



Ridin' Herd

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

Managing first-calf beef females after calving

Calving season is upon us. You've spent a lot of time selecting, managing and designing a breeding program for the females that are calving for the first time. If the replacements were selected from your herd, these heifers haven't generated any income for almost two and a half years when they wean their first calf. Skimping on the groceries for first-calf females after calving is not a place to save on feed costs.

Feeding first-calf females

First-calf females in a beef enterprise are a challenging group. Although they may represent some new genetics as future brood cows, they require more labor and higher-quality feeds, and they reward your efforts by weaning the lightest group of calves in the herd.

We know this is temporary, because if we've done our homework with due diligence, they will reward us by being productive cows for a long time. That means each and every year they get pregnant and wean a calf that performs well in the feedlot or has the potential to be a productive female if selected as a replacement.

However, if first-calf females are not managed nutritionally, they simply do not get pregnant again. There are more than two years of expenses incurred with only one calf and her as a cull to generate income from that unit.

A challenge is providing a high-quality diet to these females after calving. Many times producers concentrate on making sure that their protein needs are met. In many feeding situations, the energy needs are not met after calving, and the first-calf females lose weight and body condition from the time of calving to the start of the breeding season. Research data would support that first-calvers that lose weight and body condition from calving to the beginning of the breeding season either get pregnant late in the breeding season or fail to get pregnant.

If you look at the pounds of protein or energy needed by the first-calf female

compared to a mature cow at the same stage of gestation or lactation, they are not all that different. However, if you look at the percent of the diet that needs to be protein or energy between these two groups of females, there is a big difference.

Lower intake

The primary reason for the difference is the amount of feed/forage that they can eat. If the forage is being fed to the first-calvers and mature cows, the mature cow has a larger rumen, therefore intake is greater. The point of this discussion is that with young females, the rumen is smaller compared to a mature cow. Wow, that makes sense.

Although the pounds of a nutrient needed may not be much different, the diet quality needed to meet their nutrient requirements is much different. This is a primary reason why, beginning at least three weeks before calving, first-calvers need to be managed and fed separate from mature cows and the diet quality needs to be greater.

Research conducted at the University of Nebraska by Tim Loy and reported in the *2004 Nebraska Beef Report* indicates that as the first-calf heifer is within three weeks of calving, she experiences a 17% decrease in daily feed intake. These data further illustrate the need to separate first-calf heifers from mature cows beginning at least three weeks before the start of the calving season. These data also suggest the nutrient density of the diet has to be high because intake is restricted. Intake is re-established to more "normal" levels by about one week postcalving.

The reduction in feed intake is not yet understood. The most logical explanation

would be that the fetus has increased in size and takes space that the rumen would normally occupy. Another explanation could be that hormones being produced late in gestation affect appetite.

Nutrient density

The *2000 Nutrient Requirements for Beef Cattle* resource indicates that first-calf females postcalving need to consume a diet that is between 62% and 64% total digestible

nutrients (TDN) and 10% to 11% crude protein (CP), depending on level of milk production. These nutrient densities also assume that females are being fed to maintain body condition postcalving, not trying to increase body condition.

If meadow hay tests 58% TDN and 12% CP, prairie hay tests 54% TDN and 6.5% CP, bromegrass hay is 58% TDN and 11% CP, and early-bloom alfalfa is 60% TDN and 20% CP, feeding a combination of these feeds

or any of these feeds individually will not meet the first-calf female's energy (TDN) needs. Additionally, some of these forages will not meet her protein needs.

A high-energy feed will need to be supplemented. Corn, distillers' grains, 20% cube and silage may be choices. If corn is chosen as the supplemental energy source, make sure protein is adequate in the ration. If the forage quality is average or better, then 3 pounds (lb.) to 4 lb. per head per day of corn should be enough to meet the energy needs.

As a final point to think about, developing heifers so they calve for their first time during the first 21 days of the calving season affects future productivity. Researchers analyzed the impact of when a heifer calves during her first calving season (either first, second or third 21-day period) and the number of years she remains in the herd before being culled for reproductive reasons. It was determined heifers that calve during the first 21-day period of their first calving season had increased longevity (remained in the herd more years before being culled)

Feed costs are the greatest annual expense of a cow-calf enterprise. The young beef female poses challenges, but she is the future of your cow herd.



compared to heifers that calved for their first time during the second or later 21-day calving periods.

Cow longevity is important for commercial cow-calf producers. Increasing longevity reduces the need for replacement females, reduces labor, reduces the need for high-quality feeds, increases weaning weight, and increases the number of offspring that are available to be marketed to generate revenue. In addition, through six calvings, heifers calving in the first 21 days of their

first calving season weaned heavier calves compared to calves from dams that calved during the second or third 21-day period of their first calving season.

Final thoughts

Feed costs are the greatest annual expense of a cow-calf enterprise. The young beef female poses challenges, but she is the future of your cow herd. Don't skimp on the energy, especially after calving. First-calf females have enough challenges between calving and

the beginning of the breeding season. Don't overfeed her, but give her an opportunity to be a productive part of the herd.



EMAIL: rrasby1@unl.edu

Editor's Note: Rick Rasby is a beef specialist with the University of Nebraska.