

Low-test-weight and sprouted wheat can be fed to livestock

Rainy weather during wheat growing and harvesting made this year's crop in parts of Kansas unacceptable for milling, leaving its primary use as livestock feed, say livestock specialists at Kansas State University (K-State).

"Many studies have been conducted on

feeding wheat to livestock, and most report excellent animal performance when the wheat-containing diet is managed correctly," says Joel DeRouche, livestock production specialist with K-State Research and Extension.

Livestock feeders, particularly cattle

feeders, should consider taking advantage of price discounts when such wheat is available, he says.

"Regardless of wheat's test weight and condition, it should be processed by grinding, dry rolling or steam flaking to disturb its hard seed coat," DeRouche

says. "This will increase the energy digestibility of the wheat kernel."

Even with wheat's attributes as a feed ingredient, there are things of which livestock producers should be aware.

Wheat is low in fiber content and high in starch, making it more difficult to feed than other grains in ruminant rations, DeRouche explains. Wheat starch can support fast fermentation rates within the rumen, which can cause digestive upsets that lead to poor animal performance and even death.

"Inexperienced feeders should consider mixing wheat with other grains, such as corn or grain sorghum, to stabilize the rumen fermentation of the diet," advises Twig Marston, K-State beef cattle specialist.

Generally, wheat should be restricted to 30%-50% of the complete diet for finishing cattle, he said. Adapting fed cattle to diets with high wheat content may take 20-30 days.

Stocker cattle consuming silage or hay diets can also be fed damaged, low-test-weight wheat, Marston says. Wheat should be limited to 1% or less of the animal's body weight for growing cattle. It is imperative that the protein content of the diet be formulated to meet the animal and rumen microbial requirements.

DeRouche and Marston give tips for implementing damaged wheat into cattle diets.

- Wheat usually contains less than 14% protein, which limits its use in most low-quality forage diets fed to mature beef cattle. Protein supplements used in such situations usually contain 20%-40% protein.

- Producers should feed by weight, not volume — large cattle with greater gut capacity can utilize low-test-weight wheat more readily than younger, lightweight cattle and nonruminants. The price of low-test-weight, sprouted wheat can be calculated from corn and soybean meal prices, DeRouche says. For example, 100 pounds (lb.) of wheat has about the same economic value (based on protein and energy content) as 92 lb. of corn and 8 lb. of soybean meal.

- Damaged wheat should be stored carefully. Moisture content should be low enough to ensure that mold does not grow within the storage structure. If the wheat must be harvested at a high moisture content, then it should be dried to a safe level, aerated, preserved with a storage additive, or ensiled in an anaerobic state (like silage).

- Molds may produce toxins that can affect feeding value through reduced feed intake and performance, and in some rare cases even death, Marston says. Young animals, reproductive females and animals under nutritional stress are most vulnerable to toxins. If mold is present on kernels, a sample should be sent to a diagnostic laboratory for testing before feeding the wheat to livestock.



Editor's Note: This item was written by Crystal Rahe of K-State Research and Extension, which supplied this article.