Maximize Lean Growth with Grain-based Diet

by **BARB BAYLOR ANDERSON,**
field editor

If you want a growing diet that maximizes efficiency throughout the life of your feedlot animals, a grain-based diet is the way to go, says Ohio State University ruminant nutrition professor Francis Fluharty. He says grain rations with as little forage as possible help maximize use of propionate within the rumen so animals can make the best use of feed for lean growth.

"Growing diets are used for bone and muscle growth for small-framed breeds like Angus," he says. "Many producers think they need to feed as much as the animals will take with high-grain diets, but that is not the case. The animals can also use haylage and corn silage in feedlot situations with moderately high-fiber feedstuffs and byproducts. Gains may average about 2.2 pounds (lb.) per day with 50%-70% grain and 30%-50% fiber."

Fluharty notes grass-fed cattle grow more slowly and have a higher maintenance energy cost because of the low digestibility of forage that leads to greater visceral organ weights. Grain-fed cattle also get visceral fat but grow faster and more efficiently in a feedlot.

"Fat is not all the same. High-concentrate diets fed at restricted intakes may be used effectively because they do not lead to more seam and back fat. Seam fat is the largest fat depot between the muscles. By the time steers have 4/10 of an inch of backfat, there is already a lot of seam fat, and that means weight fat is greatest in the rib and chuck areas," he says.

Fluharty adds forage in feedlots to prevent digestive disorders. "Roughage particles should be relatively small when highly processed grain diets are fed, or undigested grain will pass through the rumen," he says. "It also helps maximize net energy for gain intake by cattle. Don't provide unlimited access to a round bale of hay. Feed has to be in the bunk and be controlled."

To maximize lean growth and feed efficiency, Fluharty recommends a prescription or programmed intake corn-based diet.

"We want to control pattern of growth, improve efficiency and change composition of growth. Try to get the cattle to gain with propionate and limit the visceral organ weight," he explains. "If you feed cattle *ad libitum* all the way through, it costs you unnecessary feed. But you don't want to over-restrict your cattle on feed, either."

An automated feed delivery system can reduce human error, he says, as well as limit feed waste and metabolic disorders that may decrease feed efficiency.

"You can control intake and improve feed efficiency and reduce overall feed costs. Work with a nutritionist to increase gain over time and remove visceral fat, increase propionate and marble well," he says. "Increasing levels of protein must be fed as intake is reduced or it reduces the animal's ability for lean tissue growth. You end up with fatter, lighter-weight cattle."

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