

USDA FORAGE AND BIOMASS PLANTING

Conservation Practice Jobsheet

512

Natural Resources Conservation Service (NRCS)

October 2010

Landowner _____



WHAT IS PASTURE AND HAY PLANTING

Pasture and hay planting is the establishment of native or introduced forage species on pasture or hay.

PURPOSE

Pasture and Hay Planting may be applied as part of a conservation management system to accomplish one or more of the following objectives:

- Establish adapted and compatible species, varieties, or cultivars for forage production
- Improve or maintain livestock nutrition and/or health
- Balance forage supply and demand during periods of low forage production
- Reduce soil erosion and improve soil and water quality
- Increase carbon sequestration

WHERE THE PRACTICE APPLIES

Pasture and Hay Planting is applicable on lands where forage production and/or conservation is needed and feasible.

GENERAL CRITERIA AND CONSIDERATIONS

The following criteria will be used to select the most appropriate species (cultivar or variety) for planting:

- Climatic conditions: annual and seasonal rainfall, growing season length, temperature extremes, and USDA Plant Hardiness Zones
- Soil physical and chemical conditions: pH, available water holding capacity, inherent fertility, salinity, alkalinity, drainage class, slope gradient, slope aspect
- Plant resistance to disease and insects common to the site or location
- Plant compatibility with other forage species and their selected cultivar(s) in

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rate of establishment, maturity, and growth habit when seeded together in a forage mixture

- Compatibility of yield and season of growth to the desired level of nutrition for the kind and class of livestock
- Specified seeding/plant material rates, methods of planting and date of planting will be consistent with documented guidance cited by research institutions or agency demonstration trials for achieving satisfactory establishment.
- All seed and planting materials will be labeled and meet state seed quality standards. Vegetative material, such as roots, can be obtained on farm, if available, or from a reputable source. For seed shipped across state lines, the germination test is valid for 5 months after the end of the month the test was made.
- Seeding rates will be determined based on pure live seed (PLS) or percent germination information found on the seed tag. PLS can be computed using decimal values with the following equation: Percent germination + Percent hard seed * Purity/100.
- Planting dates shall be scheduled during periods when soil moisture is adequate for germination and establishment
- Legume seed shall be inoculated with the recommended strain of Rhizobia bacteria for the species being planted. Do not use chlorinated water with legume seed inoculants as a sticking agent. Chlorine can kill the Rhizobia bacteria.

SEEDBED PREPARATION AND ESTABLISHMENT

Limit soil disturbing activities to the minimum needed to prepare a suitable seedbed. Consider using no-till drills when establish grasses and/or legumes on sites with an erosion hazard.

Use equipment and methods that will result in a clean, firm seedbed without excessive weed competition. For soils with good physical condition, use a one-way disk, tandem disk, or other equipment to break or mix at least the top 3 inches of soil. Lightly disk, harrow, sweep, or use chemicals about one month prior to planting to eliminate any living vegetation should it exist. If the seedbed is not firm at planting time, firm it with a cultipacker, roller, or similar implement

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On fields which have a history of compaction, use a chisel plow or similar implement capable of operating at least 1 to 2 inches below the compacted zone to shatter the compacted layer. More complete destruction of the compacted layer is achieved when deep tillage is performed in the fall when soils are usually their driest. Prior to planting the desired vegetation, lightly disk, harrow, sweep, or use chemicals to eliminate any living vegetation should it exist.

Prepared seedbeds should be firmed with a roller or cultipacker after tillage operations are complete, but prior to seeding. If seeds are surface broadcast, cover the seed immediately with a roller or cultipacker, spike-tooth harrow, or similar implement no deeper than ¼ inch.

Surface drainage will be installed as needed.

Planting methods will be selected that plant to the proper depth ensuring seed or planting material will contact soil moisture uniformly and be firmed around the seed or planting material. See

http://efotg.nrcs.usda.gov/references/public/LA/LouisianaSeedingRateTables1.1_10_28_08.pdf

for seeding/planting rates, dates, and adaptation. Footnotes are found at

http://efotg.nrcs.usda.gov/references/public/LA/FootnotesforSeedingTables10_17_08.pdf.

Methods to establish are sprig planting, planting vegetative tops, drilling or broadcasting.

FERTILITY

Plant nutrients and soil amendments necessary for establishment shall be applied according to NRCS specifications in the conservation practice standard, Nutrient Management (590)

OPERATION AND MAINTENANCE

Growth of seedlings or sprigs will be monitored for water stress. Such stress may require reducing weeds, early harvest of nurse crops, irrigation, or replanting of failed stands. Weed control can be accomplished through any of several methods

Flash grazing by livestock may be used to control annual grasses and forbs, but extreme caution should be used to avoid selective grazing of highly palatable planted species. This method will not be used after July 15, except when abnormal summer moisture promotes excessive weed growth. Flash grazing will not

be used when the soil is wet to avoid damage to young plants from hoof action

Mowing is an optional weed control measures during the establishment years and subsequent years. Mowing should coincide with grassland bird nesting period.

Chemicals used must be federally and locally registered and must be applied in accordance with authorized registered uses, directions on the label, and other Federal and State policies and requirements.

PASTURE AND HAY PLANTING – SPECIFICATIONS SHEET

Landowner/Cooperator _____

Field Office _____

Plan Number _____ Location _____

Purpose/Objective of the Practice (Check all that apply)

	Establish adapted and compatible species, varieties, or cultivars for forage production
	Improve or maintain livestock nutrition and/or health
	Balance forage supply and demand during periods of low forage production
	Reduce soil erosion and improve soil and water quality
	Increase carbon sequestration
	Other: _____

Seedbed Preparation Methods (Check all that apply). Document the Field Number and the Number of Times the Practice is to be Conducted in the Field.

	Method	Field Number	Times
	Chisel/Subsoil		
	Disk		
	Plow		
	Harrow		
	Herbicide (burndown)		
	Prescribed Burn		

Seedbed Method (Document the Method Used in Each Field)

	Method	Field Number
	Broadcast	
	Conventional Drill	
	No-till Drill	
	Planter	
	Sprigger	
	Native Grass Drill	

Additional Specifications and Notes

Practice Design Certification (To be completed after jobsheet is complete and before practice installation)

By signing below, I certify that:

- the site specific requirements for the installation, operation, and maintenance of the practice on the client's treatment unit, as recorded in this jobsheet, have been prepared in accordance with the 512 Pasture and Hay Planting Practice Standard and the guidance in the 512 Pasture and Hay Planting Practice Specification

Signature _____

Date _____

Practice Installation Certification (To be completed after practice installation and check out)

By signing below, I certify that:

- The practice has been installed according to the site specific installation requirements

Signature _____

Date _____

This practice requires a current Louisiana One Call Dottie Confirmation Number.

Call before you dig, wait 48 hours for the site to be marked, observe the marks and dig with care. The service is free. It's the law! Civil Penalties range up to \$25,000 for violations of the "Dig" law



Failure to notify Louisiana One Call before installing this practice may delay or terminate NRCS assistance.

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