

## **Maintaining quantity and quality of forage for animal health and productivity**

### **Addendum for certified consultants**

#### **For use with E528140Z1 and E528A**

#### **Setting livestock performance goals:**

Interestingly, the enhancement description suggests setting “target livestock performance goals”, yet the sampling protocol provides measures of forage quality. While CP and TDN values from forage quality can be used to evaluate nutrient content of the diet, it does not directly predict animal performance. We believe that body condition scoring is a valuable tool that integrates forage quality along with forage intake and energy expenditure in the grazing environment to provide a better understanding of overall nutrient status. Therefore, we suggest that producers should consider coupling BCS goals with forage sampling results to achieve performance goals. Here are a few references for body condition scoring cows, <https://extension.sdstate.edu/understanding-importance-your-herds-energy-reserves>, <https://extension.sdstate.edu/monitoring-nutrient-status-beef-cows>, and <http://extensionpublications.unl.edu/assets/pdf/ec281.pdf>. These articles can serve as a reference for body condition scores and provide information on potential goals for producers to be able to measure change over time.

#### **Evaluating report information**

Once participants have provided forage sample results to you, comparison to nutrient requirement tables can show when nutrient deficiencies occur. In addition to deficiencies, however, nutrient imbalances need to be considered. For example, the ideal ratio of CP:TDN is 1:7. Early spring, lush forage will have excess CP that will lead to a ratio much higher than this, suggesting excess protein and/or inadequate energy to take advantage of the surplus protein. On the other hand, dormant winter forage will not only be deficient in protein relative to requirements but will have a ratio less than 1:7, strongly suggesting the need for a protein supplement to correct the ratio.

Another example would be the Ca:P ratio if mineral analyses are provided. The ideal ratio is 2:1, but it can range as high as 7:1. The most notable symptom of this ratio being out of balance is water belly in male cattle. However, other issues can also occur in both genders.

For additional information on cattle nutrition, visit the SDSU Extension website at <https://extension.sdstate.edu/>.