NUTBAL Sampling Kit

Insulated mailer

Gel pack

NUTBAL submission form

EXEMPT ANIMAL SPECIMEN

GANLAB
Grazingland Animal Nutrition Lab

Lab Guard

GAN Lab ziptop bag with pocket, containing one pair of disposable gloves, one disposable spoon and one ziptop bag.

Other supplies needed

* Permanent marker
* Packing Tape

When to Collect Fecal Samples

Animals should be in the pasture for at least 48 hours prior to collecting the sample. Keep in mind that the manure you are collecting has the highest correlation to what forage the animal was grazing 36 hours prior.

Collecting a Sample

* Protect your hands with disposable gloves.
* Locate 5 to 10 fresh manure piles. It is preferable that you see the actual defecation event to ensure that the sample is as fresh as possible. Otherwise, collect manure that is still moist, and shows no evidence of insects or bird scratching.
* **PLEASE DO NOT** sample from animals less than 6 months of age or offspring still nursing.
* Using the provided spoon, skim away the top layer of manure. Collect a heaping spoonful from each manure pile. Avoid picking up soil, rocks, excess plant material, or other contaminants.

* *You should collect enough manure to fill half of a quart freezer bag.*
* Place the closed bag of fecal matter into the GAN Lab ziptop bag with pocket and seal.
* **Log the sample information into *NUTBAL Online* or fill out the NUTBAL submission form included in this packet** (see attached guide on completing your sample form). Insert completed form into the designated pocket.
* On the outside GAN Lab bag, use a permanent marker to write your herd id and date collected. If you logged in your sample on *NUTBAL Online*, please include the generated sample number.
* **Put the sample and the provided gel pack in the freezer overnight.**

Mailing the Sample

* **Ensure that the sample and gel pack are thoroughly frozen.**
* Put the fecal sample and gel pack in the insulated mailer. Close the mailer securely and ship it to the lab!

* Send it by **two-day priority mail** via USPS, FedEx or UPS.
* **We recommend mailing at the start of the week to prevent sample thawing during shipping over the weekend.**
* *USPS address: GANLAB, 4138 TAMU, College Station, TX 77843-4138*
* *UPS/FedEx/other: GANLAB, 1052 Agronomy Rd., College Station, TX 77840*

Payment: Online (card) or Invoice (check)

ONLINE: Payments can be made online through our Texas A&M University eStore available on the GAN Lab website. Please write your Order Number in the notes section of your sample submission form.

INVOICE: Invoices are sent after each sample is processed. If you have not yet completed a Customer Accounting Form, please return the filled form via mail or email, or call us to complete it over the phone. Reports will be sent once the form is completed.

Website: https://ganlab.tamu.edu/
Like us on Facebook! @ganlab.agrilife
Check out our GANLAB YouTube channel!
NUTBAL Online: https://nutbal.tamu.edu

TEXAS A&M AgriLife RESEARCH | THE GRAZINGLAND ANIMAL NUTRITION LAB

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Completing the NUTBAL Sample Submission Form

Please submit only **ONE fecal sample per sample information sheet.** Each sample can represent up to 3 animal profiles. You may either enter sample information online through your *NUTBAL Online* account or send the provided paper NUTBAL Sample Submission Form with your sample.

Client Information

Please provide contact information for the individual that the GANLAB can contact about questions regarding the sample, **and** who will receive the NUTBAL results and invoice. This section needs to be completed for each sample sent.

Ranch Information

The ranch information is used to file and store sample results and can be used to organize sample information for clients with multiple properties. Please write the Ranch Name in the same way for each sample associated with that property.

Date of Sample Collection

Enter the day the fecal sample **was collected**. This is very important, as climate data for that date and your location is used in the NUTBAL analysis.

NRCS Agent or Technical Advisor

The GANLAB will send results via e-mail to the person specified in this section. This should be a third-party entity, such as an NRCS agent or consultant.

* *For GANLAB to send results to the designated person, they must have apre-existing account in NUTBAL Online.*

Results and Report

Please select the method with which you would like to receive your NUTBAL results and report. You may also select to send the results and report to your technical advisor.

Select Service

Please select either Standard or Advisory service. If not indicated, Standard will be selected. If inadequate information is submitted the sample will only be given an NIRS report and the Standard fee ($45) will be charged. *Advisories cannot be completed without sufficient sample information.*

Animal Attributes and Current Condition

NUTBAL uses animal attributes to determine protein and energy requirements and predict animal performance over the next 30 days. Please fill out as accurately and completely as possible.

* **Herd ID:** Please provide a herd ID that is meaningful to you. Make sure the ID on the sample sheet matches the ID on the sample bag. If you have submitted samples from this group of animals in the past, use the same ID.
* **Species:** The species of animal in the sampled herd. NUTBAL can analyze samples from: Cattle, Goats, Sheep, Horses, Deer, and Elk.
* **Male or Female:** The gender of the animals in the sampled herd. If the herd is comprised of different genders, then separate animal profiles should be completed for each gender group.
* **Breed:** The breed of animals in the sampled herd. If the herd is comprised of several breeds, then different animal profiles should be completed for each breed group.
* **Number of Head:** The number of animals that correspond with that animal profile. Please do not include nursing animals. You may note the presence of calves in the "Comments" section.
* **Average Age:** This should be the average age of the herd being tested. Mature and immature (<24 months) animals should have separate animal profiles. Please **DO NOT** submit samples for animals under 6 months of age or offspring still nursing.
* **Spayed/Castrated:** Intact and altered animals within the same herd should have separate animal profiles.

* **Body Condition Score (BCS):** The current average BCS of animals in the sampled animal profile, on a 1-9 scale. If you do not know the average BCS of the animals, NUTBAL can estimate BCS based on animal breed, weight, and frame score. Please use the following guides to approximate BCS.

↑	1	Very Emaciated	
Caution	2	Emaciated	
↓	3	Very Thin	
↑	4	Thin	
Optimal	5	Moderate	
↓	6	Good	
↑	7	Fat	
Caution	8	Obese	
↓	9	Very Obese	
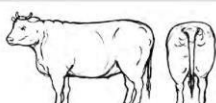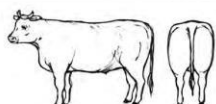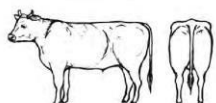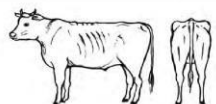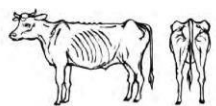
* **Frame Index:** The current average frame score (skeletal size) of animals in the sampled animal profile, on a 1-10 scale. If you do not know the average frame score of the animals, NUTBAL can estimate frame score based on animal breed, weight, and BCS.
* **Weight:** The current average weight of animals in the sampled animal profile. If you do not know the average weight of the animals, NUTBAL can estimate weight based on animal breed and BCS.
* **Days Lactating:** The average number of days the animals in the sampled animal profile have had nursing offspring.

* **Days Pregnant:** The average number of days since the animals in the sampled profile were bred.
* **Implant:** Indicate here if a growth implant has been administered to the sampled herd.
* **Internal Parasite Loads:** An approximate estimation of internal parasite (I.e., stomach worms or lung worms) load at the time of sampling. You can select from: low, medium, and high.
* **External Parasite Loads:** An approximate estimation of external parasite load (i.e., flies or ticks) at the time of sampling. You can select from: low, medium, and high.
* **Desired Average Daily Gain:** The desired average daily gain (lbs/hd/day) for the herd being tested. For growing or lactating animals, NUTBAL may automatically calculate and apply the daily weight gain needed to maintain current body condition.

Pasture

NUTBAL uses these pasture attributes to estimate the quantity of forage available for grazing and animal energy expenditure.

* **Pasture Name:** Please provide a unique pasture identification. Pastures in NUTBAL are made to be re-used over time. If you have submitted a sample from the pasture in the past, please use the same Pasture Name as before.
* **Size:** The total area of the pasture. If no size is indicated, a default pasture size that does not limit forage availability will be used.
* **% of Forage to be Grazed:** The proportion of standing forage allowed to be grazed before the cattle are moved from this pasture.
* **Predominant Forage Type:** Please select one of the following that most closely matched your pasture vegetation: "Improved Pasture", "Annual Grain", "Native Short Grass", "Native Intermediate Grass", and "Native Tall Grass. "
* **Water Availability:** The current level of water availability for the herd. Please select from: "Adequately-watered," "Poorly-watered," and "Herding to water source."
* **Slope:** Terrain slope affects animal workload and energy requirements and may restrict forage availability. Please select either: "≤ 15°" or "> 15°."

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* **Pasture Growth Rate:** This indicates the rate of pasture regrowth and can affect the amount of available forage for animal consumption. Please select from: "Rapid Growth," "Flowering/Seeding," or "Declining/Dormant/Drought."
* **Days in Grazing Period:** The number of days that you plan to have the animals in the described pasture before moving them. If no number is provided, NUTBAL will default to "30 days."

Feeds Used

NUTBAL forage quality analysis and animal performance projections represent the diet consumed 36-48 hrs prior to sampling. For the most accurate forage quality analysis, please discontinue supplemental feeding 48 hours before sampling. In the "Feeds Used" section, please provide feed information for the supplements you intend to feed over the next 30 days, and include feed tags, if available. *Only feeds with a crude protein or energy value need to be included in this section*, and NUTBAL will add the nutrients provided by these feeds into the total diet. If you cannot take the animals off the supplement prior to sampling, please provide a note in the "Comments" section that animals were not taken off supplemental feed. You do not need to provide information for supplemented hays, as they will be accounted for in the forage quality analysis.

* **Feed Type:** The name of the feedstuff. If feeding a commercial feed, please indicate the general feed type (i.e., range cube, liquid feed, cow cake, etc.) and write the feed name in the comments section. Please include a feed tag copy if available.
* **% Crude Protein (CP):** The crude protein concentration of the feed, as indicated on the feed tag.
* **% Total Digestible Nutrients (TDN):** If you know the TDN of the feedstuff, please indicate here (most feed tags do not include TDN, but NUTBAL can use a default value based on the feed type).
* **Frequency of feedings:** The frequency that supplemental feeds are offered. Please select from: "Daily," "Every 2 days," "Every 3 days," or "Weekly."
* **Amount Fed (lbs/hd):** The amount of supplemental feed offered at each feeding, in lbs. per head. If there is a feed indicated in the "Feed Type" section, but no amount is provided, a default value based on the type of feed will be used.

* **Ionophore:** If you are feeding an ionophore (Monensin/Rumensin or Lasalocid/Bovatec), please specify the type and dosage here.

Feed Mediation

NUTBAL automatically generates a Feed Mediation Report for samples with supplemental feed information. The Feed Mediation Report calculates the cost and amount of the previously described supplement required per head over the course of the grazing period. It also calculates the amount of that supplement required to meet a protein or energy deficiency. *If you would like NUTBAL to automatically calculate the amount of feed required to meet a protein or energy deficiency, please mark the "Amount Fed" section with a zero.* If you provide information for multiple supplemental feeds, NUTBAL can also select the most economical feed to meet a nutrient deficiency.

* **Cost per Ton ($):** For the most accurate Feed Mediation Report, we suggest including the costs to purchase, store, and distribute the supplemental feed.
* **Minimum Amount Fed (lbs/hd):** Sometimes, the process of purchasing, storing, and distributing a small quantity of supplemental feed may be more expensive than the potential gain of addressing a slight nutrient deficiency. The minimum amount of feed per head is the quantity provided during each feeding required so that you would be willing to purchase, store and distribute that supplemental feed. This places a constraint on supplemental feed allocation when NUTBAL calculates the Feed Mediation Report.
* **Maximum Amount Fed (lbs/hd):** The maximum amount of the supplemental feed you are willing to provide at each feeding. This places a constraint on supplemental feed allocation when NUTBAL calculates the Feed Mediation Report.

For step-by-step demonstrations and additional sampling information, please check out our video tutorials on our GAN Lab YouTube Channel and Facebook page!

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