Forage Harvest Management

Forage Harvest Management for Wildlife

Conservation Practice WV Job Sheet Code 511

Definition

The timely cutting and removal of forages from the field as hay, greenchop, or ensilage.

Purpose

Forage Harvest Management (511) should be established concurrently with other practices as part of a wildlife management system and overall wildlife management plan.

Grassland management practices are usually directed toward the maximum production of forage and hay for livestock. However, these practices can be performed with a timing and intensity that are wildlife-friendly yet remaining productive agriculturally.

Most grasses are normally at their highest quality and ready for cutting for hay during the peak nesting period for many ground-nesting birds (March 15 - July 15).

The timing and intensity of harvesting grass is the most critical of all the factors that can affect the value of grasslands for both wildlife and livestock. This job sheet pertains to the harvesting of forages with a timing and a method that is wildlife-friendly.

Considerations for Establishment

Actively managed grasslands are usually either cut for hay or used as pasture for livestock. The management of grasslands to produce both livestock forage and wildlife food and cover is a compatible use of the land. However, **it is extremely difficult to have wildlife management and livestock forage production as equal primary objectives**. In reality, there are frequent trade-offs in either production or habitat; and compromises must be made to things such as livestock carrying capacity, amount of acceptable habitat disturbances, decrease in production of livestock or forage and the quality of that forage. Managers must be aware of potential compromises and take them into consideration when developing livestock forage and wildlife management plans. For wildlife-friendly grazing strategies refer to (528) Prescribed Grazing.

First, it is essential to understand the daily and seasonal requirements of the wildlife species prior to implementing these techniques. Refer to the NRCS conservation practice standard (645) Upland Wildlife Habitat Management for more information regarding the daily and seasonal habitat requirements for various species of wildlife.

Also, delayed harvest of areas utilized for hayland will provide forage and nesting areas for pollinators. Delayed or idling of fields in rotations of two-three years provides areas for bumble bee nesting and forbs. Refer to the West Virginia Pollinator Handbook for more information relevant to pollinators.

The design and installation of the treatment layout should be planned to best facilitate operation of harvest machinery. For example, grass strips should be laid out to accommodate single or multiple full width passes by farm equipment.

Used alone or in combination with the other techniques such as strip disking, mowing can successfully manipulate vegetative succession. Some general guidelines are:

- If possible, mow no more than 1/3 of an entire grassland stand in any given year. This can be done by harvesting only 1/3 of a single field; or

no more than 1/3 of the entire acreage of a stand in a year (See Figure 1).

- Mowing should occur in 2-4 year cycles with field(s) or portions of a field(s) to remain undisturbed for a period of time (fallow). A longer rotation yields greater diversity in composition and structure. However, rotation cycles that are 5 years or longer may allow significant woody invasion to occur in some instances.
- Where feasible utilize a strip mowing method (See Figure 2). Mow in strips of 35-100 feet wide avoiding more narrow strips that can lead to increased predation of desirable wildlife. Each strip may have variable widths.
- Rotate mowed strips across and/or throughout the field and along the natural contour of the land. It is desirable and beneficial if the strips are irregular in shape. Initially, it is helpful to mark the strips in the field with stakes or flags to identify the desired mowing pattern.
- Mow cool season grasses no shorter than 4 inches.
- Tall fescue has very little wildlife benefit and should be replaced with a more beneficial species where feasible.
- When possible, mowing should be performed in the spring or late summer outside the primary nesting season (April 15 – July 15). However, specific species management may require mowing during the primary nesting season. If harvesting a portion of a stand for livestock forage, it may be necessary to harvest during this period.
- Each grazing system has unique characteristics for operation. However as a general rule, graze no more than 1/3 of an entire grassland stand in any given year while the remainder of the stand is fallow. This may be accomplished by harvesting only 1/3 of a single field; or no more than 1/3 of the entire acreage of a grassland stand of multiple fields in a year. (See figure 3).

Operation and Maintenance

Grasslands are dynamic communities that require frequent disturbance to maintain the desired composition. An extended mowing/ harvest schedule is required beyond the installation period.

To maintain the health and vigor of grasslands it may require the periodic application of lime and/or fertilizer. This should be done according to recommendations from a soil test that is performed on a regular basis. Nutrients should be applied outside the primary ground nesting season (March 15 – July 15).

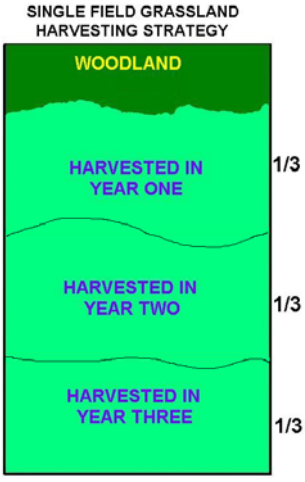

Figure 1. This figure illustrates harvesting 1/3 of a single field per year. Grassland may be harvested by haying, mowing or other suitable methods.

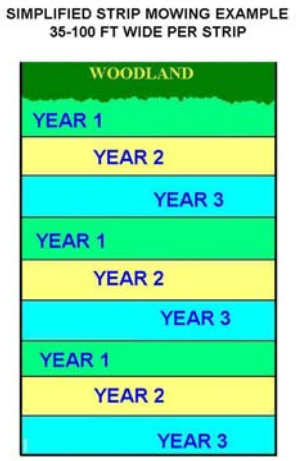

Figure 2. This is a simplified 3 year strip mowing cycle. Each year approximately one-third of the grassland in the field is harvested and diversity of height is created throughout the field. Although this figure illustrates a straight mowing pattern, it is desirable and beneficial for strips to be irregularly shaped with varying widths.

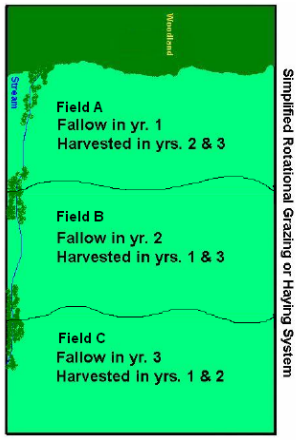

Figure 3. This figure illustrates a simplified example of a three field rotational haying system and harvest schedule. Each field will remain undisturbed (fallow) for a one year period over three years. Refer to Conservation Practice Standard (528) Prescribed Grazing for wildlife-friendly strategies.

Specifications

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Site-specific requirements are listed on the following pages of this job sheet. Specifications are prepared in accordance with the WV NRCS Field Office Technical Guide.

Client:	**Farm #:**	**Tract #:**
Field(s):	**Date:**	
Designed By:	**Targeted Wildlife Specie(s):**	

Purpose (check all that apply)	
☐ **Create habitat for grassland and ground nesting songbirds**	☐ **Develop a mowing/haying plan with wildlife as the primary resource concern**
☐ **Create, maintain or establish habitat for native pollinators through delayed harvest**	☐ **Component of a wildlife management plan developed using the (645) Upland Wildlife Habitat Management standard**
☐ **Other wildlife purpose:**	

Layout		
Total acreage of grassland:	Total number of fields:	If only one field occurs, into how many portions will this field be divided?

Grassland Species Composition: List the dominant grass and/or legume specie(s) within the field or portion of the field to be managed. Also, identify any species that are to be planted.

Cool Season Species	**Field _____**	**Field _____**	**Field _____**
	Field _____	**Field _____**	**Field _____**
Warm Season Species and/or Forbs	**Field _____**	**Field _____**	**Field _____**
	Field _____	**Field _____**	**Field _____**

Field No.	Harvest Method [1]	Management Schedule [2]				Strip Mowing Planned	Strip Mowing Management [3]				
		Mowing Date(s)	Minimum Height (in)	Fallow Date(s)	Nutrient Management Date(s)		Total Strips	Strip Width	Rotation Length (yrs)	Strips mowed per Year	Mowing Height (in)

[1] **Harvest Method**: Select, **Mowing** or **Haying**. If other, specify in the notes section.

[2] **Management Schedule**: Under the appropriate column list the period(s) that this field or portion of a field is to be harvested including the schedule for nutrient application and period the field(s) are to remain fallow. Identify the minimum desired height of the grass after harvest. Where possible avoid harvesting during the peak of ground nesting season (March 15-July 15).

[3] **Strip Mowing Management**: List the number of strips to be mown in a given field or portion of a field and the frequency that they are to be cut including the width. Strips should be cut at least annually and on a rotational basis. (For example: 6 strips on a 3 year rotation would require harvesting 2 different strips annually.)

[NOTE: For strip disking strategies refer to (647) Early Successional Habitat Development/Management]

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If needed, an aerial view, map or a sketch of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Refer to the conservation plan map for location information

Additional Specifications and Notes: (i.e. Operation and Maintenance specifics, etc.)

Maintain this practice according to the guidance outlined in this document under the section entitled Operation and Maintenance.

Questions regarding the operation, harvest schedule or establishment of this practice should be directed to:

_____**at**_____

Clear Form