

Animal Enhancement Activity –ANM17- 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

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 throughout the year, and
- Better understand animal nutritional needs as they change throughout the year.

Criteria

- 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 decisions 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 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.

Michigan Supplement

MI-ANM17 Enhancement Activity- Monitoring nutritional status of livestock using the NUTBAL PRO system

State Criteria:

Fecal samples may be sent to:

Grazingland Animal Nutrition Lab
Blackland Research and Extension Center
720 East Blackland Road
Temple, TX 76502-9622
Ph: 254-774-6134
Fax: 254-774-6150

SUPPLIES NEEDED

The GAN Lab supplies Styrofoam boxes, ice substitute, and original sample sheet that can be copied for future samples. You will need to have on hand plastic bags that seal, mailing labels, tape, permanent marker or labels, and disposable spoons or gloves for picking up the sample.

COLLECTING A FECAL SAMPLE

Now that you have the GAN Lab starter kit and have read the instructions, you are ready to begin.

1. Freeze the ice pack overnight and label Styrofoam lid with your address and the GAN Lab address.
2. Gather together zip-loc type sandwich or freezer bags, tape, plastic gloves and/or disposable spoons, permanent marker, pen, sample form and Styrofoam box.
3. One fecal sample can represent a herd or pasture. Collect a “heaping tablespoon” from 5 to 10 fresh fecal piles to get a composite sample. Collect at least a half cup, but no more than a pint is needed. Deposit manure in bag. Sample should be free of dirt, insects, and grass. The Styrofoam box should hold 4 to 6 samples and the ice pack.
4. Allow sample to cool to increase the life of the ice substitute and label each plastic bag with a sample or pasture ID, date collected and any other pertinent information using a permanent marker or stick-on label. The label on the bag should match the ID on the sample sheet. Remember that in route the contents of the Styrofoam box may take on moisture. Please keep that in mind when labeling your sample bags. Samples can be frozen and mailed later if more convenient.

5. Place in the Styrofoam box the cooled or frozen fecal sample, and ice substitute. In a separate plastic bag, place the completed sample sheet and any photos of land/cattle that may be useful if you desire a NUTBAL advisory report.
6. Seal the box with packing tape around and across the lid. Use any mail service that guarantees two-day delivery, i.e. 2-day Priority Mail through the Postal Service.
7. Receive results approximately 4 days after collecting sample via fax or e-mail.

Other Manure Testing Laboratories

Manure analyses shall be performed by laboratories successfully meeting the requirements and performance standards of the Manure Testing Laboratory Certification Program (MTLCP) (<http://www2.mda.state.mn.us/webapp/lis/manurelabs.jsp>).

Forage Analysis

Accredited forage testing laboratories can be found at the National Forage Testing Association website at www.foragetesting.org.

NUTBAL PRO

A more user friendly adaptation of NUTBAL is used in the Automated NIRS/NUTBAL Online System interactive website. The installation CD of NUTBAL is available to those that attend a NUTBAL workshop arranged through NRCS.