

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

CONSERVATION COVER

(Acre)

CODE 327

DEFINITION

Establishing and maintaining permanent vegetative cover to protect soil and water resources.

PURPOSE

- Reduce soil erosion and sedimentation.
- Improve water quality.
- Restore, create, or enhance wildlife habitat.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on land that will be retired from agricultural production requiring permanent protective cover, and on other lands needing permanent protective cover. This practice does not apply to plantings for forage production or to critical area plantings.

CRITERIA

General Criteria Applicable To All Purposes

Plant species selection will be based on long-term land use objectives and habitat needs of target wildlife species.

The selected species will be adapted to the soil and site conditions.

Temporary Cover

- 1) Temporary cover may be established for erosion control and weed suppression when:
 - a) suitable seed or tree seedlings are not available;
 - b) the normal planting period for the species has passed;
 - c) chemical residues will not allow establishment of cover; and/or other limiting situations are present.
- 2) Temporary cover shall be established according to Table 1.
- 3) Temporary cover crops shall be clipped prior to seed maturity.

- 4) Permanent cover will be established at the next available seeding or planting period.

Introduced or Native Grass Establishment

1. Cool season grasses and legumes shall be seeded from February 1st to May 15th or from August 1st to October 10th. Annual legumes may only be seeded during the spring. Native grass and native grass mixtures that include forbs will be seeded between April 15th and June 30th. When planting legumes with native grasses, planting should occur between April 15th and May 15th when possible. Legumes can also be over seeded during the fall or spring after native grass planting.
2. Species and seeding rates will be according to Table 2.
3. Seed will conform to minimum state standards for purity, germination and other features. Seed tags and other information may be requested by NRCS representatives to verify contract compliance.
4. Soil amendments, when planned, shall be made according to University of Kentucky fertilizer and lime recommendations. Nitrogen is not recommended for native grass plantings for conservation cover purposes.

Seedbed Preparation

Site preparation shall be done to provide a firm weed free seedbed that ensures good seed to soil contact.

Adequate seedbed preparation will consist of:

- 1) Conventional Tillage: A seedbed may be prepared by moldboard plowing and secondary tillage to make a clean firm

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

seedbed. Roll or culti-pack immediately prior to and after seeding.

- 2) Conservation Tillage: Prepare a seedbed with a chisel, disk or other similar tillage implement. Apply herbicides or tillage operations early enough to assure a kill of existing vegetation. Roll or culti-pack immediately prior to and after seeding.
- 3) No-Tillage: Apply adequate herbicide to kill existing vegetation prior to seeding. Mowing, grazing, or prescribed burning may be used prior to planting to control excessive residue that can prevent proper operation of no-till equipment. If possible after mowing, remove the hay to allow proper equipment operation (check program rules to determine if grazing/hay removal is allowed).

Eradicating Existing Vegetation and Competition Control

Evaluate existing cover to determine the most effective treatment to allow seeding success. Use mowing or grazing where permitted, and prescribed burning to remove or reduce vegetative growth that will interfere with herbicide applications, mechanical tillage or planting operations. Heavy mowing, grazing or burning at the correct times may also weaken the existing vegetation.

Herbicide may be needed for weed control even when conventional tillage or conservation tillage is used as the seedbed preparation method. Existing stands of vegetation should be evaluated to determine if herbicide is needed in conjunction with the tillage.

When no-tillage is used as the seeding method, herbicide applications are typically required to kill existing vegetation and may be needed to control competing vegetation during establishment.

Herbicide burn downs may be done in the fall or spring when vegetation is actively growing. More than the one herbicide application may be required to effectively kill existing vegetation.

All herbicides must be applied according to label recommendations.

More detailed information on seedbed preparation, seeding, and herbicide use is provided in the Conservation Cover (327) Job Sheets for introduced and native grasses.

Tree and Shrub Establishment

Tree and shrub establishment as conservation cover will be planted according to the NRCS TREE/SHRUB ESTABLISHMENT (612) and FOREST SITE PREPARATION (490) practice standards and the Tree/Shrub Establishment (612) job sheet.

Criteria to Provide Additional Erosion Control

On areas where additional erosion control is needed such as, steeper slopes or concentrated flow areas, no more than 20 percent of the seeding mixture by weight will be comprised of species rated poor for erosion control.

The minimum seeding rate in Table 2 may be increased by 25% to address erosion concerns when site conditions warrant.

Criteria to Provide Additional Wildlife Benefits

When an objective is to improve wildlife habitat, the seeding mixture should not contain species with a poor wildlife rating from Table 2. Select species that create an open structure that allows increased forb production and wildlife movement.

Native perennial forbs are important to many wildlife species. Increasing the number of forb species improves the wildlife habitat by increasing stand diversity. Forbs may be added to the seeding mix according to Table 2.

To benefit insect food sources for grassland nesting birds, spraying or other control of noxious weeds will be done on a spot basis.

Maintenance practices and field activities should not disturb cover during the avian nesting season between May 15th and August 1.

Annual mowing of the conservation cover for generic weed control is not recommended since it greatly reduces cover for next year's nesting period. If needed, conduct mowing and light disking activities outside the nesting season. Since program rules may limit maintenance options, check specific program guidelines prior to conducting maintenance and management operations.

CONSIDERATIONS

This practice may be used to promote the conservation of wildlife species, including threatened and endangered species.

Where applicable this practice may be used to conserve and stabilize archeological and historic sites.

Consider rotating management and maintenance activities (e.g. mow only one-fourth or one-third of the area each year) throughout the managed area to maximize spatial and temporal diversity.

Use native species when available. Consider trying to re-establish the native plant community for the site

If a native cover (other than what was planted) establishes, and this cover meets the intended purpose and the landowner's objectives, the cover should be considered adequate.

PLANS AND SPECIFICATIONS

Specifications for this practice shall be prepared for each site. They shall include, but are not limited to, recommended species, seeding rates and dates, establishment procedures, and other management actions needed to insure an adequate stand. Specifications shall be recorded using applicable job sheets, narrative statements in the conservation plan, and/or other acceptable documentation.

OPERATION AND MAINTENANCE

Maintenance practices and activities should not disturb cover during the primary nesting period for grassland species between May 15th and August 1st. Exceptions should be considered for periodic burning or mowing when necessary to maintain the health of the plant community. Mowing may be needed during the establishment period to reduce competition from annual weeds. Noxious weeds will be controlled to prevent proliferation and spreading to adjacent fields.

Annual mowing of the conservation cover stand for general weed control is not recommended.

Any use of fertilizers, pesticides and other chemicals shall not compromise the intended purpose.

Prescribed burning may be used to manage native grasses provided that a Prescribed Burning Plan is prepared in advance by the Kentucky Department of Fish and Wildlife Resources (KDFWR) or qualified Technical Service Provider. The landowner will be responsible for adhering to the KDFWR burn plan and all local and state laws applicable to open burning in Kentucky.

Since program rules may limit maintenance options, check specific program guidelines prior to conducting maintenance and management operations.

Table 1. Seeding rates for temporary cover.

TEMPORARY COVER SPECIES	SEEDING RATE
Spring Oats	2 bushels/acre
Winter Oats	3 bushels/acre
Wheat*	1.5 bushels/acre
Rye grain*	1.5 bushels/acre
Annual ryegrass*	20 pounds/acre

* Oats should be used as a temporary cover for native grasses due to possible allelopathic effects from the other species used for temporary cover.

Table 2. Conservation cover must be established with at least one grass species. Native grass mixtures must include a minimum of 5 pounds grass Pure Live Seed (PLS) per acre. Minimum seeding rates may be increased by 25% if site conditions warrant. When wildlife is a primary objective, conservation cover may also be established using the seeding rates in the Upland Wildlife Habitat Management Standard (645) or the Restoration and Management of Declining Habitats (643).

<u>Species</u>	<u>Erosion</u>	<u>Wildlife</u>	Single Grass Species Seeding Rate (Minimum Pounds/Acre)	Multiple Grass Species Seeding Rate (Minimum Pounds/Acre)
<u>Introduced Grasses</u>				
Orchardgrass	F	G	15	10
Red Top	F	G	10	5
Timothy	G	G	10	5
<u>Native Grasses</u>				AT LEAST 5 POUNDS GRASS PLS/ACRE REQUIRED
Big Bluestem	G	E	5	1
E. Gama Grass	P	E	5	3
Indiangrass	G	E	5	1
Little Bluestem	G	E	5	1
Side Oats Grama	P	E	NA	1
Switchgrass	G	G	5	Minimum 0.5 lb. to 1.0 lb. Maximum
Va. Wild Rye	P	E	NA	1
<u>Legumes</u>			Legume Seeding Rate For Single Legume Species (lbs.)	Legume Seeding Rate For Multiple Legume Species (lbs.)
Alsike Clover	F	G	2	1
Birdsfoot Trefoil	F	F	3	1.5
Ladino Clover	F	F	1	0.5
Kobe Lespedeza	F	G	3	1.5
Korean Lespedeza	F	G	3	1.5
Partridge Pea ^{1/}	P	G	0.5 – 1	0.5
Red Clover	F	F	5	2.5
White Clover	F	F	1	0.5
<u>Native Forbs</u>			(see the NRCS 645 Standard For Eligible Forb Species)	
Single Species	P	E	8 ounces	
Multiple Species ^{2/}	P	E	8 ounces	

1/ - Partridge pea is considered a native forb. When planned as a single forb species, its seeding rate should be between 0.5 – 1.0 pounds/acre.

2/ - See the Upland Wildlife Habitat Management (645) practice standard for suitable forb mixtures.

Wildlife and Erosion Control Ratings of E- Excellent, G – Good, F – Fair, and P - Poor