

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**PRESCRIBED GRAZING**

(Ac.)  
CODE 528A

**DEFINITION**

Managing the controlled harvest of vegetation with grazing animals.

**PURPOSES**

This practice may be applied as part of a conservation management system to accomplish one or more of the following purposes.

- Improve or maintain the health and vigor of plant communities.
- Improve or maintain quantity and quality of forage for livestock health and productivity.
- Improve or maintain water quality and quantity.
- Minimize accelerated soil erosion, and maintain or improve soil quality.
- Improve or maintain the quantity and quality of food and/or cover available for wildlife.
- Promote economic stability through grazing land sustainability.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to all lands where grazing animals are managed.

**CRITERIA**

**General Criteria Applicable for all Purposes**

Removal of forage will be in accordance with site production limitations, rate of plant growth, and the physiological needs of forage plants.

Manage kind of animal, animal number, grazing distribution, length of grazing periods, and timing of use to provide sufficient rest from grazing during the growing period.

Protect soil, water, air, plant, and animal resources when locating livestock feeding, handling, and watering facilities.

Manage grazing animals to maintain adequate vegetative cover on sensitive areas (i.e. riparian, wetland, habitats of concern).

**Additional Criteria to Improve or Maintain the Health and Vigor of Plant Communities.**

The duration of grazing and the height of stubble following grazing will be based on plant tolerance and adaptation and expected productivity of forage species to meet management unit objectives. See Tech Note "Grazing Guidance" or Summary Report from C-Graze Software.

Adjust grazing periods, stocking density and/or stocking rates to meet the desired objectives for the plant communities and the associated resources, including the grazing animal.

Schedule the timing of livestock movements based on rate of plant growth, desired beginning and stopping grazing heights, (or forage mass) and desired use efficiency instead of calendar dates.

Periodic rest from grazing may be needed to maintain or restore the desired plant community following episodic events, such as wildfire, freezes, severe drought, overgrazing, pests (weeds, insects, disease) or improper nutrient management.

**Additional Criteria to Improve or Maintain Quantity and Quality of Forage for Livestock Health and Productivity**

Plan grazing and harvest schedule to match forage supply and quality with the nutrient requirements of the animal and the goals of the livestock producer.

Manage to prevent the loss of livestock from forage induced health disorders (nitrates, grass tetany, bloat,) and poisonous plants. See Stock Poisoning Plants of North Carolina Bulletin Number 414, June 1973.

<http://www.cals.ncsu.edu/botany/ncsc/Poisonplants/index.htm>

#### **Additional Criteria to Improve or Maintain Water Quality and Quantity**

Maintain adequate ground cover, plant health and plant density to improve filtering capacity of the vegetation.

Enhance nutrient distribution and improve or maintain ground cover by minimizing concentrated livestock lounging areas.

Position livestock feeding and watering sites away from drainage patterns and watercourses.

Where livestock are permitted to drink from streams and ponds, the prescribed grazing system must address the following:

- Adequate vegetation to prevent soil erosion under animal traffic; otherwise, heavy use area protection or use exclusion must be implemented to control access and prevent degradation.
- Access to streambank is kept to a minimum, especially when soil is wet.
- Alternative watering facilities, without stream fencing, will be placed as far away from stream as possible (100 feet minimum).
- Alternative watering facilities are located at least 50 feet from areas of concentrated runoff.
- Shade must be available during the summer months away from streams and drainage patterns (minimizes nutrient and soil movement into watercourses).

#### **Additional Criteria to Minimize Soil Erosion and Improve Soil Quality**

Maintain adequate ground cover (litter and canopy) to minimize soil loss, improve water infiltration and soil quality.

Minimize concentrated livestock areas, trailing, and trampling to reduce soil compaction, excess runoff and erosion.

#### **Additional Criteria to Improve or Maintain Food and/or Cover for Wildlife Species**

Manage for diverse plant communities when wildlife habitat is a major objective of the landowner. Manage plant height, canopy structure and density for desired wildlife habitat.

Defer grazing at some time during critical nesting periods. See Upland Wildlife Habitat Management (Standard 645).

#### **Additional Criteria to Promote Economic Stability through Grazing Land Sustainability.**

Provide grazeable forage for as many days as possible to minimize supplemental feed cost.

Alternative feed sources will be evaluated on basis of animal nutrient requirement, availability and relative cost.

Develop a contingency plan for emergency situations to insure economic feasibility without resource degradation.

#### **CONSIDERATIONS**

The prescribed grazing plan should consider objectives and abilities of the client.

Rest pastures for a period of time to ensure the success of prescribed fire, brush and weed control, new plantings or renovation or other conservation practices.

Where practical, start the grazing sequence in a different pasture each growing season.

When toxic or troublesome weeds pose a significant problem, prescribed grazing should be implemented in conjunction with Pest Management (Standard 595) (including the use of other types of grazing animals) to protect desired plant communities.

Livestock feeding, handling, and watering facilities should be designed and installed to meet animal requirements and to improve and/or maintain animal grazing patterns,

minimize trampling/trailing and improve the distribution of manure and urine. These facilities should be designed and installed to minimize animal stress, the spread of disease, parasites, contact with harmful organisms and toxic and noxious plants.

When developing a grazing plan, consider landscape position, soil productivity, shade, and drinking water distribution in deciding how to subdivide or fence the farm to protect the resources and efficiently use the growing forage.

Supplemental feed and/or mineral requirements should be balanced with the grazed forage to meet nutritional requirements for the kind and class of grazing livestock.

Prescribed grazing should consider the needs of other enterprises utilizing the same land, such as wildlife and recreational uses.

One or more of the following conservation practices may be used to successfully implement a prescribed grazing plan.

**Facilitating Practices:** *These practices are used to control or influence the movement or handling of grazing animals and facilitate the application of the Prescribed Grazing Plan.*

- Access Road (560)
- Animal Trails and Walkways (575)
- Controlled Stream Access for Livestock Watering (730-interim)
- Fence (382)
- Heavy Use Area Protection (561)
- Pipeline (516)
- Pond (378)
- Pond Sealing or Lining (521A & E)
- Spring Development (574)
- Stream Crossing (576-interim)
- Watering Facility (614)
- Water Well (642)

**Supporting or Accelerating Practices.** *These practices help to achieve desired changes in the plant community more rapidly than is possible through implementation of the Prescribed Grazing Plan alone.*

- Brush Management (314)
- Controlled Livestock Lounging Area (337 interim)
- Critical Area Planting (342)
- Grade Stabilization Structure (410)
- Grazing Land Mechanical Treatment (548)
- Irrigation Water Management (449)

- Land Clearing (460)
- Land Smoothing (466)
- Nutrient Management (590)
- Pasture and Hay Planting (512)
- Pest Management (595)
- Prescribed Burning (338)
- Residue Management (329A)
- Riparian Forest Buffer (391)
- Streambank and Shoreline Protection (580)
- Upland Wildlife Habitat Management (645)
- Use Exclusion (472)
- Waste Utilization (633)
- Wetland Wildlife Habitat Management (644)
- Windbreak/Shelterbelt Establishment (380)

## PLANS AND SPECIFICATIONS

The prescribed grazing plan shall conform to all applicable federal, state, and local laws. Seek measures to avoid adverse effects to endangered, threatened, and candidate species and their habitats.

Documentation for the Grazing Plan may include approved Job Sheets, computer spreadsheets and/or written summary.

### The Prescribed Grazing Plan will include:

1. **Goals and Objectives.** Clearly stated.
2. **Resource Inventory.** Maps showing field numbers, acres, existing fences, crop, drinking water locations, barns, working facilities, and soils.
3. **Forage Inventory.** For each month document the expected forage production of the predominant forage species within each field.
4. **Animal inventory.** List the number of head and average weights of all classes and kinds on the farm including birthing season, live birth%, and weaning date.
5. **Forage- animal balance sheet.** For each month document the balance between all animal demands and forage supply under selected grazing efficiencies.
6. **Grazing Heights and Rest Periods.** For the predominant plant species in each field document the starting and ending grazing heights (or forage mass), the period of grazing (days on paddock) and expected days of rest to reach target start grazing heights for specific times of year.

7. **Information about Soil Fertility Management.** When planning at the RMS level, Nutrient Management (590) is an essential practice, otherwise consider including information about fertilization and liming management. In the absence of a Soil Test Report for each field, document the planned application rates and timing of fertilizer and lime based on NCSU Extension guidelines.
8. **Emergency Management Alternatives.** Identify contingency measures to adjust the grazing plan when unexpected problems (drought, fire, freezing, flooding, pest outbreaks) or management mistakes cause the feed supply and demand to get out of balance.
9. **Monitoring Method.** An initial assessment of pasture condition will be made using the Pasture Condition Score Sheet. Subsequent pasture condition evaluations can be used to determine if the grazing plan is meeting objectives. See Tech Note "Evaluating Pasture Condition" or C-Graze Software output.
10. **Narrative & Summary of the Grazing Plan** may include approved Job sheets, computer spreadsheets and/or written summary remarks.

## OPERATION AND MAINTENANCE

The manager will use the prescribed grazing plan to guide his management on a continuing basis, making adjustments as needed to ensure that the concept and objectives of its application are met.

If an imbalance between forage supply and animal requirements is encountered, the Prescribed Grazing Plan shall be adjusted by following the *contingency measures* outlined in the plan.

All facilitating practices (i.e. fence, watering, trail facilities) that are needed to effect adequate grazing distribution as planned by this standard will be maintained in good working order.

In the absence of a Nutrient Management plan, apply lime and fertilizer or manure according to soil test recommendations. Soil test fields (to depth of 3-4") prior to implementing a grazing plan and every two to three years thereafter.

Clip pastures as needed to initiate vegetative regrowth and/or control undesirable plant species.

Renovate pastures as necessary to introduce desired forage species. Make certain of compatibility among existing species and introduced specie(s).

Exclude or eliminate any hazard from a pasture that may injure livestock, such as loose wire, other hardware, holes, and downed trees or heavy limbs.

Maintenance: All facilitating practices (i.e. fence, watering facilities, pest management) that are needed to effect adequate grazing distribution as planned by this practice will be maintained in good working order.