

**Natural Resources Conservation Service
Conservation Practice Standard**

**PASTURE AND HAY PLANTING
(Ac.)
CODE 512**

DEFINITION

Establishing or reestablishing native or introduce forage species (includes pasture and hayland renovation.)

PURPOSE

This practice may be applied as part of a conservation management system to accomplish one or more of the following purposes:

- Establish adapted and compatible species, varieties or cultivars.
- Improve or maintain livestock nutrition and/or health.
- Extend the length of the grazing season.
- Provide emergency forage production.
- Reduce soil erosion.

CONDITIONS WHERE PRACTICE APPLIES

This practice may be applied on cropland, hayland, pastureland, and other agricultural lands where forage production is feasible and desired.

CRITERIA

General

Plant species and their cultivars will be selected based upon:

- The attached table for plant species, planting rates, dates, and planting depth will be used. Fertilizer and lime rates will be applied according to the nutrient management standard and specification code 590. See FOTG Section II-J, Pasture Suitability Groups, for adaptation of plants. If plants are not listed in FOTG Section II-J, refer to the Cooperative Extension Service Agronomy Handbook or the Mississippi State University Web Site at msstate.edu. Additional information can also be found in the "Perennial Warm Season

Grasses for the Southeast" handbook or "Southern Forages" handbook.

- Soil condition and position attributes such as pH, available water holding capacity, drainage, inherent fertility, acidity, alkalinity, flooding and ponding and levels of toxic elements that may be present such as selenium and aluminum.
- Plant resistance to disease and insects common to the site.

Seeding rates will be those listed in the attached table. All seed and planting materials will meet state seed quality laws.

Provide a firm, weed-free seedbed that ensures good seed-to-soil contact. For new pasture or hayland plantings prepare a seedbed by disking and/or chiseling to a minimum depth of four (4) inches and smooth with one (1) or two (2) harrowings. Prepare the seedbed well in advance of planting to allow the soil to become well settled and firm before planting. Where this cannot be done, use a cultipacker to firm the fresh seedbed before and after planting. If new plantings are to be no-tilled, apply a recommended burndown three (3) weeks before planting and at planting if needed. For renovation of pasture or hayland prepare a seedbed by one (1) light disking and smooth with a harrow or use a sod seeder. All legume seed will be inoculated with the proper viable rhizobia before planting.

Additional Criteria for Improving or Maintaining Livestock Nutrition and/or Health

Forage species must be capable of meeting the desired level of nutrition for the kind and class of the livestock to be fed.

Additional Criteria for Extending the Grazing Season

Forage species selected shall fill a recognized dietary deficiency within the year-long forage management program. To extend and/or

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improve summer forages (Bahigrass, Bermudagrass, Dallisgrass) overseed with white clover, red clover, crimson clover, Ball clover, vetch or annual lespedeza. In north Mississippi, tall fescue can be sod seeded into summer pastures to extend grazing. Tall fescue can be sod seeded with white clover, red clover, or crimson clover.

Criteria for Reducing Erosion

Plants shall have the ability to provide adequate ground cover, canopy cover, root mass and vegetal retardance to water flows either alone or in combination with other forage species when site conditions require erosion protection.

CONSIDERATIONS

Prescribed grazing and brush management practices may be used in combination with pasture and hay planting.

Where wildlife management is an objective, the food and cover value of the planting can be enhanced by using an approved habitat evaluation procedure to aid in selecting plant species and providing for other habitat requirements necessary to achieve the objective.

Fertilizer needs to be appropriately placed and timed to be effective.

Coated seed should be seeded at the same rate as non-coated seed but the planting equipment needs to be re-calibrated.

In areas frequented by high density of animals, establish persistent species that can tolerate close grazing.

Forage species planted in mixtures should exhibit similar palatability to one another to avoid spot or selective grazing.

PLANS AND SPECIFICATIONS

Specifications for the establishment of pasture and hayland plantings will be prepared for each site or management unit according to the criteria, considerations, and operations and maintenance described in this standard, and will be recorded on specification sheets, job sheets, or in narrative statements in the conservation plan.

OPERATION AND MAINTENANCE

The operator will inspect and calibrate equipment prior to use to insure proper rate, distribution and depth of planting material (planting too deep is a common mistake).

Growth of seedlings or sprigs shall be monitored for water stress. Depending on the severity of drought, water stress may require reducing weeds, early harvest of any companion crops, irrigating when possible, or replanting failed stands.

Invasion by undesirable plants shall be controlled by cutting, using a selective herbicide, or by grazing management by manipulating livestock stocking rates, density, and duration of stay.

Insects and diseases shall be controlled when an infestation threatens stand survival.

Evaluate forage stands each season or as needed to determine management inputs needed to achieve the desired purpose(s).

Table 1
Eligible Plants, Seeding Rates, Dates, and Planting Depths

Plant Species <u>1/</u>	Alone Min. Units Per Acre	Mixture Min. Units Per Acre	Renovation <u>8/</u>	Seeding Dates	Planting Depth (Inches)
<u>Perennials</u>					
Bahiagrass	15-25 Lbs.		15	Mar-May Sep-Oct <u>4/</u>	1/4
Bermudagrass, Hybrid	20,000 sprigs <u>3/</u>		20,000	Feb-June	2-3
Common	5 Lbs.		3	Mar-May	1/4
Dallisgrass	15 Lbs. PLS <u>2/</u>		15	Feb-May Sep-Oct <u>4/</u>	1/2
Johnsongrass	20 Lbs. PLS <u>2/</u>		15	Apr-May	1/2
Tall Fescue	20 Lbs.		15	Sep-Nov	1/4-1/2
Alfalfa	15 Lbs.		15	Sep-Oct 15	1/2
Big Bluestem (Kaw, Earl) <u>6/</u>	8-10 Lbs. PLS <u>2/</u>	4 PLS <u>2/</u>	8	Apr-May	1/4-1/2
Caucasian Bluestem <u>6/</u>	3-5 Lbs. PLS <u>2/</u>		3	Apr-May	1/4-1/2
Indiangrass (Lometa) <u>6/</u>	8-10 Lbs. PLS <u>2/</u>	4 PLS <u>2/</u>	8	Apr-May	1/4-1/2
Switchgrass (Kanlow, Alamo) <u>6/</u>	8-10 Lbs. PLS <u>2/</u>	4 PLS <u>2/</u>	8	Apr-May	1/4
Sericea Lespedeza	30 Lbs. <u>6/</u>		20	Mar-April	1/4
White Clover	3 Lbs.		3	Sep-Oct 15	1/4
<u>Annuals</u>					
Red Clover (Biennial)	8 Lbs.	5 Lbs. <u>7/</u>	5	Sep-Oct 15	1/4
Ball Clover	3 Lbs.		3	Sep-Oct 15	1/4
Subterranean Clover	20 Lbs.		10	Aug 25-Oct 15	1/4
Lespedeza, Common	30 Lbs.	15 Lbs.	15	Mar-May	1/4
Kobe	30 Lbs.	15 Lbs.	15	Mar-May	1/4
Korean	30 Lbs.	15 Lbs.	15	Mar-May	1/4
Arrowleaf Clover	10-15 Lbs. <u>5/</u>		10	Sep-Oct 15	1/4
Crimson Clover	20 Lbs.	20 Lbs.	20	Sep-Oct 15	1/4
Hairy or Woolly Pod Vetch	30 Lbs.	20 Lbs.	20	Sep-Oct	1/2
Rough Peas (wild winter)	30 Lbs.	20 Lbs.	20	Sep-Oct	1/4
Sorghum-Sudangrass Hybrids	15-35 Lbs.		25	Apr-June	1/2-1
Millet (Pearl or Brown Top)	15-25 Lbs.		15-25	May-June	1/2
Ryegrass	25-40 Lbs.	25 Lbs.	25-40	Sep-Nov	1/2-1
Cereal Grains	120 Lbs.	90 Lbs.	120	Sep-Oct	1/2-1

1/ At least one of the perennial grasses listed must be seeded when the area is to be established to permanent vegetative cover. Any plant listed can be used for improvement of vegetative cover (renovation).

2/ Pure Live Seed = PLS.

3/ 20,000 SPRIGS = 20 Bu. Green clippings at the rate of 40 bu/ac can be substituted for sprigs. (1 Bu = 1.25 cu. ft.)

4/ Plant with ryegrass or cereal grain.

5/ Seed should be scarified.

6/ Apply N after the stand is 8-10 inches tall or the following year.

7/ When planted with white clover and/or grass.

8/ Renovation rates to be drilled into existing sods that have suffered stand reduction.

NOTE: Where seeding ranges are given use the low seeding rate when drilled. Use higher rates when broadcast.

NOTE: All legume seed will be inoculated.

