

# Nutritional Considerations Going into Calving

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As we start 2024, many beef cattle producers are about to start the calving season. Across the state, forage availability is variable. Some places have seen severe drought in late summer/early fall, causing producers to feed more hay and deplete their winter hay supply. Many producers were able to put up plenty of hay. However, we have received several emails and phone calls dealing with hay quality being lower than expected this year. Entering the peak of hay feeding season, here are a few situations we are seeing, and the potential ramifications.

1. I will restrict feed in the last trimester to decrease calf birth weights.
2. I need more protein to go with my hay.
3. There is a tendency to underestimate crude protein and overestimate energy.

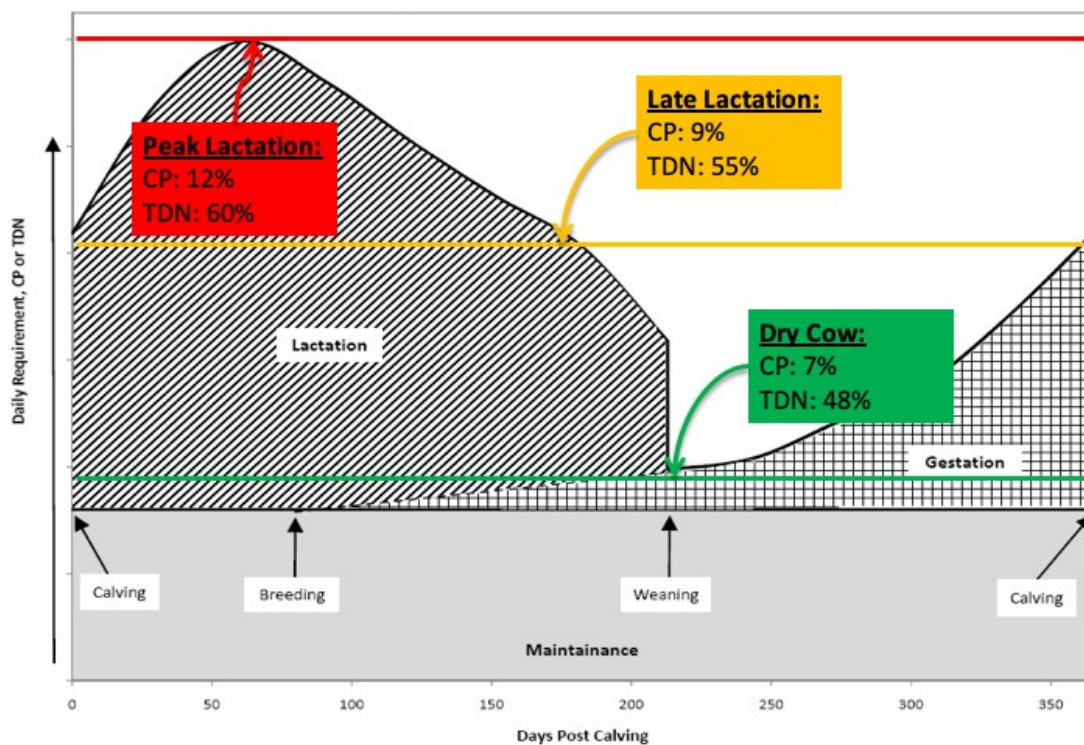
## **I will restrict feed in the last trimester to decrease calf birth weights.**

Is this correct? Absolutely! The problem is that is not the only thing it will affect. Recent research has focused on fetal programming. Fetal programming is the concept that maternal stimulus or insult during fetal development has long-term effects on the offspring. One of the most critical aspects of fetal programming involves adequate nutrition, or lack thereof, for the dam. Research has shown minimal impact on calf birth weights, however restricted nutrition during the last trimester decreased weaning weights, finishing weights, and hot carcass weights. Additionally, research from Nebraska indicated that heifers from nutritionally restricted cows reached puberty 14 days later than those with proper nutrition.

## **I need more protein to go with my hay.**

Is this correct? Possibly, however protein is only half of the equation. From April 1 to December 1 of this year, 924 bermudagrass hay samples and 151 fescue hay samples were submitted to the UGA lab. The mean crude protein (CP) and energy (TDN) values were 10.6% and 54.1%, respectively for bermudagrass, and 10.6% and 54.9%, respectively for fescue. **Figure 1** represents the CP and TDN requirements of brood cow throughout the production year. As you can see, as cows are entering the final trimester, their CP requirement is exceeded by the average bermudagrass and fescue sample, but the energy





**Figure 1.** The nutrient requirement of a mature brood cow through a 365-day calving interval.

requirement falls short for bermudagrass. More importantly, there is a slight deficiency for CP for peak lactation but falls tremendously short for TDN.

**There is a tendency to underestimate crude protein and overestimate energy.** The cheapest money you will ever spend in a beef cattle operation is a forage test, guaranteed!!! In a recent Master Cattlemen's Program, free forage testing was offered to participants along with a survey asking producers to estimate what they thought the quality of the hay was (prior to testing). This survey resulted in 83% of producers under estimating the protein of their hay compared to the actual. This would result in the purchasing protein supplement when not needed. For energy, 50% over estimated energy. This would result in depriving needed energy during late gestation and early lactation. In addition to the previously discussed fetal programming issues, this could also cause delayed breeding. An actual example of over estimation of energy is illustrated in **Figure 2**. The over estimation could likely result in breeding delayed 42 days. The resulting loss in weaning weight could easily reach 80 lb, resulting in an approximate \$176 decrease in





**Figure 2.** Actual example of over estimating energy.

**Example of over-estimation energy for 25 cows:**

- Estimated TDN: 60% ACTUAL TDN: 55.5%  
DIFFERENCE: 4.5%
- No feed – cows lose condition, slip 2 cycles
- Calf is ~80lb lighter than contemporaries/expected WW
- At \$2.20/lb, **\$-176/calf**

**IF ONLY I'D KNOWN...**

- \$25 for forage test (\$1/cow)
- 4 lb/d of Corn Gluten for 60 days (\$300/ton) = **\$36 TOTAL**
- **\$36 investment/cow returns \$179/cow**
- X 25 cows = **\$3,575 return on investment!!!!**

value per calf. Through forage testing, the producer would know to feed 4 lb/d of a supplement such as corn gluten feed. Based on a 25-cow herd, this could easily return \$3,575 above cost. That is a no-brainer!

Brood cow nutrition is a crucial part of a beef cattle operation. Between fetal programming and maintaining the proper calving interval, it is imperative for producers to pay close attention to the nutrients available in their forages, and if they meet the requirements of their herd. If you have any questions on nutrition, hay testing, or developing winter feeding strategies, contact your local Cooperative Extension office ([extension.uga.edu](http://extension.uga.edu), or 1-800-ASK-UGA-1).



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