

Preparing for winter – focus on forage

Mother nature has been rather fickle for the past 365 days, in Kansas we have seen flooding, droughts, blizzards, extreme heat, extreme winds, and hail, to name some of the biggest events. According to Kansas Mesonet data there was 15 inches of rainfall (October 1, 2018 to October 1, 2019) in Grant county (Southwest; average annual rainfall 12 inches) while Parsons (Southeast; average annual rainfall 42 inches) has seen 70 inches of rainfall in that same time period. With all these extremes in weather, our forages have shown quite a bit of variability in quality.

There are numerous factors that influence forage quality. Table 1 outlines what effects might have impacted plant growth, harvest, and what we may anticipate about the harvested forages nutritional quality. This Table can be found at (<https://enewsletters.k-state.edu/beeftips/2019/12/17/preparing-for-the-winter-focus-on-forage/>) Additionally, after the long, cold winter of 2018-2019, many producers fed their entire supply of harvested forages and in attempt to replenish supplies may have been less selective in what to harvest. For example, hay was harvested from pastures after being grazed (largely stems and seeds heads), from pastures with mature forage, or mis-managed pastures. Hay from these sources might not exceed wheat straw in quality.

Now what? Since there is a wide variety of weather events that can impact forage quality, prior to winter feeding, it will more than pay to test hay for nutrient composition. An investment of \$15-60 per sample for forage analysis gets rid of the guesswork and allows for proper balancing of diets. For example, a 1,400-pound mature cow in the last 1/3 of pregnancy needs 2.1 pounds/day of protein. If you assumed a book value of 8.33% crude protein for sudangrass then cows have enough protein to meet requirements (at a 30 pound of dry matter intake); however, if hay forage analysis says crude protein was actually 4.5% then you are underfeeding protein by 0.71 pounds/day. The protein deficiency will negatively affect colostrum, calving ability, and/or condition. Many times we think additional protein is all that needs to be supplied over the winter, but with some of the forages tested this year, that is not the case. For example, that same 1,400-pound mature, pregnant cow in the last trimester needs 14.5 pounds of TDN per day. Book value of 54.5 % TDN for sudangrass (Table 2) offers enough energy to meet cow requirements (assuming intake of 30 lbs DM), however, if TDN content is only 43.3, cows are short 1.25 pounds TDN per day. Depending on the length of time feeding this hay, cows may lose enough body condition prior to calving to once again impact ease of calving, colostrum quality and potentially re-breeding that following spring. Table 2 is a summary of some of the average forage values that have been received through extension offices in the Southeast and Central portion of the state for hay harvested this year as well as the “normal book value” of the forages. As the table summarizes, some of the average values match with “book values” however the ranges are very large for each of the measures reported.

How soon can I see a return on investment of my forage test? Take a forage you assumed was 6% crude protein but was actually 7% crude protein. Since you assumed 6% crude protein you develop a supplement program of providing 1.4 pounds of a 20% supplement that cost \$400/ton. The supplement cost for 60 days is \$16.80/cow. If you have more than 2 cows, you have more than covered the cost of the test (basic nutrient test ~\$15 plus shipping) in supplement savings