

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE INSTALLATION GUIDELINES**

**PRESCRIBED GRAZING**

(ac.)  
CODE 528A

**Guidelines Applicable for All Purposes**

Removal of herbage will be in accordance with stocking rates, production limitations, plant sensitivities, and management goals using Sections I and II of the South Dakota Technical Guide (SDTG) and other references as guidance.

Frequency of defoliations and season of grazing will be based on the rate and physiological conditions of plant growth.

Duration, time (season), and intensity of grazing will be based on desired plant community goals, expected productivity, and management unit objectives.

The intensity, frequency, duration, and season of grazing will be manipulated to promote ecologically sound and economically stable plant communities, which will sustain the resources and meet the landowner's objectives.

Grazing use on range grasses and grass-like desirable species will not remove more than 50 percent by weight of the total current year's growth when grazed during the growing season and not more than 60 percent when grazed during the dormant season. Table 1 can be utilized as a tool to help determine the percent of weight removed of common grasses by estimating the percent of the plant height removed.

Grazing use on range desirable browse (woody) species will not remove more than 65 percent of the current year's growth. Degree of use on browse species is based on the amount of current year's growth removed.

On pasturelands, the desired species will not be grazed closer than the minimum leaf lengths shown in Table 2. Grazing use should not be initiated on pastureland until the desired species has reached the minimum height shown in Table 2. To maintain the health and vigor of the desired species, they should attain the minimum leaf length shown in Table 2 before the first killing frost.

Final grazing use determinations will generally be made at or near the end of the grazing season.

Many legumes can induce bloat in livestock. In general, pastures containing 50 percent or less legumes will have a very low incidence of bloat.

Degraded grasslands can benefit from one to two years of deferment during the growing season. Deferment should be for a minimum of three consecutive months. The growing season for cool season plants is from April 1 to October 31 and from May 15 to October 1 for warm season plants. The best three-month period to defer use for cool season plants is April 1 to June 30 and June 1 to August 31 for warm season plants.

All domestic livestock must be removed from the pastures that are being deferred.

Grazing programs will need to be changed or adjusted when significant changes in plant vigor or composition, animal kinds and classes, and management objectives occur.

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Where needed, grazing prescriptions will be adjusted to maintain or improve riparian and associated upland vegetation to meet planning goals and objectives.

The grazing manager should be encouraged to initiate a monitoring program to document actual grazing dates, livestock performance, climatic conditions, and vegetation utilization and changes over time.

Supplemental feed may be necessary to meet the desired nutritional levels for animals of concern. The proper placement of supplemental feeds can be used as a method to distribute livestock throughout a pasture. Improper placement can have negative impacts on the soil, water, air, plant, and animal resources.

Use of natural or artificial shelter will be included as part of this practice when conditions demand.

Salt, minerals, creep feed, and other supplements should not be placed in the vicinity of livestock watering facilities. Movement of supplement throughout the pasture can improve livestock distribution.

Livestock water supply must be adequate in quantity and quality to meet the demands of the livestock over the specified grazing period in each pasture.

Every grazing program must be tailored to the cooperators' goals and resources. Such things as animal husbandry requirements (breeding programs, etc.,) may affect the design of the grazing prescription and need to be considered.

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

### **Additional Guidelines for the Development of Rotational Grazing Programs**

Grazing and rest periods should be scheduled to meet the desired objectives for the plant communities, grazing animals, and the associated resources in each pasture.

Livestock movements shall be based on plant growth and utilization and not calendar dates.

The planned grazing sequence may be changed for short periods to take advantage of seasonal forages such as annual bromegrasses, Kentucky bluegrass, sweet clover, smooth bromegrass, crop aftermath, etc.

When two or more pastures are scheduled to be grazed **one time** during the growing season, alternate the season of use for each pasture on an annual basis. Avoid grazing the same pasture during the same period of the growing season year after year. On rangelands, provide a minimum of 45 consecutive days of rest during the growing season of the desired forage species. On pasturelands, provide a minimum of 30 consecutive days of rest during the growing season. Special use pastures such as monocultures of crested wheatgrass or big bluestem may be utilized during the same period year after year as part of a complimentary grazing system.

Where two or more pastures are scheduled to be grazed **two or more** times during a growing season, plan the grazing sequence to avoid grazing the same pasture year after year during the same portion of the growing season. Plan the rest periods so each pasture will receive a minimum of 30 consecutive days of rest each period and a minimum of 90 total days during a growing season.

### **Additional Guidelines for Improved Animal Health and Productivity**

Movement of animals will be in a manner to improve and/or maintain animal health and performance, and to reduce or prevent the spread of disease, parasites, and contact with harmful insects and toxic plants.

Grazing should be applied in accordance with forage quality and quantity criteria that best meets the production requirements for the kind and/or class of animal. Fecal samples and the Nutritional Balance Analyzer (NUTBAL) software are useful tools to monitor the nutritional status of grazing animals.

Handling of animals should be in a manner producing the least amount of stress as possible.

### **Additional Guidelines for Water Quality**

Duration, intensity, frequency, and season of grazing in or near surface waters will be applied in such a manner that the impacts to vegetative and water quality will be positive.

Duration, intensity, frequency, and season of grazing will be applied to enhance nutrient cycling by better manure distribution and increased rate of decomposition.

Alternatives to surface water supplies such as dams, streams, and dugouts for livestock water should be encouraged to reduce impacts on water quality and improve animal performance.

### **Additional Guidelines for Soil Erosion and Soil Condition.**

Maintain the amount of vegetative cover needed to prevent accelerated soil erosion due to wind and water as prescribed by the appropriate wind and water erosion equations.

Duration, intensity, frequency, and season of grazing shall be managed to minimize soil compaction, sustain high levels of vegetative cover, reduce detrimental effects on soil condition, and minimize soil erosion.

### **Additional Guidelines for Providing Food, Cover, And Shelter for Wildlife**

When needed, the prescribed grazing prescription will be designed to result in the plant community that will meet the needs of the animals of concern as to cover, shelter, food, nesting cover, etc. The habitat management guides in the SDTG should be used to provide assistance in writing the prescription.

### **Additional Guidelines for the Development of a Drought Contingency Plan**

Drought is the most commonly occurring natural disaster impacting grazing lands. Drought contingency plans will help minimize drought impacts. At a minimum, these plans should contain the following items:

- Trigger Mechanisms – an explanation of climatic conditions which will activate all or portions of the plan.
- Grazing Land Resource Monitoring – steps to be taken to determine production, growth rates, etc.
- Livestock Management – describe when and how to initiate steps such as culling, early weaning, etc.
- Grazing Management – describe required changes in grazing management
- Marketing – explain the various marketing strategies, lease arrangements, price protection options, etc.

Appendix 1 provides an example of a drought contingency plan.

**TABLE 1. PERCENT WEIGHT REMOVED AS A RELATIONSHIP TO PERCENT HEIGHT REMOVED**

SPECIES	PERCENT OF HEIGHT REMOVED													
	10	20	30	40	50	55	60	65	70	75	80	85	90	95
Big Bluestem	2	6	11	17	23	30	35	41	46	54	62	71	79	89
Blue Grama	2	4	6	9	13	15	17	20	25	28	35	42	53	75
Buffalograss	2	5	7	11	18	21	32	35	38	45	53	62	71	77
Crested Wheatgrass	2	4	7	11	18	24	29	33	38	44	53	60	68	83
Green Needlegrass	2	4	6	11	16	20	25	30	36	44	52	61	71	85
Kentucky Bluegrass	1	3	5	9	14	16	20	26	34	40	47	57	71	85
Little Bluestem	1	4	9	15	23	27	32	37	41	47	53	61	70	82
Needleandthread	1	2	4	6	10	12	15	19	24	29	36	46	56	73
Ovalhead Sedge (wetland)	2	5	9	13	18	21	26	31	39	46	54	62	73	86
Prairie Junegrass	2	4	6	9	13	16	18	21	25	30	35	42	55	69
Prairie sandreed	2	6	11	17	23	30	35	41	46	54	62	71	79	89
Red Threeawn	2	6	11	17	26	30	36	42	46	53	61	70	78	89
Sandberg bluegrass	1	2	4	8	11	14	16	19	24	30	37	46	56	75
Sand Dropseed	1	3	5	8	12	17	21	25	30	35	46	56	68	83
Sideoats Grama	1	3	5	9	14	18	23	27	32	39	47	56	66	80
Slender Wheatgrass	2	6	9	12	17	21	27	31	36	42	51	59	69	80
Smooth Bromegrass	3	6	11	15	19	27	32	37	45	52	58	63	82	92
Switchgrass	2	5	9	13	20	26	30	36	42	50	59	68	76	89
Threadleaf Sedge (upland)	2	4	6	10	15	17	21	27	34	41	48	59	73	86
Western Wheatgrass	2	6	11	17	26	32	37	44	50	58	66	74	82	91

To use this table, first, calculate the percent of the height of the plant removed by grazing. Find this figure on the top line of the table and then follow that column down to the appropriate species. This figure represents an estimate of the percent of the weight removed.

**Table 2. Minimum Height of Pasture Species for Initiating and Terminating Grazing**

Species	BEGIN GRAZING		END GRAZING	
	Minimum & Optimum Height of Vegetative Growth in Inches	Approximate Date	Minimum Stubble Height in Inches	Minimum Regrowth Before Killing Frost in Inches
Alfalfa	6 - 10	May 15	3	8
Big & Sand Bluestem	8 - 14	July 1	6	6
Creeping Foxtail	8 - 10	May 7	3	6
Crested Wheatgrass	4 - 6	April 20	3	4
Green Needlegrass	6 - 8	May 15	3	5
Indiangrass	8 - 14	July 1	6	6
Intermediate Wheatgrass	8 - 14	May 15	4	6
Kentucky Bluegrass	4 - 6	May 7	2	4
Little Bluestem	4 - 6	July 1	3	4
Orchardgrass	6 - 10	May 15	4	6
Pubescent Wheatgrass	8 - 14	May 15	4	6
Prairie Sandreed	8 - 14	June 20	4	6
Reed Canarygrass	8 - 8	May 7	4	6
Russian Wildrye	4 - 4	May 7	3	4
Sideoats Grama	4 - 6	June 20	2	4
Slender Wheatgrass	6 - 12	May 7	3	6
Smooth Bromegrass	8 - 14	May 7	4	6
Switchgrass	12 - 20	June 20	8	10
Tall Wheatgrass	8 - 14	May 7	4	6
Timothy	6 - 10	June 1	3	5
Western Wheatgrass	6 - 10	May 15	4	5

## Notes on Table 2.

- Recommended grazing heights for grass mixtures or grass legume mixtures should be for the dominant or desired species.
- Height is the average height when leaves are lifted in a vertical position.
- Jointed grasses such as smooth bromegrass and intermediate wheatgrass should be grazed in the early boot stage, prior to seed set to trigger regrowth of basal sprouts.
- The last harvest of alfalfa should generally be made 35 to 45 days prior to the time the first hard freeze normally occurs
- On pasture grazed during the dormant season, stubble height at the end of the grazing period is applicable.
- Approximate date is for continuous grazing and is highly dependent on present climatic conditions. Rotation grazing usually can usually begin seven or more days earlier in the season.

# Appendix 1

## Example Drought Contingency Plan

Review previous 12 months of precipitation records and compare to the local 30-year average.

- Obtain 30-year average monthly precipitation records for the nearest weather station.
- Using local monthly precipitation records compare monthly shortfall.
- Initiate a marketing strategy plan that utilizes all possible marketing sources, price protection, and contracting possibilities.
- Begin to routinely monitor soil moisture and plant growth on a weekly basis.

**Implement phase I** if the past 6 months precipitation records are 50 percent below the 30-year average:

- Cull 10 percent of the herd the first month of grazing if precipitation remains 50 percent below 30-year average.

**Implement phase II** if the first three months of the grazing season receives less than 50% of the 30-year average monthly precipitation:

- Remove 30 to 50 percent of the herd as regrowth dictates (i.e., little or no regrowth in a 30-day rest period for pastures in rotation)

**Implement phase III** if the first four months of the grazing season receives less than 50% of the 30-year average monthly precipitation.

- Measure remaining forage in all pastures.
- Combine herds into one large herd.
- Allocate remaining forage in each pasture to the one herd (i.e., graze each pasture the length of time it takes to utilize the remaining grazeable forage while keeping adequate cover for erosion control.) Adequate cover is considered to be 1,000 to 1,200 lbs. dry matter per acre.
- Begin early weaning of calves.
- Remove all remaining livestock as soon as markets are favorable or alternative forage is procured.