

## COLLECTING FECAL SAMPLES

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Fecal profiling of livestock using near infrared spectroscopy (NIRS) allows prediction of dietary crude protein (%CP) and digestible organic matter (%DOM) on a dry matter basis. The methods described below for profiling, shipping, and handling fecal samples have been tested throughout the U.S. Keeping the samples cool and insect free preserves the integrity of the sample for up to seven days.

### **When to collect fecal sample:**

Animals should be in the pasture at least 48 hours prior to collecting fecal sample. Livestock are usually easier to find in the early morning and late evening in hot weather.

### **Supplies:**

- < Plastic zipper sandwich bags that seal to contain sample (i.e. Ziplock. DO NOT use bags that fold over.)
- < Plastic gloves or extra plastic bags to protect hands
- < Disposable spoon(s)
- < Permanent ink marker to label bags (i.e. Sharpie)
- < Mailing labels and tape
- < Masking tape to label bags if marker tends to smear

### **We provide:**

- T Styrofoam Mailing box
- T Gel pack (ice substitute)
- T Sample form and instruction sheet (originals)

### **Fill out the Sample Form:**

The “Client” is the person or entity that pays for the sample. Please provide clients address, phone, fax (optional), e-mail (optional). Please indicate if the invoice is to be mailed or faxed. The “Client Representative” is the person who the GAN lab may contact with questions and who will receive the lab results. Complete the client representative section with name, phone, fax, address, and e-mail address. Please indicate how you would like the sample results sent; mail, fax, or e-mail. Record the date collected, your sample ID, vegetation, and animal kind (cattle, sheep, goats, etc).

Regarding NUTBAL reports, please complete the NUTBAL information section on the back of the form. An accurate NUTBAL report depends on accurate information such as breed (i.e. 1/4 Brahman and 3/4 Angus), age, pregnancy, lactation, weight, condition score, and pasture conditions.

If you are currently feeding a supplement or feed, please complete the feed stuff section of the form. Attach a copy of the feed tag, if possible. Please indicate the last date herd was fed or if supplement is free choice. NUTBAL can also determine the most cost efficient feed stuff for the animal described (feed cost per pound of gain). Please provide feed information on additional feed stuffs if this is desired.

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## **Before collecting the sample:**

1. Freeze gel pack.
2. Attach labels to styrofoam mailing box.
3. Gather supplies.

## **Collecting the Sample:**

1. Protect your hands from disease etc., with plastic gloves or extra bags.
2. Locate 5 to 10 fresh dung piles. It is preferable that you see the actual defecation event to ensure that the sample is fresh and free of pests. Otherwise, collect dung that is still moist inside and shows no evidence of insects or bird scratching.
3. Using a disposable spoon, collect a heaping tablespoon or a large pinch from 5 to 10 dung piles. A small freezer bag need not be more than 3/4 full. Avoid picking up soil or excess plant material.
4. Dispose of dirty gloves, bags, or spoons used to collect sample in an environmentally safe manner.
5. Record on the bag your sample ID, date, and name with a permanent marker.
6. Place the sample in the styrofoam mailer with frozen gel pack. Allow fecal sample to cool to air temperature to extend the life of the frozen gel pack while in shipment.
7. If you are not shipping the sample that day, the sample may be frozen or stored in refrigerator. Freeze sample in the mailer so that it will fit. Freezing does not affect the analysis.
8. Complete the Sample Form, insert form in a zipper bag separate from the sample, and enclose in the styrofoam mailer. Samples from MEXICO must include a Certificate of Origin.
9. Mail the sample in a timely manner.

## **Packing and Mailing the Sample:**

1. Place from bottom to top the fecal sample, the frozen gel pack, bag with sample form, and paper to reduce cold leakage.
2. Place lid on mailer and tape securely with packing tape. Scotch tape does not work well.
3. Send mailer by two-day mail to the following address:  
*Grazingland Animal Nutrition Lab  
Dept. of Rangeland Ecology and Management  
Texas A&M University  
2126 TAMU  
College Station, TX 77843-2126*
4. For more information, you may contact the Grazingland Animal Nutrition Lab (GAN Lab).  
phone: 979-845-5838  
fax: 979-845-2542  
e-mail: ganlab@rasc-sparc.tamu.edu  
web site: <http://cnrit.tamu.edu/ganlab>