

## How to Maximize Income By Managing Days Dry

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There are benefits to maintaining the optimum calving interval. This publication suggests ways to accomplish this reproductive management technique.

Most dairy producers are aware that an optimum calving interval is 365 days. This is a normal lactation length of 305 days with a dry period of 60 days. This interval is often looked at as a goal to strive toward rather than a goal that must be reached to maximize income from the sale of milk.

Many factors play a part in proper reproductive management of a dairy herd. To maintain a 365-day calving interval:

1. Have a routine herd health program in effect so all cows are checked to be certain that their reproductive organs are in condition for breeding.
2. Begin to breed cows at first observed heat 50 days after freshening.
3. Have a routine and effective heat diagnosis program so cows are observed in heat and can be readily bred.
4. Be certain that proper artificial insemination techniques are followed so they are not the limiting factor in maintaining an optimum calving interval. If you are uncertain of the A.I. technique used, attend a refresher course offered by most large A.I. firms in the state.
5. Have cows checked for pregnancy 30-60 days after breeding to be certain that conception has taken place, and if not, heat observation and breeding can be resumed. Excessively long calving intervals will result if cows are not checked for pregnancy.
6. Follow a nutrition program that will allow cows to cycle regularly and replenish body reserves depleted by the stress of peak production. Feeding a complete balanced ration and having your forages analyzed play an integral part in maintaining optimum production and herd health. Overfeeding energy to poor producers or underfeeding high producers can affect reproductive performance as well as reduce income from the sale of milk and increase feed costs.

Properly managing days dry includes carefully managing the entire dairy program from feeding, breeding, herd health and reproductive monitoring. The average number of days dry can be a good indicator of how well your entire dairy operation is functioning. Let's look at how the number of days dry can influence the amount of milk produced and directly influence income to your dairy enterprise.

### Effect of Days Dry

An extensive study by Keown and Everett at Cornell University looked at the amount of milk produced by cows in subsequent lactations by various days dry categories. The study included 305,237 first-lactation records on cows that had a second record, 226,313 second-lactation records on cows with a third lactation record, and 157,498 third-lactation records on cows that had a fourth lactation. *Table I* presents the various increases in milk production in subsequent lactations for different numbers of days dry.

**Table I. Increase in actual 305-day milk production (lbs) in subsequent lactations for various categories of days dry between paired lactations.**

Days dry	Dry Periods Between Lactations (lb. milk) <sup>a</sup>		
	1 - 2	2 - 3	3 - 4
0-20	0	0	0
21-30	20	1204	930
31-40	508	2002	1863
41-50	884	2418	2321
51-60	1061	2572	2495
61-70	1132	2601	2508
71-80	1174	2623	2557
81-90	1209	2645	2572
91-100	1306	2721	2603
101-110	1333	2809	2639
111-120	1459	2849	2623
121-130	1445	2939	2871
131-140	1567	2959	2891
141-150	1642	3010	2970
151-160	1708	3218	3107
161-170	1748	3218	3151
171-180	1880	3423	3401
> or = 181	2104	3556	3538

<sup>a</sup>Additional milk from increasing dry days.

*Table I* shows that a cow with 0-20 days dry between the first and second lactation would not give any additional milk in her second lactation over her first. Likewise a cow dry for 21-30 days would give an additional 20 pounds of milk in her second lactation. For all lactations, 51-60 days dry is the point at which the rate of increase in subsequent lactation production no longer is economical considering the additional days dry. Additional days dry may not produce enough extra milk to compensate for feeding costs or maximize production per day of herd life.

Use *Table I* to figure out how much extra milk a cow can be expected to produce in her following lactation when preceded by a given dry period.

For example, if a herd has a 110-day dry period for first-lactation animals, then these cows would produce 272 lbs (1,333 lbs to 1,061 lbs) more milk in second, than first lactation animals open for 60 days. This extra milk income must be offset by housing and feed costs to keep the cattle dry for an additional 50 days.

The income from selling 272 lbs of 3.5 percent milk would be less than \$30. The extra income would not offset the additional expenses of approximately \$2 per day (a conservative estimate) to house and feed a dry cow. In fact, a producer loses about \$70 (\$100-\$300) by keeping a first-lactation cow dry for an additional 50 days over the optimum 60-day period.

Take your average number of days dry and figure the amount of income you are losing for your herd's situation by using the following calculations.

### How to Estimate Your Losses for Your Herd Situation

Enter your days dry for first lactation animals

\_\_\_\_\_ A

Take figure from *Table I* for your days dry

\_\_\_\_\_ B

Optimum days dry 51-60 days 1,061 lbs C

Subtract C from B = \_\_\_\_\_ lb D.

Multiply C × 0.11 (Price for 1 lb milk) = \$ \_\_\_\_\_ E

Your days dry (A - 60) × \$2/day for feed and housing =

\$ \_\_\_\_\_ F

Subtract (F-E) × number of first lactation animals =

\$ \_\_\_\_\_. This is your estimate of the loss for days dry for first lactation animals.

Similar figures can be calculated for second and third lactation animals using the figures in *Table I*. Once these three figures are added together you have estimated your economic losses for one management practice, that of days dry. The costs can be substantial.

### Conclusions

Looking at your herd's average number of days dry is a good indicator of how well your breeding management program is working. Average days dry in excess of 50 to 60 can be attributed to inadequate nutrition, herd health or reproductive problems. If days dry are significantly over 60 days, then a complete analysis of your herd's overall management system may be in order.

Additional dairy information can be found at: [www.nebraskadairy.unl.edu](http://www.nebraskadairy.unl.edu).

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