Maximize Managed Grazing Opportunities

Choose grain coproducts to improve rumen fermentation, supplement poor-quality forage and extend forage supplies.

by ***Barb Baylor Anderson***

Cool-season forages provide an abundant supply of spring forage and the opportunity for deferred fall grazing. But the cool-season summer slump and the winter feeding period represent significant production gaps for beef producers. Justin Sexten, University of Illinois Extension beef systems specialist, says producers can maximize managed grazing opportunities during these times by working in grain coproducts.

"Supplemental feed costs represent the most important factor influencing profitability in beef herds," he says. "Warm-season perennial and annual forages and winter annuals with crop residues can extend the grazing season in some areas. But in regions with shallow soils and marginal slopes, supplement alternatives may be required."

Sexten says corn and soybean coproducts are a good choice for a managed grazing system because of their readily fermentable fiber content and reduced starch levels relative to corn. He adds that coproduct use is particularly well-suited to improving rumen fermentation, supplementing poor-quality forage and extending forage supplies.

Improving rumen fermentation

"Adding legumes to pastures increases available protein to the rumen," Sexten says. "But the amount of protein reaching the small intestine is limited by energy supplied to the microbes and the rapid degradation of protein to ammonia in the rumen. Providing energy or rumen undegraded protein may permit more efficient forage protein use."

Sexten says different coproducts are suited to supplying either fermentable energy or undegraded protein. If you have lush, high-protein spring forages, for example, you may want to consider a low-protein coproduct, such as soybean hulls.

"Using coproducts to increase rumen undegraded intake protein may improve rumen fermentation," he says. In these instances, dried distillers' grains with solubles (DDGS) are the preferred coproduct due to higher levels of rumen undegraded protein. Producers should be mindful of the increase in energy and differences in the source of energy supplied by DDGS.

Supplementing poor-quality forage

Coproducts are often successful in supplementing poor-quality forage as well. Missouri Forage Research Center studies suggest that more than 75% of the differences in grazing animal performance can be attributed to forage availability. The balance is attributed to forage quality. The most common source of poor-quality forage in managed grazing systems, particularly in the Midwest, is cornstalk residue.

"Early after harvest, the energy content of cornstalk residue may be acceptable. But as the grazing season continues, the grain is preferentially consumed and leaves an energy- and protein-deficient forage," Sexten says. "A high-protein, low-starch coproduct such as corn gluten feed or DDGS can supplement poor-quality forages in this instance."

University of Kentucky Extension forage specialist Garry Lacefield says producers can also beef up their forage programs. A solid forage base should be comprised of cool-season grasses and legumes, but currently, he says, legumes are only present at a high enough level to really improve production on less than one-fourth of the acreage needed.

"Research, demonstration and farmer experience have clearly documented the positive contribution legumes make in grass pastures," he says. "Adding legumes to hay and pasture fields brings high yields, [along with] their ability to fix nitrogen and improve quality, including increases in palatability, intake, digestibility and nutrient content. Legumes also improve animal growth rates, reproductive efficiency and milk production."

Lacefield says producers can expect more growth, because most cool-season grass growth occurs during the spring and fall. Growing grasses and legumes together improves the seasonal distribution of forages and provides more growth during the summer.

Extending forage supplies

At some time during the grazing season, however, forage supplies generally become limiting. Sexten says that when that occurs, grain coproducts may be the best biological choice for supplementing forage supplies. Hay is often considered the most economical supplement due to ease of feeding, transportation and handling. But nutrient content comparisons after considering hay waste may reveal hay is no supplemental bargain.

"Coproducts may be the most economical supplement compared to feeding hay. Many coproducts reach yearly price lows during August to November," he notes.

Sexten encourages producers to use economical coproducts to extend forage supplies by allowing cool-season forages to stockpile and to delay winter annual or stalk residue grazing.

"Animals do not have a hay requirement; they have nutrition requirements. Seek to provide those nutrients in the most economical manner," he stresses.

For more information specific to regions, contact your county Extension office. AJ

Coproduct considerations

Coproducts are a highly variable feed input, which University of Illinois Extension Beef Systems Specialist Justin Sexten says necessitates feed testing to ensure an adequate and balanced nutrient supply. He says coproducts should be tested, or inquiries should be made about how coproduct standards are maintained at the plant.

"Given the variability of the animal and feedstuffs, several feeding guidelines have been developed," Sexten says. "The guidelines are based on specific nutritional concerns. Total dietary sulfur intake — feed and water — should not exceed 0.4%. Corn gluten feed and DDGS (dried distillers' grains with solubles) are generally high in sulfur, and, if fed in excess, may cause problems."

In addition, Sexten advises that total dietary fat levels not exceed 5% to maintain fiber digestion. DDGS can contain as much as 10%-12% fat. Calcium-to-phosphorus ratios should be maintained in the range of 1.5-2 to 1. Corn coproducts are high in phosphorus, while soybean hulls are high in calcium.

"Small particle size and rapid rumen fermentation may cause bloat and loose stools with high levels of soybean hull supplementation when adequate effective fiber is not available," he says. "Maximum ration dry-matter levels of coproducts are 30% corn gluten feed, 30% DDGS and 25% soybean hulls."