



Ridin' Herd

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

Weaning is a powerful management tool

Reproductive performance is a critical key for profit potential for the cow-calf enterprise. Body condition score (BCS) at calving, at least for spring-calving cows, affects how quickly a beef cow resumes estrous cycles after calving and when she gets pregnant during the next breeding season. Body condition at calving can be affected by feeding and supplementation strategies. In areas where forage quantity is not adequate for late summer and fall grazing, weaning could be a management practice, especially for young cows raising their first calf, to manage body condition.

How early can calves be weaned?

The dairy industry has successfully weaned calves at very young ages. Calves weaned at these young ages require special facilities.

In a beef calf context, the rumen of a newborn lacks the symbiotic microbial population that enables adult cattle to process forage fiber via fermentation digestion. Rumen development proceeds rapidly once solid food consumption begins. Research suggests spring-born calves consume significant amounts of native range forage at 45 days of age.

There are a number of items to consider prior to early weaning calves. Calves can adapt quickly to the change in environment and diet if a management plan has been carefully developed. Regardless of weaning age, calves that start eating dry feed immediately after separation from their dam have fewer incidences of morbidity and mortality than calves that do not eat for 24-48 hours after separation.

Bunk and waterer height need to accommodate the smaller calf. Offering a creep feed three to four weeks prior to weaning will help calves adjust to eating

processed feeds and make the weaning transition period less stressful. Creep-feeding in this manner will “bunk-break” the calves and will teach them to eat.

Fenceline weaning

Stress is the No. 1 issue affecting calf performance at weaning. Calves are being removed from their dams and a herd social structure in which they were comfortable. Also, the calves are often being moved into a different environment with new feed and water sources.

Fenceline weaning calves is a method to reduce calf stress at weaning. This weaning method prevents the calves from nursing while still giving the calf social contact with its dam. This gradual process helps calves begin the transition to being on their own and part of a new herd.

Fenceline weaning:

- allows both cows and calves to spread out along the fence
- minimizes dust by using adjacent pastures
- leaves calves in the pasture they are

used to being in and moves cows to the adjacent pasture; and

- provides feed and water resources for the calves that are familiar and close to the fence.

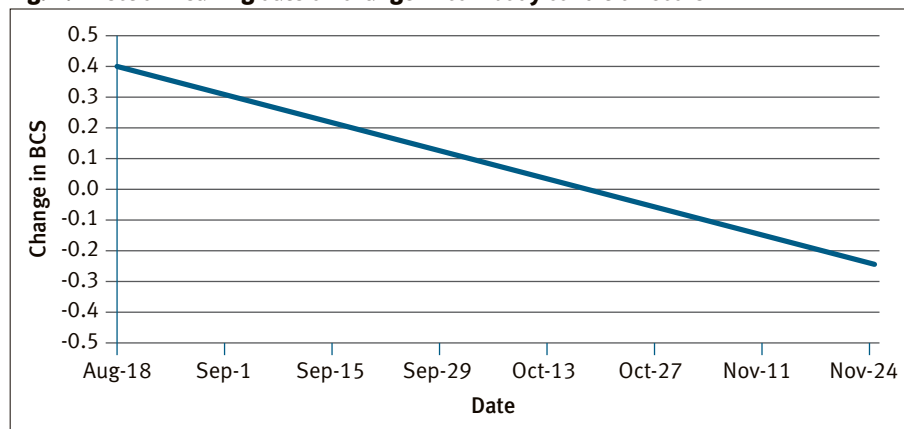
Consider supplementing calves while they are still with their dams beginning two weeks before fenceline weaning. This will accomplish a couple of things; calves will learn to eat a supplement and calves will get accustomed to the vehicle that delivers the supplement, which will help if calves need to be gathered and moved.

A number of studies have shown calves that were fenceline weaned have lower incidents of sickness compared to their contemporaries that were hard weaned and immediately separated from visual and audio contact with their dams.

Partial weaning and re-introduction of calf and dam

One management technique to gain condition back on beef females and reduce 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 non-lactating dam, and allow the cow to gain back body condition as she is no longer lactating. In an experiment, calves were weaned for 4 days, 8 days, and 12 days then the calves and dams were turned back together. Calves weaned at 4 days, 8 days, and 12 days all “mothered up” and began suckling their dams. Milk production was measured and all cows that had their calves weaned 4 days, 8 days, and 12 days produced milk after the 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 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 can be commingled.

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



The effect on beef cows

Early weaning the calf significantly reduces

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the nutrient demands placed on the cow and more closely matches her requirements to nutrients supplied under drought or poor range conditions. Removing the calf early improves body condition, which has the potential to carry over through the winter, causing increased body condition at calving that is also evident during the next breeding season.

At our Gudmundsen Sandhills Laboratory, located in the heart of the Sandhills of Nebraska, they weaned March-born calves in mid-August and weaned every two weeks until the end of November (see Fig. 1). On Aug. 18, cows were 0.4 of a BCS unit above the average (y axis or vertical axis). The relationship between weaning

date and body condition score change is highly correlated ($r^2 = 0.95$) and is linear, or a straight line, from Aug. 18 to Nov. 24, and the slope of the line is negative. This means that for every two weeks that weaning is delayed past Aug. 18, there is 0.1 of a unit decrease in BCS. In addition to the effect of weaning date on cow body condition, the data in this same experiment suggests that calf weight increased up 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 producers to manage BCS and more closely predict the impact of delaying weaning.

Final comments

Reproductive performance of beef cows is impacted by body condition score at

calving. Producers should target spring-calving cows to calve in a body condition of 5 and for first-calvers a condition score of 6. Determine the most economical strategy to get beef females in adequate body condition. When calves are separated from their dams impacts body condition and can be used as a tool to manage body condition. Explore management strategies to minimize stress on the calf. Fenceline weaning is a proven management strategy that reduces stress on the calf.



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