

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

PRESCRIBED GRAZING

(Ac.)

CODE 528

DEFINITION

Managing the harvest of vegetation with grazing and/or browsing animals.

PURPOSE

- Improve or maintain desired species composition and vigor of plant communities.
- Improve or maintain quantity and quality of forage for grazing and browsing animals' health and productivity.
- Improve or maintain surface and/or subsurface water quality and quantity.
- Improve or maintain riparian and watershed function.
- Reduce accelerated soil erosion, and maintain or improve soil condition.
- Improve or maintain the quantity and quality of food and/or cover available for wildlife.
- Manage fine fuel loads to achieve desired conditions.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to all lands where grazing and/or browsing animals are managed.

CRITERIA

General Criteria Applicable to All Purposes

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

Adequate quantity and quality drinking water will be supplied at all times during period of occupancy.

Adjust intensity, frequency, timing and duration of grazing and/or browsing to meet the desired objectives for the plant communities and the associated resources, including the grazing and/or browsing animal.

Manage kind of animal, animal number, grazing distribution, length of grazing and/or browsing periods and timing of use to provide grazed plants sufficient recovery time to meet planned objectives. The non-grazed recovery period the entire year or during the growing season of key plants. Deferment (non-grazing period less than one year) and/or rest (non-grazing period equal or greater than one year) will be planned for critical periods of plant needs. (See Maine Grazing Plan spreadsheet to estimate optimum rotation schedules.)

Provide deferment or rest from grazing or browsing to ensure the success of seeding or other conservation practices that cause stress or damage to key plants.

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

Manage livestock movements based on rate of plant growth, available forage, recommended residual stubble height for the plant species grazed, or other objectives, such as wildlife habitat suitability.

Develop contingency plans to deal with expected episodic disturbance events e.g. insect infestation, drought, wildfire, flood, etc .

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

Duration and intensity of grazing and/or browsing will be based on desired plant health and expected productivity of key forage species to meet management objectives. Cool season grass/legume pastures should not be grazed lower than 2-3 inches of residual stubble, and warm-season grasses to no less than 6 inches.

Plan periodic deferment from grazing and/or browsing to maintain or restore the desired plant community following episodic events, such as wildfire or drought.

Where appropriate, soil test periodically for nutrient status and pH, and apply fertilizer and/or soil amendments according to soil test to improve or maintain plant vigor.

When management is available and feasible, noxious and invasive plant species should be controlled.

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

Plan grazing and/or browsing to match forage quantity and quality goals of the producer within the capability of the resource to respond to management.

To optimize delivery of nutrients to the animals, enhance diversity of pasture plants by planning intensity, frequency, timing and duration of grazing and/or browsing.

Plan intensity, frequency, timing and duration of grazing and/or browsing to reduce animal stress and mortality from toxic and poisonous plants.

Supplemental feed and/or minerals will be balanced with forage consumption to meet the desired nutritional level for the kind and class of grazing and/or browsing livestock.

Dietary needs of livestock will be based on the National Research Council's Nutrient Requirements of Domestic Animals or similar scientific sources with appropriate adjustments made for increased energy demand including travel to and from pasture, as applicable.

Biosecurity safeguards will be in place to prevent the spread of disease between on-farm or ranch classes of livestock and between livestock farm or ranch units.

Shelter in the form of windbreaks, sheds, shade structures, and other protective features will be used where conditions warrant to protect livestock from severe weather, intense heat/humidity, and predators.

Additional Criteria to Improve or Maintain Water Quality and Quantity and/or Riparian and Watershed Function.

Minimize concentrated livestock areas to enhance nutrient distribution, improve or maintain ground cover, and improve or maintain riparian/floodplain plant community structure and functions.

Plan intensity, frequency, timing and duration of grazing and/or browsing to:

- Provide adequate ground cover and plant density to maintain or improve infiltration capacity and reduce runoff.
- Provide adequate ground cover and plant density to maintain or improve filtering capacity of the vegetation.
- Minimize deposition or flow of animal wastes into water bodies.
- Minimize animal impacts on stream banks, shorelines, and wetlands.
- Maintain adequate riparian plant community structure and function to sustain associated riparian, wetland, floodplain and stream function.

Additional Criteria to Reduce Soil Erosion and Maintain Soil Condition

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

Plan intensity, frequency, timing and duration of grazing and/or browsing to provide adequate ground cover, litter and canopy to maintain or improve infiltration and soil condition.

Additional Criteria to Improve or Maintain Food and/or Cover for Fish and Wildlife Species of Concern

Identify species of concern in the objectives of the prescribed grazing plan.

Plan intensity, frequency, timing and duration of grazing and/or browsing to provide for the development and maintenance of plant community structure and diversity needs for the fish and wildlife species of concern.

Additional Criteria for Management of Fine Fuel Load

Where wildfire is a concern, plan intensity, frequency, timing and duration of grazing and/or browsing to reduce hazardous fuel loads.

CONSIDERATIONS

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

Livestock feeding, handling, and watering facilities will be designed and installed in a manner to improve and/or maintain animal distribution. These facilities will also be designed and installed to minimize stress, the spread of disease, parasites, contact with harmful organisms and toxic plants.

Utilization or stubble height target levels are tools that can be used in conjunction with monitoring to help ensure that resource conservation and producer objectives are met.

Where practical and beneficial, start the grazing sequence in a different management unit each growing season.

When weeds are a significant problem prescribed grazing and/or browsing should be implemented in conjunction with other pest management practices to protect desired plant communities.

Prescribed grazing should consider wildlife, recreational, and other uses of the same land. Where known travel corridors cross pastures, consider utilizing a fence type and location which will allow for passage. *In particular, consider passage for amphibian, reptiles, and*

other wildlife traveling to and from breeding areas.

To prevent soil compaction, confine animals to a “sacrifice” or “heavy-use” area, or move them more frequently during periods when soils are saturated.

Consider enhancing pasture sustainability by managing for multiple pasture species (e.g., frost-seeding legumes).

When paddocks are chosen for deferment or rest, consider selecting interior paddocks (those away from field edges) to provide essential habitat for area-sensitive, grassland-dependent species such as Bobolinks and Meadowlarks.

Consider excluding livestock from forest, riparian areas, wetlands, and other sensitive habitats.

Consider improving carbon sequestration in biomass and soils through management of grazing and/or browsing to produce the desired results.

If nutrients are being applied, Nutrient Management (590) should be applied.

PLANS AND SPECIFICATIONS

The prescribed grazing plan shall conform to all applicable federal, state and local laws.

Seek measures to avoid adverse affects to endangered, threatened, and federal, state, or tribal species of concern and their habitats.

Prepare a prescribed grazing plan for all planned management units where grazing and/or browsing will occur according to standards and specifications. Utilize the Maine Grazing Plan spreadsheet:

<http://efotg.nrcs.usda.gov/references/public/ME/GrazingPlan.xls> and the Maine Pasture Condition Score Sheet:

http://efotg.nrcs.usda.gov/references/public/ME/ME_Pasture_Condition_Score.xls

for planning and documentation.

Prescribed Grazing Plan will include:

- Goals and Objectives clearly stated.
- Livestock Inventory – species, use, size (both existing and planned)

- Conservation Plan Map(s) indicating field numbers and acres, land use (pastured fields), planned paddock system, planned and existing infrastructure: fence, lanes, watering facilities
- Resource Inventory that identifies:
 - existing resource conditions and concerns
 - Soils maps and legend to determine drainage and to predict forage performance and suitability
 - identifies opportunities to enhance resource conditions
- Forage Inventory of the expected forage quality, quantity and species in each management unit(s).
- Forage-Animal Balance developed for the grazing plan, which ensures forage produced or available meets forage demand of livestock and/or wildlife.
- Grazing Plan developed for livestock that identifies periods of grazing and/or browsing, deferment, rest, and other treatment activities for each management unit.
- Contingency Plan developed to address potential problems (i.e., drought, flooding, insects). This will serve as a guide for adjusting the grazing prescription, to ensure resource management and economic feasibility without resource degradation.
- Monitoring Plan developed using appropriate records to whether the grazing strategy is resulting in a positive or upward trend and is meeting objectives. Identify the key areas and key plants that the manager should evaluate in making grazing management decisions. Utilize the Maine Pasture Condition Score Sheet to monitor pasture health annually.

OPERATION AND MAINTENANCE

Operation. Prescribed Grazing will be applied on a continuing basis throughout the occupation period of all planned grazing units.

Adjustments will be made as needed to ensure that the goals and objectives of the prescribed grazing strategy are met.

Maintenance. Monitoring data and grazing records will be used on a regular basis within the prescribed grazing plan to insure that objectives are being met, or to make necessary changes in the prescribed grazing plan to meet objectives.

All facilitating and accelerating practices (e.g. Fence (382), Pest Management (595), Brush Management (314), Pasture Planting (512) (etc.) needed to effect adequate grazing and/or browsing distribution as planned by this practice standard will be maintained in good working order.

REFERENCES

- Barnes, R.F., D.A. Miller, and C.J. Nelson. 1995. Forages, The Science of Grassland Agriculture, 5th Ed. Iowa State University Press, Ames, IA.
- Smith, D., R.J. Bula, and R.P. Walgenbach. 1986. Forage Management 5th ed. Kendall/Hunt Publ. Co. Dubuque, Iowa.
- United States Department of Agriculture, Natural Resources Conservation Service. 1997. National range and pasture handbook. Washington, DC.
- Vallentine, J.F. 2001. Grazing management. Academic Press, San Diego, CA.
- Voisin, A. 1959. *Grass productivity*. Philosophical Library, New York.