Forage Risk Assessment Management System

Dynamic online risk management tool available to livestock producers 24/7
Components

- Herd Nutrition Monitoring Tool
  - NIRS/NUTBAL Automated System
- Forage Monitoring Tool
  - PHYGROW
- Reproductive Alternatives
  - BCS Pregnancy Calculator
- Economic Trade-Offs
  - Financial implications of alternatives
Methods and Procedures

- Establish baseline vegetation types and herd inventories and install rain gauges
  - Ranch visit.
- Monitor forage quality and project animal performance
  - Collect monthly fecal samples from index herds.
- Monitor on site precipitation
  - Check FRAMS gauges and log precipitation online.
  - Backup weather monitoring system with NOAA.
- Monitor forage production deviation from long-term average
  - View online projections and adjust herd structure according to 90 day drought projection.
- Decision tool
  - Assess values of alternative actions relative to markets
    - Examples: partial destock, feed, lease pasture, etc.
Web-based Inputs

- Precipitation and climate data
- Livestock prices
  - Current and projections
- Feed costs
- Soils and plant data
Ranch Inputs

- Rain fall data
- Forage description
- Herd structure information and updates
- Fecal sample collection
- Relevant decision alternatives
Output

- Drought monitor via forage production
  - % deviation from long-term average
  - Current and projected at 30, 60 and 90 days
- Livestock nutritional status
- Pregnancy Rates based on projected BCS
- Destocking impacts
- Feeding recommendation
- Relative value of feeding vs. destocking
Ranchers can collect a fecal sample, log onto their personal LEWS site and the NIRS/NUTBAL autosystem web site and conduct tradeoff analysis.
What we will be doing on your ranch

• How to collect fecal samples
• Designating plant communities (dominant vegetation as index plant communities)
• Locating rain gauges (< 1000 – 1 gauge, max 5 gauges)
• Setting herd structure (use whole ranch)
• Accessing the web site
What we will need

• Access to the ranch (we will notify ahead of time)

• Orientation and directions

• DOQQ with soils and range sites

• Overlay with fences and roads
Weather Grid Information

- For TX, NM, OK a 4x4 km NOAA grid is available (5.76 sq miles or 3686 acres)

- A CMORPH grid is 8x8 km (23.04 sq. miles or 14,746 acres)

- NOAA 0.25 weather grid is 25x25 km (approx. 12x12 mi. In U.S. or 144 sq. miles or 92,160 acres)
Reference Plant Communities in 7 County Area:
Coastal Bermudagrass – Average Stand
Rangeland 0-30% Woody Cover
Rangeland >30% Woody Cover

0.25° NOAA Weather Grids

STATSGO soils help identify the dominant soil in the grid and is linked to a “filled” database of all soil series modeling attributes in the USA.

Reference plant communities for a given region are identified by experts and accepted by the ranching community.

Reference plant community measured at a SME selected site for the multi-county area.

Grid/Soil/Plant Community/Grazing Reference Community can be specified.
**Take the ? out of nutritional management of your cows**

...let the cows tell you what they need!

Automated on-line advisory service or work directly with the technology

Contact GANLAB at Texas A&M University

Phone 979-845-5838
Email ganlab@cnrit.tamu.edu

The quality of this pasture is really good

Not enough to eat in this pasture, think the neighbors place is better

This pasture is dry and the quality looks low

What do I need to feed these cows and how much is it costing me?

... 2 day priority mail, and an Internet connection gets you answers to these questions

NIRS Fecal Profiling Technology

59.3 % Digestible Organic Matter

11.5 % Crude Protein

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Setting up the rain gauge(s)

• Gauge protected from grazing animals or other disturbance

• Distance a minimum of 3 times height of trees or structures

• GPS the site of the the gauge
PHYGROW sampling frame
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Presence of forbs in frame
Plant basal hit on point
PHYGROW – reading woody cover