

How to use the NIRS/NUTBAL System To Monitor Nutrition for Beef Cattle

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Effective Monitoring Tool for the Beef Producer

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The NIRS/NUTBAL system is an effective nutritional monitoring tool designed for ranchers. This system generates valuable information that enables you to make informed, timely decisions regarding animal nutrition and grazing management. Better informed management decisions can positively affect the nutritional status and body condition of livestock to enhance productivity and profit.

The NIRS/NUTBAL system is a two part system that helps you manage animal performance and evaluate forage quality. This diagnostic tool is designed for livestock operations where most or all of the animals' diet is derived from rangeland, pasture, or hay.

Near infrared reflectance spectroscopy, NIRS, is used to analyze livestock fecal samples to determine the protein and energy value of the forage consumed. The GAN Lab predicts percent crude protein (CP) and digestible organic matter (DOM). (DOM is a measurement of energy~DOM * 1.05 approximates Total Digestible Nutrients value). These results reflect the quality of the grass or hay consumed approximately 36 hours prior to defecating. The diet quality of concentrated feeds (grain, liquid feed, etc.) is not evaluated in the NIRS analyses. The impact of such supplements on animal performance is evaluated by the second component of the nutritional monitoring system, the Nutritional Balance Analyzer or NUTBAL Pro.

The computer model NUTBAL Pro estimates animal performance by incorporating NIRS results with animal attributes (breedtype, etc.), environmental conditions, feed supplements and pasture conditions. NUTBAL used this information to calculate how much protein and energy your animals need and how much of these nutrients they are consuming.

NUTBAL generates a report that tells you:

- Positive or negative plane of nutrition
- Weight gain or loss
- The nutrient limiting performance (protein or energy)
- Your most cost effective supplement
- Amount of feed needed
- Amount of forage consumed

The software also helps you determine if you have enough forage.

Now let's take a look at how you can use the NIRS/NUTBAL system as a nutritional monitoring program for cows, stockers, and heifers. We will discuss possible objectives, goals, and benefits of utilizing this system for each animal group.

Trickle-Down Concept

Management Decisions

effect herd's

Nutritional Balance

to maintain appropriate

Body Condition

for optimal

Cow Productivity

to maximize

PROFIT