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AGRICULTURAL EXTENSION DIVISION
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F.W. Peck, Director

MINNESOTA FARM BUSINESS NOTES

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

USING RECORDS TO INCREASE FARM EARNINGS

Prepared by Roland C. Bevan

There has been a considerable increase in the keeping of farm records in recent years. This increase has been especially marked where farmers have been able to obtain assistance in keeping and analyzing their records from agricultural colleges and agricultural experiment stations. In order to determine how such records are used by farmers and what value they may have to them, some observations have been made of a group of farmers included in the Southeast Minnesota Farm Management Service.

The members of this service have been keeping records for the past ten years in cooperation with the University of Minnesota. Each year their records have been carefully checked and analyzed by experienced farm management workers. The farmer not only has his own record from year to year for comparison, but he also has the results of 150 other farmers in the same section of the state with whose results he may compare his own. It is thru this comparison with other farmers that he is able to detect any weakness in his own operations and to learn why other farmers may have been more successful.

Farmers' Ideas on the Uses of Records

Sixty-three farmers who were members of this Farm Management Service were asked how they used their farm records. Their answers fall in three definite groups:

1. To determine the earnings of the farm.
2. To discover the weaknesses in the farm organization.
3. To serve as a record for reference.

Some of the replies given by farmers follow: "Farm records are valuable to your farm business only as far as you are able to detect the weak and the strong points in your management." "Each year this summary of my business gives me inspiration to try next year to do better." "Farming is a business and you really need to keep records of that business." "If we want to know the weight of the last batch of hogs, their selling price, or the date of the sale, or if we want to check on crop acreages or hogs sold the previous year, we can find this information in our farm record." "Our farm records revealed our heavy poultry losses." "Records make you think about your business." "Records are more valuable after you have kept them a number of years."

Suggestions Made to Farmers and Their Acceptance

The farm management specialist who assists the farmer in the study of his records not only points out some of the weaknesses in his organization and farm practices, but also makes some specific suggestions as to possibilities for their correction. Since these suggestions have been recorded from year to year, it is possible to study them to determine to what extent the farmers followed the suggestions and the results that followed their adoption.

A total of 342 suggestions made to 85 farmers have been selected for study. The suggestions were made over the period 1928 to 1934 and cover varying periods of from two to seven years' records on the individual farms. Typical suggestions were: "Increase acreage in alfalfa", "balance the dairy ration", "increase proportion of land in corn and decrease small grain", "increase alfalfa hay and decrease silage in the dairy ration", "expand poultry enterprise gradually", "sell hogs nearer the seasonal peak of hog prices", "adopt swine sanitation" and "add a flock of sheep". The total number, 342, does not represent that many different suggestions, since often the same suggestion was made on a number of farms. A summary of the groups of suggestions made and of their adoption by the farmers concerned is given in Table 1.

Table 1

Classification of Suggestions for Improvement of Farm Organizations and Their Acceptance by Farmers, 1928-1935			
Subject of suggestion	No. of suggestions made	No. of suggestions followed	Per cent of suggestions followed
Choice of crops	141	90	64
Dairy herd improvement	70	38	54
Amount of livestock	62	37	60
Swine improvement	34	26	76
Crop practices	14	6	43
Size of business	10	9	90
Poultry improvement	5	3	60
Miscellaneous changes	6	4	67
Total	342	213	62

The index of high return crops is a weighted index of the percentage of the tillable land in the higher return crops. The following of the suggestions dealing with the choice of crops resulted in an average increase of 3.55 in that index. Another study of the data indicates an average increase in operator's earnings of \$31 for each increase of one in the index of choice of crops. This is an average of the years 1928 to 1932, and therefore includes years of both high and low earnings. This increase in the choice of crop index, as a result of following the suggestions made, will therefore tend to increase operator's earnings 3.55 times \$31 or \$110.

The following of suggestions pertaining to amount of livestock resulted in an average increase of 2.15 in the animal units of livestock per 100 acres. Another study of the data covering the same period indicates an average increase in operator's earnings of \$40 for each increase of one animal unit of livestock per 100 acres. An increase of 2.15 in the animal units of livestock per 100 acres will, therefore, tend to increase operator's earnings 2.15 times \$40 or \$86.

The following of suggestions dealing with swine improvement resulted in an average decrease of 49 pounds in the concentrates used to produce a hundred pounds of hogs. This is a decrease of 10.6 per cent in the feed requirement. Using the prices and production for 1936, this saving amounted to \$75 per farm.

These are a few of the results of following suggestions made to farmers as their farm records were studied. There were many other increases in earnings resulting from the record analysis, but these suffice for illustration. It should be remembered, however, that the increases in earnings for an individual farmer were cumulative as he followed more and more suggestions. A number of suggestions may be followed by each farmer and his increase in earnings will be the total of the increases in earnings resulting from the following of the several suggestions.

Examples of Changes Made by Certain Farmers to Increase Earnings

Farmers who are trying to increase their earnings are constantly looking for changes in the farm organization which will make their farms more profitable. If farm records help such farmers to detect the parts of their farm business that need improvement, their efforts to increase earnings will prove more effective. The farmers cited below have made changes in their farm organizations in their efforts to increase earnings. In every case, the farmer has indicated that his records have revealed the need for the changes made. Constant price levels have been assumed in calculating results of changes made.

Farmer A increased his earnings by \$1,400 per year. He increased the acreage of sugar beets and sweet corn, eliminated the hog enterprise, and increased poultry.

Farmer B increased his crop yields 17 per cent by substituting alfalfa and sweet clover for timothy and mixed clover and timothy. Moreover, this change in the cropping system increased the protein in the dairy ration which, combined with the sale of low producing cows, increased the butterfat production for the herd by 45 pounds per cow. Poultry returns were increased 49 cents per hen, or a total of \$88 for the flock, by purchasing chicks from high producing stock and by improved housing, feeding and care.

Farmer C increased his farm income \$200 by substituting corn for a part of the oats in his cropping system.

Farmer D increased the size of his farm business by adding a flock of sheep and his earnings were increased by \$125 as a result. This farmer changed his dairy ration by increasing the proportion of alfalfa hay, and the butterfat production of the herd increased from an average of 255 pounds to 334 pounds. The farm layout was changed to adopt a better succession of crops and to set up a more efficient field arrangement.

Farmer E has increased his returns over feed from hogs by \$1,051 in two years, after adopting swine sanitation. This farmer also decreased the amount of labor hired by 16 per cent (a saving of about \$200) after his records had indicated high labor costs.

Farmer F increased his hog returns over feed \$419 in one year by following a program of swine sanitation.

Farmer G enlarged his poultry enterprise, increasing the returns over feed from poultry by \$436, with no additional expense outside of \$50 added to annual expenses by a new poultry house.

Farmer H increased his returns from hogs \$139, spurred by his first year's report which showed that the hog returns were two dollars less than the feed cost for every hundred pounds of hogs produced.

The cases cited show how certain farmers have increased their earnings by the use of records. Farm records, however, do not automatically increase earnings. It is only in so far as the farmer follows the suggestions growing out of the records that he profits from them. Records were much more useful to the farmers in this study because the records on other farms in the same community were available for comparison. It was from these comparisons that most of the suggestions for improving the farm business arose.

MINNESOTA FARM PRICES FOR OCTOBER, 1937
Prepared by W. C. Waite and W. B. Garver

The index number of Minnesota farm prices for the month of October, 1937 was 81. When the average of farm prices of the three Octobers, 1924-25-26 is represented by 100, the indexes for October of each year from 1924 to date are as follows:

October 1924 - 93	October 1931 - 52
" 1925 - 104	" 1932 - 38
" 1926 - 104	" 1933 - 50
" 1927 - 98	" 1934 - 67
" 1928 - 95	" 1935 - 75
" 1929 - 107	" 1936 - 96*
" 1930 - 82	" 1937 - 81*

*Preliminary

The price index of 81 for the past month is the net result of increases and decreases in the prices of farm products in October, 1937 over the average of October, 1924-25-26 weighted according to their relative importance.

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

	Oct. 15, 1937	Sept. 15, 1937	Oct. 15, 1936	Av. Oct. 15, 1924-25- 26	% Oct. 15, 1937 is of Sept. 15, 1937	% Oct. 15, 1937 is of Oct. 15, 1936	% Oct. 15, 1937 is of Oct. 15, 1924-25-26
Wheat	\$.96	\$1.04	\$1.25	\$1.28	92	77	75
Corn	.45	.90	.94	.78	50	48	58
Oats	.24	.24	.37	.38	100	65	63
Barley	.51	.52	.98	.61	98	52	84
Rye	.59	.65	.73	1.01	91	81	58
Flax	1.89	1.90	1.87	2.15	99	101	88
Potatoes	.31	.42	1.00	.71	74	31	44
Hogs	10.00	10.90	9.20	10.68	92	109	94
Cattle	7.70	8.00	6.30	5.97	96	122	129
Calves	8.80	8.80	7.30	9.36	100	121	94
Lambs-sheep	8.68	8.86	7.55	11.03	98	115	79
Chickens	.163	.16	.119	.166	102	137	98
Eggs	.203	.183	.243	.35	111	84	58
Butterfat	.37	.35	.35	.44	106	106	84
Hay	6.40	5.95	8.26	11.90	108	77	54
Milk	1.80	1.80	1.97	2.26	100	91	80

*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*

	Oct. 1937	Sept. 1937	Oct. 1936	Av. Oct. 1924-26
U.S. farm price index	81.0	86.0	88.0	100.0
Minnesota farm price index	81.0	87.0	96.0	100.0
U.S. purchasing power of farm products	96.0	101.0	105.0	100.0
Minnesota purchasing power of farm products	96.0	101.0	114.0	100.0
U.S. hog-corn ratio	16.6	11.2	9.4	12.8
Minnesota hog-corn ratio	22.2	12.1	9.8	14.6
Minnesota egg-grain ratio	18.2	12.4	14.1	21.7
Minnesota butterfat-farm grain ratio	43.9	33.4	23.2	38.3

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