April 1967
Dairy Reproduction Series 1
Extension Pamphlet 219

AGRICULTURAL EXTENSION SERVICE
University of Minnesota

Extra Money By Improving Reproductive Performance

You may not realize how much you can increase profits from your dairy herd by improving the reproductive performance of your cows. Many dairymen can raise their yearly profits as much as $60 per cow by improving breeding efficiency through a sound breeding management program.

Poor breeding efficiency is costing you money:

IF your cows do not calve regularly every 12 to 13 months.

IF your cows do not maintain a profitable level of production up to 60 days before calving.

IF your first-calf heifers have not dropped their calves and begun paying their way by the time they are 25 months of age.

Milk Production

Reproductive failures mean LONGER CALVING INTERVALS and DELAYED CALVING of first-calf heifers. Whether in milk or idle, cows still require the same costly production inputs—room, board, and labor. Late entry of first-calf heifers into the milking herd adds to the cost of raising herd replacements and delays the time they can begin making a profit.

Most cows have neither the genetic ability nor the environmental opportunity to maintain a profitable level of production beyond 10 or 11 months of lactation. Research has shown no beneficial effect of dry periods longer than 60 days. So a 12- to 13-month calving interval is recommended. This schedule permits cows to complete a 305-day (10-month) lactation and still have the recommended 60 days of rest before calving.

To estimate how much milk per cow you are losing, select the efficiency value from the table that best fits the average calving interval and milking plan for your herd.

Example:

A herd that has a 14-month calving interval and 305-day lactations is producing at 90 percent efficiency when compared to a 12-month interval. If cows in this herd average 12,000 pounds of milk per year on a 14-month interval they would produce about 13,333 pounds (12,000 ÷ .90) on a 12-month calving interval. This means you could get 1,333 more pounds of milk per cow annually.

The total annual loss for a 40-cow herd would be 53,320 pounds of milk (40 × 1,333). If milk is worth $4.40 per cwt., this means there is a loss of $2,346.08 in gross income from milk.

Most of this loss could be avoided by shortening the calving interval to 13 months or less. On the other hand, losses will be even larger if the calving interval is stretched to 15 months or beyond.

There are exceptional cases where milk losses due to extended calving intervals can be reduced by keeping cows producing at a profitable level up to 60 days before calving. This requires an excellent feeding and management program combined with cows that have the rare genetic ability to maintain high production beyond 10 months of lactation. Most herds have only one or a few of these cows.

The efficiency values in the table for (B), milking up to 60 days before calving, are 100 percent for cows calving every 12 and 14 months. This shows that milk losses, but not calf crop losses, can be reduced when the calving interval extends up to 14 months **if** good cows are fed and managed well.

Production Costs

Production costs increase and the size of the milk check decreases as a herd's breeding performance declines. For every dollar you spend for production inputs on a 12-month calving interval you will spend $1.01 on a 13-month, $1.08 on a 14-month, and $1.12 on a 15-month interval to get the same amount of milk. Cutting production costs by 8 to 12 percent can mean the difference between profit and loss to many dairymen.

Profit From Milk

Labor income from milk (a dairyman's profit for his labor) is squeezed whenever milk production decreases and production costs increase. Again, the percentage values in the table can help you estimate your losses.

Figure Your Own Loss

Poor breeding efficiency results in less milk, fewer calves, and a smaller profit. The precent efficiency values in the table show the relative size of losses due to extended calving intervals of cows (A) milked only 305 days regardless of how long they must stand dry, and (B) milked up to 60 days before calving. You can use these percent efficiency values to estimate your own losses.

Effect of calving interval on production efficiency

Efficiency measure	Days milked*	Average calving interval, months — percent efficiency 12	13	14	15
Milk per cow:	(A)	100	99	90	86
	(B)	100	103	100	98
Profit for labor:	(A)	100	98	81	72
	(B)	100	106	100	96
Size of calf crop:	(A)	100	92	86	80
	(B)	100	92	86	80

* (A) Cows dried off at 305 days regardless of how long they must stand dry.

(B) Cows maintained profitable production and were milked up to 60 days before having their next calf.

Example:

If your labor income from milk last year was $5,000 on a 14-month calving interval, it would have been about $6,172 ($5,000 ÷ .81) on a 12-month calving schedule. This means an increase in net profit of $1,172.

To a dairyman with about a 13,000 pound DHIA* herd average, the difference between a 12- and 14-month calving interval can mean the difference between working for $2.10 or $2.52 per hour.

Calf Crop

Fewer calves are born in herds with poor reproductive performance. The size and quality of the calf crop affects both current and future profits. Reproductive failures reduce current profits because there are fewer calves to market for cash and too many cows to sell for slaughter. Future profits are limited because fewer herd replacements will be available to replace low-producing cows in the herd.

The genetic improvement of a herd depends on how many poor cows can be replaced by better ones. Herd replacements sired by well-proven bulls will be superior to poor producers that should be culled. A smaller crop of herd replacements and forced culling for reproductive failures, mastitis, etc., will limit the number of low producers that can be culled each year, thereby slowing down genetic progress.

You can easily estimate your calf crop losses from the calf crop efficiency values in the table.

Example:

A 40-cow herd on a 14-month calving interval has an 86-percent calf crop, or 34 calves born per year (40 × .86); this means a normal loss of 3 heifer and 3 bull calves a year.

If the heifers are worth $60 apiece and the males $20, the loss is $240 per year.

Two years from now three poor cows will be kept because these three heifers are not available for replacements. This means future herd improvement will be reduced by about 200 pounds of milk per cow. For a 40-cow herd that is (40 × 200) 8,000 pounds of milk. At $4.40 per cwt. for milk, the future loss is $352 in 1 year's milk receipts.

Savings Possible

Not all of the losses due to poor breeding efficiency can be avoided. But an average calving interval of 12½ to 13 months will reduce major losses and can be achieved for a herd. The table illustrates some of the savings possible for a 40-cow herd with 305-day lactations. Successful dairymen apply sound breeding, feeding, and management practices to obtain regular calving intervals, longer periods of profitable production, larger calf crops, and more profit.

Effect of calving interval on annual performance of a 40-cow herd

Return per year	Average calving interval, months 12	13	14	15
Pounds of milk per cow	12,800	12,670	11,560	10,992
Profit: Labor income	$7,479	$7,300	$6,018	$5,395
Hourly wage	$2.52	$2.49	$2.10	$1.89
Number of calves born	40	37	34	32

Tips for More Profit From Better Breeding Efficiency

1. Observe heats closely. For best results watch for heats twice each day and breed 6 to 18 hours after standing heat.

2. Breed between 60 and 90 days after calving. Never breed before 60 days.

3. Control reproductive diseases such as brucellosis, vibriosis, trichomoniasis, leptospirosis, and other possible disease, through vaccination, use of artificial insemination and the services of a competent veterinarian to routinely examine for pregnancy and to treat problem breeders.

4. Provide a good feeding and management program so that heifers are large enough to breed at 15 months of age and problem breeders keep producing profitably up to 60 days before calving.

5. Keep and use accurate and complete breeding records for each cow. Include all heat dates, services, sires used, calving dates, and any abnormal conditions.

Reducing Reproductive Failures Will . . .

—Increase milk production by avoiding extended periods of low production and idle cow-days from long dry periods and late entry into the milking herd.

—Increase the size of calf crop, thus speeding the genetic improvement of the herd by having more herd replacements, and increase income with more calves to market for cash.

—Increase labor return and reduce the cost of producing milk.

—Permit more cows to be culled for low production, fewer for reproductive failures.

—Allow you to take advantage of high milk prices; regular calving intervals allow you to maintain peak production periods when demand for milk is greatest.

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Issued in furtherance of cooperative extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, in cooperation with the U. S. Department of Agriculture. Luther J. Pickrel, Director of Agricultural Extension Service, University of Minnesota, St. Paul, Minn. 55101.
10M—4-67