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# FARM BUSINESS NOTES

Prepared by the Divisions of Agricultural Economics and Agricultural Extension  
Paul E. Miller, Director Agricultural Extension

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UNIVERSITY FARM, ST. PAUL

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## How Long Does It Take to Pay for a Farm?

G. A. POND AND W. L. CAVERT<sup>1</sup>

There is considerable discussion concerning aid to returning veterans to buy farms on the basis of a small down payment. As a contribution to this discussion, data are presented for 11 members of the Southeast Minnesota Farm Management Service who have kept records of their farm receipts and expenses and also of their personal and household expenses for the 13-year period 1931-1943, inclusive. Each farmer has operated the same land each year.

Calculations were made as to the number of years that it would take to pay off debts equal to 40 per cent of the inventory value as of January 1, 1931, of the livestock and machinery, plus a debt equal to 75 per cent of the reasonable sale value of the farm real estate as of the same date. The amount available for application on interest and principal was found by deducting cash outlays for both farm business and living expenses from cash income. The interest rate on the non-real estate debt was assumed to be 7 per cent from January 1, 1931, to December 31, 1934, and 6 per cent for the remaining years. The interest rate on the real estate mortgage was assumed to be 5 per cent throughout the whole period. It is believed that these rates approximate the average interest rates prevailing through the period. However, they are somewhat higher than current rates.

In the calculations it was assumed that all earnings available for debt payments were applied in the following order:

- First, on interest on personal property
- Second, on interest on the real estate mortgage
- Third, on principal owing on personal property
- Fourth, on principal owing on real estate

In any year in which available earnings were not equal to the interest, the deficiency was added to the principal of the real estate debt.

In nearly every case, the particular farms are well above average for their locality in quality of soil and improvements. It is believed that the neighbors of these farmers would rate them as well above the average in ability.

### University Farm Radio Programs

HOMEMAKERS' HOUR—10:45 a.m.

UNIVERSITY FARM HOUR—12:30 p.m.

THE FRIENDLY ROAD—1:00 p.m.

Station WLB—770 on the dial

Each one of the 11 was in the prime of life in 1931, in good health, and had excellent personal habits. Furthermore, these individuals had a great advantage over one who was purchasing and starting to farm in that they had a going concern. They were living on farms upon which they had either been raised or which they had occupied for a number of years.

When buying a farm, a man usually experiences some disappointments. He may find that the drainage isn't as good as it appeared in a dry time, the fields have more stone, the soil is less fertile, there is more weed infestation, or perhaps the buildings are not as satisfactory as they seemed when he was under the spell of the real estate salesman. All of these risks are avoided when a man is considering a farm upon which he has lived for a number of years.

Nine of the farms ranged from 160 to 200 acres in size, one was 80 acres, and the other was 106 acres. The average area of the 11 farms was 169 acres, the average sale value of the land and buildings was \$14,483 or \$86 per acre, and the average investment in livestock and machinery was \$4,754. Under the assumed conditions, the debt on the real estate was \$10,862 and the non-real estate debt was \$1,902, a total debt of \$12,764 or \$76 per acre. Most of these farms have buildings and other improvements that are superior to the average in their localities.

It may be suggested that the 1930's were a period of agricultural depression, prices were low, and there were the great drouths of 1934 and 1936. It is true that the situation in the 1930's was not altogether a happy one for farmers. But, in the past, it has been normal for difficulties to confront farmers and this will likely be true in the future. Prices were very low in 1931, 1932, and 1933, but this was partly compensated for by low inventory values on January 1, 1931, when the records were started. These lower inventory values gave a lower assumed debt than if the records were started in 1929 or earlier years. Then, in the particular area in which these farms are located, the drouths of 1934 and 1936 brought

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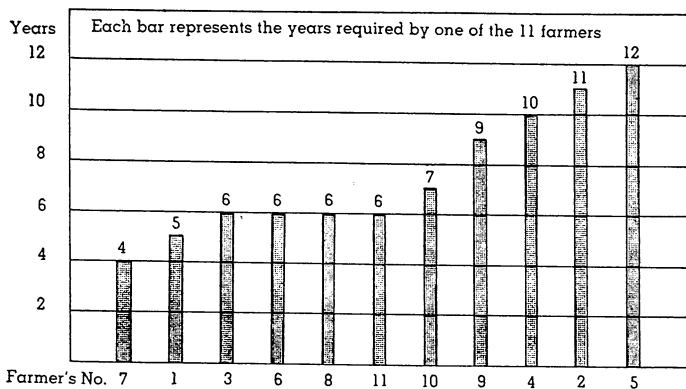


FIG. 1. Years to pay chattel mortgage equal to 40 per cent of value of the livestock and machinery investment when real estate mortgage is 75 per cent of the value of real estate

the advantage of good prices. At the same time, yields were sufficiently high so that practically no reduction in livestock numbers was necessary. Neither were there any marked increases in purchases of feed.

What are the results? Figure 1 tells the story as regards progress that could have been made in paying a chattel mortgage under the assumed conditions. Of the 11 farmers, six could have maintained interest on the real estate mortgage and completed payment of the chattel mortgage in four to six years, while the remaining five would have required seven to 12 years to pay off a chattel mortgage equal to 40 per cent of the initial value of livestock and machinery. Individual No. 5, who took 12 years, ended the 13-year period with an assumed real estate debt which was 6 per cent greater than at the start on January 1, 1931.

As regards progress in paying for real estate, three of the farmers would have been free from debt by December 31, 1943, and all except the one individual previously mentioned would have made substantial progress. In this connection, attention is directed to figure 2 which indicates that these 11 farmers would have made would have been in the years 1941, 1942, and 1943, a period when yields of crops were well above normal, when prices had received a strong upward push from defense and war activities, and when cash expenses had not yet risen greatly.

All except one of these farmers would have had one to eight years when he could not have met his interest

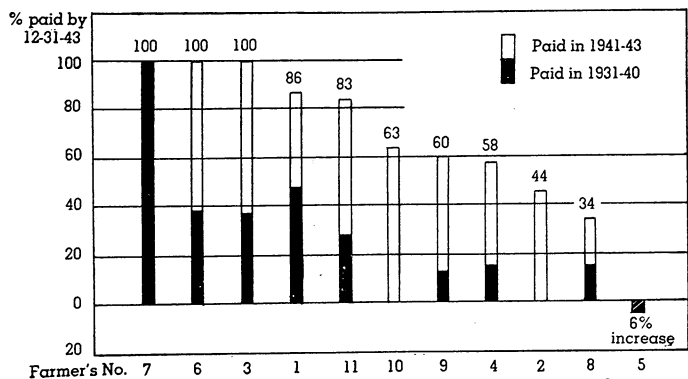


FIG. 2. Percentage of total real estate and chattel debt paid to December 31, 1943, under assumed conditions

obligations in full. Five of the 11 would have had either three or four successive years in which interest obligations could not have been met in full. In general, when a farmer has three or more successive years in which he cannot meet interest obligations, he becomes thoroughly discouraged and may decide to quit. Even if the farmer does not become discouraged, his creditors, especially short-term creditors, are quite apt to be insistent on the sale of sufficient security so that some reduction may be made in the debtor's obligations. The result of a period of inability to meet interest on short-term debts is usually an auction and a new farm operator.

The importance of the amount of debt is indicated by the fact that if these 11 farmers had started in 1931 with no debts except a real estate mortgage equal to 50 per cent of the value of the real estate, by December 31, 1940, under the assumed conditions, four would have paid the debt in full, six others would have paid 49 to 97 per cent of their debt, but the eleventh would have reduced the debt by only 2 per cent. Only three of the 11 would have had two or more years in which interest obligations could not have been met in full.

The experience of these 11 families over a 13-year period suggests that it will be no kindness to veterans to set them up in farming with a heavy debt burden, especially if the prices of both land and farm chattels are at a high level in the early postwar period. In many cases, a rental arrangement or work for wages may be preferable to assuming a heavy real estate obligation.

In this connection, it may be recalled that many of the fathers of the veterans of World War II, upon their return from World War I, started farming upon the basis of a liberal amount of borrowed money. The results were most unfortunate. Some of the grandfathers of the present veterans had a similar unhappy experience after the Civil War. History records that English farmers had similar unfortunate experiences after the Napoleonic wars.

## Wartime Work on Farms

S. A. ENGENE

Wartime conditions have brought changes in the sources and utilization of labor on Minnesota farms. Detailed labor records obtained from a group of farms in Nicollet County provide information on these changes. Records were obtained from 26 farmers in 1941, 27 in 1942, and 24 in 1943. Although these farmers are better than average managers and operate larger than average farms, these data probably indicate fairly accurately the general trend in labor utilization in the community.

The total hours worked on these farms remained quite constant, averaging 6,855 hours per farm in 1941, 6,682 in 1942, and 6,826 in 1943. This includes only work on livestock and crops and other work pertaining directly to the farming operations. It does not include housework.

Although the total hours remained constant, the source of this labor changed. The hours worked by the farm operators increased from 2,968 in 1941 to 3,112 in 1942 and to 3,332 in 1943. The hours worked by the other members of the family, whether paid or unpaid, de-

creased from 2,106 in 1941 to 1,837 in 1943. Some members of the family left the farm for service in the armed forces or for work elsewhere, but this loss was partially offset by grown sons working longer days and by more work by women and children. The hours of labor hired also decreased slightly, from 1,781 in 1941 to 1,657 in 1943.

Decreased numbers of workers were offset by longer hours of work per day. The number of hours worked per day by the operators on week days increased from 8.8 hours in 1941 to 9.8 in 1943. In 1941 these farmers averaged as much as 10 hours a day in only one month (July). In 1942 they averaged 10 hours or more per day in three months (August, October, November). In 1943 they averaged this long a day every one of the seven months from April through October. The longest days were in April, 1943, with an average of 10.9 hours per day. The number of hours worked per day in 1943 averaged more than in the previous two years for every month of the year except November. The hours worked by operators on Sundays increased from 4.6 hours in 1941 to 5.4 in 1943.

The hours of work spent on livestock increased from 4,062 in 1941 to 4,259 in 1943. All of this increase was due to increases in work on hogs and poultry. Hog production was increased by 16 per cent and the number of hens by 30 per cent on these farms. There was little change in the volume of other livestock enterprises. Work on crops changed from 1,850 hours in 1941 to 1,925 hours in 1942 and 1,704 hours in 1943. Most of these changes were due to variations in weather conditions. The decrease in 1943 was due partly to unfavorable weather conditions which kept farmers out of the field a considerable part of the summer, making it necessary for them to work more rapidly and do less thorough work when they were able to get into the fields. Miscellaneous work on maintenance of fences, buildings, and machinery, general management, and farm business remained virtually unchanged. Work done off the farm for pay decreased during this period.

Work on livestock took more time than all other work combined on these farms. Approximately 60 per cent of all working hours were spent on livestock in each of these three years. In 1943 work on livestock required more time than work on crops for each of the 12 months of the year. During the two previous years, hours spent on crops exceeded that on livestock only during the two months of July and August, and even in those months the differences were small.

## Farmers' Estimates of Benefits from Farm Management Services

TRUMAN R. NODLAND

Some of the benefits a farmer receives from a farm management service are indicated in the results of a survey of the members of the Southwestern Minnesota Farm Management Service during the winter of 1943.<sup>1</sup> Of the total of 93 usable survey schedules secured, 65 were from

<sup>1</sup>The survey was taken by Ross Huntsinger, field agent for the Southwestern Minnesota Farm Management Service at that time.

Table 1. How Farmers Used a Record of Their Farm Business

	Percentage of farmers who had received		
	One annual report	Two annual reports	Per cent of all farmers
<b>GENERAL USE MADE OF RECORD</b>			
Prepared an income tax statement.....	100	94	96
Memorandum of business transactions....	82	83	83
For obtaining credit .....	4	11	9
<b>MANAGEMENT FACTORS CHANGED BECAUSE OF THE RECORDS</b>			
Livestock management .....	29	57	48
Cropping plans .....	18	37	31
Buildings .....	0	25	17
Equipment .....	0	11	8
Power .....	4	6	5
Marketing .....	7	9	9
Labor .....	7	6	7
Financing .....	7	3	4

members who had received two annual summaries and 28 from members who had received only one summary.

The various uses farmers made of their records and the proportion of the farmers reporting each use are shown in table 1. Nearly all used their records in the preparation of an income tax statement. Eighty-three per cent used them as a memorandum of the business transactions and 9 per cent found them an aid in securing credit. Many phases of the farm business were changed as a result of an analysis of the records. Nearly one half made changes in the management of the livestock enterprises and one third made changes in cropping plans because of information secured from the records. The proportion reporting changes was much higher among farmers who had received two annual summaries than among those who had received only one summary of their business. It takes considerable time to plan farming operations but a much longer period of time to put these plans into effect.

A summary of the reaction to the annual reports is presented in table 2. One half of the farmers were of the opinion that feeding efficiency was the factor which had the greatest influence on their earnings. Forty-three per cent stated crop yields was the most important factor influencing earnings. The other five factors were mentioned by 20 per cent or less of the farmers.

Comparatively few reported serious objections to keeping records. Approximately 10 per cent disliked putting details in the records. Another 10 per cent thought too much time was required to keep a good feed record. An average of 50 hours annually was spent on each record, including the time spent with the fieldman as well as that needed to make the entries in the book. Fortunately the heaviest demand on the farmer's time comes at the end of December when other farm work is somewhat less pressing.

Table 2. Factors Farmers Are Most Interested in Improving

	Percentage of farmers who had received		
	One annual report	Two annual reports	Per cent of all farmers
Crop yields .....	29	49	43
Choice of crop .....	14	22	19
Amount of livestock .....	11	15	14
Feeding efficiency .....	43	54	51
Size of business .....	25	14	17
Labor efficiency .....	25	14	17
Control over expenses .....	43	11	20

## Minnesota Farm Prices for May, 1944

Prepared by W. C. WAITE AND R. W. COX

The index number of Minnesota farm prices for May, 1944, is 175. This index expresses the average of the increases and decreases in farm product prices in May, 1944, over the average of May, 1935-39, weighted according to their relative importance.

**Average Farm Prices Used in Computing the Minnesota Farm Price Index, May, 1944, with Comparisons\***

	May 15, 1944	April 15, 1944	May 15, 1943		May 15, 1944	April 15, 1944	May 15, 1943
Wheat	\$ 1.49	\$ 1.49	\$ 1.23	Hogs	\$12.90	\$13.10	\$14.00
Corn	1.01	1.01	.91	Cattle	12.00	11.80	12.60
Oats	.73	.72	.55	Calves	13.40	13.00	13.90
Barley	1.13	1.10	.74	Lambs-Sheep	12.83	12.82	13.27
Rye	1.09	1.11	.69	Chickens	.21	.20	.19
Flax	2.86	2.86	3.01	Eggs	.28	.28	.33
Potatoes	1.10	1.05	1.55	Butterfat	.54	.54	.53
Hay	11.40	10.30	7.50	Milk	2.65	2.60	2.55
				Wool†	.41	.40	.40

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

† Not included in price index number.

With the exception of hay, the prices of crops and livestock products have changed but slightly over the past several months. The marked increase in the price of hay has been due to the developing scarcity of this product. The prices of cattle, calves, and lambs have shown a moderate increase. The Minnesota farm price index of 175 is slightly lower than one year ago. The crop price index increased 20 per cent but the livestock and livestock products price indexes declined about 5 per cent and 3 per cent, respectively.

The feed ratios are much less than in May, 1943, because of the decline in livestock prices and the increase in grain prices. If the subsidy payment of 6 cents per pound of butterfat is added to the reported price of this product in April, the butter-farm-grain ratio would be raised to 27.5.

**Indexes and Ratios for Minnesota Agriculture\***

	May 15, 1944	May 15, 1943	May 15, 1942	Average 1935-39
U. S. farm price index	182.3	182.3	144.7	100
Minnesota farm price index	175.3	177.2	145.7	100
Minn. crop price index	180.1	149.6	120.7	100
Minn. livestock price index	167.8	177.0	158.8	100
Minn. livestock product price index	179.5	185.9	143.4	100
U. S. purchasing power of farm products	130.9	137.1	119.6	100
Minn. purchasing power of farm products	125.8	133.3	120.4	100
Minn. farmers' share of consumers' food dollar	62.5	61.6	55.7	46.3
U. S. hog-corn ratio	11.0	13.4	17.5	10.7
Minnesota hog-corn ratio	12.8	15.4	19.0	14.6
Minnesota beef-corn ratio	11.9	13.6	15.0	12.7
Minnesota egg-grain ratio	12.6	18.0	17.8	14.6
Minnesota butterfat-farm-grain ratio	24.8	32.1	29.7	29.7

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

## Tonnage and Ton Value of Sales

The average annual total tons of the 19 principal agricultural products sold by farmers of the state are shown in the table below by five-year periods and for the three-year period 1940-1942. There is no marked trend over most of the period, the total tonnage of sales in 1935-1939 averaging approximately that of 1910-1914. The large increase in the 1940-42 period is a reflection of the very great expansion in agricultural output during the war.

**Tonnage and Average Value per Ton of Minnesota Farm Sales**

Period	Average annual sales in tons		Average value of sales per ton at 1935-39 prices
	Thousands	Dollars	
1910-14	4617	42.12	
1915-19	4320	50.76	
1920-24	4697	54.67	
1925-29	4700	64.74	
1930-34	3800	79.81	
1935-39	4597	67.69	
1940-42	6319	67.17	

While the tonnage of farm sales has remained fairly constant, there has been a great change in the products making up these sales. In the early periods a large portion of these sales were of grains, while in the later periods livestock and livestock products increased in relative importance. These changes are reflected in the average values per ton which are also shown in the table. These ton values have been adjusted to a uniform level of prices by dividing the actual tonnage values for the various periods by the Minnesota Farm Price Index for the period. There is a marked upward trend between 1910-14 and 1930-34 and some decline since the latter period. The upward trend is occasioned by the shift of farmers from products with a relatively low value per ton to products relatively higher in value per ton. In general it represents more extensive processing on the farm. Instead of selling crops, the farmers of the state have increasingly grown crops to feed livestock with a product resulting which has a higher per ton value.

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