



Ridin' Herd

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

Give them a little extra

Most of the cow herds in the Midwest calve in the spring, prior to vegetative forage. To cover the gap, harvested forages such as hay or alfalfa are commonly fed. Quality of harvested forages can vary based on type and maturity at harvest. The major factor that influences forage quality is maturity at harvest.

Feeding first-calf females

Nutrition after calving is important to the cow herd, especially first-calf females. Many times producers do a good job of meeting the protein needs of the first-calf female in early lactation, but in many feeding situations they do not meet their nutrient need for energy. After calving, there should be three feeding groups: mature cows, first-calf females and the group of replacement heifers being developed.

The most challenging group of females in the cow herd is comprised of first-calf females postcalving. Their nutrient requirements are high because they are lactating, repairing their reproductive tract to get ready for their next pregnancy and still trying to grow.

These females should be calved in a body condition score (BCS) 6 (1 = thin and emaciated; 9 = obese) as compared to a BCS 5 for the rest of the cow herd.

Fig. 1 illustrates the effect of body condition on the postpartum anestrous interval, the interval from calving to first estrus (heat), in heifers. Heifers that calve in a BCS greater than 5 and that are able to

maintain body condition postcalving have a very acceptable pregnancy rate. Heifers that calve at a BCS less than 5 and that are fed to increase body condition postcalving achieve an unacceptable pregnancy rate during their second breeding season.

The interesting part of Fig. 1 is that heifers calved for their first time in a BCS greater than 5 and fed to increase body condition after calving have, on average, only about a 3 percentage unit increase in pregnancy rate as compared to heifers calving in a BCS greater than 5 and fed to maintain condition after calving. Many times the extra feed fed to increase condition score after calving goes into milk production and is not used to increase body condition.

The 1996 *Nutrient Requirements for Beef Cattle* 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 you have meadow hay that tests 58% TDN and 12% CP, prairie hay that tests 54% TDN and 6.5% CP, bromegrass hay that is 58% TDN and 11% CP, or early-bloom alfalfa at 60% TDN and 20% CP, feeding a combination of these feeds, or any of these feeds individually, for sure will not meet the first-calf female's energy (TDN) needs. Some of these forages will not meet their protein needs either.

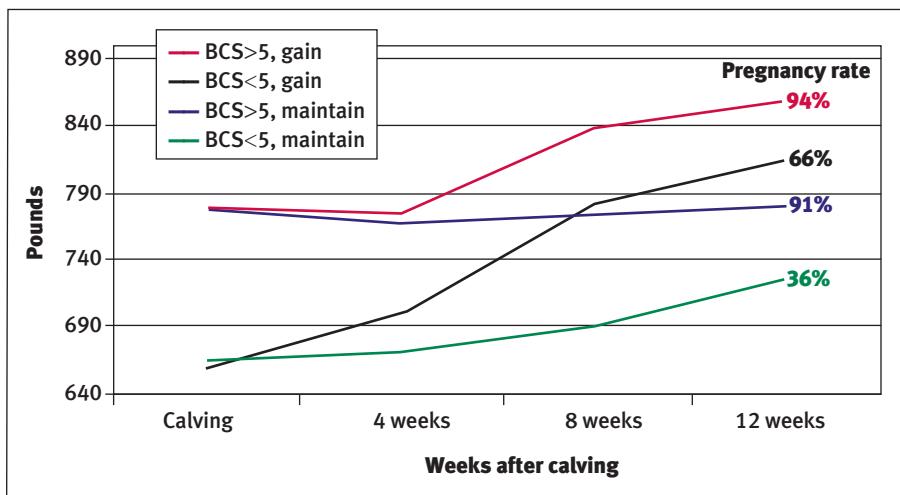
Based on the information given in the previous paragraph, a feed that is high in energy will need to be added to the diet to meet the TDN needs. There are a number of feeds that will fit nicely into these diets depending on where you are located — corn grain, corn silage, distillers' grains (DG), corn gluten feed, wheat midds or soy hulls, just to name a few.

The grain byproducts (distillers' grains, gluten feed, wheat midds and soy hulls) fit nicely, because they don't have a negative interaction with forage digestion. If you had the bromegrass hay and had access to dried distillers' grains (DDGs) and the heifers after calving weighed about 1,000 pounds (lb.), then about 23 lb. per head per day of the bromegrass hay and 3 lb. per head per day of DDG would meet both the protein and energy needs. If both these feeds are about 90% dry matter (DM), these females will be consuming about 2.3%-2.4% of their body weight, which is well within the intake capabilities of these females.

When feeding these kinds of rations, make sure all females have access to their fair share. Also, you could feed the hay through a bale processor or in a round-bale feeder and offer the energy source in a bunk or fed on frozen ground. Feeding losses on frozen ground are minimal. If you do feed supplement on frozen ground, feeding next to a fence on a slight uphill slope would eliminate cows walking on the supplement.

Remember that the first-calf female has a smaller rumen than that of the mature cow. Because of this, nutrient quality of the diet is very important, and low-quality feeds likely do not fit into these rations. As always, sample and test forages for quality. Target the high-quality forages for the first-calf females after calving and for the developing replacement heifers.

Fig. 1: Heifer weights at and after calving and pregnancy rates



When following this strategy, less supplemental feeds will need to be purchased. Salt and fresh water are important. Vitamin and mineral supplementation need to be adjusted based on diet ingredients.

Final thoughts

Managing and feeding first-calf females can be a challenge. Because of their high energy needs, they need to be separated from the mature cows.

Also, in a herd there is a pecking order, and young females are usually at the bottom and most times get cheated out of some of

the feed. Body condition is important for future reproductive performance. The most difficult time to get a beef female pregnant is during her second breeding season. They will need extra energy after calving to help them remain in the herd.

Protein needs are important, but I think producers do a pretty good job of meeting the protein needs of beef females both before and after calving. Remember, these first-calf females are still growing along with all the other things associated with being a first-time mama cow. Supplements can be expensive, so convert them to a 100% DM basis and compare and price them on a

price-per-nutrient (TDN, CP, etc.) basis. I don't believe in babying these females, but at least give them a chance to be a productive part of your cow herd.



E-MAIL: [rzasby@unlnotes.unl.edu](mailto: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.