

Distilling Gains

Dried distillers' grains can help produce more beef.

Story by
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Supplemental feeding of dried distillers' grains (DDG) to cattle can help produce more beef in grazing programs, a Texas

Agricultural Experiment Station researcher says. After a summer and fall feeding study utilizing both heifers and steers, Jim MacDonald, Experiment Station beef nutritionist, says he believes this byproduct of ethanol production will be useful in more than just feedlot or dairy operations.

In the next few years, an additional 200-600 million gallons (gal.) of ethanol are expected to be produced in the High

Plains, MacDonald says. Production will utilize up to 214 million bushels (bu.) of corn or sorghum and result in 1.71 million tons of distillers' grains.

"A majority will likely be utilized by feedyards and dairies, but due to the sheer increase in availability, there should be opportunities for cow-calf and stocker operations to use it as well," he says.

The most promising opportunity may be in the situation where lightweight calves are held for a couple of months before they go onto wheat, MacDonald says.

The summer grazing study, using heifers averaging 600 pounds (lb.), compared feeding 3 lb. of DDG per head per day, or approximately 0.5% of the animal's body weight, to no supplement, MacDonald reports. Results showed an improvement in gain of a quarter of a pound per head per day over the control calves.

In the fall dormant-range study, steers weighing approximately 400 lb. were compared at rates of 0 lb., 1 lb., 2 lb. and 3 lb. per head per day, MacDonald says. Gain improved from just over one-half pound per head per day at the 1-lb. rate, to 1.75 lb. per head per day at the highest level of supplementation.

"However, the effect was quadratic in that the more you supplemented, the incremental gain was lower," MacDonald says. "In other words, at the 1-pound rate, the efficiency of gain was about 50%, where at the highest rate, it was 40%."

During the summer trial, the efficiency was only about 10%, he says, because both sets of animals were eating well on grass and the supplementation did not make as big a difference.

"So supplementation is more efficient on dormant range, as you would expect," MacDonald says.



Economics

The economics of supplementing with distillers' grains will depend on the cost of the product compared to the value of gain, he says.

MacDonald paid \$118 per ton for the distillers' grains, which equated to a \$12.50-per-head investment for an \$18.80-per-head return during the 63 days the heifers were fed.

As corn prices have risen during the past month or so, so has that of distillers' grain, he said. The same scenario now would have the producer paying \$175 per ton, which would result in an \$18.96-per-head investment for a \$16.20-per-head return.

"Producers need to run the economics in their situation to see if it is a good fit," he advises.

The 56-day fall trial, using the \$175-per-ton rate for the distillers' grains, resulted in a \$16.33-per-head investment at the highest level of supplementation, MacDonald says. That investment was worth \$68.25 per head.

"The economics would say in the fall or winter scenario, producers will want to supplement at as high levels as possible," he says.

"And even though this research is conducted with stocker calves, I think there is opportunity for cow-calf producers to utilize the distillers' grains as well," MacDonald says. "The supplemental fat has been shown to improve reproduction, as well as provide energy to maintain or improve body condition score."

However, potential dangers exist if animals are fed at extreme rates due to fat and sulfur content, he said. Excessive fat can reduce forage digestibility. Also, sulfur can tie up minerals such as copper, creating a deficiency. Excessive sulfur

may cause polioencephalomalacia (PEM), also known as "brainers."

Producers who use distillers' grains need to be cognizant of all sulfur sources, including water, MacDonald says. If a producer is feeding distillers' grains high in sulfur and also has sulfur in the water, it could be enough to cause trouble. (See page 129 for more on the dangers of high sulfur levels.)

The supplementation trials were only the first step in MacDonald's study, he says. Comparisons of distillers' grains to more traditional supplementation and following the calves onto wheat pasture need to be done.

"I'm very much enthused about using distillers' grains to produce more beef on a fixed land base," he says. "The caveat will be to see what previous supplementation

does to subsequent wheat grazing gains. We'll have some data on that in the spring."



Editor's Note: Kay Ledbetter is a communications specialist for Texas A&M University Agricultural Communications, which supplied this article and accompanying photo.

