Prescribed Grazing (formerly titled Range Management)

Nebraska Conservation Planning Sheet No. 14

NRCS Natural Resources Conservation Service

reprinted November 2005

What is prescribed grazing?

Prescribed grazing is a management technique that utilizes grazing animals to manage grazing lands. A grazing prescription considers livestock numbers and timing of grazing to help determine proper stocking rates, balance forage supply with forage demand, and help improve or maintain the plant community on grazing lands.

How it helps the land

Prescribed grazing is the main component in conservation management on grazing lands.

A grazing prescription can:

- Improve or maintain the health and vigor of plant communities
- Improve or maintain the quantity and quality of forage for livestock health and productivity
- Improve or maintain water quality and quantity on rangelands
- Reduce soil erosion and maintain or improve soil condition
- Improve or maintain the quantity and quality of food and cover available for wildlife
- Promote economic stability through grazing land sustainability

A well planned grazing system is the key to maintaining or improving the productivity, health, vigor, and ecological condition of grazing lands. Practices like fences and watering systems, plus accelerating practices like interseeding and prescribed burning, may be used to address

natural resource concerns identified during conservation planning. These practices can help insure the success of the prescribed grazing system.

Planning your grazing system

A prescribed grazing system starts with a clear understanding of goals and objectives based upon a resource problem or opportunity. Once these have been determined the prescribed grazing plan includes:

- Resource Inventory - of the current land condition and existing structures such as fences and watering facilities. The types of soils, as well as the ecological sites, will help determine how your grazing lands will respond to grazing treatments.
- Forage Inventory - of forage quality, quantity, and plant species in each pasture during the grazing period.
- Forage-Animal Balance - ensures that available forage meets forage demand by grazing animals, including wildlife. If available forages are insufficient, overgrazing can occur, which can weaken plants through reduced root systems, reduced productivity, a decline in vigor, and can affect the ability of the plant to recover from environmental stress like drought. Likewise, if forage demand over time is lower than forage available, under-grazing can occur. Under-grazing can adversely impact plant communities as well as reduce potential economic returns from unrealized livestock productivity.
- Grazing Schedule - is a plan that identifies periods of grazing and rest as well as other treatments for each pasture. It can be as simple as prescribing a stocking rate designed to improve or maintain the grazing land resource in a

single pasture, to a more intensive grazing rotation system with grazing periods through multiple pastures with multiple herds.

- Contingency Plan - grazing lands are regularly susceptible to drought, hail, insect damage, flooding, and wildfire. The contingency plan serves as a guide for adjusting the grazing prescription to ensure proper grazing land management during times of environmental stress.

- Monitoring Plan - a plan developed with records to assess whether the grazing strategy is meeting objectives. Key areas and key plants are identified to assist in making grazing management decisions.

Other things to know about prescribed grazing

A grazing prescription can be scheduled to consider the time of plant growth, available forage, and utilization levels to determine when grazing animals should be moved to optimize the grazing resource for plant, and animal sustainability. Sometimes periodic rest from grazing is needed to maintain or restore desired plant communities. Full or partial season rest periods may be necessary to prepare for prescribed burns, brush control, seeding, or other treatments. In all cases, the grazing schedule should be designed to realize the resource objectives.

Utilization

Leaf removal impacts root growth on foraged plants. The grazing utilization level can be managed to optimize sustained plant health over time. Utilization levels are observed on a regular basis to determine the proper timing of livestock movement. A good starting point in a prescribed grazing plan is to manage grazing levels so that no more than 50 percent of the current year's plant growth is removed.

Grazing distribution

Livestock often prefer to graze easily accessible areas close to water sources and on gentle slopes. When allowed, livestock will select the most palatable plants resulting in uneven grazing distribution. Locating salt, minerals, and supplements away from water is effective at pulling livestock into under-utilized areas. Centrally locating watering facilities when possible can also improve distribution. Cross fencing pastures is another method to control livestock distribution and increase grazing efficiency.

Season of use

Changing the season of use of a pasture from year to year can be beneficial to rangeland plants. For instance, a pasture grazed in June in one year can be grazed in August the following year to give plants a "rest period" at a time when leaf and root growth is critical. Livestock selectivity of plants can be reduced and plants get an opportunity to stay healthy and productive.

Management of key plant species in key grazing areas

Key plant species and key areas are selected to monitor rangelands for proper utilization, range health, and changes in plant composition due to grazing management. Identifying key areas and key species on rangelands increases the efficiency in evaluating the effects of management. A key area represents the landscape in which livestock graze. A key species is normally a desirable forage plant that makes up at least 15% of the plant community. Observations of the changes to the key species generally will provide clues as to how the remaining plant community is responding to grazing management. Photographs taken at key areas can help visualize and record the changes taking place in the landscape following prescribed grazing.

Prescribed burning

Burning rangelands in a controlled environment or under a prescription can help control woody invasive plants such as Eastern Red Cedar. Prescribed burns require careful planning and land preparation. Local fire officials must be notified and proper permits obtained before conducting a prescribed burn. A successful prescribed burn can help improve and maintain rangelands.

Range seeding

Range seeding or interseeding is considered when rangelands are in such poor condition that grazing management practices alone cannot effect the desired improvement. For more information on range seeding, see Conservation Planning Sheet 15, *Range Seeding*.

Brush management

Brush infested grazing lands often do not respond to changes in grazing management alone. Brush can be controlled by mechanical, chemical, or biological means depending on the species and its density. Decisions to control brush will be affected by the objective of the land use. If wildlife, recreation or woodland uses are the primary objectives, then the brush control method should be selected that will optimize the benefits for these desired uses.

For more information refer to the Nebraska Field Office Technical Guide (eFOTG) (http://efotg.nrcs.usda.gov/efotg_locator.aspx?map=NE), Section IV, Conservation Practice Standard - Prescribed Grazing, (528), or contact your local Natural Resources Conservation Service office.