

## Forage Sampling and Analysis

### The Situation

Forages represent a primary source of nutrients for beef cattle. Forages vary widely in their nutrient composition due to various factors including forage species, stage of maturity at harvest and weather conditions during the growing season. Forage sampling and analysis is a basic management tool that allows beef cattle producers to better manage their forage resources, which may reduce overall feed costs, and improve animal performance. Few beef producers routinely obtain and submit forage samples for nutrient analysis. Increasing producer knowledge of proper forage sampling protocols and analysis facilitates strategic use of feed resources and improves beef production efficiency. This leads to increased economic sustainability of beef cattle producers and rural communities.

### What We Did

County and District K-State Research and Extension personnel provided training for producers on forage sampling and analysis, including proper forage sampling protocols, forage analysis terminology and how to use the results of forage analysis to improve animal management. The information was provided in face-to-face meetings, newsletters, newspaper columns, social media and radio. Agents reviewed the forage analysis with producers, then used a ration analysis software program to develop balanced and cost-effective rations to meet animal performance objectives.

### Outcomes

Face-to-face meetings were held in eight locations and reached more than 325 individuals. Based on information presented to producers, in a sample of 40 attendees, 83% indicated moderate to significant improvement in awareness of forage sampling protocols and use of a forage analysis for animal management as a result of what they learned at the meeting. Of those who attended, 68% reported a moderate to significant change in their knowledge of forage analysis terminology, and 86% said they were likely or very likely to change management practices as a result of what they learned.

### Success Story

One producer shopping for protein supplements learned that home-raised forages were of adequate quality to meet requirements after the local agent sampled the available forages and used the BRANDS ration analysis software program to balance a ration. A revised proportion of alfalfa and sorghum-sudan bales to grind for feeding was implemented and cows performed as anticipated. Not buying a protein supplement saved the producer \$0.50 per head per day.

### Contact

**Brett Melton**

*Livestock Agent*

River Valley District, 811 Washington, Suite E, Concordia, KS 66901

785-243-8185

[bmelton@ksu.edu](mailto:bmelton@ksu.edu)

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**Sandy Johnson**

*Extension Beef Specialist*

PO Box 786, Colby, KS 67701

785-462-6281

[sandyj@ksu.edu](mailto:sandyj@ksu.edu)



Brett Melton demonstrates how to collect a sample from a large square bale.