

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE GENERAL SPECIFICATION**

PRESCRIBED GRAZING

**(Ac.)
CODE 528**

GENERAL SPECIFICATION

Procedures, technical details, and other information listed below provide additional guidance for carrying out selected components of the named practice. This material is referenced from the conservation practice standard for the named practice and supplements the requirements and considerations listed therein.

Some components of this practice may adversely affect significant cultural resources and should be submitted to a cultural resource specialist for a determination of impacts before the practice commences.

Meeting the Standard

The prescribed grazing standard is generally met if pasture plants are deemed to be healthy, vigorous and providing adequate cover for the soil. This is generally considered to be plant cover in excess of 2-4 inches in residual height, depending on the type of plants, with a 70% ground cover.

Rest Periods

To accomplish the objectives of prescribed grazing, the goal of the practice over time will be to rotate animals at least twice weekly during the grazing season.

This rotation is needed because healthy forage plants require a rest period to be vigorous. Repeated overgrazing depletes root carbohydrate reserves, weakens the plants and decreases diversity. Overgrazing can occur as spot grazing within pastures that are not rotated often enough. Resting pastures adequately stimulates plant diversity that benefits wildlife habitat and animal health.

Continuous grazing, in principle, can be used in prescribed grazing; however, this will be extremely hard to manage. The reason is that it will necessitate a low stocking rate and periodic clipping of pastures to keep them vegetative. Keeping plants vegetative will help prevent spot grazing and subsequent overgrazing. *If spot overgrazing occurs in the majority of a pasture over a grazing season, it does not meet the standard of prescribed grazing.* Overgrazing occurs when the plants are below the minimum suggested grazing height and not provided a rest period to replenish the root reserves.

Levels of Implementation

Prescribed grazing has various levels of implementation, depending on the goals and objectives of the manager. The goal level is to move animals twice weekly with pastures having enough rest to return them to the desired grazing height for the pasture being re-grazed. All prescribed grazing plans shall discuss how to accomplish this type of rotation. A twice-weekly rotation protects the soil resource by making it easier to maintain adequate cover. It will help prevent spot grazing as animals are rotated to a fresh pasture before each “spot” that is grazed has regrown enough to be eaten again within that rotation.

Higher levels of implementation provide more economic benefit and help the land manager achieve his or her economic benefits. The harvest efficiency may be increased from 40-50% to 60-70% with a faster rotation. The higher harvest efficiency will require a daily rotation (or twice a day for grass-based dairy producers, for example). Higher efficiency allows higher gains and/or more animals per acre.

Number of Pasture and Pasture Subdivisions

As the frequency of rotation increases, the number of pastures or subdivisions must increase.

Beginning graziers should have an adequate number of pastures to work toward the “conservation ideal” of rotating twice a week. This can be accomplished in the beginning with 3-4 pastures per grazing herd and a rotation of 7-10 days. Those pastures can be subdivided through temporary fencing to 6-8 pastures to accomplish the twice a week rotation. Then pastures can be subdivided again to work toward the “economic ideal” of a daily rotation at periods during the grazing season to optimize harvest efficiency. This management routine would be ideal during periods of dry weather or limited forage availability.

A prescribed grazing plan will be prepared for all management units where grazing of any livestock will occur. The grazing design should provide stock water either within the individual pastures or via a well-maintained lane access to water for the grazing unit. A good recommendation is water availability within 1000 feet of grazing location.

Requirements for Developing a Prescribed Grazing Plan

Elements of the plan will include:

- The land manager’s objectives.
- Inventory of existing resources: fences, water, soils, forages.
- Forage/animal balance.
- Number and location of planned pastures, fences, watering locations and other facilitating practices.
- Grazing plan: periods of grazing and rest, other treatment activities for each management unit.

Goals and objectives shall be clearly stated. These will address economic as well as resource concerns.

Resource inventory (i.e. Resource condition, existing structures, facilities, soil). Existing fences will be shown. Permanent barbed or woven wire as well as electric fences should be differentiated. In addition to a soil survey, soil tests results should be

evaluated and recommendations adjusted for grazing conditions, as contrasted to hay production. Locations of watering points should also be noted.

Forage inventory assesses the expected quality, quantity and species of forage in each management unit(s) during the grazing period.

The forage inventory should be evaluated under various intensities of rotation. This can be referred to as a farm-specific forage profile and is best accomplished through grazing records to monitor grazing days per acre across and within seasons. A precursor to this effort can be accomplished through computer programs designed to evaluate forage production and utilization. However, remember those numbers are estimates and may deviate considerably from reality. Estimates of forage availability should be made on a monthly basis rather than seasonal or annually.

Forage-animal balance shall be developed as part of a sustainable grazing plan for the management unit(s), which insures forage produced or available meets forage demand of livestock and/or wildlife of concern.

Adjusting the grazing plan may be referred to as forage budgeting. Budgeting is best accomplished by periodically monitoring the pastures as to forage availability (as well as availability of quality forage) and anticipated growth in subsequent days. This monitoring of grazing days available may help in making decisions on such practices as nitrogen fertilization (including timing of application), use of temporary fencing for higher harvest efficiency for short time periods, or the need to change pasture composition through better management or seeding practices. It can also assist in scheduling times to market animals to decrease forage demand during stress periods.

Adjustments to stocking rates and other adjustments to the grazing system are a normal and necessary part of prescribed grazing management.

Balancing forage supply and animal requirements – management considerations:

- Bring all pastures to soil test recommendations for pH, phosphorus and potassium for grazing.
- Recognize that keeping plants in the linear phase of the growth curve potentially increases production. The linear phase is the vegetative stage.
- Synchronize animals at highest critical nutrition need (peak of lactation) with greatest supply of quality forage. Time calving and weaning to match availability of quality forage.
- Apply nitrogen fertilizer to add to available forage when needed.
- Carry animals past weaning through a high forage availability time period and selling as forage supply decreases.
- Harvest hay when forage supply is excessive rather than using hay fields dedicated to hay production.
- Stockpile forage (fescue or bermudagrass) for later need (dry summer grazing, fall grazing, winter grazing).
- Use winter annuals to extend the grazing season, particularly in warm season grass sods.
- Use good grazing management to extend the grazing season of perennials.
- Feed hay to rest pastures when appropriate (such as seasonal shifts).
- Compromise quality and quantity of forage, especially when cutting hay. Quality is a function of physiological maturity (cutting date) and quantity may need to be reduced for adequate quality.

Grazing plan developed for livestock that identifies periods of grazing, rest, and other treatment activities for each management unit.

Evaluation of the grazing plan should be based on monitoring pasture availabilities to prevent severe overgrazing, have adequate rest periods for the plants to replenish stored carbohydrates, and decreasing spot grazing within the pastures. The lowest management scenario to accomplish those objectives may be a twice a week rotation. However, a more intensive rotation can significantly increase the harvest efficiency and improve the economics of the farm and assist in getting the livestock through periods of environment stress.

Contingency plan must be developed that details potential problems (i.e., severe drought, flooding) and serves as a guide for adjusting the grazing prescription to ensure resource management and economic feasibility without resource degradation. Such a plan may include feeding hay in sacrifice areas for a short time period to prevent overgrazing of all the pastures. Also the pastures that have been stressed but not overgrazed will recover much faster after the environmental stress is over. A contingency plan should include how to decrease numbers of animals as forage growth declines through the drier parts of the year.

Monitoring plan is to be developed with appropriate records to assess whether the grazing strategy is meeting objectives. Identify the key areas and key plants that the manager should evaluate in making grazing management decisions. The pasture assessment score sheet should be used as a primary monitoring tool to determine management priorities of various pastures in the prescribed grazing plan.

The Foundation of Grazing Management

The manager of the grazing land should understand the reasons for a more frequent rotation related to cover, impact on diversity of plants and harvest efficiency. Education through grazing field days and technical assistance is key to build upon existing knowledge. Utilize the grazing stick for management decisions. Prescribed grazing management objectives can be addressed as follows:

1. Rest pastures for more vigorous plants and greater plant diversity.
2. Increase harvest efficiency by rotating more frequently, particularly at times of the year where forage supplies are limiting.
3. Increase individual animal production or production per acre through grazing.
 - Increase carrying capacity for an increase in animal product per acre.
 - Balance production per animal and production per acre.
4. Manage pastures
 - without cutting hay.
 - to cut some hay (not owning hay equipment).
 - to cut a major amount of hay (owns hay equipment).

Facilitating Practices

Most prescribed grazing plans should include other practices to support the management of the grazing system. For example, a good grazing program is best carried out using Forage Harvest Management (511) to keep pastures vegetative.

- Brush Management (314) for control of invasive species into pastures.
- Forage Harvest Management (511) for harvest of surplus forage.
- Heavy Use Area Protection (561) to protect watering areas and other areas of high levels of livestock traffic.
- Nutrient Management (590) for proper use of animal wastes and commercial fertilizers on pastureland.
- Pasture and Hayland Planting (512) for renovation of pastures when needed.
- Pest Management (595) to control insects, disease, weeds and other organisms.
- Pipeline (516), Water Facility (614), and Water Well (642) for proper water development to aid in livestock distribution.
- Streambank and Shoreline Protection (580) for proper management of riparian areas.