Extension shopper article for 9-1-15

Testing hay can save supplement dollars

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As you drive thru the county, the abundance of hay in big round bales is quite evident. Producers are glad to have adequate supplies of hay as fall and winter approaches. Cattle producers must remember that quantity and quality of hay are independent characteristics of their hay crop.

Forage analysis can be a useful tool to remove some of the mystery concerning the hay that producers will feed this winter. Testing the grass hays this year for protein and energy content will help the producer design winter supplementation programs most appropriate for the forage supply that is available. Any of the potential nitrate accumulating hays should be tested for nitrate concentration.

Forage quality has two important benefits to cows or heifers. First higher quality forages contain larger concentrations of important nutrients so animals consuming these forages should be more likely to meet their nutrient needs from the forages. Secondly, and just as important, animals can consume a larger quantity of higher quality forages. Higher quality forages are fermented more rapidly in the rumen leaving a void that the animal can fill with additional forage. Consequently, forage intake increases. For example, low quality forages (below about 6% crude protein) will be consumed at about 1.5% - 2% of body weight (on a dry matter basis) per day. Higher quality grass hays (above 8% crude protein) may be consumed at about 2.0% - 2.25% of body weight. Excellent forages, such as good alfalfa, silages, or green pasture may be consumed at the rate of 2.5% of body weight per day. The combination of increased nutrient content AND increased forage intake makes high quality forage very valuable to the animal and the producer.

The value of forage testing can best be illustrated by comparing the supplement needed to meet the nutrient needs of cows in the winter. Assume we are feeding hay to a 1200 pound spring-calving cow in late gestation. She needs 1.9 pounds of crude protein to meet her needs and that of the growing fetus. If she consumes 2.0% of her body weight in a low quality grass hay (4.0% Crude Protein) she will receive 0.96 pounds of protein from the hay leaving a deficiency of 0.94 pounds of protein needed from the supplement. To meet her protein needs with a 30% crude protein supplement would require 3.13 pounds of supplement each day. However, if the same cow was consuming a higher quality grass hay (7.0% Crude Protein), then she receives 1.68 pounds of protein from the hay and must be given enough supplement to meet the 0.22 pounds that is lacking. Now, to meet her needs the cow only needs 0.73 pounds of the same supplement per day. Because of the difference in hay quality the supplement needs vary by 4 fold!

The Butler County Extension office has a forage testing probe available to borrow and can provide an instruction sheet on the best method of testing hay bales. We can also give you packaging instructions and will send the sample to the lab for a fee if you want us to.