

GRAZING MANAGEMENT (CSP Enhancements)

March 2005

Enhancement Activity Task Sheet

UT-CSP-EGM



Photo courtesy of NRCS

Enhancement Activities

Enhancements activities refer to actions that provide resource benefits beyond the level prescribed by NRCS Conservation Practice Standards. Once implemented Enhancement Activities should result in an observable or measurable improvement to the condition of one or more of the soil, water, air, plant, or animal resources, or provide for more efficient resource utilization and/or energy conservation.

Enhancement Activity Benefits

Enhancement activities associated with Grazing Management such as estimating forage quality and animal performance and increasing the intensity of rotational grazing can result in the following benefits to the producer and the environment:

- Reduced risks to ground and surface water quality
- Increased ecosystem health for better water cycling, mineral cycling, and biologic integrity

- Reducing production costs by increasing efficiency of your operation

CSP Payments

You can earn payments by participating in any of the following activities:

- Improve the balance of forage quality and quantity by annually applying recommendations that result from the NUTBAL assessment
- Improve rangeland health by monitoring grazing units using an NRCS accepted monitoring technique (i.e. photo points, nested freq., etc.) and adjusting grazing management
- Improve rangeland health or wetland/riparian pasture condition by implementing a rest rotation grazing system
- Improve rangeland health by implementing a deferred rotation grazing system
- Improve pasture condition and productivity by increasing the grazing management intensity
- Improve range health by managing grazing distribution through increase and/or movement of salt, supplements, & offsite watering facilities

CSP Enhancements earnings are subject to payment caps. Your actual payment will depend on your CSP Tier level and the number of acres enrolled.



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Client's Acknowledgement Statement:

I have elected to use the following Grazing Management activities and understand the requirements of the selected activities:

- Improve the balance of forage quality and quantity by annually applying recommendations that result from the NUTBAL assessment (Worksheet 1)
- Improve rangeland health by monitoring grazing units using an NRCS accepted monitoring technique (i.e. photo points, nested freq., etc.) and adjusting grazing management (Worksheet 2)
- Improve rangeland health or wetland/riparian pasture condition by implementing a rest rotation grazing system (Worksheet 3)
- Improve rangeland health by implementing a deferred rotation grazing system (Worksheet 4)
- Improve pasture condition and productivity by increasing the grazing management intensity (Worksheet 5)
- Improve range health by managing grazing distribution through increase and/or movement of salt, supplements, & offsite watering facilities (Worksheet 6)

I agree that the following information will be provided to NRCS upon request:

- Written documentation of the activity performed (use attached worksheets or equivalent).
- Documentation to show how the activity was preformed and what the results were.
- Copies of dated receipts for equipment or services purchased.

I understand that CSP Enhancements earnings are subject to payment caps and that my actual payments will depend on my CSP Tier level and the number of acres enrolled.

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

Accepted by: /s/ _____ Date: _____

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Worksheet 1 - Improve the balance of forage quality and quantity by annually applying recommendations that result from the NUTBAL assessment

The GAN Lab's NIRS/NUTBAL PRO SYSTEM A Rancher's Tool for Monitoring Livestock Nutrition and Forage Quality

In recent years, the analysis of fecal samples, a.k.a. manure, has proven to be a useful and effective diagnostic and management tool. A fecal sample collected out in the pasture can be sent to the Grazingland Animal Nutrition Lab (GAN). The GAN Lab analyzes the fecal sample using near infrared reflectance spectroscopy (NIRS) to determine the quality of the forage the animals were consuming 36 hours prior to defecating.

WHAT CAN A FECAL SAMPLE TELL YOU

The GAN Lab offers an analysis package that includes percent crude protein (CP) and percent digestible organic matter (DOM). Digestible organic matter is a measure of energy as is total digestible nutrients (TDN). Fecal samples are also analyzed for percent fecal nitrogen (FN) and percent fecal phosphorus (FP). FN and FP refers to the proportion of these minerals in the manure deposited on the ground. All four analyses are predicted for a cost of \$25 per fecal sample. One composite fecal sample can represent an entire herd.

WHAT IS NUTBAL PRO & WHAT CAN NUTBAL PRO TELL YOU

The second component of the system, NUTBAL Pro, is a decision support software developed at Texas A&M University by Dr. Jerry Stuth and the GAN Lab team. An update of the DOS-based version, NUTBAL Pro employs many new tools and the latest scientific knowledge on grazing animal nutrition. The software asks you for information regarding animal attributes, environmental conditions, pasture conditions, feeding program, and metabolic modifiers as well as incorporates GAN Lab results (CP, DOM, FN and FP) as forage quality values. The Nutritional Balance Analyzer software determines: 1) if animals are on a positive or negative nutritional plane, 2) daily weight gain/loss, and 3) the most cost effective feeding option if supplementation is needed from the information you supply.

NUTBAL Pro produces two reports. The Standard NUTBAL Report describes nutritional intake, requirements, and balance for the following: protein, net energy for maintenance and net energy for gain. This report also estimates average daily gain, identifies the limiting nutrient (energy or protein), and reports dry matter intake, milk production, and fecal output. The Mediation Report selects the most cost efficient feed alternative. The user identifies one or more protein or energy supplements available to use. The program evaluates the feeds' value with regards to the animal's nutrient deficiency or desired gain. The Mediation report then identifies the cost efficient option, amount to be fed, and cost per day. The report also calculates the price per ton required for other selected supplements to be competitive with the best choice. NUTBAL Pro is available on CD-Rom only. The CD also includes electronic copies of training materials, sampling instructions and other helpful information.

WHAT IS THE NIRS/NUTBAL PRO SYSTEM

The combined NIRS/NUTBAL Pro System is a diagnostic and management tool that enables you to monitor the changes in forage quality over time, estimate animal performance and supplement more efficiently. A regular monitoring program such as a monthly fecal sampling schedule provides a wealth of information that brings a new level of confidence to your decision making process.

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HOW CAN I USE THIS INFORMATION

The NIRS/NUTBAL Pro System generates a vast amount of data that may be applied numerous ways, especially when you use the system as a nutritional monitoring program sampling on a regular basis. The following are just a few brief highlights. A downward trend in nutritional status may indicate it is time to move the animals to new pasture. The estimated gain or loss per day may help you decide when to start feeding or moving stockers. Dry matter intake can be used to determine if forage will be sufficient for grazing period. Fecal phosphorous and nitrogen output reported in lbs/day provides actual data with which to manage nutrient-loading concerns.

CONTACT THE GAN LAB

First, contact the GAN Lab or visit the web site. The GAN Lab will mail you a starter kit that includes a Styrofoam box with ice substitute, sample sheets, instructions for collecting the fecal sample and completing the sample sheet, and additional articles that you may find informative. Additional kits or boxes are available upon request.

Grazingland Animal Nutrition Lab
 Texas A&M University, Rangeland Ecology & Management
 2126 TAMU
 College Station, TX 77843-2126
 979-845-5838 Phone, 979-845-2542 Fax
ganlab@cnrit.tamu.edu, <http://cnrit.tamu.edu/ganlab>

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. Please do not use fold over baggies. As you can imagine, they leak.

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.
5. 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.
6. Place in the Styrofoam box the cooled 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.
7. 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).
8. Receive results approximately 4 days after collecting sample via fax or e-mail.



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Name:

Worksheet 2 - Improve rangeland health by monitoring grazing units using an accepted monitoring technique (i.e. photo points, nested freq., etc.) and adjusting grazing management

Payment = \$1.00/acre (<300 acres, minimum of 1 point); \$0.60/acre (300 to 3000 acres, minimum of 1 point per 500 acres); \$0.30/acre (>3000 acres, minimum of 1 point per 1000 acres) for establishing monitoring points and monitoring vegetation attributes.

Develop monitoring plan with appropriate records to assess whether the grazing strategy is meeting objectives. Identify the key areas (on a map) and key plant/s in the plan that the manager will evaluate in making grazing management decisions.

Recommended procedures are in Chapter 4 of the National Range and Pasture Handbook (Trend determinations, Exhibit 4-6), and Monitoring Manual for Grassland, Shrubland and Savanna Ecosystems, ARS 2005.

Use this table to document rangeland units rested.

Monitor key areas			
Pasture/Management Unit	Key Area Location	Monitoring Methods (photo points required, note other information collected)	Date Collected
	100 feet North-East of South-	Photos before and after grazing, and utilization check	4/15/2004 9/10/2004
	T3N R15W	Photos before and after grazing, and utilization check showing an average 4 inch stubble height.	5/2/2004 10/15/2004

Example



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Monitor key areas			
Pasture/Management Unit	Key Area Location	Monitoring Methods (photo points required, note other information collected)	Date Collected

Establishing Monitoring Points and Monitoring Vegetative Attributes Certification

I certify that I have established monitoring points and monitored the vegetative attributes as listed in the table above.

Name: _____ Date: _____



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Worksheet 3 - Improve rangeland health by implementing a rest rotation grazing system

Payment = \$12.00/acre for rangeland units rested under rest-rotation grazing. \$20.00/acre for wetland or riparian areas rested under rest-rotation grazing.

Rangeland management units on the agricultural operation are in a rest-rotation grazing system where at least one management unit is deferred from use for the entire calendar year. The operation should contain at least four management units. Use the grazing record book and/or similar records to indicate which management units are rested and when. Keep actual use records and take before and after photos at key areas. Attach grazing records and photos for the unit for each year.

Use this table to document rangeland units rested.

Rangeland Management Unit	Management Unit Acres	System Acres	Dates Rested
<i>Example</i>		4215	1/1/2004 to 12/31/2004

Use this table to document wetland/riparian areas rested.

Wetland/Riparian Area	Management Unit Acres	System Acres	Dates Rested

Resting Rangeland, Wetland, or Riparian Areas Certification

I certify that I have rested the rangeland units or wetland/riparian areas as listed above.

Name: _____ Date: _____



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Name: _____

Worksheet 6 – Improve range health by managing grazing distribution through increase and/or movement of salt, supplements, & offsite watering facilities.

Payment = \$2.00/acre for rangeland units where new water, salt, mineral, and/or supplemental feeding areas are established or rotated.

Salt, mineral, and supplemental feeding areas are moved at least annually to an area of the pasture that was under utilized the year before to affect livestock distribution for increased ecological health. Move the location of salt, mineral, and protein supplements (e.g. low moisture blocks, range cake, etc.) to change livestock distribution and utilization patterns on rangeland. Use the worksheet and map to indicate which management units have salt, mineral, and/or supplemental feeding areas rotated and when (date and/or season of the year) the change of location was made.

Provide off-site watering facilities and exclude domestic livestock from grazing springs and seeps. Also pipe water to other areas of the pasture for wildlife and livestock use to improve grazing distribution and aid the management and/or restoration of habitat for targeted wildlife. Attach map and applicable drawings, plans, photos, or other documentation to show changes. These changes should be planned with an NRCS Conservationist and/or a Consultant.

Use this table to document increased grazing distribution activities.

Rangeland Management Units	Number & Type of Sites Rotated	System Acres	Year
18-Mile range unit <i>Example</i>	3 salt, 2 supplement locations	7215	2004

Increased Grazing Distribution Activities Certification

I certify that I have increased grazing distribution activities as listed above.

Name: _____ Date: _____