

Animal Enhancement Activity –ANMI7- Monitoring Nutritional Status of Livestock using the NUTBAL PRO System



Enhancement Description:

Use the NUTBAL PRO software to determine if the current diet is sufficient to meet livestock nutritional needs. This requires the collection and laboratory analysis of forage or fecal samples to determine the nutritional value of grazing forages.

Land Use Applicability: This enhancement is applicable to pastureland and rangeland.

Benefits

NUTBAL PRO is a decision-support software that assimilates information regarding animal attributes, environmental conditions, forage conditions, feeding program, and metabolic modifiers. Nutbal Pro reports provide information to:

- balance animal nutritional needs with contributions from grazing forage,
- select the most cost efficient feed alternative, amount to be fed, and cost per day,
- evaluates feeds' values with regards to the animal's nutrient deficiency or desired gain,
- monitor the quality of grazing forages through out the year, and
- better understand animal nutritional needs as they change throughout the year.

Criteria for Monitoring Nutritional Status of Livestock using the NUTBAL PRO System

- Forages (using either fecal samples or forage tissue sample) must be analyzed by an accredited laboratory.
- Information is entered into the NUTBAL PRO decision support software.
- A report must be generated and management decision documented and completed within 14 days from receiving forage analysis.
- A minimum of 6 forage analysis and NUTBAL PRO reports must be completed each year.

Documentation Requirements for Monitoring Nutritional Status of Livestock using the NUTBAL PRO System

For each forage sample collected for analysis:

- A copy of the forage analysis report.
- A copy of the NUTBAL PRO reports generated from the decision support software.
- Written documentation of the management decisions made as a result of the analysis.



United States Department of Agriculture
Natural Resources Conservation Service

NE-ANM17

Animal Enhancement Activity – ANM17 – Monitoring Nutritional Status of Livestock using the NUTBAL PRO System

State Criteria

Implementation of this enhancement **requires** the collection and laboratory analysis of forage or fecal samples to determine the nutritional value of grazing forages following these steps:

1. Collect a minimum of 6 forage samples per year:
 - a. Six sample minimum required, it is recommended to do monthly samples the first year.
 - b. Sampling should focus on transition periods, or when seasonal changes occur. For example, the period from mid-summer to late summer means that forage is drying out and losing nutritional value. Fecal samples analyzed at this time would indicate whether the herd's nutritional needs were being met or not.
 - c. Samples can be either fecal or forage tissue.
 - d. Samples must be analyzed by an accredited laboratory.
2. Sample Collection Process (samples can be either fecal or forage tissue):
 - a. Fecal Samples:
 - i. Contact the Grazingland Animal Nutrition Lab, Texas A&M University at 979-845-5838, ganlab@cnrit.tamu.edu, <http://cnrit.tamu.edu/ganlab/> to obtain a starter kit.
 - ii. Follow the instructions to collect samples and submit for analysis. An overview of the process is found at: http://cnrit.tamu.edu/ganlab/Getting_Started/getting_started.htm
 - b. Forage Tissue Samples:
 - i. Contact your selected forage analysis laboratory for proper sampling procedures.
3. Analysis:
 - a. The laboratory will complete a forage analysis report using near infrared reflectance spectroscopy (NIRS) technology for your submitted sample.
 - b. The NIRS analysis results must be entered into the NUTBAL PRO decision support software along with other herd information.
 - i. Online NUTBAL PRO is available at: <http://cnrit.tamu.edu/autosystem/>
 - ii. Check with your chosen laboratory, as they may provide NUTBAL PRO results for you.
 - c. NUTBAL reports must be generated.
4. Management Decisions:
 - a. Within 14 days from receiving reports, management decisions must be documented and completed.

Documentation Requirements:

- Copy of forage analysis reports (6 individual reports minimum required)
- Copy of the NUTBAL PRO reports generated from the decision support software for each of the forage analysis reports.
- Written documentation of the management decisions made as a result of each analysis. (Refer to the back of this form for example documentation.)



United States Department of Agriculture
Natural Resources Conservation Service

NE-ANM17

Example NUTBAL Standard Balance Report Results Decision Documentation:

Sample Location & Date	Livestock	Nutrient Balance Met?	Performance Limited by:	Decisions/Any Changes Implemented/Dates
North Pasture June	Cow/Calf <i>example</i>	Yes	Crude Protein	Cows are gaining weight ok for now (June report). When we move to next pasture in July we will want to supplement with protein as forage condition will drop. Moved on 7/4/09, added protein block. Will sample again next week.

I certify that the following information meets specifications and has been provided to NRCS:

- 1. Copies of dated forage analysis reports
- 2. NUTBAL PRO report results for each forage analysis report.
- 3. Written documentation of the decisions, any changes implemented and dates.

I understand that it is my responsibility to obtain all necessary permits and to comply with all laws, regulations and ordinances pertaining to the application of these activities.

Certified by: _____ **Date:** _____