PERSPECTIVES

Outside the Box

▶ by **Tom Field,** *director of producer education, National Cattlemen's Beef Association*

Forage resource monitoring

There is a genuine crisis forming on the American landscape, evidenced by the decisions of new generations who decide not to return to the land, the growing notion that America does not need to be self-sufficient in food production, and the increasing transformation of agricultural lands to other uses.

Effective management

This situation compels a greater commitment to the management of grazing resources. If we take the time, the energy and the risk to build a healthy working landscape, then we will have taken the path to attaining Wallace Stegner's vision of *communities equal to the beauty of our scenery*.

Management is the process of applying human creativity, experiences and effort to worthwhile endeavors. Effective management is, at its root, a process of discovery built on trial and error, a combination of both science and art, and never a guaranteed recipe for success. And as the *Priorities First* study pointed out, grazing management is at the forefront of successful cow-calf production.

A study of the environmental practices of beef producers found that implementing successful grazing management strategies begins with a thoughtful description of desired outcomes coupled with a reasonable and disciplined approach to capturing data in a format that can be utilized to measure progress toward the stated goals and objectives. Goals that are specific and measured with a system of affordable, credible and achievable data collection are more likely to be attained.

An efficient, yet effective approach to site monitoring is fundamental to measuring the productivity and vitality of the forage resource.

Management of forage and rangeland resources is one of the most intriguing challenges given the complexity, connectivity and vast expanse of both time and space involved. Range ecosystem science has yielded a plethora of valid data points that can be captured — so many, in fact, that managers could expend the full extent of their time and energy toward observation and data collection of a specific range or pasture site. Thus, it is vital to apply the 80:20 rule, which suggests that 80% of the results arise from 20% of the effort.

An efficient, yet effective approach to site monitoring is fundamental to measuring the productivity and vitality of the forage resource. A monitoring protocol requires the merger of short- and long-term perspectives where the long-term monitoring is designed to capture data that helps managers make immediate decisions and to provide the data points to build trend lines and benchmarks in four key categories:

1. Site information, including a location description, map and photo points.
2. Short-term information, such as landscape appearance, key species utilization, grazing maps and stubble height.
3. Long-term approaches, such as photo-point transects, photo plots, riparian stability and plant density.
4. Interpretive methods, such as the grazing response index.

The basic information gained from each methodology is listed in Table 1. Additional critical data that should be collected on a site-specific basis to support the key methods includes:

- ▶unit name for the allotment, management area or geographic area;
- ▶name or identification for each pasture or subunit;
- ▶site-specific description of the study area supported by GPS coordinates;
- ▶date, method used and person collecting the data;
- ▶running tally of the trend line;
- ▶description of the growing conditions for the year in question;
- ▶kind and class of livestock and number of each;
- ▶season of use; and
- ▶current year's grazing management.

Grass growing resources

Regardless of whether the site is owned, leased, public or private, accomplishing grazing goals while documenting the effect of the livestock enterprise is important to improving management decisions. While the old adage "as exciting as watching grass grow" suggests otherwise, profitable cow-calf production is enhanced when managers develop a dedicated interest in the cost savings, productivity increases and viability enhancement that can be attained from a functional forage resource monitoring plan.

Table 1: Basic information gained from key methodologies used in site monitoring

Methodology	Information estimated
Landscape appearance	Forage utilization
Key species	Forage utilization
Grazing use map	Describes use patterns
Stubble height	Forage utilization
Photopoint transect	Monitor vegetative and site condition
Photo plots	Monitor changing conditions
Cover by life form transect	Describes canopy cover
Plant density	Describes plant community composition
Streamside stability	Describes riparian plant community
Grazing response index	Describes annual use

A multitude of resources are available to assist livestock producers in learning and growing in their professional range and pasture management skills. Resources are available from both the public and private sector, and while many monitoring protocols are easily adapted to most environments, regionally specific educational opportunities are also available. The Extension service and a number of land-grant universities offer strong educational programs designed to support grazing management enhancement.

A starter list of additional organizations and web sites are listed below:

- Land EKG, *www.landekg.org*
- American Grazing Lands Services, *www.americangrazinglands.com*
- Natural Resources Conservation Services (NRCS), *www.nrcs.usda.gov*

The stewardship of land, water and other natural resources is fundamental to the long-term success of a cow-calf business.

Monitoring these resources is important to enhancing profitability and to maintaining the credibility of the industry in the eyes of citizens.

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