

SOIL CONSERVATION SERVICE

WEST VIRGINIA

PASTURE AND HAYLAND MANAGEMENT

STANDARD

Definition

Proper treatment and use of pastureland or hayland.

Purpose

To prolong life of desirable forage species, to maintain or improve the quality and quantity of forage, and to protect the soil and reduce water loss.

Conditions Where Practice Applies

On all pasture and hayland.

Effects on Water Quantity and Quality

This practice reduces runoff, increases infiltration, and increases transpiration. The changes are more pronounced when dealing with pasture. There will be a reduction in the amount of surface water leaving the field, and an increase in the amount of water infiltrating into the root zone.

With the reduced runoff there will be less erosion, less sediment and substances transported to the surface waters. The increased infiltration increases the possibility of soluble substances leaching into the ground water.

SPECIFICATIONS

1. PASTURE MANAGEMENT

A. Soil Treatment:

Lime – Lime requirements should be based on a soil test. Lime will be applied to correct pH within the range for each species as follows:

Alfalfa and ladino clover 6.5-7.0

All other legumes, smooth brome grass, reed canary grass,
Orchard grass, switch grass, big bluestem, and caucasion
Bluestem 6.0-7.0

Kentucky blue grass, tall fescue, timothy, and redtop 5.6-6.5

Fertilizer – Apply fertilizer based on results of soil tests made by West Virginia University, other land grant institutions, or competent private laboratories. For general recommendations in the absence of a soil test, use information prepared by WVU Agronomy Department or land grant colleges in adjoining states.

Less than 25% legume, use 50-80 lbs. N per application. When higher rates are used, use split application.

Over 25% legume, fertilize as if all legume.

Warm season grasses, apply nitrogen annually in late May or June when plants are 12-14 inches tall; use up to 75 lbs/acre. Do not apply in early spring.

B. Stocking Rate - The stocking rate is determined by the available forage expected during the grazing season. These estimates should be based on actual yield or use records, yield data for different soils on Conservation form 5 in Section II of the Technical Guide, or data from the pasture calendar section of Form WV-CPA-3.

C. Grazing Management

1. Defer grazing in the spring until the soil is firm.
2. See the attached “Grazing Guide” for the stage of growth to begin grazing and minimum grazing heights. Recognize that frothy bloat can be a problem with alfalfa and cloves.
3. Rotation grazing – Rotational grazing will promote plant vigor and maximize production. Grazing will be at a rate which allows removal of forage to height specified in the guide within seven days.

D. Weed Control

1. Mowing – When needed, pasture should be mowed when the majority of weeds are in bloom. Pasture containing “cool” and “warm” season flowering weeds should be mowed twice, about June 15-20, and again about August 15-30. Close mowing (approximately 3 inches) is most effective, except not closer than 6 inches for warm season grass species.
2. Spraying – For chemical control of target species, follow recommendations in current Agronomy Guide. (See Brush control Specification 314 for control of woody plants.)
3. Salting – Salt should be distributed away from water in area of light use to achieve better grazing distribution (uniform use). Other items encouraging

concentration points such as oilers and mineral feeders should be located in such a way to disperse livestock.

4. Fencing – Use fences where needed for protection or proper grazing management. See Fencing Specification 382.
5. Rotation Grazing – Intensive rotation grazing helps in the control of weeds by more uniform grazing. Continuous grazing allows animals to selectively graze the better plants. The best defense against weeds is a healthy, vigorous, dense sod.

GRAZING GUIDE 1/

Species	Stage of Growth to Start Grazing in Spring	Successive Grazings	Remove Livestock When Height of Grazed Stubble Is	Over Wintering Height
Bluegrass	4-5" high, April 20 to May 10, for most of West Virginia	Following 4-5" recovery growth	1-2"	3"
Orchardgrass, tall fescue & other non-jointed grasses	8" high and from boot to early head	Following 8-10" recovery growth	2-3"	5"
Smooth Brome, Timothy, Reed canary & other jointed grass	Before jointing & between early to full head, except smooth brome, medium to full head	8-10" recovery growth	2-3"	6"
Alfalfa 2/	Full bud	¼ bloom or 5/6 weeks recovery period. To prolong life of stand, alfalfa should reach maturity at least once during growth season.	2-3"	6"
Birdsfoot 2/	¼ bloom	¼ bloom or 6-8 weeks recovery period.	2-3"	5"
Ladino 2/	¼ to ½ bloom or 8-10" high	8-10" high, ladino should be ¼ - ½ bloom before last grazing.	2"	4"

GRAZING GUIDE 1/

Species	Stage of Growth to Start Grazing in Spring	Successive Grazings	Remove Livestock When Height of Grazed Stubble Is	Over Wintering Height
Red & alsike clover	¼ - ½ bloom	¼ bloom	2"	5"
Crownvetch <u>2/</u>	Early bloom	Early bloom	2-3"	5"
Sudan grass <u>2/</u>	18"	18"	4"	--
Sudan grass <u>2/</u> hybrid	30"		4"	--
Small Grains <u>2/</u>	8-10" high	Winter grains be harvested for grain should not be grazed after April 15 for most of WV	3"	--
Switchgrass <u>2/</u> & Big Bluestem	18-24" high. Staff of growth between jointing & formulation of a seed head in the stem boot.	18-24" recovery growth	8"	8"
Caucasian <u>2/</u> Bluestem	14-18" high. Stage of growth between jointing & formulation of a seed head in the stem boot.	14-18" recovery growth	6"	6"

1/ Grazing of grass-legume mixtures should be governed by height of the dominant species.

2/ These are suited for rotation grazing only.

II. HAYLAND MANAGEMENT

A. Soil Treatment – See I-A

B. Weed Control – See I-D

C. Harvesting

1. New Seedings – Cut when sufficient growth is present and the plant roots are established well enough to assure adequate food reserve storage for overwintering and vigorous spring greenup.
2. Establishing Stands – Grass-legume mixtures should be harvested at the time to favor the dominant species or the species desired to be maintained. (See Haying Guide).

HAYING GUIDE

Stage of Growth and Height to Cut Legumes and Grasses for Hay

<u>Species</u>	<u>Period</u>	<u>When to Cut for Hay or Silage</u>
	1st cutting or grazing	Alfalfa when in full bud – trefoil – ¼ bloom
Alfalfa & birdsfoot trefoil (upright type) <u>1/</u>	2 nd and successive cutting	¼ bloom or after a 5-6 week recovery period for alfalfa, and ½ bloom or after a 6-8 week recovery period for trefoil
	1 st Cutting	¼ to 1/3 bloom or when 8-10 inches high
Ladino-grass	2 nd and successive cuttings	Handle as grazing
	1 st Cutting or grazing	¼ bloom
Red and alsike clover	2 nd successive cuttings	¼ bloom
Lespedeza	1 st cutting	½ bloom to full bloom
Orchardgrass & tall fescue (nonjointed grasses)	1st cutting	Boot to early head stage
	2 nd and successive cuttings	8-10 inch recovery growth
Smooth brome grass, timothy and reed canarygrass ((jointed grasses)	1st cutting	Smooth brome grass medium to full head, others – early to full head
	2 nd cutting	When basal sprouts appear at soil surface
Switchgrass, big bluestem, & caucasian bluestem	1 st cutting	Late boot stage. Leave 4-6" stubble

1/For other spring and fall management recommendations for alfalfa stands see Penn State University Agronomy Guide.