

UNITED STATES DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

CONSERVATION COVER

(Acre)

Code 327

**DEFINITION**

Establishing and maintaining perennial vegetative cover to protect soil and water resources on land retired from agricultural production.

**PURPOSES**

To reduce soil erosion and sedimentation, improve water quality, restore native plant communities, and restore, create or enhance wildlife habitat.

**CONDITIONS WHERE THIS PRACTICE APPLIES**

On land retired from agricultural production, including land entered into retirement programs. This practice does not apply to planting for forage production or to critical area plantings.

**CRITERIA**

Plants for conservation cover shall be perennials. Annuals may be included as a companion crop in planting mixtures of perennials and with native vegetation. Annual plants for wildlife food plots may be used.

Vegetative manipulation can be accomplished by prescribed burning, mechanical, biological or chemical methods, or a combination of these.

**Grasses and Legumes**

Select plants that will be suitable for the planned purpose, and are suited to soil and site conditions.

Introduced perennial grasses and legumes suitable for conservation cover, along with planting rates and planting dates are contained in Table 1.

Native perennial grasses suitable for conservation cover, along with planting rates, adapted varieties and planting dates are listed in Table 2.

Native perennial grasses suitable for wildlife habitat, along with planting rates, adapted varieties and planting dates are listed in Table 3.

Native perennial forbs and legumes may also be added to native grass mixtures (Table 4).

Plant nutrients required for plant establishment will be applied according to standard, *Nutrient Management-590*.

Lime shall be applied in accordance with soil test recommendations.

Tillage operations for seedbed preparation shall be the minimum necessary to prepare an adequate seedbed for planting and establishment of cover.

Legume seed shall be inoculated with the proper inoculant according to instructions on the inoculant package.

Plant during the optimum planting dates. During planting, cover the seed with soil material to the proper seeding depth with a drill or cultipacker seeder, or if seed are surface broadcast, use a cultipacker or other suitable equipment to cover seed immediately after seeding.

**Shrubs and Trees**

Native shrubs suitable for wildlife are listed in Table 5. Species of trees suitable for planting are listed in Table 6 or see *Section II-Fof the Field Office Technical Guide and Woodland Reference 13-2*. Spacing and planting dates shall be in

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accordance with the standard *Tree/Shrub Planting-612* and/or the recommendations of the Alabama Forestry Commission.

Competition of vegetation, which will inhibit establishment of trees, shall be reduced by disking or by other mechanical means prior to planting. Herbicides may also be used before or after seedlings are planted.

Firebreaks should be established along high fire hazard areas, according to the standard, *Firebreak-394*.

### **Permanent Wildlife Habitat**

Native plant species suitable for wildlife are listed in this standard or the standard *Wildlife Upland Habitat Management-645* also may be used to determine plant species and establishment techniques for permanent wildlife habitat establishment. A reduction in general agricultural seeding rates may be desirable for certain wildlife species such as bobwhite quail. This is to create open areas to allow for increased animal movement and forb production. The rates will need to meet the minimum requirements for erosion control.

### **Wildlife Food Plots**

Annual plants may be used for wildlife food plots in accordance with the standard, *Wildlife Upland Habitat Management-645*.

Annual food plots shall be located on non-erodible portions of the field, otherwise practices to control erosion must be used.

Selection of suitable plant species, determination of food plot size and location, and establishment techniques will be in accordance with *Wildlife Upland Habitat Management-645*.

### **Native Vegetation**

Native vegetation is acceptable as cover if it is in accordance with program requirements, if it provides erosion control, and noxious weeds are controlled.

### **CONSIDERATIONS**

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Consider long-term land use objectives and/or habitat needs of target wildlife species in selection and management of plant species.

Suitability of soils and site conditions should be considered in selection of plant species.

Conservation tillage methods of grass and/or legume establishment should be considered.

Prescribed burning of native grasses and certain introduced grasses and legumes can improve vigor, stand density, and aid with weed control. Burning may not be adapted to all species such as tall fescue.

Water infiltration and percolation can increase with establishment of conservation cover by reducing evaporation and runoff.

Close growing vegetation can reduce sediment and sediment related pollutants delivered to streams.

Organic matter content of soils will increase with long-term conservation cover thus increasing the water holding capacity of the soil.

### **PLANS AND SPECIFICATIONS**

This practice shall be recorded using narrative statements in the conservation plan, approved specifications sheets, guide sheets, or other acceptable documentation. The plan will identify the fields or other location where conservation cover and associated practices will be applied along with the plant species, planting rates, establishment methods, and management.

### **OPERATION AND MAINTENANCE**

Maintenance practices and other activities which may disturb nesting are to be curtailed during the primary nesting period. Exceptions may be granted when mowing weeds is necessary to facilitate establishment of vegetative cover.

Noxious weeds in fields established to conservation cover will be controlled by mowing, fire, tillage, or herbicides as appropriate. Treat only portions of the field needing weed control (spot treatment).

Consideration for wildlife should be given by rotating management or maintenance practices

throughout the managed area. For example, mow only one third of a field each year by mowing alternate strips or alternate portions of the field instead of mowing the entire field each year. Prescribed burning should be utilized instead of mowing where feasible. Burning will be in accordance with the standard, *Prescribed Burning-338*.

Plant nutrients for maintenance will be applied according to the standard, *Nutrient Management-590*.

## REFERENCES

Alabama Cooperative Extension System Circular ANR-149. *Alabama Planting Guide for Forage Grasses*

Alabama Cooperative Extension System Circular ANR-150. *Alabama Planting Guide for Forage Legumes*

Alabama Forestry Planning Committee. *Considerations for Forest Management on Alabama Soils*. 1993.

Dean, Blanche E. *Trees and Shrubs in the Heart of Dixie*. 1961. Coxe Publishing Company, Birmingham, AL.

Godfrey, Robert K. *Trees, Shrubs, and Woody Vines of Northern Florida and Adjacent Georgia and Alabama*. 1988. University of Georgia Press, Athens, GA.

Grelen, Harold E. and Vinson L. Duvall. *Common Plants of Longleaf Pine-Bluestem Range*. 1966. U. S. Forest Service Research Paper SO-23.

*National Wildflower Research Center's Wildflower Handbook*. 1989.

NRCS CRP Practice Maintenance Policy and NRCS CRP Seeding Recommendations Policy.

USDA Miscellaneous Publication No. 303. *Native Woody Plants of the United States*. 1939.

USDA-SCS Agriculture Handbook No. 389. *100 Native Forage Grasses in 11 Southern States*. 1971.

**Table 1**  
**INTRODUCED PERENNIAL GRASSES AND LEGUME SUITABLE**  
**FOR**  
**CONSERVATION COVER**

Crop	Seeding Rate/Ac.	Planting Dates & Adapted Area		
		North	Central	South
<b><u>PERENNIAL GRASSES</u></b>				
Bahiagrass	20 lbs.	- <sup>1/</sup>	Mar 1 - Jul 1	Feb 1 - Nov 1
Bermudagrass, common	5 lbs.	Apr 1 - Jul 15	Mar 15 - Jul 15	Mar 1 - Jul 15
Dallisgrass	10 lbs. PLS <sup>2/</sup>	Mar 15 - Jul 1	Mar 1 - Jul 1	Feb 1 - Jul 1
Fescue, Tall	25 lbs.	Mar 1 - Apr 15 <sup>3/</sup> Sep 1 - Nov 1	- Sep 1 - Nov 1	- Sep 15 - Nov 15 <sup>4/</sup>
Johnsongrass	30 lbs.	Apr 1 - Jul 31	Apr 1-Jul 31	-
Orchardgrass	15 lbs.	Aug 15 - Nov 1	-	-
<b><u>PERENNIAL LEGUMES</u></b>				
Sericea	30 lbs.	Mar 15 - May 15 Jun 15 - Jul 15	Mar 1 - May 1 Jun 15 - Jul 15	Feb 15 - May 1 Jun 15 - Jul 15
White Clover	3 lbs.	Feb 1 - Apr 1 Sep 1 - Nov 1	Feb 1 - Apr 1 Sep 1 - Nov 1	- Sep 15 - Nov 15 <sup>4/</sup>

1/ The dash (-) means not recommended.

2/ PLS - Pure Live Seed.

3/ Spring fescue plantings in North Alabama are limited to critical areas only.

4/ Fescue seedings and white clover seedings in South Alabama are limited to subclass w soils.

**Table 2**  
**NATIVE PERENNIAL GRASSES SUITABLE**  
**FOR**  
**CONSERVATION COVER**

<b>Native Grass Mixture</b> <sup>1/2/3/</sup>	<b>Seeding Rate</b>	<b>Remarks</b>
Switchgrass	5 lbs PLS <sup>4/</sup>	Adapted to deep soils with good water holding capacity, including well drained to poorly drained, but tolerates flooding for extended periods and will grow on sandy soils.
Indiangrass Switchgrass	2 lbs PLS 4 lbs PLS	Mixture is approximately 20% Indiangrass. This mixture will do better on sandy soils than switchgrass alone.
Big Bluestem Switchgrass	2 lbs PLS 4 lbs PLS	Mixture is approximately 20% Big Bluestem. Big Bluestem is more drought tolerant than most other native grasses.
Big Bluestem Indiangrass Switchgrass	4 lbs PLS 4 lbs PLS 2 lbs PLS	Mixture is equal amounts of Big Blue, Indian and Switchgrass. Best for upland sites with some wet or poorly drained areas.
Big Bluestem Indiangrass Side-Oats Grama Switchgrass	3 lbs PLS 2 lbs PLS 5 lbs PLS 2 lbs PLS	Mixture is 1/3 Side-Oats Grama, 1/3 Switchgrass, and 1/3 Big Blue and Indiangrass. Side-Oats Grama is well adapted to alkaline sites with a high pH. This mixture is adapted to upland alkaline Blackbelt soils.
Eastern Gamagrass	10 lbs PLS	Adapted to deep bottomland soils with good water holding capacity. Will tolerate flooding and somewhat poorly drained soils, but is not adapted to highly alkaline soils.

1/ Adapted Varieties of Native Grasses for Alabama are:

Big Bluestem - Kaw & Roundtree  
 Indiangrass - Lometa & Rumsey  
 Side-Oats Grama - Haskell  
 Switchgrass - Alamo & Cave-In-Rock

2/ The planting dates for the adapted areas are:

North - April 1 to July 1  
 Central - March 15 to July 15  
 South - March 1 to July 15

3/ Seed should be covered no more than 1/4 inch deep at planting.

4/ PLS - Pure Live Seed

**Table 3**  
**NATIVE PERENNIAL GRASSES SUITABLE**  
**FOR**  
**WILDLIFE HABITAT**

Native Grass <sup>1/2/</sup>	Seeding Rate <sup>3/4/</sup>	Remarks
Big Bluestem	7 lbs PLS <sup>5/</sup>	A vigorous, warm season bunchgrass which grows well on most soil types. It does best on moist, well-drained soils, but is more drought tolerant than other warm season native grasses except for little bluestem.
Coastal Panicgrass	10 lbs PLS	Drought tolerant and well adapted to very sandy sites. Does well on backdune areas along the coast.
Eastern Gamagrass <sup>6/</sup>	2 lbs PLS	Well adapted to deep bottomland soils with good water holding capacity. Will tolerate flooding and somewhat poorly drained soils, but is not adapted to highly alkaline soils.
Indiangrass	5 lbs PLS	A warm season, short, bunchgrass which has good drought tolerance. It is well adapted to medium-heavy to light, sandy textured soils. The seed stalk may be up to 3 feet tall.
Little Bluestem	4 lbs PLS	Warm season bunchgrass growing to a height of 3 feet. It has good drought tolerance and grows well on deep, shallow, sandy, fine textured, and rocky soils.
Side-Oats Grama	5 lbs PLS	Side-Oats Grama is adapted to many soil types. It does good on well-drained uplands, shallow ridges, and rocky areas; however, it performs poorly on dense clays and very loose sands. It does best on calcareous and moderately alkaline soils and is well adapted to the eroded soils of the Black Belt.
Switchgrass	2.5 lbs PLS	A vigorous, tall warm season grass which is well adapted to deep soils with good water holding capacity, including well drained to poorly drained soils. It will tolerate flooding for extended periods and will grow on sandy soils. Low-land types may grow to a height of 6 feet on moist, fertility sites.

1/ Adapted Varieties of Native Grasses for Alabama are:

Big Bluestem - Kaw & Roundtree  
 Coastal Panicgrass - Atlantic  
 Indiangrass - Lometa & Rumsey  
 Little Bluestem - Aldous, Cimarron, & Pastura  
 Side-Oats Grama - Haskell  
 Switchgrass - Alamo & Cave-In-Rock

2/ The planting dates for the adapted areas are:

North - April 1 to July 1  
 Central - March 15 to July 15  
 South - March 1 to July 15

3/ Seed should be covered **no more than** 1/4 inch deep at planting.

4/ When two grasses are used in mixture, reduce the seeding rate of each by 1/3. When more than two grasses are used in a mixture, reduce the seeding rate of each by 1/2.

5/ PLS - Pure Live Seed

6/ Eastern Gamagrass will only be planted as part of a mixture for wildlife habitat.

Table 4

**NATIVE PERENNIAL FORBS AND LEGUMES SUITABLE FOR  
ADDING TO NATIVE GRASS MIXTURES**

<b>Native Mixture</b>	<b>Seeding Rate</b>	<b>Remarks</b>
Black-eyed Susan	2.0 lbs	Tolerant of a wide range of soils, but prefers a well-drained site with a pH level of 6.0-7.0. Needs full sun.
Butterfly weed	10.0 lbs	Requires a very well-drained sandy or gravelly soil in full sun. May take up to two years to become established from seed.
Coreopsis (perennial)	10.0 lbs	A drought tolerant perennial. Withstands a wide range of conditions but prefers rich, well-drained soil with a pH level of 5.5-7.0.
Illinois Bundleflower	5.0 lbs	A warm-season legume. Prefers clay to clay loam soil with some overflow water. It also grows well on sandy loam soils. Needs pH level of 6.0 to 6.5.
Moss Verbena	6.0 lbs	Drought tolerant. Prefers light to heavy soils that are well-drained with a pH level of 6.0-7.0 and in full sun.
Purple coneflower	12.0 lbs	Prefers full sun to partial shade and well-drained soil with a pH level of 5.5-7.0; will tolerate poor, dry soil.

Table 5

## NATIVE SHRUBS SUITABLE FOR WILDLIFE

Native Shrub	Primary Wildlife Uses	Remarks
Shrub Lespedezas	Food, Cover	Perennial warm-season legume with semiwoody stems. Adapted to upland coastal plain soils. Suitable for field borders, hedgerows, odd area plantings, reclamation of infertile sites, multirow windbreaks, and erosion control on barren sites.
Crab Apple	Food	A large shrub to small tree. Prefers moist, well drained soils. Grows best in full sun.
Mayhaw	Food	Shrub or small tree to about 20 feet tall. Adapted to acid, wet, and flooded soils, but will grow on well drained soils. Grows well in full sun or shade.
Blackhaw	Food	A shrub up to 20 feet tall. Well adapted to dry sites as well as alkaline soils. Grows well in full sun.
Chickasaw Plum and other wild plums	Food, Cover	Deciduous shrub, grows to 10 ft. Performs well on well-drained, medium- to coarse-textured soils.
Serviceberry	Food	Deciduous branching shrub. Adapted to deep loamy to clayey soils, semiarid ridges, and rocky slopes in full sunlight or partial shade; also moist, deep soils in riparian zones.
Eastern Red Cedar	Cover	A large evergreen tree. Thrives in many kinds of soil, including limestone, dolomitic, and rarely granitic and siliceous soils. Slow growing and long-lived. Easily killed by fire. Resists grazing well. Very drought resistant.
Wax Myrtle	Cover	A small to large evergreen shrub. Grows in sandy or sterile, often acid soil.
Rabbit Eye Blueberry	Food, Cover	A small to large shrub. Requires acidic soils (pH 4.5 to 5.2). Performs well in moist, well-aerated, well-drained soil high in organic matter.
Blackberry	Food, Cover	Perennial plants with erect, stout, ridged canes (stems) 4 to 8 feet tall. Prefers moist but well-drained situations with an abundance of light.
Dewberry	Food, Cover	Perennial with stems that trail on the ground. Prefers well-drained soils. Will grow in full light or under high shade situations.
Yaupon	Food, Cover	A large evergreen shrub. Prefers dry, well-drained soils and full sunlight. Grows well in sandy soils.
Elderberry	Food	A large stoloniferous shrub. May reach tree size, 30 feet tall and 2 feet in diameter. Adapted on a variety of soils and sites but is most common on moist to wet, fairly well-drained sites. Will grow in full light or under high shade situations.

**Table 6**  
**TREES FOR CONSERVATION COVER**

<b>Trees</b>	<b>Purpose</b>	<b>Remarks<sup>1/</sup></b>
Pine species <sup>2/</sup>	Forest products	Plant 500 to 700 trees per acre.
	Wildlife	Plant 500 or less trees per acre. Create or retain openings.
Hardwood species <sup>3/</sup>	Forest products	Plant 300 to 500 trees per acre.
	Wildlife	Plant mixture of 2 or more mast producing species.
Eastern red cedar	Forest products/ Wildlife	Plant 500 to 700 trees per acre. Limited to alkaline soils.

1/ Prepare site according to *Standard 490 - Forest Site Preparation*. Protect from fire and grazing.

2/ Grow well on acid soils. Can grow on poorly drained to excessively drained soils. Refer to *Considerations for Forest Management on Alabama Soils* for the proper species to plant.

3/ Grow on a wide range of soils with the better sites along streams. Refer to *Considerations for Forest Management on Alabama Soils* for the proper species to plant.

# GEOGRAPHICAL AREAS FOR SPECIES ADAPTATION AND SEEDING DATES

