



Ridin' Herd

► by Rick Rasby, Extension beef specialist, University of Nebraska

Managing body condition is key to success

Many times I have discussed the importance of managing the body condition of your cow herd. Body condition at calving for spring-calving cows has a major effect on reproductive performance during the next breeding season. Cows and first-calf females in good body condition at calving [body condition score (BCS) 5 for cows and BCS 6 for first-calf females] will resume estrous cycles and breed early in the breeding season. How cows are managed late in the grazing season will have a major effect on their body condition as they enter the winter.

Time of weaning

Lactation has a major effect on how nutrients are partitioned in the beef cow. Until the diet meets and exceeds a cow's nutrient requirement for lactation, nutrients will not be partitioned to other activities, such as replenishing body energy reserves. The balance between available nutrient (feed) resources and level of milk production is critical. Too much milk matched with medium- to low-quality feed resources results in a cow herd that you are constantly trying to catch up in body condition.

When feed resources and milk-producing ability for mature cows are matched in an ideal production system, cows will be a little thin at weaning. Once the calves are weaned, and that nutrient demand for lactation is removed, cows should begin to gain back body condition in about 45 days. In this ideal production system, cows would be in BCS 5 going into the winter without any supplementation. However, if weaning occurs late in the grazing season for spring-

calving cows and grass resources decrease rapidly such that quality is low, then gaining back body condition will be a challenge without some supplementation.

The challenge is spring-calving, first-calf females and managing body condition of this group without a lot of supplementation. These females are the ones that are likely to be thin in the fall at weaning. Body condition is critical for this group of females, and it affects their stayability in the cow herd.

Because they have not reached maturity, you are working with a smaller rumen compared to mature cows. This is the major reason why quality of the diet is so important. As we all know, warm-season pasture quality decreases as the season changes from summer into fall. This is a critical time of the year to manage condition of young cows.

At the University of Nebraska's Gudmundsen Sandhills Laboratory, located in the heart of the Sandhills of Nebraska, we conducted an experiment to look at the effect of weaning date of March-born calves

on cow BCS change. The primary grass resource at this location is warm-season native pasture. Its nutrient quality peaks in late May and early June and begins to decline rapidly in August. We began weaning the March-born calves in mid-August and weaned every two weeks until the end of November (see Fig. 1).

The Y axis indicates change in BCS; the graph indicates that on Aug. 18, cows were 0.4 BCS above the average. The relationship between weaning date and BCS change appears to be highly correlated ($r^2 = 0.95$), and it appears to be linear (or a straight line) from Aug. 18 to Nov. 24. Also, the slope of the line is negative. This means that for every two weeks that weaning is delayed past Aug. 18, there is a 0.1 unit decrease in BCS.

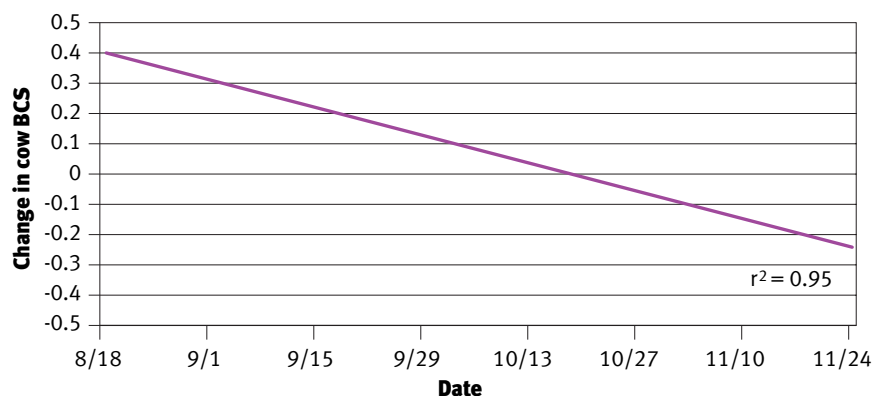
In addition to the effect of weaning date on cow body condition, the data in this same experiment suggest that calf weight increased until Oct. 13 at the same time that cow BCS decreased. After Oct. 13, calf gain was minimal as cow BCS continued to decrease. Knowing this information can allow you to manage the body condition of young, lactating females and more closely predict the effect of delaying weaning. In some management systems, it may be economical to strategically wean calves from first-calf cows before the mature cows at a specific time of the grazing season to get condition back on them using the grass resource instead of waiting later in the grazing season when supplementation is likely to be needed.

Partial weaning

One management technique that, in theory, puts condition back on young females and reduces the stress on the calf is to wean the calf for a period of time to dry up the dam, then reintroduce the calf to its dam. This technique, if successful, would reduce the stress on the calf, because it is back with its nonlactating dam, and allow the cow to gain back body condition, as she is no longer lactating.

We have weaned calves for 4 days, 8 days and 12 days, then turned the calves and dams back together. Calves weaned at 4, 8 and 12 days all mothered up and began suckling their dams. We measured milk production, and all cows, regardless of calf removal length, produced milk after the

Fig. 1: Effect of weaning date on change in cow body condition score



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calves were returned. Milk composition didn't change much depending on whether cows had their calves weaned for 4 or 8 days.

But when calves were weaned for 12 days, milk composition was slightly different, indicating that the cows that had their calves weaned for 12 days were beginning to dry up. It appears to me that to use this management technique, calves would need to be weaned from their dam for at least 30 days for the dam to dry up before dam and calf could be commingled.

Final thoughts

I write a lot about managing young females in a beef production system. To me they are the most challenging group of females in a cow herd, and most of my calls from producers are in regard to this set of females. I don't want to provide a "false" feed environment for them, and the management practices that have been discussed in this column don't do that.

If you have been diligent in your breeding program and selection of genetics that fit your feed resources, then paying close attention to young cow management to provide them an opportunity to be a productive part of the herd as mature cows is

not providing a false feed environment. The challenge with the young female from a nutritional perspective is the small rumen capacity and the quality of the feed resource available at certain times of the year.



E-MAIL: rrasby@unlnotes.unl.edu

Editor's Note: "Ridin' Herd" is a monthly column written by Rick Rasby, professor of animal science at the University of Nebraska. The column focuses on beef nutrition and its effects on performance and profitability.