United States Department of Agriculture

CONSERVATION ENHANCEMENT ACTIVITY

E511B

CONSERVATION STEWARDSHIP PROGRAM

Forage harvest management that helps maintain wildlife habitat cover, shelter or continuity

Conservation Practice 511: FORAGE HARVEST MANAGEMENT

APPLICABLE LAND USE: Crop (Annual & Mixed); Crop (Perennial); Pasture, Range

RESOURCE CONCERN ADDRESSED: Animals

ENHANCEMENT LIFE SPAN: 1 year

Enhancement Description

The timely cutting and removal of forages from the field as hay, green chop, or ensilage in such a way, and in time frames, to optimize both forage yield/quality and wildlife cover and shelter and/or continuity between otherwise disconnected habitats.

Criteria

- Specify the wildlife species of concern on the state-approved NRCS Wildlife Habitat Evaluation Guide (WHEG). The species of concern must be one that is present for at least part of their life cycle in the geographical/physiographic region.
- The state's WHEG will be completed by a NRCS biologist or partner wildlife biologist. Cover and shelter or continuity habitat requirements for the wildlife species of concern must be specified on the WHEG. The total WHEG score after installation of this practice must be 0.60 or greater.
- Provide suitable habitat for desired wildlife species. This may require changes to harvest schedules, cover patterns, and minimal plant heights while managing the desired forage stand, plant community, and stand life.

- Time harvest to benefit the desired wildlife species by following state guidelines. Whenever possible, avoid harvest during the primary nesting season, harvest during daylight hours, and harvest in patterns (e.g. - beginning on one end of the field and working back and forth across the field or beginning in the center of the field and working outward).

- Cut forage at a height that will promote the vigor while leaving minimal stubble heights required by the desired wildlife species and the Cooperative Extension Service recommendations to avoid winterkill in cold climates.

- Harvest forage without compromising plant vigor and stand longevity and at the stage of maturity that provides the desired quality and quantity to the degree possible while still providing suitable habitat for the desired wildlife species.

- Harvest silage/haylage within the optimum moisture range for the type of storage utilized. Follow Cooperative Extension Service recommendations for moisture content. For optimal dry hay quality, rake at 30% to 40% moisture and ted or invert swaths when moisture is above 40%. Bale field cured hay at 15% to 20% moisture.

Documentation and Implementation Requirements

CONSERVATION STEWARDSHIP PROGRAM

Participant will:

- ☐ Prior to implementation, ensure forage harvesting tool/machinery is capable of cutting the forage at the height required to provide suitable habitat for the desired wildlife species without compromising plant vigor and stand longevity.
- ☐ Prior to implementation, review the map delineating the fields selected for improving wildlife cover and shelter and enrolled in the enhancement.
- ☐ Prior to implementation, develop a plan to harvest forage in a manner that protects stand longevity and also maintains or improves wildlife habitat. Plan must include specifications detailing the wildlife protection measures, such as selecting time periods to avoid forage harvest to protect wildlife and ensuring that suitable wildlife habitat exists during critical nesting periods. Refer to NRCS Conservation Practice Standard Forage Harvest Management (Code 511).
- ☐ Prior to implementation, provide the forage harvest plan to NRCS for review to confirm it meets the criteria of the enhancement.
- ☐ During implementation, take photographs of forage cutting heights with fields and date of harvest identified.
- ☐ During implementation, notify NRCS of any planned changes to verify they meet the enhancement criteria.
- ☐ During implementation, keep the following documentation for each field:

Field	Forage species selected for harvest	Harvest height (inches)	Harvest Date

- ☐ After implementation, make documentation and photographs of forage cutting heights available for review to NRCS to verify implementation of the enhancement.

NRCS will:

- ☐ As needed, provide technical assistance to meet the criteria of the enhancement.
- ☐ Prior to implementation, provide and explain NRCS Conservation Practice Standard Forage and Biomass Planting (Code 512) as it relates to implementing this enhancement.
- ☐ Prior to implementation, an NRCS biologist or partner wildlife biologist will complete the state-approved NRCS WHEG. Specific species targeted will be notated on the WHEG, and total score after implementation must equal 0.60 or greater.

Wildlife Species of Concern	
Cover & Shelter Requirements	
Planned WHEG Score after implementation	

- ☐ Prior to implementation, verify a map has been developed delineating the hayfields that will have the enhancement implemented.
- ☐ Prior to implementation, NRCS will provide technical assistance, as needed to:
    - o Develop a plan to harvest forage in a manner that protects stand longevity, while also maintaining or improving wildlife habitat. Plan must meet requirements of NRCS Conservation Practice Standard Forage Harvest Management (Code 511).

- Develop specifications detailing the wildlife protection measures, such as selecting time periods to avoid forage harvest to protect wildlife and ensuring that suitable wildlife habitat exists during critical nesting periods.

☐ During implementation, evaluate any planned changes to verify they meet the enhancement criteria.

☐ After implementation, verify the planned forage harvest was completed to specifications developed for the fields delineated.

☐ After implementation, review documentation and photographs of forage cutting heights to verify implementation of the enhancement.

☐ If changes were made after implementation, complete the state's approved NRCS Wildlife Habitat Evaluation Guide (WHEG).

Wildlife Species of Concern	
Cover & Shelter Requirements	
WHEG Score after Implementation	

CONSERVATION STEWARDSHIP PROGRAM

NRCS Documentation Review:

I have reviewed all required participant documentation and determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name_____Contract Number _____

Total Amount Applied_____ Fiscal Year Completed _____

_____ _____

NRCS Technical Adequacy Signature Date

CSP 2020
Mississippi Supplement
E511B

Forage Harvest Management That Helps Maintain Or Improve Wildlife Habitat (Cover And Shelter)

Documentation Requirements:

- **Landowner must be provided with attached job sheet, MS-ECS-511-12(SS).**
- **Landowner will apply and maintain all of the following management actions specifically for improving or protecting habitat functions for targeted wildlife species, such as quail. The following measures can be taken to minimize mortality of nesting adults and fledging juveniles. These methods will minimize nest destruction by restricting/deferring haying activities and improving wildlife cover and shelter by increasing edge habitat and establishing travel corridors between habitats:**
  - ✓ **Grassland birds may be drawn to nest in hay fields. For at least 1/3 of the hay acreage, hay cutting must be either before and/or after the primary nesting or fawning seasons based on state established dates for the targeted species. The nesting and fawning dates in Mississippi are from April 1 to August 15. These areas provide alternative adjacent habitat and allow birds additional areas to nest or re-nest (for those that failed to successfully nest in active hayfields).**
  - ✓ **Establish or maintain transition zones/corridors/escape cover extending from the edge of a field, fence row, or water course. This cover should consist of woody vegetation (tree lines, hedgerows, woodland, and/or shrubs) at least 30 feet wide. These areas provide adjacent habitat for cover and shelter by increasing edge habitat and establishing travel corridors between habitats. Transition zones that "feather" habitat changes with different heights and types of cover (from trees to open fields) provide a mixture of foods (such as seeds, insects, berries) and cover (such as nesting, brood-rearing, and escape). It is important to connect various land uses and desired cover types with travel corridors that can also provide food and escape cover. In hay fields where wildlife cover and shelter are absent or inadequate, woody vegetation may be planted or allowed to naturally re-vegetate by preserving or encouraging existing shrubby and woody cover, tall grasses, annual weed patches, and briar patches, such as blackberries. The producer will need to establish or maintain transition zones/corridors/escape cover on at least 50% of the field boundary to achieve a WHEG value of 0.60. (Record producer's decisions in the "Other Management" section of the attached job sheet)**
  - ✓ **Increase forage heights after mowing to state specified minimum heights for the targeted species on all hayed acres. State targeted species and minimum mowing heights (Record minimum forage heights after cutting by field on attached job sheet.):**
    - o **for introduced grass pastures is the Eastern Meadowlark and 5 inches.**
    - o **for native grass pastures is the Northern Bobwhite and 8 inches.**
- **MS_WHEG_01-19-17 Pasture-Hayland Habitat index evaluation must be completed for both before implementation and after implementation of this enhancement. Minimum WHEG value for after implementation must be 0.6.**

- **For all harvest activities that will be conducted during the nesting/fawning season, the producer will implement <u>at least two</u> of the following to flush wildlife from mowed areas during the harvest operation to reduce mortality to wildlife. (Record producer's decisions in the "Other Management" section of the attached job sheet):**
  - ✓ **Attach a flush bar on the mower/harvest equipment.**
  - ✓ **Conduct all harvest/mowing during daylight hours. Nesting adults and roosting individuals are less likely to flush from cover during the night.**
  - ✓ **Haying patterns will be either:**
    a. Begin on one end of the field and work back and forth across the field, or
    b. Begin in the center of the field and work outward to provide cover that allows fledgling birds to escape to the edge of the field (see Fig. 2).

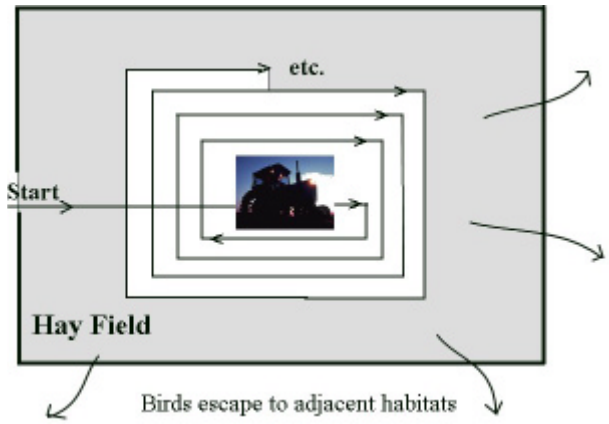

Fig. 2. Hay fields should be mowed from the center outward to allow birds to escape to adjacent habitats.

- **Map(s) delineating the area that will be treated.**

FORAGE HARVEST MANAGEMENT
Specifications

Landowner _____

County _____

FSN _____ Tract _____

Field No.(s) _____

Plant(s) _____

_____

Growth Stage for Harvest _____

_____

Minimum Cutting Height _____

Fertilizer (according to soil test or attached nutrient budget) _____

_____

Lime (amount needed to adjust pH) _____

Liming Record

Field #	Year	Rate	Weed Control
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Other Management _____

_____

_____

_____

District Conservationist _____

Landowner/Operator _____

NRCS, Mississippi