CALVING EASE

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GROWTH RATE GOALS FOR WEANED HEIFERS

From a cash-flow point of view, the sooner a heifer enters the milking herd the better. We've all heard recommendations to get our average age at first calving lower. Some recommend 24 months. Others recommend earlier.

The hard facts of arithmetic cannot be escaped. The only way a 90 pound heifer calf can weight 1400 pounds prior to calving at 2 years (730 days) is to gain an average of 1.8 pounds daily.

No animal is going to gain the same amount every day for two years. Some days will be less than a pound. Others may be over 2 pounds. Are there periods in a heifer's life when it's not desirable to gain too rapidly?

Can Prepubertal Heifers be Pushed Too Hard?

The answer to this question is not clear. Why? The biology of growth is amazingly complex. Research has established that roughly between 3 and 12 months of age prepubertal heifers' mammary tissue grows at a rate much faster than the rest of her body. Other research has demonstrated that this mammary tissue growth rate and composition can be influenced by the quantity and quality of the heifers' feed.

Plainly stated, by pushing heifers too hard for rapid growth at this age can impair their ability to produce milk later in life. Excessive rates of growth apparently have a negative influence on the composition of the developing mammary tissue. Research is, however, unclear about what is "too hard."

WHAT GROWTH GOALS MAKE SENSE?

Three recently published studies (Hoffman and Others; Van Amburg and Others; and Waldo and Others) may give use some ideas. First, low growth rates around

1.1 to 1.3 pounds per day only put us in a bad cash-flow situation. Heifers aren't ready to breed until 16 to 20 months and don't calve until 25 to 29 months of age.

Second, extremely high growth rates around 2.2 to 2.6 pounds per day seem to be associated with high risk. Heifers calving between 17 and 20 months of age present a whole set of problems most of us are poorly equipped to solve successfully. This does not include potential negative effects of these growth rates for heifers between 3 and 12 months of age on their milk production later in life.

Third, choosing growth goals for prepubertal heifers somewhere 1.3 and 2.0 pounds per day appears to be the real arena of choice. The 1989 National Research Council recommendations are for about 1.8 pounds per day. In our reading, all three of the recently published research findings suggest that growth rates slightly below and above this 1.8 level have no negative effects on subsequent milk production. This has been demonstrated not only for the first but also the second lactation.

Fourth, gains of 1.7 to 1.9 pounds per day in the prepubertal period doesn't really pay off unless we have a good postpubertal management program in place. For example, what good does it do to have one's heifers ready to breed AI at 13 months if heat detection is only 30 percent effective? All you get are huge, 26-month old heifers that were bred late that have awful calving problems. Or, what good does it do to get heifers bred at 14 months if they only gain 1 pounds a day until calving due to an inadequate ration? All you get are heifers 1100 pounds precalving that have post-calving body score of 2.5.

NEEDED: AN INTEGRATED HEIFER MANAGEMENT PROGRAM

On one hand, it's great to set a realistic growth-rate goal for one's prepubertal heifers. Even better we could resolve to measure them periodically to check on accomplishments. On the other hand, excellent management during the prepubertal period pay the best returns only when combined with good breeding and feeding management in the postpubertal period, too.

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