Control the Feedbunk for Efficient Gain

Feedbunk management can help maximize performance, minimize digestive disorders and improve intake consistency.

by **BARB BAYLOR ANDERSON,**
field editor

What is the worst way to feed cattle from an animal health and cost-of-gain standpoint?

That would be to keep them constantly in mud, feed them at different times during the day with a high-forage/low-concentrate diet and substitute feed ingredients indiscriminately, says Francis Fluharty, Ohio State University ruminant nutrition professor.

As part of a recent webinar series on minimizing feeding costs, Fluharty urged beef producers to instead manage the feedbunk for maximum efficient gain.

"Feedbunk management is the most important operation to maximize performance, minimize digestive disorders and keep animals eating a consistent amount of feed," he says. "Use a feedbunk-management protocol and scoring system. Start with a slick bunk. Give them what they will consume in 24 hours and adjust in 5% increments rather than having bunks with feed always available. Our research found a better average daily gain (ADG) of 3.78 versus 2.07."

However, Fluharty adds, not all average daily gain is the same. With a 100% forage diet, the acetate that results is used in fatty acid synthesis, creating backfat and seam fat. Propionate goes to glucose in the liver and butyrate goes to development of fatty acid.

The better option, he says, is a grain-based diet. Producers see increased propionate production relative to acetate, which results in higher levels of glucose in the liver. More glucose leads to greater average daily gain, more lean-tissue growth per day and ultimately more marbling.

Feeding forages results in less microbial protein per pound of dry matter consumed than grain diets.

In addition, Fluharty says visceral organs increase in weight when there is more forage in the diet. Greater organ weights result in decreased feed efficiency and dressing percentage. To maintain visceral organs requires 40%-50% of an animal's daily energy intake and 30%-40% of an animal's daily protein intake with a forage-based diet. Plus, feeding forages results in less microbial protein per pound of dry matter consumed than grain diets. Long-stemmed hay reduces digestible energy intake as the animal expends energy ruminating.

"Increasing dietary crude protein in receiving diets does not increase dry-matter intake, but it does improve average daily gain and feed efficiency," he says. "Moist grain with more surface area is most rapidly digested, including wheat, barley, high-moisture and steam-flaked corn. You can go from a Yield Grade 3 to 4 or 5 when you add grain."

Fluharty warns acute acidosis can occur with highly processed grain diets, followed by bloat in some situations. Animals may become listless, anorexic, get diarrhea, have decreased blood bicarbonate and sometimes increased blood lactate. Also, varied feed intake increases bacterial populations and lactate production, decreases rumination and lowers blood pH.

"Prevent acidosis with increased frequency of feeding and increased percent of roughage in the diet. Feed complementary grain sources to increase the time of ruminal digestion so that less starch is available at any one time. Implement a gradual diet adaptation period of 10-14 days, and use products that minimize the effect of lactic acid-producing organisms," he says.

He encourages producers to respect the hierarchy of nutrient use. Nutrients first go toward maintenance, then development, growth, lactation, reproduction and fattening. Feedlot steers use as much as 70%-80% of feed intake for maintenance, leaving only 20%-30% for growth.

"When feed intake is controlled daily so there is just enough feed for every animal to be full, they eat in excess of maintenance and gain weight more efficiently because there are fewer or no days when they eat less than maintenance, leaving nothing for gain," he says. "Knowing the amount fed per animal daily is critical to optimizing efficiency of feed use for gain."

Editor's Note: *A former National Junior Angus Board member, Barb Baylor Anderson is a freelancer from Edwardsville, Ill.*