TECHNICAL NOTES

UNITED STATES DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE
SEPTEMBER 2013 ALEXANDRIA, LOUISIANA

PLANT MATERIALS TECHNICAL NOTE NO. 1

Planting Rates for Louisiana by MLRAs

When planting conservation species in Louisiana several factors can contribute to a landowner having a poorly established stand or even a complete stand failure. Using species and varieties not adapted to the site, not planting adequate amounts of seed, using poor planting techniques and a failure to plant at the proper time of the year are considered to be the main reasons for planting failures.

Producers will often invest considerable amounts of time and money buying and planting conservation seeds but will fail to consider species adaptability to the site and the proper plant rates and dates that should be used to help guarantee success.

Planting Rates for Louisiana by MLRAs was developed as a guide to assist landowners and planners in the development of conservation plantings. The following tables provide recommendations on plant species and varieties that could be planted in Louisiana guaranteeing some degree of successful establishment. Planners should reference the attached tables when making the following decisions;

- Species Selection
- Variety Recommendations
- Native Plant Selections
- Season of Growth
- Wildlife/Pollinator Recommendations
- Adaptation by Major Land Resource Area (MLRA)
- Recommended Planting Rates/Dates
- Soil adaptation
- Applicable Conservation Practice

Louisiana Plant Materials Technical Note No.1 replaces all reference to “Appendix 1- Planting Rates for Louisiana by MLRAs” within the Louisiana eFOTG.

Morris J Houck
Plant Materials Specialist

Planting Rates for Louisiana by MLRAs - Page 1 Revised August 2013

							Adaptation by Major Land Resource Area											Seeding Guidance	Adapted Plants by Soil Groups 3/					Conservation Practice								
Name	Variety	Seeding Rates are pounds pure live seed (PLS) per acre unless otherwise noted. 2/, 4/	Native-Introduced	Season of Growth	Wildlife Use 14/	Pollinator Use 15/	131A Southern Mississippi River Alluvium	131B Arkansas River Alluvium	131C Red River Alluvium	131D Southern Mississippi River Terraces	133A Southern Coastal Plains	133B Western Coastal Plains	134 Southern Mississippi Valley Loess	150A Gulf Coast Prairie	151 Gulf Coast Marsh	152A Eastern Gulf Coast Flatwoods	152B Western Gulf Coast Flatwoods	Optimum Seeding Dates 6/, 9/	Coarse	Moderately Coarse	Medium	Moderately Fine	Fine	327 Conservation Cover	550 Range Planting	512 Forage and Biomass Planting	386 Field Border	340 Cover Crop	393 Filter Strip	601 Vegetative Barrier	342 Critical Area Planting 4/	Comments 11/
PERENNIAL GRASSES 1/, 5/																															
Bahiagrass,*Paspalum notatum*	Argentine, Pensacola, Tifton 9, TifQuik, UF Riata	15	I	W			X	X	X	X	X	X	X	X		X	X	3/15-6/1 (3/1-8/1)	X	X	X	X		X		X	X		X		X	Sandy soils, not recommended for heavy clay soils, pH 5.5-6.5, drought tolerant
Bermudagrass (broadcast green hay), *Cynodon dactylon*	Alicia, Jiggs, Grazer, Brazos, Russell, Summrall 007, Little Phillip I, Tifton 44, Tifton 85, Coastal	1750 lbs/ac, 8/	I	W			X	X	X	X	X	X	X	X		X	X	4/15-6/30 (3/1-8/31)	X	X	X	X	X			X			X		X	All soils, extremely drought tolerant
Bermudagrass (hulled), *Cynodon dactylon*	Common, Cheyenne	5	I	W			X	X	X	X	X	X	X	X		X	X	3/15-6/1 (3/1-8/1)	X	X	X	X	X	X		X	X		X		X	All soils, extremely drought tolerant. May be planted in Jan-Feb under CP 342 (see footnote 4)
Bermudagrass (sod), *Cynodon dactylon*	Common	110 sq^2 per 1000 ft^2	I	W			X	X	X	X	X	X	X	X		X	X	4/15-6/30 (3/1-8/31)	X	X	X	X	X	X							X	Used on disturbed sites that would be hard to get seed or sprigs established
Bermudagrass (sprigging green hay), *Cynodon dactylon*	Alicia, Jiggs, Grazer, Brazos, Russell, Summrall 007, Little Phillip I, Tifton 44, Tifton 85, Coastal	300-500 lbs/ac	I	W			X	X	X	X	X	X	X	X		X	X	4/15-6/30 (3/1-8/31)	X	X	X	X	X			X			X		X	All soils, extremely drought tolerant
Bermudagrass (sprigs), *Cynodon dactylon*	Alicia, Jiggs, Grazer, Brazos, Russell, Summrall 007, Little Phillip I, Tifton 44, Tifton 85, Coastal	7/	I	W			X	X	X	X	X	X	X	X		X	X	4/15-6/30 (3/1-8/31)	X	X	X	X	X	X		X			X		X	All soils, extremely drought tolerant
Bermudagrass (unhulled), *Cynodon dactylon*	Common, Cheyenne	5	I	W			X	X	X	X	X	X	X	X		X	X	3/15-6/1 (3/1-8/1)	X	X	X	X	X	X		X	X		X		X	All soils, extremely drought tolerant. Planting date may be extended to October 15 if planted with a full seeding rate of annual ryegrass. May be planted in Jan-Feb under CP 342 (see footnote 4)
Bitter Panicum, *Panicum amarum*	Fourchon Germplasm, Local Ecotype	4"-1 gal pots, bareroot shoots, rooted, unrooted stems, cuttings, 2-5 ft centers	N	W	X	X								X	X			12/1-6/1						X	X						X	10/, Pollinator habitat
Bluestem: big, *Andropogon gerardii*	Kaw, Earl, Common, Local Ecotype	7-10	N	W	X	X	X	X	X	X	X	X	X	X		X	X	2/1-5/15 (12/1-5/31)		X	X	X		X	X		X		X	X	X	Best adapted to deep loamy fertile upland sites. Pollinator habitat
Bluestem: little, *Schizachyrium scoparium*	Aldous, OK Select Germplasm, Cimarron, Common, Local Ecotype	7-10	N	W	X	X	X	X	X	X	X	X	X	X		X	X	2/1-5/15 (12/1-5/31)	X	X	X	X	X	X	X		X		X	X	X	Pollinator habitat
Bluestem: seacoast, *Schizachyrium maritimum*	Timbalier Germplasm, Local Ecotype	4"-1 gal pots, 2-5 ft centers	N	W	X	X								X	X			12/1-6/1						X	X						X	10/, Pollinator habitat

Planting Rates for Louisiana by MLRAs - Page 2 **Revised August 2013**

							Adaptation by Major Land Resource Area											Seeding Guidance	Adapted Plants by Soil Groups 3/					Conservation Practice								
Name	**Variety**	Seeding Rates are pounds pure live seed (PLS) per acre unless otherwise noted. 2/, 4/	Native-Introduced	Season of Growth	Wildlife Use 14/	Pollinator Use 15/	131A Southern Mississippi River Alluvium	131B Arkansas River Alluvium	131C Red River Alluvium	131D Southern Mississippi River Terraces	133A Southern Coastal Plains	133B Western Coastal Plains	134 Southern Mississippi Valley Loess	150A Gulf Coast Prairie	151 Gulf Coast Marsh	152A Eastern Gulf Coast Flatwoods	152B Western Gulf Coast Flatwoods	Optimum Seeding Dates 6/, 9/	Coarse	Moderately Coarse	Medium	Moderately Fine	Fine	327 Conservation Cover	550 Range Planting	512 Forage and Biomass Planting	386 Field Border	340 Cover Crop	393 Filter Strip	601 Vegetative Barrier	342 Critical Area Planting 4/	**Comments 11/**
PERENNIAL GRASSES 1/, 5/																															
California Bulrush, *Schoenoplectus californicus*	Bayou Lafourche Germplasm, Local Ecotype	1 gal pots, bareroot, 2-5 ft centers	N	W	X	X								X	X			12/1-6/1						X	X						X	10/, Pollinator habitat
Carpetgrass, *Axonopus fissifolius*	Common	25-35	N	W			X	X	X	X	X	X	X	X		X	X	3/1-8/31	X	X	X	X	X								X	
Centipede Grass, *Eremochloa ophiuroides*	Common	15-25	I	W			X	X	X	X	X	X	X	X		X	X	3/1-8/31	X	X	X	X	X								X	
Cordgrass: marshhay, *Spartina patens*	Gulf Coast, Local Ecotype	4"-1 gal pots, bareroot, 2-5 ft centers	N	W	X	X								X	X			12/1-6/1						X	X					X	X	10/, Pollinator habitat
Cordgrass: smooth, *Spartina alterniflora*	Vermilion, Local Ecotype	4"-1 gal pots, bareroot, 2-8 ft centers	N	W	X	X									X			12/1-6/1						X	X						X	10/, Pollinator habitat
Dallisgrass, *Paspalum dilatatum*	Common	5	I	C	X		X	X	X	X	X	X	X	X		X	X	3/15-6/1 (3/1-8/1)			X	X	X	X		X	X		X		X	
Eastern Gamagrass, *Tripsacum dactyloides*	Pete, IUKA IV, Highlander, San Marcos, Texas Sue, Jackson, Medina, Local Ecotype	8-13	N	W	X	X	X	X	X	X	X	X	X	X		X	X	2/1-5/15 (12/1-5/31)		X	X	X	X	X	X	X	X		X	X		Best adapted to moist, well drained fertile soils. Does not tolerate standing water for long periods. Pollinator habitat
Indiangrass, *Sorghastrum nutans*	Cheyenne, Lometa, Americus, Common, Local Ecotype	7-10	N	W	X	X	X	X	X	X	X	X	X	X		X	X	2/1-5/15 (12/1-5/31)	X	X	X	X	X	X	X		X		X	X	X	Best adapted to loamy soils. Pollinator habitat
Muhly: gulf, *Muhlenbergia capillaris*	Common, Local Ecotype	1-2	N	W	X	X	X	X	X	X	X	X	X	X	X	X	X	2/1-5/15 (12/1-5/31)	X	X	X	X	X	X	X		X		X	X	X	Upland, moist-wet sites. Attract beneficial insects such as ladybug beetles (Coccinella spp.). Pollinator habitat
Paspalum: brownseed, *Paspalum plicatulum*	Common, Local Ecotype	3-5	N	W	X	X	X	X	X	X	X	X	X	X	X	X	X	2/1-5/15 (12/1-5/31)	X	X	X	X	X	X	X		X		X	X	X	Grows well on strongly acid to neutral, poorly drained, clay loam soils, and on excessively drained, deep, sandy soils. Quail and wild ducks eat seeds. Pollinator habitat
Paspalum: Florida, *Paspalum floridanum*	Harrison, Common, Local Ecotype	6-8	N	W	X	X	X	X	X	X	X	X	X	X	X	X	X	2/1-5/15 (12/1-5/31)	X	X	X	X	X	X	X		X		X	X	X	Quail, dove, and turkey eat the large grain-like seeds. Pollinator habitat
Paspalum: seashore, *Paspalum vaginatum*	Brazoria Germplasm, Local Ecotype	unrooted stems, rooted cuttings, 4"-1 gal pots, 1-3 ft centers	N	W	X	X								X	X			12/1-6/1						X	X						X	10/, Pollinator habitat
Purpletop, *Triden flavus*	Union Germplasm, Common, Local Ecotype	2-6	N	W	X	X	X	X	X	X	X	X	X	X		X	X	2/1-5/15 (12/1-5/31)	X	X	X	X	X	X	X		X		X	X	X	Pollinator habitat
Sea Oats, *Uniola paniculata*	Caminada Germplasm, Local Ecotype	4"-1 gal pots, 2-5 ft centers	N	W	X	X								X	X			12/1-6/1						X	X					X	X	10/, Pollinator habitat

Planting Rates for Louisiana by MLRAs - Page 3 Revised August 2013

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PERENNIAL GRASSES 1/, 5/																															
St Augustine (sod), *Stenotaphrum secundatum*	Common	110 sq^2 per 1000 ft^2	I	W			X	X	X	X	X	X	X	X		X	X	3/1-8/31	X	X	X	X	X								X	Used on disturbed sites that would be hard to get seed or sprigs established.
Switchgrass, *Panicum virgatum*	Alamo, Blackwell, Local Ecotype	4-9	N	W	X	X	X	X	X	X	X	X	X	X	X	X	X	2/1-5/15 (12/1-5/31)	X	X	X	X	X	X	X	X	X		X	X	X	All soils. Alamo variety tolerates poor drainage. Blackwell variety is not recommended south of US Hwy 84. Due to Alamo's aggressive nature it should be limited to a maximun of 10 % of the total mix when used in a combination of other native grass species. Pollinator habitat
Tall Fescue, *Schedonorus phoenix*	Kentucky 31, Georgia 5, Jesup, AU Triumph, Forager, Penngrazer	20-30	I	C			X	X	X	X	X	X	X	X		X	X	9/1-11/30			X	X	X	X		X	X		X	X	X	Best adapted to loamy soils. Allow to reseed to help with persistence. Tolerates low pH and poorly drained soils.
Velvet Rosettegrass, *Dichanthelium scoparium*	Pilgrim Germplasm	3	N	C	X	X	X	X	X	X	X	X	X	X		X	X	9/1-10/15 (8/1-11/30)	X	X	X	X	X	X	X		X		X		X	All soils. Seeds and plants provide food for wildlife. Pollinator habitat
Wildrye: Canada, *Elymus canadensis*	Lavaca Select Germplasm, Common, Local Ecotype	25-40	N	C	X	X	X	X	X	X	X	X	X	X		X	X	9/1-10/15 (8/1-11/30)		X	X	X	X	X	X		X		X	X	X	Should be planted 1/4 to 1/2 inch deep. Pollinator habitat
Wildrye: Virginia, *Elymus virginicus*	Omaha, Kinchaffoonee Germplasm, Common, Local Ecotype	15-20	N	C	X	X	X	X	X	X	X	X	X	X		X	X	9/1-10/15 (8/1-11/30)		X	X	X	X	X	X		X		X		X	Should be planted 1/4 to 1/2 inch deep. Pollinator habitat
Zoysia (sod), *Zoysia japonica*	Common	110 sq^2 per 1000 ft^2	I	W			X	X	X	X	X	X	X	X		X	X	3/1-8/31	X	X	X	X	X								X	Used on disturbed sites that would be hard to get seed or sprigs established

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PERENNIAL LEGUMES, FORBS 1/, 5/																															
Alfalfa, *Medicago sativa*	Cimarron VR, Florida 77, AmeriGraze 702	25	I	C	X	X	X	X	X	X								9/1-11/1		X	X	X				X						Adapted to highly fertile well drained soils, neutral pH, requires high management to maintain stand. Limited adaptation. Bloom Period - March to September
Black-eyed Susan, *Rudbeckia hirta*	Common, Local Ecotype	1-2	N	W	X	X	X	X	X	X	X	X	X	X		X	X	2/1-5/15 (9/1-5/31)						X	X		X		X		X	Bloom Period - June to October
Butterfly Milkweed, *Asclepias tuberosa*	Common, Local Ecotype	8-10	N	W	X	X		X	X	X	X	X	X	X		X	X	2/1-5/15 (9/1-5/31)	X	X	X	X		X	X		X		X		X	Bloom Period - May to September
Compass Plant, *Silphium laciniatum*	Common, Local Ecotype	8-10	N	W	X	X			X			X		X			X	2/1-5/15 (9/1-5/31)	X	X	X	X		X	X		X		X		X	Bloom Period - July to September
Coralbean, *Erythrina herbacea*	Common, Local Ecotype	1	N	W	X	X			X	X	X	X	X	X	X	X	X	2/1-5/15 (9/1-5/31)	X	X	X	X	X	X	X		X		X		X	Bloom Period - March to November
Fragrant Goldenrod, *Solidago odora*	Common, Local Ecotype	1	N	W	X	X	X	X	X	X	X	X	X	X		X	X	2/1-5/15 (9/1-5/31)	X	X	X	X		X	X		X		X		X	Bloom Period - July to August
Goat's Rue, *Tephorsia virginiana*	Common, Local Ecotype	8-10	N	W	X	X					X	X		X	X	X	X	2/1-5/15 (9/1-5/31)	X	X	X	X		X	X		X		X		X	Bloom Period - April to July
Herbaceous mimosa, *Mimosa strigillosa*	Crockett Germplasm, Common, Local Ecotype	8-10	N	W	X	X	X	X	X	X	X	X	X	X	X	X	X	2/1-5/15 (12/1-5/31)	X	X	X	X	X	X	X		X	X	X		X	Bloom Period - May-July, Attractive to insects, Very low growing, No thorns
Illinois Bundleflower, *Desmanthus illinoensis*	Sabine, Local Ecotype	12-14	N	W	X	X	X	X	X	X	X	X	X	X	X	X	X	2/1-5/15 (12/1-5/31)		X	X	X	X	X	X		X		X	X	X	Adapted to most upland and bottomland soils, Bloom Period - May to September
Ironweed, *Vernonia baldwinii*	Common, Local Ecotype	1-2	N	W	X	X	X	X	X	X	X	X	X	X			X	2/1-5/15 (9/1-5/31)	X	X	X	X	X	X	X		X		X		X	Bloom Period - July to November

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PERENNIAL LEGUMES, FORBS 1/, 5/																															
Lablab, *Lablab purpureus*	Rio Verde	25-50	I	W	X	X	X	X	X	X	X	X	X	X		X	X	4/1-8/1	X	X	X	X	X	X				X			Adapted to a variety of soils, favors well drained sunny sites. Bloom Period - May to September
Maximillian Sunflower, *Helianthus maximiliani*	Aztec, Local Ecotype	1-2	N	W	X	X	X	X	X	X	X	X	X	X		X	X	2/1-5/15 (12/1-5/31)		X	X	X	X	X	X		X		X	X	X	Adapted to a variety of soils, favors well drained sunny sites. Bloom Period - August to November
Perennial Peanut, *Arachis glabrata*	Florigraze, Arbrook	60-80 bu rhizomes/ ac	I	W	X	X					X	X	X	X		X	X	1/1-3/1		X	X					X						Adapted to well drained sandy to loamy soils with a pH between 5.0 and 7.5. Moderately cold tolerance.
Plains Coreopsis, *Coreopsis tinctoria*	Common, Local Ecotype	1-2	N	W	X	X	X	X	X	X	X	X	X	X		X	X	2/1-5/15 (9/1-5/31)	X	X	X	X	X	X	X		X		X		X	Bloom Period - April to September
Prairie Clover: purple, *Dalea purpurea*	Cuero Select Germplasm, Local Ecotype	3-4	N	W	X	X	X	X	X	X	X	X	X	X		X	X	2/1-5/15 (12/1-5/31)		X	X	X	X	X	X		X		X		X	Adapted to high pH soils. Bloom Period - May to September
Prairie Clover: white, *Dalea candida*	Common, Local Ecotype	3-4	N	W	X	X	X	X	X	X	X	X	X	X		X	X	2/1-5/15 (12/1-5/31)		X	X	X	X	X	X		X		X		X	Adapted to high pH soils. Bloom Period - June to August
Purple Coneflower, Echinacea purpurea	Common, Local Ecotype	5-7	N	W	X	X	X	X	X	X	X	X	X	X		X	X	2/1-5/15 (9/1-5/31)	X	X	X	X		X	X		X		X		X	Bloom Period - June - October
Rough Coneflower, *Rudbeckia grandiflora*	Common, Local Ecotype	1	N	W	X	X		X	X	X		X		X	X		X	2/1-5/15 (9/1-5/31)	X	X	X	X		X	X		X		X		X	Bloom Period - April to July
Sericea Lespedeza, *Lespedeza cuneata*	AU Lotan, Serala, Serala 76	20-30	I	W	X	X	X	X	X	X	X	X	X	X		X	X	3/1-5/1	X	X	X	X	X			X	X				X	Bloom Period - July to October
Slender Mountain Mint, *Pycnanthemum tenuifolium*	Common, Local Ecotype	2-3	N	W	X	X	X	X	X	X	X	X	X	X	X	X	X	2/1-5/15 (9/1-5/31)			X	X	X	X	X		X		X		X	Bloom Period - June to August
Sunflower: swamp, *Helianthus angustifolius*	Common, Local Ecotype	1-2	N	W	X	X	X	X	X	X	X	X	X	X	X	X	X	2/1-5/15 (9/1-5/31)	X	X	X	X		X	X		X				X	Bloom Period - May to November
Sunflower: ashy, *Helianthus mollus*	Cajun Sunrise Germplasm, Local Ecotype	6-9	N	W	X	X	X	X	X	X	X	X	X	X	X	X	X	2/1-5/15 (9/1-5/31)	X	X	X	X	X	X	X		X		X		X	Bloom Period - May to November
Thickspike Gayfeather, *Liatris pycnostachya*	Common, Local Ecotype	1-2	N	W	X	X		X	X	X	X	X	X	X		X	X	2/1-5/15 (9/1-5/31)	X	X	X	X	X	X	X		X		X		X	Bloom Period - August to December
Trailing Fuzzybean, *Strophostyles helvola*	Hopefield Selection	15	N	W	X	X	X	X	X	X	X	X	X	X	X	X	X	2/1-5/15 (9/1-5/31)			X	X	X	X	X		X		X		X	Bloom Period - March to July
Yellow Wild Indigo, *Baptisia sphaerocarpa*	Common, Local Ecotype	4-5	N	W	X	X			X		X	X		X			X	2/1-5/15 (9/1-5/31)	X	X	X	X		X	X		X		X		X	Bloom Period - April to June

Planting Rates for Louisiana by MLRAs - Page 1 Revised August 2013

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ANNUAL GRASSES 1/																																
Annual Ryegrass, *Lolium perenne* L. *spp multiflorum*		20-30 bulk lbs	I	C			X	X	X	X	X	X	X	X		X	X	9/15-10/31 (9/1-11/30)		X	X	X	X	X		X		X	X		X	Adapted to a wide range of soils, including poorly drained soils. Highly productive. Optimum pH 5.5-8.0. When using for temporary cover, planting dates may be extended up to March 1st.
Barley, *Hordeum vulgare*		50-125 bulk lbs	I	C	X		X	X	X	X	X	X	X	X		X	X	9/15-10/31 (9/1-11/30)		X	X	X		X		X		X	X		X	Drought tolerant. Optimum pH range 5.0-8.0. Early maturity. Winter deer food plots. When using for temporary cover, planting dates may be extended up to March 1st. Use as nurse crop when establishing other forage grasses or legumes.
Cereal Rye, *Secale cereale*		90-120 bulk lbs	I	C	X		X	X	X	X	X	X	X	X		X	X	9/15-10/31 (9/1-11/30)	X	X	X	X		X		X		X	X		X	Adapted to well drained sandy to loamy soils. Drought and cold tolerant. Optimum pH range 5.0-7.5. Early maturity. Winter deer food plots. When using for temporary cover, planting dates may be extended up to March 1st.
Chufa, *Cyperus esculentus*		50 lbs bulk lbs	I	W	X	X	X	X	X	X	X	X	X	X		X	X	4/1-5/31	X	X	X			X								Excellent wildlife food.
Corn, *Zea mays*		15 lbs bulk lbs	N	W	X	X	X	X	X	X		X	X	X		X	X	3/1-4/30	X	X	X			X								Excellent wildlife food. Bloom Period - May to June
Grain Sorghum, *Sorghum bicolor* (L.) Moench ssp. *bicolor*		20 bulk lbs	N	W	X	X	X	X	X	X	X	X	X	X		X	X	4/1- 6/30	X	X	X	X	X	X								Adapted to a wide variety of soils. Optimum pH range 5.5 or greater. Highly productive. Nitrate or prussic acid poisoning can occur under some grazing conditions. Bloom Period - March to May
Millet: browntop, *Urochloa ramosa*		35-45 bulk lbs	I	W	X	X	X	X	X	X	X	X	X	X		X	X	4/1-8/1		X	X	X	X	X				X	X		X	Best adapted to well drained loamy soils, less adapted on calcareous soils. Bloom Period - March to May
Millet: pearl, *Pennisetum glaucum*		25-30 bulk lbs	I	W	X	X	X	X	X	X	X	X	X	X		X	X	4/1-8/1		X	X	X	X	X				X	X		X	Bloom Period - March to May
Millet: proso, *Panicum miliaceum*	Common, Dove	15 bulk lbs	I	W	X	X	X	X	X	X	X	X	X	X		X	X	4/1-8/1		X	X	X	X	X				X			X	Adapted to a wide range of soils, used mainly for wildlife food plots. Bloom Period - March to May
Oats, *Avena sativa*		100-120 bulk lbs	I	C	X		X	X	X	X	X	X	X	X		X	X	9/15-10/31 (9/1-11/30)		X	X	X	X	X		X		X	X		X	Used for early fall grazing, less cold tolerance when compared to other small grains. Winter deer food plots. When using for temporary cover, planting dates may be extended up to March 1st.
Sorghum X Sudangrass Hybrids		30-35 bulk lbs	I	W			X	X	X	X	X	X	X	X		X	X	4/1-8/1		X	X	X	X	X				X			X	Adapted to a wide variety of soils. Highly productive. Nitrate or prussic acid poisoning can occur under some grazing conditions.
Sudangrass, *Sorghum vulgare*		30-40 bulk lbs	I	W			X	X	X	X	X	X	X	X		X	X	4/1-8/1		X	X	X	X	X				X			X	Adapted to a wide variety of soils. Highly productive. Nitrate or prussic acid poisoning can occur under some grazing conditions.
Triticale, ×*Triticosecale rimpaui*		50 bulk lbs	I	C	X		X	X	X	X	X	X	X	X		X	X	9/15-10/31 (9/1-11/30)		X	X	X	X	X		X		X	X		X	Cross between wheat and rye. Winter deer food plots. When using for temporary cover, planting dates may be extended up to March 1st.
Wheat, *Triticum aestivum*		60-120 bulk lbs	I	C	X		X	X	X	X	X	X	X	X		X	X	9/15-10/31 (9/1-11/30)		X	X	X	X	X		X		X	X		X	Cold and drought tolerance. Good fall and winter grazing. Winter deer food plots. When using for temporary cover, planting dates may be extended up to March 1st.

Planting Rates for Louisiana by MLRAs - Page 1 Revised August 2013

Name	Variety	Seeding Rates are pounds pure live seed (PLS) per acre unless otherwise noted. 2/, 4/	Native-Introduced	Season of Growth	Wildlife Use 14/	Pollinator Use 15/	Adaptation by Major Land Resource Area: 131A Southern Mississippi River Alluvium	131B Arkansas River Alluvium	131C Red River Alluvium	131D Southern Mississippi River Terraces	133A Southern Coastal Plains	133B Western Coastal Plains	134 Southern Mississippi Valley Loess	150A Gulf Coast Prairie	151 Gulf Coast Marsh	152A Eastern Gulf Coast Flatwoods	152B Western Gulf Coast Flatwoods	Seeding Guidance: Optimum Seeding Dates 6/, 9/	Adapted Plants by Soil Groups 3/: Coarse	Moderately Coarse	Medium	Moderately Fine	Fine	Conservation Practice: 327 Conservation Cover	550 Range Planting	512 Forage and Biomass Planting	386 Field Border	340 Cover Crop	393 Filter Strip	601 Vegetative Barrier	342 Critical Area Planting 4/	Comments 11/
ANNUAL LEGUMES, FORBS 1/, 5/																															
Alyceclover, *Alysicarpus ovalifolius*	Common	30	I	W		X	X	X	X	X	X	X	X	X		X	X	5/1-7/31	X	X	X			X		X	X				X	Adapted to well drained sandy soil. Will tolerate low pH. Best adapted to Gulf Coast and other areas of high summer rainfall. Does not compete well with weed during establishment. Bloom Period - July to September
Annual Lespedeza, *Kummerowia striata, K. stipulacea*	Common, Kobe, Korean	25	I	W	X	X	X	X	X	X	X	X	X	X		X	X	2/15-4/1	X	X	X	X		X		X	X				X	Adapted to well drained soils. Optimum pH range 5.0-6.6. Will not compete with vigorously growing warm season grasses. Korean less tolerant of soil acidity. Bloom Period - July to September
Austrian Winterpea, *Pisum sativum* ssp. *arvense*	Common	30	I	C	X	X	X	X	X	X	X	X	X	X		X	X	10/1-11/15 (9/1-11/30)		X	X	X		X		X		X				Adapted to well drained loam and sandy loam soils. Not adapted to acid soils. Bloom Period - March to May
Clasping Coneflower, *Dracopis amplexicaulis*	Common, Local Ecotype	2-3	N	W	X	X	X	X	X	X	X	X	X	X	X	X	X	2/1-5/15 (9/1-5/31)	X	X	X	X	X	X			X		X			X	Produces large quantities of seed. Used for landscape beautification, good pollinator species. Bloom Period - April to July
Clover: arrowleaf, *Trifolium vesiculosum*	Amclo, Meechi, Yuchi, Apache	8-10	I	C	X	X	X	X	X	X	X	X	X	X		X	X	10/1-11/15 (9/1-11/30)		X	X	X		X		X	X				X	Adapted to sandy and sandy loam soils. Optimum pH range 5.5-7.0. Late maturity, low bloat potential, good cold tolerance. Bloom Period - February to July
Clover: ball, *Trifolium nigrescens*	Common	2-3	I	C	X	X	X	X	X	X	X	X	X	X		X	X	10/1-11/15 (9/1-11/30)		X	X	X	X			X					X	Adapted to fair-poorly drained, loamy and clay soils with a pH of 6.5-8.5. Late maturity, low bloat potential, good cold tolerance. Bloom Period - March to April
Clover: berseem, *Trifolium alexandrinum*	Bigbee	12-16	I	C	X	X	X	X	X	X	X	X	X	X		X	X	10/1-11/15 (9/1-11/30)	X	X	X	X	X			X					X	Adapted to fair-poorly drained, loamy and clay soils with a pH of 6.5-8.5. Late maturity, low bloat potential, poor cold tolerance. Bloom Period - March to June
Clover: crimson, *Trifolium incarnatum*	Chief, Dixie, Tibbee, AU Robin	16-20	I	C	X	X	X	X	X	X	X	X	X	X		X	X	10/1-11/15 (9/1-11/30)	X	X	X	X		X		X	X	X			X	Adapted to well drained soils with a pH range of 6.0-7.0. Early maturity, medium bloat potential, good cold tolerance. Bloom Period - February to May
Clover: red, *Trifolium pratense*	Kenland, Kenstar, Renegade, Cherokee, Concorde, Acclaim, Cinnamon, Southern Belle	10-12	I	C	X	X	X	X	X	X	X	X	X	X		X	X	10/1-11/15 (9/1-11/30)		X	X	X	X	X		X	X	X			X	Adapted to poorly drained acid soils. Optimum pH 6.5-8.0 Fairly drought tolerant. Very high yielding. Cool season annual to biennial. Bloom Period - April to October
Clover: subterranean, *Trifolium subterraneum*	Mt. Barker, Nangeela, Tallarook, Woogenellup, Meteora	16-20	I	C	X	X	X	X	X	X	X	X	X	X		X	X	10/1-11/15 (9/1-11/30)			X	X	X	X		X	X	X			X	Best adapted to well-drained soils. Tolerant of acid soils. Optimum pH 6.0 – 7.3. Cool season annual. Tolerated close grazing. Bloom Period - March to May
Clover: white or ladino, *Trifolium repens*	Louisiana S-1, Osceola, Regal,Regal Graze, Pinnacle, Canopy, California, Durana, Patriot, Colt, Crescendo	3-5	I	W	X	X	X	X	X	X	X	X	X	X		X	X	10/1-11/15 (9/1-11/30)			X	X	X	X		X	X	X			X	Best adapted to well-drained silt loam and clay textured soils. Not suited to droughty or alkaline soils. Optimum pH 6.0 – 7.5. Medium bloat potential. Good cold tolerance. Bloom Period - April to October

Planting Rates for Louisiana by MLRAs - Page 2 Revised August 2013

							Adaptation by Major Land Resource Area											Seeding Guidance	Adapted Plants by Soil Groups 3/					Conservation Practice								
Name	Variety	Seeding Rates are pounds pure live seed (PLS) per acre unless otherwise noted. 2/, 4/	Native-Introduced	Season of Growth	Wildlife Use 14/	Pollinator Use 15/	131A Southern Mississippi River Alluvium	131B Arkansas River Alluvium	131C Red River Alluvium	131D Southern Mississippi River Terraces	133A Southern Coastal Plains	133B Western Coastal Plains	134 Southern Mississippi Valley Loess	150A Gulf Coast Prairie	151 Gulf Coast Marsh	152A Eastern Gulf Coast Flatwoods	152B Western Gulf Coast Flatwoods	Optimum Seeding Dates 6/, 9/	Coarse	Moderately Coarse	Medium	Moderately Fine	Fine	327 Conservation Cover	550 Range Planting	512 Forage and Biomass Planting	386 Field Border	340 Cover Crop	393 Filter Strip	601 Vegetative Barrier	342 Critical Area Planting 4/	Comments 11/
ANNUAL LEGUMES, FORBS 1/, 5/																															
Cow Peas, *Vigna unguiculata*	Iron and Clay	25-35	I	W	X	X	X	X	X	X	X	X	X	X		X	X	4/1-7/1		X	X	X		X				X				Adapted to well drained soils with a pH range of 5.5-7.5. Drought tolerant, do not cause bloat. Bloom Period - June to August
Partridge Pea, *Chamaecrista fasciculata*	Comanche, Lark Selection, Local Ecotype	10-13	N	W	X	X	X	X	X	X	X	X	X	X		X	X	12/1-5/31	X	X	X			X	X		X		X	X	X	Adapted to sands and sandy loam soils. Good reseeding annual. Bloom Period - April to October
Purple Horsemint, *Monarda citriodora*	Common, Local Ecotype	1-2	N	W	X	X	X	X	X	X	X		X	X				2/1-5/15 (9/1-5/31)	X	X	X	X	X	X			X		X		X	Attracts a wide array of pollinators. Forms large colonies. Bloom Period - May to July
Radish, *Raphanus sativus*	Tillage Radish, Common	8-10	I	C	X	X	X	X	X	X	X	X	X	X		X	X	2/1-11/1		X	X	X	X					X				For alleviating soil compaction. Plant 30-60 days before killing frost. Can be mixed with small grains or other annual legumes at a 25% rate. If planted in 15" or greater rows reduce seeding rate to 4 PLS lbs/ac. Bloom Period - May to August
Singletary Pea, *Lathyrus hirsutus*	Common	50	I	W	X	X	X	X	X	X	X	X	X	X		X	X	10/1-11/15 (9/1-11/30)			X	X	X	X		X	X	X			X	Adapted to acid to calcareous loamy and clayey soils. Tolerates wet conditions. Cease grazing when seed pods form to avoid poisoning and allow reseeding. Bloom Period - May to September
Smartweed, Pennsylvania, *Polygonum pennsylvanicum*	Common	5-10	N	A	X	X	X	X	X	X	X	X	X	X	X	X	X	3/1-6/30	X	X	X	X	X	X					X		X	Adapted to all soils that exhibit above average wet conditions and where wet conditions fluctuate from wet to dry. It is not adapted to highly droughty soils. Excellent wildlife value. Bloom Period - May to September
Soybeans, *Glycine max*	Common	35-60	I	W	X	X	X	X	X	X	X	X	X	X		X	X	4/1-7/1		X	X	X	X	X				X				Adapted to well drained soils with a pH range of 5.5-8.0. Drought tolerant when used for forage, difficult to cure when cut for hay. Best used for silage. Bloom Period - May to July
Sunflower, *Helianthus annuus*	Common, Peredovik, Giant	30	N	W	X	X	X	X	X	X	X	X	X	X		X	X	4/1-7/31	X	X	X	X	X	X			X					Used for wildlife food plots. Bloom Period - June to October
Sunn Hemp, *Crotalaria juncea*	Tropic Sun	30-50	I	W	X	X	X	X	X	X	X	X	X	X		X	X	4/1-9/1		X	X	X						X				Adapted to well drained sandy to loamy soils. Should be terminated before seed set. Produces high amounts of residue. Bloom Period - July to October
Sweet Clover; yellow, *Melilotus indicus*	Common	15-25	I	C	X	X	X	X	X	X	X	X	X	X		X	X	10/1-11/15 (9/1-11/30)			X	X	X	X			X	X			X	Both yellow and white sweet clovers are biennials. Adapted to well drained clay to clay loam soils. Optimum pH range 6.5-7.0. Use low coumarin varieties when available. Bloom Period - May to August
Vetch: common , *Vicia sativa*	Common	35-50	I	C	X	X	X	X	X	X	X	X	X	X		X	X	10/1-11/15 (9/1-11/30)	X	X	X	X		X			X	X			X	Bloom Period - March to May
Vetch: hairy , *Vicia villosa*	Common	20	I	C	X	X	X	X	X	X	X	X	X	X		X	X	10/1-11/15 (9/1-11/30)	X	X	X	X	X	X		X	X	X			X	Best adapted to well-drained soils. Tolerant of acid soils. Bloom Period - March to May

Planting rates for Louisiana by MLRAs - Page 1; Before selecting trees to plant prior to final species selection additional information is needed buy a site visit to determine if the species is suitable to the site. Additional information beside soil texture such as surface drainage, internal drainage, landscape position, flooding regimes, soil pH, etc., should be determined. Tools such as the Web Soil Survey can help preliminary determine this information. The FOTG 612 standard reference species adaptability under these regimes.

									Adaptation by Major Land Resource Area											Seeding Guidance	Adapted Plants by Soil Groups 3/					Conservation Practice				
Name	pH 11/	Flood Tolerance 12/	Planting Rate Per Acre / Spacing 13/	Seedling Height-in (Root Collar Diameter)	Root Length-inches (No. Laterals)	Native-Introduced	Wildlife Use 14/	Pollinator Use 15/	131A Southern Mississippi River Alluvium	131B Arkansas River Alluvium	131C Red River Alluvium	131D Southern Mississippi River Terraces	133A Southern Coastal Plains	133B Western Coastal Plains	134 Southern Mississippi Valley Loess	150A Gulf Coast Prairie	151 Gulf Coast Marsh	152A Eastern Gulf Coast Flatwoods	152B Western Gulf Coast Flatwoods	Planting/Seeding Dates 9/	Coarse	Moderately Coarse	Medium	Moderately Fine	Fine	327 Conservation Cover	381 Silvopasture 13/	612 Tree Shrub Establishment 14/	342 Critical Area Planting 4/	Comments 11/
WOODY PLANTS 1/, 5/																													
American Beautyberry, *Callicarpa americana*	4.8-7.0	I	1210	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X	X	Bloom Period - March to July
Bald Cypress, *Taxodium distichum*	4.6-7.5	T	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X	X	X	X	Various sites, sloughs, swells, flats, swamps, does well on higher moist sites.
Black Cherry, *Prunus serotina*	4.6-6.2	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X		Bloom Period - March to April
Black Gum, *Nyssa sylvatica*	4.6-7.0	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X			X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X		
Black Mangrove, *Avicennia germinans* , Pelican Germplasm	6.0-8.0	T	2-8 ft centers	4"-1 gal pots,		N	X										X			12/15-3/15	X	X	X	X	X	X		X	X	10/
Black Willow, *Salix nigra*	4.5-9.0	T	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X	X	Bloom Period - March to July
Blackberry, *Rubus sp.*	5.0-7.0	WT	4840	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X	X	Bloom Period - March to April
Boxelder, *Acer negundo*	5.2-7.0	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X	X	Bloom Period - March to April
Buttonbush, *Cephalanthus occidentalis*	5.3-8.5	T	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X		X		X	X	Bloom Period - March to April
Cottonwood, *Populus deltoides* - Bareroot	5.5-7.5	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X	X	X	X	12/15-3/15		X	X	X	X			X	X	Various sites, common on fronts, does best on well drained sands and loams.
Cottonwood, *Populus deltoides* - Cuttings	5.5-7.5	MT	300-680	15"-20" (3/8"-3/4")	N/A	N	X		X	X	X	X	X	X	X	X	X	X	X	12/15-3/15		X	X	X	X	X		X	X	Various sites, common on fronts, does best on well drained sands and loams.
Deciduous Holly (possum haw), *Ilex decidua*	3.5-6.5	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X		X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X		Bloom Period - March to April
Dewberry, *Rubus sp.*	5.0-7.0	I	4840	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X	X	Bloom Period - March to April
Dogwood: flowering, *Cornus florida*	5.0-7.0	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X		X	X	12/15-3/15		X	X	X	X	X		X	X	Bloom Period - March to April
Dogwood: swamp, *Cornus stricta*	5.0-8.0	T	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X		X	X	12/15-3/15		X	X	X	X	X		X	X	Bloom Period - March to April
Elderberry, *Sambucus nigra*	5.0-7.0	I	300-550	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X	X	Bloom Period - March to April
Elm: American, *Ulmus americana*	5.5-8.0	WT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X		Common on high flats and ridges
Elm: cedar, *Ulmus crassifolia*	5.2-8.0	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X		Common on low flats with moderate flooding
Green Ash, *Fraxinus pennsylvanica*	3.6-7.5	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X	X	Wide variety of sites, terraces, ridges, high flats
Hackberry-Sugarberry, *Celtis laevigata*	5.0-7.0	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X		

Planting rates for Louisiana by MLRAs - Page 2; before selecting trees to plant prior to final species selection additional information is needed buy a site visit to determine if the species is suitable to the site. Additional information beside soil texture such as surface drainage, internal drainage, landscape position, flooding regimes, soil pH, etc., should be determined. Tools such as the Web Soil Survey can help preliminary determine this information. The FOTG 612 standard reference species adaptability under these regimes.

									Adaptation by Major Land Resource Area											Seeding Guidance	Adapted Plants by Soil Groups 3/					Conservation Practice				
Name	pH 11/	Flood Tolerance 12/	Planting Rate Per Acre / Spacing 13/	Seedling Height-in (Root Collar Diameter)	Root Length-inches (No. Laterals)	Native-Introduced	Wildlife Use 14/	Pollinator Use 15/	131A Southern Mississippi River Alluvium	131B Arkansas River Alluvium	131C Red River Alluvium	131D Southern Mississippi River Terraces	133A Southern Coastal Plains	133B Western Coastal Plains	134 Southern Mississippi Valley Loess	150A Gulf Coast Prairie	151 Gulf Coast Marsh	152A Eastern Gulf Coast Flatwoods	152B Western Gulf Coast Flatwoods	Planting/Seeding Dates 9/	Coarse	Moderately Coarse	Medium	Moderately Fine	Fine	327 Conservation Cover	381 Silvopasture 13/	612 Tree Shrub Establishment 14/	342 Critical Area Planting 4/	**Comments 11/**
WOODY PLANTS 1/, 5/																													
Hickory: mockernut, *Carya alba*	4.8-7.5	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X		X	X	X	X	X	X			X	X	12/15-3/15	X	X	X			X		X		Upland, Bloom Period - March to May
Hickory: shagbark, *Carya ovata*	4.8-7.5	WT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X		X	X	X	X	X	X					12/15-3/15	X	X	X	X		X		X		Does best on moderately drained loams. Bloom Period - March to May
Hickory: water (Bitter pecan), *Carya aquatica*	4.8-6.0	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X		Common to low flats, sloughs, major alluvial streams on poorly drained soils.
Locust: black, *Robinia pseudoacacia*	4.6-8.2	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X	X	Good pollinator plant but considered noxious and/or invasive in some areas. Bloom Period - March to May
Locust: honey, *Gleditsia triacanthos*	6.0-8.0	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15		X	X	X		X		X	X	Good pollinator plant but considered noxious and/or invasive in some areas. Bloom Period - March to May
Oak: black, *Quercus velutina*	4.0-5.0	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15		X	X	X				X		Uplands - Black oak grows best on well drained, silty clay to loam soils. Bloom Period - March to May
Oak: cherrybark, *Quercus pagoda*	4.5-6.2	WT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15		X	X	X			X	X		Bottomlands - ridges and terraces. Do not plant on soils with poorly drained conditions. Best suited on well drained soils on higher elevations and convex ridges
Oak: delta post, *Quercus stellata* var. *paludosa*		WT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X			X	X	12/15-3/15	X	X	X	X	X	X		X		Grows in fine sandy loam soils on the highest first-bottom ridges in terraces
Oak: laurel, *Quercus laurifolia*	3.6-5.6	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X			X		X		
Oak: live, *Quercus virginiana*	6.0-7.5	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X			X		X		
Oak: overcup, *Quercus lyrata*	3.6-5.5	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15		X	X	X	X	X		X		Bottomlands - on low flats subject to long duration flooding.
Oak: post, *Quercus stellata*	5.0-7.5	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X			X		X	X	X	X	X		X	X	12/15-3/15		X	X	X	X	X		X		Uplands
Oak: sawtooth, *Quercus acutissima*	5.0-8.0	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	I	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X	X	X		
Oak: Shumard, *Quercus shumardii*	4.4-7.5	WT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15		X	X	X		X	X	X		Bottomlands - ridges and terraces. Do not plant on soils with poorly drained conditions. Best suited on well drained soils on higher elevations and convex ridges
Oak: southern red, *Quercus falcata*	5.0-6.0	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X		Uplands
Oak: swamp chestnut (Cow), *Quercus michauxii*	3.6-6.2	WT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15		X	X	X		X		X		Bottomlands - Do not plant on soils with poorly drained conditions. Best suited on well drained soils on higher elevations and convex ridges.
Oak: water, *Quercus nigra*	3.6-6.3	WT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X		Uplands and bottomlands (ridges an terraces) Loamy or clay soils must have well drained and moderately well drained surface conditions with somewhat poorly drained internal conditions. Soils on higher elevations and convex ridges.
Oak: white, *Quercus alba*	4.5-6.2	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X		Uplands and terraces - does best on well drained loams

Planting rates for Louisiana by MLRAs - Page 3; before selecting trees to plant prior to final species selection additional information is needed buy a site visit to determine if the species is suitable to the site. Additional information beside soil texture such as surface drainage, internal drainage, landscape position, flooding regimes, soil pH, etc., should be determined. Tools such as the Web Soil Survey can help preliminary determine this information. The FOTG 612 standard reference species adaptability under these regimes.

									Adaptation by Major Land Resource Area											Seeding Guidance	Adapted Plants by Soil Groups 3/					Conservation Practice				
Name	pH 11/	Flood Tolerance 12/	Planting Rate Per Acre / Spacing 13/	Seedling Height-in (Root Collar Diameter)	Root Length-inches (No. Laterals)	Native-Introduced	Wildlife Use 14/	Pollinator Use 15/	131A Southern Mississippi River Alluvium	131B Arkansas River Alluvium	131C Red River Alluvium	131D Southern Mississippi River Terraces	133A Southern Coastal Plains	133B Western Coastal Plains	134 Southern Mississippi Valley Loess	150A Gulf Coast Prairie	151 Gulf Coast Marsh	152A Eastern Gulf Coast Flatwoods	152B Western Gulf Coast Flatwoods	Planting/Seeding Dates 9/	Coarse	Moderately Coarse	Medium	Moderately Fine	Fine	327 Conservation Cover	381 Silvopasture 13/	612 Tree Shrub Establishment 14/	342 Critical Area Planting 4/	**Comments 11/**
WOODY PLANTS 1/, 5/																														
Oak: willow, *Quercus phellos*	3.6-6.3	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X		Common on high flats of floodplains on poorly drained clays
Oat: nuttall, *Quercus nuttallii*	3.6-6.8	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X	X	X		Common on high flats of floodplains on poorly drained clays
Pawpaw, *Asimina triloba*	**5.2-7.2**	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X		X		X	X	Larvae of the Zebra Swallowtail butterfly (*Eurytides marcellus*) feed exclusively on the leaves. Many birds and animals utilize fruit. Bloom Period - March to April
Pecan: native sweet, *Carya illinoensis*	4.8-7.5	WT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X			X	X	12/15-3/15	X	X	X	X	X	X	X	X		Do not plant on soils with poorly drained surface conditions with somewhat poorly drained or poorly drained internal conditions. Soils on higher elevations and convex ridges.
Persimmon, *Diospyros virginiana*	4.4-7.0	T	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X		Bloom Period - March to May
Pine: loblolly, *Pinus taeda* - Bareroot	4.5-6.7	WT	300-900	5"-14" (1/4"-3/8")	4"- 6" (Multi)	N	X			X		X	X	X	X			X	X	12/15-3/15	X	X	X	X	X	X	X	X	X	Acid course soils: adapted to a wide range of sites
Pine: loblolly, *Pinus taeda* - Containers	4.5-6.7	WT	300-900	6"- 8" (1/8")	4"- 6" (Multi)	N	X					X	X	X	X			X	X	12/15-3/15 (10/1-4/31)	X	X	X	X	X	X	X	X	X	Acid course soils: adapted to a wide range of sites
Pine: loblolly, *Pinus taeda* - Seed, Broadcast	4.5-6.7	WT	3 lbs	N/A	N/A	N	X			X		X	X	X	X			X	X	9/1 - 12/30	X	X	X	X	X			X	X	Acid course soils: adapted to a wide range of sites
Pine: longleaf , *Pinus palustris* - Bareroot	6.0-6.7	I	340-900	8" Needle Length (1/2")	5"- 8" (Multi)	N	X		X				X	X	X			X	X	12/15-3/15	X	X	X			X	X	X		For MLRA see longleaf pine ranges. For soil types see selected soil series.
Pine: longleaf, *Pinus palustris* - Containers	6.0-6.7	I	340-900	4" Needle Length (1/4")	4" - 6" (Multi)	N	X						X	X	X				X	12/15-3/15 (10/1-4/31)	X	X	X			X	X	X		For MLRA see longleaf pine ranges. For soil types see selected soil series. Avoid planting containers with numerious circleing roots
Pine: shortleaf, *Pinus echinata*	4.5-6.0	I	300-900	5"-14" (1/4"-3/8")	4"- 8"	N	X			X	X	X	X	X	X				X	12/15-3/15	X	X	X	X	X	X	X	X	X	Prefers sandy- texture soils, but will grow well on clayey soils with good internal drainage
Pine: slash, *Pinus elliottii*	4.0-6.4	I	300-900	5"-14" (1/4"-3/8")	4"- 8"	N	X							X				X	X	12/15-3/15			X	X	X	X	X	X	X	Well adapted to dense, poorly drained flatwoods. Geographic limitations.

Planting rates for Louisiana by MLRAs - Page 4; before selecting trees to plant prior to final species selection additional information is needed buy a site visit to determine if the species is suitable to the site. Additional information beside soil texture such as surface drainage, internal drainage, landscape position, flooding regimes, soil pH, etc., should be determined. Tools such as the Web Soil Survey can help preliminary determine this information. The FOTG 612 standard reference species adaptability under these regimes.

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WOODY PLANTS 1/, 5/																														
Plum, *Prunus sp.*	5.0-8.0	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X	X	Bloom Period - March to April
Rabbit Eye Blueberry, *Vaccinium ashei*	4.0-7.0	I	300-550	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X			X	X	12/15-3/15		X	X	X		X		X		Bloom Period - March to April
Redbud:eastern, *Cercis canadensis*	4.5-7.5	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X	X	Bloom Period - March to May
Red Maple, *Acer rubrum*	4.5-7.5	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X		Found on various sites, common in flats and swamps. Bloom Period - March to April
Red Mulberry, *Morus rubra*	4.4-7.5	WT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X	X	X		X		Bloom Period - March to April
River Birch, *Betula nigra*	4.5-6.0	WT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X			X	X	12/15-3/15		X	X	X	X	X		X	X	
Shrub Lespedeza, *Lespedeza thunbergii* - Bicolor, Thunberg	5.8-7.5	WT	10 – 15 lbs	N/A	N/A	I	X	X	X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X	X	May become invasive
Shrub Lespedeza, *Lespedeza thunbergii* - Bicolor, Thunberg	5.8-7.5	WT	1500	12"-24" (3/8"-1/2")	8" (4-8)	I	X	X	X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X		X		X	X	May become invasive
Southern Crab Apple, *Malus angustifolia*	5.0-6.5	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X		Poor growth on coarse sand poorly drained clays. Bloom Period - March to May
Swamp Dogwood, *Cornus stricta*	5.0-8.0	T	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X		X	X	12/15-3/15		X	X	X	X	X		X	X	
Sweet Gum, *Liquidambar styraciflua*	5.1-7.5	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15		X	X	X	X	X		X	X	Various sites, common on fronts, does best on well drained sands and loams.
Sycamore, *Platanus occidentalis*	4.4-7.5	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X	X	
Walnut: black, *Juglans nigra*	5.0-7.5	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X				12/15-3/15		X	X	X		X		X		Terraces and uplands, does best on deep moist loams. Bloom Period - March to April
Water Tupelo, *Nyssa aquatica*	3.6-5.6	VT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X	X		X	X	12/15-3/15	X	X	X	X	X	X		X		
Yellow Poplar, *Liriodendron tulipifera*	4.5-7.0	I	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X		X	X	X	X	X	X	X			X	X	12/15-3/15	X	X	X	X		X		X	X	
Yaupon, *Ilex vomitoria*	4.5-7.0	MT	300-680	12"-24" (3/8"-1/2")	8" (4-8)	N	X	X	X	X	X	X	X	X	X	X	X	X	X	12/15-3/15	X	X	X	X		X		X	X	Showy red berries attract many bird species and various mammals, including black bear. Deer will utilize foliage for browse

FOOTNOTES - Louisiana Planting Tables - 2013

1/ Species are listed by common name and where applicable by released cultivar or variety.

2/ Planting rates are shown as pure live seed (PLS). To compute PLS from seed analysis information: Percent PLS = (%germination + % hard [dormant] seed) X % pure seed [purity]. Seeding rate in PLS pounds divided by % PLS of the seed lot will give you the bulk pounds needed to get the right amount of pure live seed planted.

3/ Soil groups are based on the following textures: Coarse - coarse sand, sand, fine sand, very fine sand, loamy course sand, loamy sand, loamy fine sand, loamy very fine sand; Moderately Coarse - sandy loam, coarse sandy loam, fine sandy loam; Medium - very fine sandy loam, loam, silt loam, silt; Moderately Fine - clay loam, sandy clay loam, silty clay loam; Fine - sandy clay, silty clay, clay

4/ For Critical Area Plantings (342) consideration should be given by the designated Conservationist as to the suitability of the plants to the application, time of planting, and site conditions. For difficult sites the use of the higher seeding rates may be applied to provide quicker cover. When using cool season annual grasses for temporary cover, planting dates may be extended up to March 1st. FOR CRITICAL AREA PLANTINGS ONLY-A 50/50 Mixture of hulled and unhulled Bermudagrass seed maybe planted in January and February if mixed with a cool season annual grass planted at it's full seeding rate.

5/ Local ecotypes may be used when seeding natives. Local harvested seed should have its geographic origin within 200 miles north, 300 miles south, 200 miles east and 200 miles west of the site where it will be planted. It is also desirable that locally harvested seed be used on soils of the same texture as soils where seed was harvested.

6/ The optimum planting depth for sprigs & tops is 1.0 to 3.0 inches, small seeded (>35000 seed per pound) species is 1/8 to 1/4 inch, large seeded species 1/4 to 1/2 inches.

7/ A bushel of Alicia, Jiggs, Grazer, Russell, Summrall 007, Little Phillip I, Tifton 44, Tifton 85, or Coastal sprigs contain about 400 sprigs and weigh approximately 15 pounds. Satisfactory stands can be obtained by using 12-15 bushels (180-225 lbs) per acre if planted by hand in rows three feet apart, 15 – 20 bushels (225-300 lbs) per acre if planted by machine in rows or 40 – 50 bushels (600-750 lbs) per acre if broadcast and disked into the soil. Since Brazos contains fewer sprigs per bushel use 20 - 25 bushels (300-375 lbs) per acre if planted in rows by hand, 25 – 30 bushels (375-450 lbs) per acre if planted by machine in rows or 50-60bushels (750-900 lbs) per acre if broadcast and disked into the soil.

8/ A bale of green, uncured clippings (Alicia, Jiggs, Grazer, Brazos, Russell, Summrall 007, Little Phillip I, Tifton 44, Tifton 85, Coastal) weighing 100 lbs will plant 2500 square feet when spread over the area. This equates to a planting rate of 1,750 lbs/acre.

9/ Optimum Planting Dates are listed. The “Maximum Range Date(s)” is listed within “( )” and can be used when conditions favor planting earlier or later. Example; Switchgrass can be planted from 2/1 to 5/15 with a maximum planting range from 12/1 to 5/31 depending on soil moisture conditions.

10/ For coastal revegetation, planting stock size and type will be determined based on site factors such as soil, water depth, salinity, wave energy, available moisture, location on sand dune, etc.

11/ The pH values above serve as a guide. The species will often grow on soils outside the pH limits. The pH values listed indicate where these species may have the best growth potential.

12/ When wetness is a problem, most hardwoods will grow on sites somewhat drier than those listed herein. Woody plants should never be planted on sites that are wetter than those to which they are adapted. Flood Tolerance indicated is for "Mature Trees".

I	= Intolerant - Unable to tolerate flooded sites.
WT	= Weakly Tolerant - Able to tolerate saturated or flooded soils for a short period.
MT	= Moderately Tolerant - Able to tolerate saturated or flooded soils for several months, but mortality is high if flooding persists during the growing season.
T	= Tolerant - Able to tolerate saturated or flooded soils for long periods during the growing season.

13/ The following information do not supersede minimum specification requirements in a conservation program, conservation plan or contract. Spacing depends on landowner's objectives, purpose of practice, species mixtures, and field conditions that may affect survival based on type of problem or hazard that may be encountered on a site, i.e.: droughty deep sands, wetness, restricted rooting depth, potential herbivores (rodents), etc. Refer to table for trees/acre at various spacing.

Spacing (feet)	Plants/ acre		Spacing (feet)	Plants/ acre
2X4	5,445		10X12	363
3X3	4,840		11X11	360
6X6	1,210		12X12	302
6X8	907		14X6	518
6X10	726		14X7	444
6X12	605		14X8	388
7X7	889		16X6	453
7X10	622		16X7	388
8X8	680		16X8	340
8X9	605		16X9	302
8X10	544		18X6	403
8X12	454		18X7	345
9X9	538		20X6	363
10X10	436		20X8	225

13/ - Continued

Conservation Practice	Purpose	Spacing Range	Minimum Survival-
327 Conservation	Wildlife – Pine	435	175-375
	Wildlife Hardwood	302	
	Wood Products - Hardwood	300-550	
342 Critical Area Planting	Soil Erosion – Critical Sites, Pine	1210	
381 Silvopasture	Pine	225-450	175-375
612 Tree/Shrub	Wildlife		
	Temporary open canopy	300	150-225
	Hardwoods - Higher range to develop wildlife habitat for species and structural diversity with use of nurse trees.	435-680	350
	Pine	225-450	175-375
	Longleaf Pine	340-450	175-375
612 Tree/Shrub Establishment	Wood Products		
	Pine	340-680	300-450
	Hardwood – Oak Plantation	544	300

14/ Wildlife Use - Notes that this plant is beneficial to wildlife. It may be used for food and/or shelter by multiple species of wildlife. Consult the PLANTS Database or other plant references for specific uses.

15/ Pollinator Plants - These plants have been observed to attract beneficial pollinator species by providing nectar, pollen, nesting habitat, and acting as host plants. Additional information on pollinators may be found at the Xerces Society website at http://www.xerces.org