

# Prescribed Grazing

## Minnesota Conservation Practice Job Sheet 528



### Definition

Managing the controlled harvest of vegetation with grazing animals.

### Purpose

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.
- 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.
- Promote economic stability through grazing land sustainability

### Where used

This practice applies to all land uses where grazing animals harvest forage. Grazing animals derive a majority of their nutritional needs from forbs, grasses, and legumes and are considered herbivores.

### Resource management system

Prescribed Grazing is normally established as part of a conservation management system to address the soil, water, air, plant, animal, and human needs as related to the owner's goals and objectives. It is important to consider the management of environmentally sensitive areas, the forage-livestock balance and the location of facilitating practices to minimize erosion and to promote vigorous vegetative growth.

### Criteria

#### General Criteria Applicable to All Purposes

Removal of herbage will be in accordance with site production limitations, rate of plant growth and the physiological needs of forage plants. Climatic conditions, pasture management, soil fertility, and competition are among several factors determining the growth rate of the forage. During periods of high plant stress the frequency of defoliation will be decreased. During periods of low plant stress, defoliation can be more frequent. Manage kind/class of animal,

animal number, grazing distribution, length of grazing periods, timing, and season of use to provide the desired degree of defoliation and to provide sufficient deferment 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, karst areas).

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

Duration and intensity of grazing will be based on desired plant health and expected productivity of key forage species to meet management unit objectives. The designated key species on pastureland and rangeland will not be grazed closer than the minimum leaf lengths shown in Table 1, located in the MN NRCS Prescribed Grazing Standard and also at the end of this Job Sheet. Specific recommendations for starting and ending grazing heights are given in the [Managed Rotational Grazing Plan](#) on page 3.

Also, grazing use should not be initiated on pastureland until the designated key species has reached the minimum height shown in Table 1. To maintain the health and vigor of the designated key species, these species should attain a minimum leaf length as shown in Table 1 before the first killing frost. Schedule livestock movements based on rate of plant growth, available forage and utilization, not calendar dates. Periodic rest from grazing may be needed to maintain or restore the desired plant community following episodic events, such as wildfire, severe drought, extended ponding or flooding.

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

Manage for diverse plant communities. Manage plant height, structure and density for desired wildlife habitat. Provide rest from grazing during critical nesting periods.

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

Evaluate the economics of the forage system and associated infrastructure. Develop a grazing system that provides forage for as much of the year as possible to minimize supplemental feed cost. Develop a contingency plan to ensure resource management and economic feasibility without resource degradation. Reduce the loss of livestock from toxic and poisonous plants.

#### **Specifications**

Site-specific requirements are listed in the **Grazing Plan Narrative and Forage Balance Sheet**. Additional provisions are entered on the **Grazing Plan Map**. Specifications are prepared in accordance with the NRCS Field Office Technical Guide. See Practice Standard 528, Prescribed Grazing. Please note that the **Grazing Plan Narrative** is a more detailed document than the Managed Rotational Grazing Plan that gives more detailed management information.

#### **Considerations**

Prescribed grazing should consider the needs of other enterprises utilizing the same land, such as wildlife and recreational uses. See Practice Standard 528, Prescribed Grazing for additional considerations.

#### **Operation and Maintenance**

Inspect fences and watering systems periodically and do preventative maintenance as needed.

Drain or use compressed air to drain pipelines that are located on top of the ground prior to fall freeze-up.

Keep records when animals are turned into and out of paddocks and the initial height and the height of the forages after grazing.

# Prescribed Grazing - Job Sheet

## MANAGED ROTATIONAL GRAZING PLAN

### THE DEVELOPMENT OF A PRODUCTIVE, STABLE & SUSTAINABLE SYSTEM

This plan represents a starting point for the establishment of a Managed Rotational Grazing System. The recommendations made are based upon the best estimations available, but will require modification as changes occur in the plant populations, soil health, weather conditions, plant herbivore interactions and management goals.

### GRAZING SYSTEM MANAGEMENT

Producer: \_\_\_\_\_ County: \_\_\_\_\_

Livestock Type: \_\_\_\_\_ Class: \_\_\_\_\_ Weight: \_\_\_\_\_

Acres: \_\_\_\_\_ Grazing Season: \_\_\_\_\_ Grazing Period: \_\_\_\_\_

System Type: \_\_\_\_\_

### FORAGE GROWTH WILL DICTATE LIVESTOCK MANAGEMENT

INITIATE GRAZING within a paddock, when forage height is approximately \_\_\_\_” to \_\_\_\_”.  
(Typically 8-12” but may differ depending on key species.)

TERMINATE GRAZING within a paddock, when forage height is a minimum of \_\_\_\_” to \_\_\_\_”.  
(Typically 4-6” but may differ depending on key species)

Forages will require an AVERAGE of 30 DAYS OF REST before being grazed again.

Forage growth will determine NUMBER OF ROTATIONS through a system in a season.

Key Forage Species to be Managed \_\_\_\_\_

Recommended Residual Stubble Height (From Table 1, MN 528 Standard) \_\_\_\_\_

\*Rotation should start in a different paddock each season.

\*Place salt and or mineral supplements at opposite end of paddock from watering facility to promote more even grazing distribution.

\*For seasonal or long term drought, a management plan will be developed that will protect the forage resource base from degradation by overgrazing. Livestock numbers and or grazing season length will need to be adjusted to account for the deficit in forage production.

\*For excessive moisture conditions a management plan will be developed that will protect the forage resource base from degradation by livestock hoof impact. A sacrificial area will be designated to contain livestock until they can return to the grazing system.

\*Utilize annual crop residue for late summer, fall or early winter grazing.

**Refer to grazing plan narrative document and forage balance sheet for additional details.**

SENSITIVE AREAS Check applicable type(s). To check, right click on the checkbox, select properties and then select the default value of "checked" radio button.

- Wetlands                       Riparian area                       Steep slopes                       Droughty soil
- Wooded                               Spring                               Sinkhole                               Prairie Remnant
- Hydric Soil                       Other (specify) \_\_\_\_\_

**Refer to the grazing plan narrative document, if applicable, for more management details.**

FACILITATING PRACTICES  
Refer to Grazing Plan Map for Locations

**Perimeter Fence**

Type of Construction \_\_\_\_\_ Feet \_\_\_\_\_  
 Type of Construction \_\_\_\_\_ Feet \_\_\_\_\_  
 Type of Construction \_\_\_\_\_ Feet \_\_\_\_\_

**Interior Fence**

Type of Construction \_\_\_\_\_ Feet \_\_\_\_\_  
 Type of Construction \_\_\_\_\_ Feet \_\_\_\_\_  
 Type of Construction \_\_\_\_\_ Feet \_\_\_\_\_

**Pipeline**

Type of Construction \_\_\_\_\_ Feet \_\_\_\_\_  
 Type of Construction \_\_\_\_\_ Feet \_\_\_\_\_

**Watering Facilities**

Type \_\_\_\_\_ Number \_\_\_\_\_ Capacity \_\_\_\_\_  
 Type \_\_\_\_\_ Number \_\_\_\_\_ Capacity \_\_\_\_\_  
 Type \_\_\_\_\_ Number \_\_\_\_\_ Capacity \_\_\_\_\_

**Heavy Use Area Protection**

Type \_\_\_\_\_ Number \_\_\_\_\_ Dimensions \_\_\_\_\_

**Animal Trails and Walkways**

Type \_\_\_\_\_ Width \_\_\_\_\_ Length \_\_\_\_\_

**Pasture and Hayland Planting**

Type \_\_\_\_\_ Extent (acre) \_\_\_\_\_  
 Type \_\_\_\_\_ Extent (acre) \_\_\_\_\_

**Pumping Plant**

Type \_\_\_\_\_ Extent (acre) \_\_\_\_\_

**Pond**

Type \_\_\_\_\_ Drainage Area (acre) \_\_\_\_\_

**Spring Development**

Number \_\_\_\_\_

**TABLE 1  
MINIMUM HEIGHTS OF PASTURE SPECIES FOR INITIATING AND TERMINATING GRAZING**

Species	Begin Grazing		End Grazing	
	Initial grazing height In early spring*	Minimum and optimum height of vegetative Growth	Minimum stubble height**	Minimum regrowth before killing frost
Alfalfa	--	Bud Stage	---	6***
Creeping foxtail	6	8-10	3	6
Green needlegrass	4-5	6-8	3	5
Inter. Wheatgrass	4-5	8-14	4	6
Ky. Bluegrass	2	4-6	2	4
Orchardgrass	3-4	6-10	3	6
Perennial Ryegrass	3-4	5-7	3	4
Pubescent wheatgrass	4-5	8-14	4	6
Reed canarygrass	4-5	8	4	6
Russian wildrye	4	5-7	3	4
Slender wheatgrass	4-5	6-12	3	6
Smooth Brome	4	8-14	4	6
Tall Fescue	4	6-10	3	6
Tall Wheatgrass	4-5	8-14	4	6
Timothy	4	6-10	4	5
Western Wheatgrass	4	6-10	4	5
Big bluestem	--	10-14	6	6
Indiangrass	--	10-14	6	6
Little bluestem	--	5-7	3	4
Sand bluestem	--	8-14	6	6
Sideoats Gramma	--	4-6	2	4
Switchgrass	--	12-20	8	10

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