MINNESOTA FARM MANAGEMENT SERVICE NOTES

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Prepared by the Farm Management Group at University Farm, St. Paul, Minn.

## DAIRYING

### Costs and Returns from Milk Cows

The average net return per cow in 1926 on the Pine County farm accounting route at Askov was $22.00. The average production per cow was 250 pounds. These figures are the averages from 23 farms having a total of 262 cows. A detailed statement of receipts and expenses per cow is presented in Table I. A comparison of results obtained in 1926 with 1925 is given in Table II.

TABLE I
Receipts and Expenses per Cow, 1926 - Askov, Minn.
(Average of 262 cows on 23 farms)

| | Average amount | Range | Average value | |
|---|---|---|---|---|
| Receipts: | | | | |
| Butterfat, lbs. | 250 | 143 - 344 | $122.18 | |
| Skimmilk, lbs. | 5924 | 3244 - 10048 | 14.81 | |
| Manure, tons | 6.9 | 3.6 - 11.5 | 10.42 | |
| Appreciation | | | 1.53 | |
| Total Receipts | | | | $148.94 |
| Expenses: | | | | |
| Feed - Concentrates, lbs. | 1573 | 801 - 2186 | $27.17 | |
| Hay & fodder, lbs. | 3207 | 1714 - 4745 | 20.69 | |
| Silage & roots, lbs. | 6951 | 2828 - 9681 | 17.47 | |
| Pasture, days | 166 | 121 - 197 | 5.55 | |
| Total Feed Cost | | (50.87 - 91.94) | | $70.88 |
| Labor - Man labor, hrs. | 186¼ | 107½ - 283 | $37.22 | |
| Horse labor, hrs. | 6¾ | 1½ - 49 | .82 | |
| Total Labor Cost | | (22.17 - 61.77) | | $38.04 |
| Other Costs - Shelter | | | $10.73 | |
| Equipment | | | 2.66 | |
| Interest | | | 3.86 | |
| Cash | | | .77 | |
| Total other costs | | | | $18.02 |
| Grand total costs | | (91.31 - 161.44) | | $126.94 |
| Net return per cow | | (-19.61 - 71.94) | | 22.00 |

A wide variation between farms in most of the factors of receipts and expenses is apparent from the data in the tables. The production per cow ranged from 143 to 344 pounds. The net return varied from a loss of $19.61 to a gain of $71.94 in spite of the fact that all of these farmers patronized the same creamery and the extreme range in price received for butterfat was only 5 cents per pound. The cost per pound of butterfat fanged from 27.7 cents to 62.4 and the return per hour from 9.0 cents to 69.1 cents. An analysis of these figures shows why some of these farmers made substantial profits while others under similar circumstances incurred losses.

Cows with the ability to produce are of primary importance in dairying. The herd must be bred for high production and must be closely culled. It must be properly managed to secure maximum production. High production usually means high returns. The eight farms having the highest production averaging 317 pounds per cow had a net return of $46.84 per cow and a cost per pound of butterfat of 34.5 cents. The seven farms having the lowest production, averaging 198 pounds, had a net return of only $6.63 and a cost per pound of 45.7 cents. A correctly balanced ration fed in quantities sufficient to insure capacity production is essential. Fifteen farms on which well balanced rations were fed, all having a nutritive ratio narrower than 1:7.5, had an average production per cow of 273 pounds, while 8 farms having a nutritive ratio wider than 1:7.5 had a production of only 226 pounds. The first group had a net return of $29.80 and a cost per pound of butterfat of 38.8 cents; the latter had a return of $9.11 and a cost per pound of 45.7 cents. Proper breeding, weeding and feeding are necessary to secure satisfactory dairy returns.

TABLE II

Comparison of Dairy Data 1925 and 1926 - Askov, Minn.
(Average of 273 cows 25 farms in 1925, 262 cows 23 farms in 1926)

| | Range | | Average | |
|---|---|---|---|---|
| | 1925 | 1926 | 1925 | 1926 |
| Production per cow, lbs. | 176 - 320 | 143 - 344 | 246 | 250 |
| Feed cost per lb. B.F. ¢ | 22.2 - 40.3 | 24.4 - 38.1 | 27.3 | 28.3 |
| Net cost per lb. B.F. ¢ | 29.4 - 71.2 | 27.7 - 62.4 | 44.1 | 40.0 |
| Avg. selling price per lb. ¢ | 47.7 - 50.8 | 46.4 - 50.4 | 49.8 | 48.8 |
| Return for man labor $ | 11.84 - 104.05 | 16.11 - 104.62 | 60.07 | 59.22 |
| Return per hour ¢ | 5.4 - 56.1 | 9.0 - 69.1 | 26.1 | 31.8 |
| Return over feed $ | 32.18 - 120.93 | 33.54 - 127.11 | 81.63 | 79.48 |
| Net return per cow $ | -36.50 - 66.99 | -19.61 - 71.94 | 14.09 | 22.00 |

Greater returns were obtained in 1926 than in 1925 altho the butterfat sold for a cent a pound less. The production per cow increased very slightly from 246 to 250 pounds. The feed cost per pound of butterfat increased one cent, due to the greater amount of feeding made necessary by poor pastures and to the high prices for roughage during the last half of the year. Grain prices, however, were lower. The greater return was caused by the fewer number of man hours expended per cow. 230 hours were used in 1925 and only 186¼ in 1926. As labor is included as a cost at 20 cents an hour, the difference in labor cost caused the greater net return per cow last year. Altho the total return for labor was about the same for the two years, the fewer hours worked in 1926 increased the return per hour from 26.1 cents in 1925 to 31.8 cents in 1926.

## Costs and Returns from All Dairy Cattle

A combined statement including both milking cows and young dairy cattle shows a gain of $115 per farm. The items of cost and income are presented in Table III.

TABLE III

Costs and Returns from All Dairy Cattle 1926, Askov, Minn.
(Average of 23 farms)

| Receipts: | | Expenses: | |
|---|---|---|---|
| Closing inventory | $983 | Opening inventory | $975 |
| Sales of cattle | 295 | Purchases | 26 |
| Meat used in home | 19 | Feed | 1107 |
| Sales of dairy products | 1300 | Man labor | 484 |
| Dairy products used in home | 78 | Horse labor | 10 |
| Dairy products used for feed | 183 | Shelter | 173 |
| Cash - msicellaneous | 5 | Equipment | 30 |
| Manure credit | 170 | Interest | 58 |
| | | Cash | 15 |
| Total | $2993 | Total | $2878 |
| Gain on cattle enterprise | | | $115 |
| Return per hour man labor | | | 24.8¢ |

At the price at which growing young stock was valued last year it was unprofitable to raise it. The average loss per farm on the young cattle enterprise* was $135. The total returns were large enough to cover the cost of the feed they received but were so low that no return for man labor was obtained. Nevertheless it is advisable for dairy farmers to raise the animals that they will need in their herd. The difficulty of purchasing stock of the same quality that can be raised and the danger of bringing disease into a clean herd thru purchased animals makes the plan of buying cattle unwise. The return from milk cows, however, was large enough to absorb the loss on young cattle and to allow a return per hour of 24.8 cents on the entire dairy herd.

Very few dairymen can raise stock for sale at a profit at prices that have existed the last few years. Some calves, however, must be raised to maintain the herds. Since such stock is being raised at a loss it is evident that only the best heifers should be retained. This condition emphasizes the importance of good dairy sires. Not only must the milking cows receive proper attention but the young cattle must be carefully selected and reared if satisfactory returns are to be secured from dairying.

*The "young cattle enterprise" includes all dairy cattle except milk cows - all heifers up to the time of birth of their first calf, and all bulls.

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## Dairy Prospects for the Coming Year

Satisfactory returns from dairying during the coming year are indicated by general business conditions and by conditions within the dairy industry.

Business conditions which have such a pronounced effect upon the consumption of butter are not quite up to the high mark of 1926, but are quite satisfactory. There is more than normal activity in production, the employment situation is fairly good and wages are still high. Interest rates remain low. The volume of business as shown by bank clearings, railway traffic and retail sales, is large. There is some uncertainty with regard to the future, but as long as present conditions prevail the demand for dairy products should remain active.

Within the dairy industry the prospects are favorable but do not warrant any general expansion. The number of cows and heifers two years old and over kept for milk decreased slightly during 1926, both in the United States and Minnesota. The number of heifers being kept thruout the United States is too small for normal replacement of the milking herd, but in Minnesota a larger proportion is being retained. However, any increase in the number of dairy cows during the next two years must come from keeping the older, less productive cows that would ordinarily be sold.

The production and price of feeds during he coming year are still uncertain. The abundance of rainfall has resulted in excellent pastures and should insure plenty of hay. On the other hand, the continued cool, rainy weather has retarded the planting and growth of feed grains. Consequnetly, we may expect hay to be cheaper and grain to be somewhat higher in price but unless an unusual shortage develops grains should not be unduly expensive.

The supply of dairy products on hand and in storage is encouraging to the dairy farmer. In April the stocks of butter amounted to only 3,033,000 pounds, the lowest on record, as compared with 17,392,000 pounds in 1926 and a five year average of 10,009,000 pounds. Butter is going into storage with the price above 41 cents per pound, which would indicate that the buyers expect relatively high prices again this coming winter. Condensed milk stocks in April were the lowest on record for any month since reports first became available in 1920. Cheese production still continues to run 8 to 10 per cent below last year but the holdings on April 1 were about 13,000,000 pounds heavier than the 5 year average of 35,066,000 pounds.

Altho, on the whole, the prospects for the dairyman are favorable, expansion is not to be encouraged. Production was curtailed last year due to the shortage of pasture and hay. This year, with prospects of good pasture and plenty of hay, will probably see an increase in production with a possibility of a lower price, depending partly upon the extent of the increase in production. Dairymen should devote their attention to providing enough heifers for normal replacement and to improving the quality of the cows rather than to increasing the size of the herd. The indications are that this is not an advantageous time for starting in the dairy business except for those who have especially favorable conditions.

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