The timing of corn-residue grazing can coincide well with stockpiling forages.

by Brad White, Kansas State University Beef Cattle Institute

Running out of gas in a vehicle: How many of us have done it? (Or at least, how many will admit to it?) Obviously, this is avoidable by watching the gas gauge more closely before it goes all the way to "E." Once you have run out of gas, you tend to watch the gauge more carefully and fill up before it gets too low.

Monitoring cow nutrition through the winter is similar. We just need to know which gauges to watch and what actions to take when things start to change.

Hay feeding is one of the major variable costs associated with cow-calf operations. Multiple methods to minimize hay wastage have been discussed, including appropriate storage, bale feeder types and feeding methods (e.g., limit-feeding).

While all of these should be implemented, we are going to focus on creating a feeding strategy and matching hay feeding to cattle requirements.

Assess hay supply

Our hay-feeding strategy should be based on a current assessment of feed and cattle inventory. Hay type and amount available will affect the overall feeding strategy, and matching the hay quality to the nutritional needs of cattle is important. Often, the hay supply is not of equal quality and may need to be distributed to cows at different times based on their stage of production.

Cows in mid-gestation have the lowest energy requirements, and while their needs increase in the third trimester of pregnancy, these needs are still lower than the needs of lactating cows. This means pregnancy is often a good time to supplement cows to maintain or increase body condition, but high-quality hay may need to be saved for after calving if this period of time will require supplementation.

An inventory sheet describing hay type and amount can be created at the start of the season. This sheet may include hay storage method, which could indicate which portion of the hay supply should be fed first to save hay with the least wastage/spoilage for later in the winter.

A general plan for hay feeding amount is useful, but this will need to be modified based on weather and cattle conditions. Monitoring hay delivery to cattle can be useful to determine if hay consumption is above or below expectations, allowing a projection of how much hay will be left at the end of the season. Identifying potential gaps in hay supply early will allow modifications to the hay feeding strategy to stretch the feed to the end of the season.

Determine needs

Assessing the cows at the initiation of the hay-feeding season is important. Body condition score (BCS), or the amount of flesh cattle are carrying, is often measured on a 1 (very thin)-to-9 (obese) scale, with most cattle falling in the BCS 4 (needs supplementation)-to-6 (a little overweight) range. Our goal is often to have cows at a BCS of 5 at the time of calving, and replacement heifers at a BCS of 6 at the time of calving.

Evaluating BCS on cows at a point in time is straightforward, but monitoring changes over time can be challenging when observing the cattle every day. Each body score represents approximately 100 pounds (lb.) of body weight, meaning changes in body score are subtle and may take time before weight loss is detected.

A couple monitoring methods can be useful, including recording BCS on some cattle at a predetermined interval. This process makes the BCS evaluation intentional, and BCS can be recorded by either writing down BCS on several cows or taking pictures of the herd. The advantage of taking pictures of the cows on a monthly interval is the pictures can be easily compared between months to identify potential changes in body weight.

The earlier a change in body weight is detected, the more rapidly an appropriate change to the diet can be implemented.

Feed on need

Often the herd varies in body

Continued on page 54

Often, the hay supply is not of equal quality and may need to be distributed to cows at different times based on their stage of production.

score. In herds with defined calving seasons, most cows are in the same stage of production. However, they may not be at the same BCS. If some of the cattle need to gain weight (BCS 4) prior to calving, it may be advantageous to segregate cattle that need to gain weight so further supplementation can be provided to this subset. This is a tradeoff between labor associated with feeding multiple groups and the advantages associated with having the cattle in good body condition at the time of calving.

One group that often needs further supplementation is replacement heifers. These cattle are pregnant with their first calf. They differ from primiparous cows in that they are still growing.

Often these animals are at 60%-65% of mature body weight at the time of breeding. They need to gain weight to reach 80%-85% of mature body weight at the time of calving.

Heifers typically have a longer postpartum interval compared to cows, and heifers calving in a low BCS (<5) can have a prolonged postpartum interval — resulting in delayed rebreeding or failure to rebreed within the breeding season. Focusing on matching nutrition to the specific type of cattle and stage of production can optimize nutritional efficiency.

Conclusions

Hay feeding is a major cost for cow-calf operations. Creating and implementing a hay-feeding strategy is an important step to match the current hay supply to cattle nutritional requirements. Segregation of cows by BCS or stage of production can help optimize the amount of hay fed to each specific group. ABB

Editor's note: Author Brad White is on faculty at Kansas State University College of Veterinary Medicine and serves as director of the Beef Cattle Institute (BCI). To learn more on this and other beef herd health topics, tune in to the weekly BCI *Cattle Chat* and *Bovine Science with BCI* podcasts available on iTunes, GooglePlay or directly from *www.ksubci.org*.

Digital EXTRAs

Here are some additional resources available online.

www.cowbcs.info
Tips for condition-scoring your cows.

https://bit.ly/3TRo3nv
Tips for stretching winter hay supplies.

https://bit.ly/stretchhay
Calculate and match hay to the need.