southeastern Minnesota Farm Management Service (148 farms)
- Group D. Southwestern Minnesota Farm Management Service (165 farms)
- Group E. Farm Management Service for T. V. A. Phosphate Test Demonstration Cooperators in Southwestern Minnesota (99 farms)
- Group F. Farm Management Service for T. V. A. Phosphate Test Demonstration Cooperators in Northwestern Minnesota (98 farms)

Table 1. Farm Earnings in 1940

	Group A	Group B	Group C	Group D	Group E	Group F
Receipts:						
Cattle, hog, and sheep	\$1,581	\$1,703	\$2,322	\$4,270	\$2,107	\$ 790
Dairy products	763	1,665	1,454	570	673	610
Poultry and eggs	488	954	744	616	461	238
Crops	266	320	613	1,604	1,093	803
AAA payment	226	192	324	506	419	252
Misc. cash receipts	444	489	491	878	580	395
Total farm sales	\$3,768	\$5,323	\$5,948	\$8,444	\$5,333	\$3,088
Increase in farm capital	493	556	1,017	1,179	1,235	364
Farm perquisites	472	568	458	483	455	366
Total receipts	\$4,733	\$6,447	\$7,423	\$10,106	\$7,023	\$3,818
Expenses:						
Livestock purchases	\$ 232	\$ 480	\$ 849	\$1,935	\$ 573	\$ 145
Feed	455	838	600	1,007	497	138
Other livestock expense.....	30	65	78	72	58	13
Crop expense	132	264	182	243	219	149
Power, mach., and equip.	529	1,236	996	1,304	1,027	855
Buildings	268	254	436	500	427	233
Hired labor	215	285	404	392	251	211
Taxes, ins., and misc.	359	330	441	537	394	296
Total farm purchases	\$2,220	\$3,752	\$3,986	\$5,990	\$3,446	\$2,040
Board to hired labor	82	118	141	131	112	103
Unpaid family labor	305	424	269	252	246	295
Interest on farm capital	870	1,004	1,202	1,635	1,231	691
Total expenses	\$3,477	\$5,298	\$5,598	\$8,008	\$5,035	\$3,129
Operator's labor earnings.....	\$1,256	\$1,149	\$1,825	\$2,098	\$1,988	\$ 689

principal source of income on farms in Group D and are fairly important in Group E. Hogs are second as a source of income and dairy cattle, poultry, and sheep are of some importance. The value of land and buildings per acre is a little less than \$80 and the entire farm investment per farm is \$112 per acre.

The farms in Group F are located largely east of the better land in the Red River Valley. Some of this territory was originally prairie but a portion of it was covered with brush and timber. Imperfect drainage and timber or brush reduce the proportion of land that is tillable. About 46 per cent of the tillable land is in small grain, principally oats, barley, flax, and wheat. Climatic conditions limit corn production. Only 9 per cent of the tillable land is in cultivated crops and one fourth of this is in potatoes. Hay, pasture, and legume seed crops occupy about one third of the tillable land and 10 per cent is in summer fallow. A little over one half of the cash income is derived from the sale of livestock and livestock products and about one fourth from the sales of crops, principally wheat and flax. Dairy cattle are the most important class of livestock. Poultry and sheep are of about equal importance as sources of income. Beef cattle and hogs are of least importance in this group as compared with the others. Land in this area is of lower productivity than that in the other areas covered by these records and the value is also low. The average value per acre of land and buildings is \$22 and the total farm investment is \$34 per acre. Although the farms in this group are the largest in terms of acres they are the smallest in terms of total farm value or total farm investment.

A statement of the receipts and expenses and of the earnings of each of these groups of farmers is found in table 1. Since some of these farms are operated by tenants and others by owners with only a partial equity, these

earnings are computed on a "full owner" basis in order to make comparisons more significant. Farm perquisites listed under receipts include the value of the farm produce and fuel and the use of the house that the farm family receives from the farm. The operator's labor earnings figure represents the return to the operator for his labor and management after all expenses have been paid and a 5 per cent charge for the use of capital has been deducted.

The average earnings for Groups A and B differ but little. The average earnings for Groups C, D, and E are also quite close together but approximately 50 per cent higher than those for the first two groups. On the other hand, the average earnings in Group F are little more than one half that for Groups A and B. There is considerable relationship between size of farm, crop yields, and earnings. Crop yields are highest on the farms in Group C, slightly lower in Groups D and E, still a little lower in Groups A and B, and only a little more than one half as high in Group F as in Group C. The larger size of the farms in Groups D and E more than offset the higher yields in Group C and the earnings are slightly higher. Farms in Groups A and B are both smaller and slightly lower in crop yields. Although the largest farms are in Group F the low crop yields reduce earnings below those of farmers in the other groups.

The farm earnings figures presented in table 1 should not be considered as representative of the earnings of all farmers in these areas. The farmers included in these farm account projects are not only men of more than average managerial ability but in most cases are on farms larger or more productive than the average of the area. The earnings shown can be considered representative of the better farmers of the area and probably represent a comparable quality of farming in each group. Crop yields in 1940 were materially above average for farms in Groups D and E, slightly above average in Group C, slightly below in Groups A and B, and very much below average in Group F. These facts must be kept in mind in comparing the earnings for the different areas. Had normal yields been secured in all areas the differences in earnings among the groups would have been materially less.

State Farm Management Services

S. B. CLELAND

There are now four organized farm management services in Minnesota each with a resident fieldman in charge.

The oldest is the Southeast Minnesota Farm Management Service, which started in 1928 and has been in continuous operation since. This service has a membership fee of \$15.00 per year. The number of members varies somewhat from year to year. In the 1940 summary, reports of 148 members were included. For 1941, latest reports show about 190 cooperators. The fieldman is Glen Myers, with headquarters at Owatonna.

The Southwest Minnesota Farm Management Association is the youngest of the three. It started in January, 1940, and for that year records of 165 farms were included in the summary. Latest reports showed 185 for 1941. In this service the annual fee varies from \$15.00 for farms of 80 acres or less, to \$25.00 for farms of 280 acres or more. The fieldman is Ross Huntsinger, Lakefield.

The third service is the Soil Conservation Farm Management Service, confined to Houston and Fillmore counties, in the extreme southeastern corner of the state. In this service no fee is paid by the members, as the salary and expenses of the fieldman are paid by the Soil Conservation Service as a contribution toward a much needed research study on the organization and methods of farming in a soil conservation area. This service has been in operation since 1935. There were 75 records included in the 1940 report, and about 100 are cooperating in 1941. The fieldman is Austin B. Sanford, Caledonia, Minnesota.

The fourth service which started in 1940 is known as the Farm Management Service for T. V. A. Phosphate-Test Demonstration Cooperators. Farmers cooperating with the Department of Agriculture of the University of Minnesota and the Tennessee Valley Authority in a fertilizer demonstration project keep farm records as a part of their program of cooperation. Each farmer pays an annual fee of \$10.00 for services connected with the project, part of which goes toward the cost of summarizing the records. Unlike the other three services, this one does not provide for detailed feed records and, as a consequence, a much less thorough analysis of livestock results is possible. The farms in this service are located in 16 counties, 98 of them in 8 northwestern Minnesota counties and 99 in 8 southwestern Minnesota counties. The fieldman is Raymond Burkholder, Morris, Minnesota.

These services have the double purpose of supplying the cooperating farmers with constructive summaries and analyses of their farm businesses, and of supplying current farm management information for research, teaching, and extension purposes. Because of the complex and large-scale character of the farming in these areas, the services are urgently needed for both reasons, and the results each year are eagerly awaited. On the individual farms adjustments in methods and in organization are made according to the facts pointed out, and in the areas the teaching is adjusted accordingly. Farm management teaching generally is on a much stronger basis in areas where data of this kind are available, than where they are absent.

Some adjustments in methods have taken place in the years since this work started. In the Southeast Service, the original plan was to work only with typical dairy farms, since it was felt that more would be accomplished by centering on one dominant type of farming. On most such farms, also, hogs were the usual secondary livestock enterprise, and crop production was largely for supporting the livestock operations. As time went on, changes took place on the farms of cooperators, and farmers with other types of farming asked permission to join. Chickens, turkeys, beef cattle, and sheep became more dominant on many farms; cropping systems included important cash crops.

With the starting of the Southwest Service, where even more diversification of enterprises is found than in the Southeast area, the services were thrown open to all farmers in the area and the account book and reports were adapted to the reporting and analyzing of all of the common types of farming. This adjustment has introduced some problems, including that of increasing the total cost, but it is felt that the service has increased in value and is better equipped to be of broad general service to the areas covered.

Feed Costs and Returns In Hog Production

TRUMAN R. NODLAND

Farm records kept by approximately 140 farmers in the Southeastern Minnesota Farm Management Service from 1928 to 1940 are an excellent source of information concerning feed costs and returns on the hog enterprise. This information will be of help in budgeting feed supplies and when supplemented with outlook material will aid in making farm plans for future years. The return from the sale of hogs ranks second to dairy products as a source of income to these farmers.

The quantity of hogs raised and the feed necessary to produce 100 pounds of hogs are presented below in table 1. Corn and small grain are the principal concentrates fed; less than 3 per cent of the concentrates were in the form of purchased commercial feeds. Skim milk produced on the farm is the principal source of protein in the ration. In order to utilize all of the available supply, farmers frequently feed more skim milk than is necessary to balance the ration. Raising one third of the pigs as fall litters results in a more even utilization of skim milk. In addition to these feeds the hogs had access to some pasture.

Table 1. Production of Hogs and Feeds per Cwt. Produced

	1928-30	1931-34	1935-38	1939-40	13 Year Average
Number of litters raised.....	10.3	11.4	9.5	12.2	10.7
Number of pigs weaned per litter	6.1	6.1	6.4	6.3	6.2
Pounds of hogs produced.....	14,249	15,715	13,387	17,696	14,965
Pounds of feed per cwt. hogs produced:					
Corn.....	325	309	315	306	314
Small grain.....	162	107	111	125	124
Commercial feeds.....	9	15	17	11	13
Total concentrates.....	496	431	443	442	451
Skim milk.....	476	464	421	304	429

The cost of feed and the returns above feed cost per cwt. of hogs produced are shown in table 2. The cost of feed is based on average farm prices in the area. The price received per cwt. of hogs sold is used as the value of the product. The return above feed cost is the amount available to the farmer to pay for his labor, management, equipment, interest, etc.

Table 2. Feed Costs and Returns in Hog Production

	1928-30	1931-34	1935-38	1939-40	13 Year Average
Value of feed per cwt. hogs produced:					
Concentrates.....	\$5.78	\$2.97	\$4.71	\$3.19	\$4.19
Skim milk.....	1.19	.59	.64	.46	.72
Pasture.....	.24	.12	.15	.16	.16
Total feed cost.....	\$7.21	\$3.68	\$5.50	\$3.81	\$5.07
Price received per cwt. sold.....	8.92	3.99	8.79	5.72	6.87
Returns above feed cost.....	1.71	.31	3.29	1.91	1.80
Average price of corn per bu.....	.64	.36	.61	.38	.51
Average price of barley per bu.	.53	.42	.54	.31	.46
Average price of tankage per cwt.	3.75	1.85	2.60	2.70	2.65
Average price of skim milk per cwt.	.25	.13	.15	.15	.17

Minnesota Farm Prices—June, 1941

Prepared by W. C. WAITE and W. B. GARVER

The index number of Minnesota farm prices for the month of June, 1941, was 91. When the average of farm prices of the three Junes, 1924-25-26, is represented by 100, the indexes for June of each year from 1924 to date are as follows:

1924—84	1929—109	1934—56	1939—63*
1925—108	1930—90	1935—78	1940—65*
1926—110	1931—58	1936—78	1941—91*
1927—100	1932—39	1937—94	
1928—110	1933—48	1938—73	

* Preliminary.

The price index of 91 for the past month is the net result of increases and decreases in the prices of farm products in June, 1941, over the average of June, 1924-25-26, weighted according to their relative importance.

Average Farm Prices Used in Computing the Minnesota Farm Price Index, June 15, 1941, with Comparisons*

	June 15, 1941	May 15, 1941	June 15, 1940		June 15, 1941	May 15, 1941	June 15, 1940
Wheat	\$0.85	\$0.81	\$0.67	Cattle	\$8.30	\$7.90	\$6.80
Corn .....	.55	.53	.49	Calves	10.10	10.00	8.50
Oats .....	.27	.29	.27	Lambs-Sheep	9.02	8.56	8.04
Barley .....	.43	.43	.37	Chickens .....	.14	.14	.10
Rye .....	.44	.45	.32	Eggs .....	.21	.19	.12
Flax	1.64	1.68	1.55	Butterfat .....	.38	.36	.28
Potatoes .....	.40	.36	.55	Hay	5.34	5.69	4.52
Hogs	9.10	8.30	4.65	Milk	1.65	1.60	1.40
				Wool† .....	.39	.37	.29

* These are the average prices for Minnesota as reported by the United States Department of Agriculture.

† Not included in the price index number.

Strong upward trends in the price of Minnesota livestock and livestock products from May to June brought the index up 3 points from the May level. Rises were shown for wheat, corn, and potatoes. All livestock items rose from the May 15 level. The outstanding item was hogs, which advanced 80 cents from the May figure. All livestock products advanced excepting chickens, which showed less than the usual May-to-June seasonal decline. Butterfat was up 2 cents as against a usual seasonal decline of about 1 cent. Milk rose 5 cents per hundredweight. Taking account of the prices paid by farmers for items used in living and production, the index, at 91, indicates a purchasing power of farm products at 11 per cent above the 1924-1926 base year level.

Indexes and Ratios of Minnesota Agriculture*

	June 1941	May 1941	June 1940	Average June 1924-26
U. S. farm price index	84.9	81.2	68.4	100
Minnesota farm price index	91.4	88.5	64.6	100
U. S. purchasing power of farm products	103.1	101.9	85.0	100
Minn. purchasing power of farm products	111.0	111.2	80.4	100
Minn. farmers share of consumers food dollar		47.5	39.3	52.4
U. S. hog-corn ratio	13.1	12.4	7.6	12.2
Minnesota hog-corn ratio	16.5	15.7	9.5	14.5
Minnesota beef-corn ratio	15.1	14.9	13.9	8.9
Minnesota egg-grain ratio	18.9	17.0	12.5	14.5
Minnesota butterfat-farm-grain ratio	42.6	39.4	33.6	33.2

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

Pig Crop Report—June, 1941

The decrease in hog production which started in 1940 has been quickly checked and more hogs will be raised in 1941 than in 1940, the June Pig Crop Report of the United States Department of Agriculture indicates.

The estimated spring pig crop of 1941 is practically the same as that of 1940 for the United States as a whole and is up 2 per cent in the Corn Belt states. The number of sows to farrow in the fall season of 1941 is indicated at 13 per cent larger than the 1940 number. The combined spring and fall crop this year will exceed that of last year by at least 5 per cent but it will be smaller than the 1939 crop.

The number of pigs saved in the spring season of 1941 is estimated at 50,083,000, compared with 50,066,000, the revised estimate for 1940. The spring pig crop was larger this year in the East and West North Central states, but was down in all other regions. For the North Central region (Corn Belt states) the number of this year's spring pigs was 38,906,000 compared with 38,207,000 for last year—an increase of 2 per cent. The decreases in other regions ranged from 5 to 13 per cent. Minnesota showed an increase of 1 per cent.

The number of sows that farrowed in the spring season of 1941, estimated at 7,876,000, was 5 per cent smaller than the 1940 number. This decrease in sows was offset by the larger number of pigs saved per litter. The December 1940 Pig Report indicated that, on the basis of breeding intentions reported by farmers, the spring farrowing this year would be about 14 per cent smaller. The sharp rise in hog prices after January 1 and the appeal to farmers to increase hog production as a defense measure caused the marked departure from December intentions. This is reflected in a material increase in the reported proportion of sows farrowed in May this year.

The average number of pigs saved per litter in the spring season of 1941 was markedly larger than the average in 1940, which was the smallest in some years. The average of 6.47 for the Corn Belt has been exceeded in only one other year.

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