

Helping People Help the Land



Legumes are plants within the *Fabaceae* genus (bean family), and are capable of fixing atmospheric nitrogen through a symbiotic relationship with rhizobia bacteria in the soil. Legumes can serve to enhance conservation tillage systems, improve soil quality, reduce nitrogen requirements on row crop and pasture lands, enhance wildlife habitat, enhance pasture and hay land quality, and reduce soil erosion in cropland and critical areas (USDA 2007).

Source: http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1042287.pdf

The plants featured in this publication can be found within the East Texas Plant Materials Center's 44 million acre service area. Warm and cool season legume species produce high quality forage and seed throughout the year making them extremely valuable to wildlife and livestock. Many of the featured legumes have been developed and released by the USDA NRCS Plant Materials Program and can be found in the commercial market; others may be increased through proper habitat management. In conjunction with their valuable forage and seed, many legumes produce showy blooms which are valuable for aesthetics and pollinator habitat. These combined factors make native legumes some of our most valuable conservation plants.



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6598 FM 2782 | Nacogdoches, Texas 75964 | 936.564.4873 | www.tx.nrcs.usda.gov/technical/pmc/

Additional Resources

The Xerces Society | www.xerces.org

NRCS Plants Database | plants.usda.gov/pollinators/NRCSdocuments.html

North American Pollinator Protection Campaign (NAPPC) | www.nappc.org

Quail Unlimited | www.qu.org

Texas Parks & Wildlife | www.tpwd.state.tx.us

National Wild Turkey Federation | www.nwtf.org

Quality Deer Management Association | www.qdma.com

USDA Forest Service Southern Research Station | www.srs.fs.usda.gov

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Native Legumes of East Texas and the Western Coastal Plain



East Texas Plant Materials Center

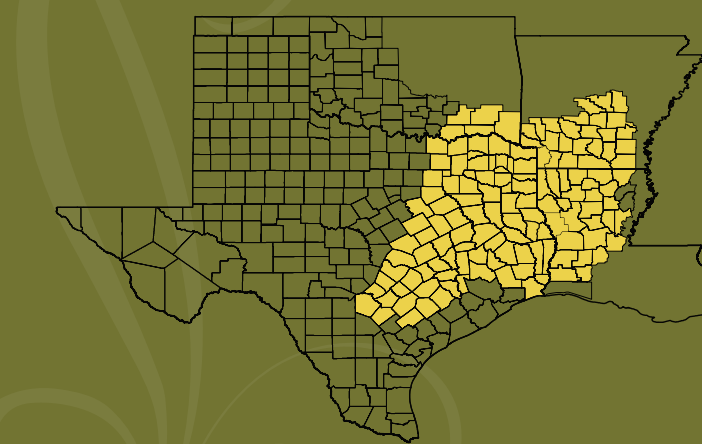
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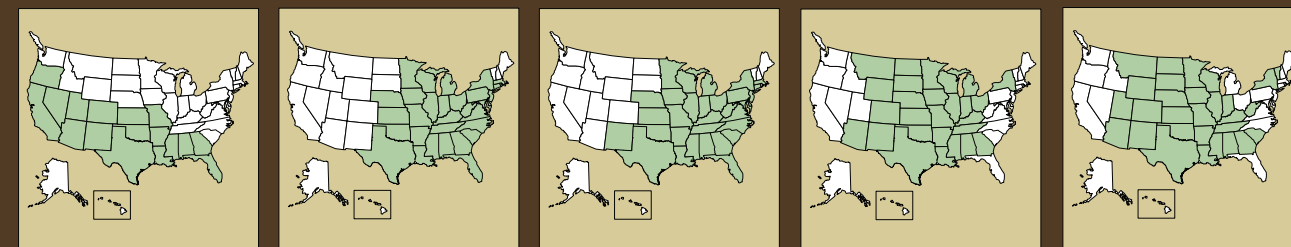
The Natural Resources Conservation Service's (NRCS) Plant Materials Program is comprised of a nationwide network of 27 centers that develop native plants and technology to address natural resource and conservation problems. Scientists at plant materials centers work to support NRCS field office operations through the development of plant based technologies that can be applied to conservation practices and standards. Texas has plant materials centers located in Nacogdoches, Kingsville, and Knox City which work cooperatively with state and federal agencies, commercial businesses, and seed and nursery associations.

Plants released by the Plants Materials Program have been used to develop biomass for biofuel production, sequester carbon from the atmosphere, reduce erosion, restore wetlands and other critical areas, improve water quality through the protection of riparian areas and uptake of nutrient runoff from agricultural sites, restore coastal dunes, and improve wildlife habitat. The Plant Materials Program is adaptable and ever evolving to meet new conservation challenges as they emerge.



Special thanks to David Basden, Ryan Walser, and Ricky Linex for their photographs contributed to this publication.





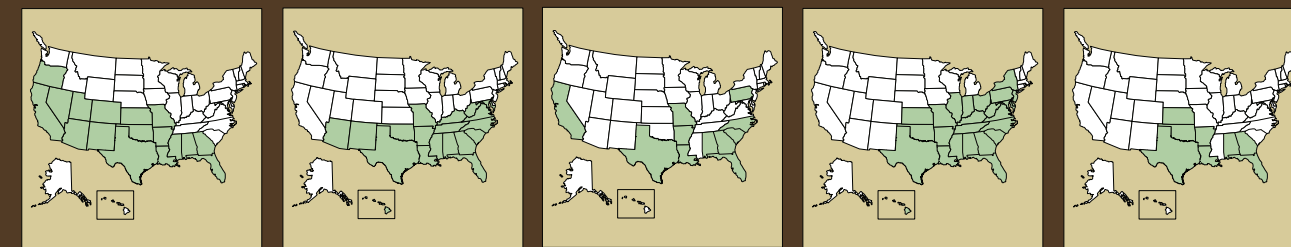
Illinois Bundleflower
Desmanthus illinoensis

Ticktrefoil
Desmodium canescens

Partridge Pea
Chamaecrista fasciculata

Purple Prairie Clover
Dalea purpurea

White Prairie Clover
Dalea candida



Deer Pea Vetch
Vicia ludoviciana

Snout Bean
Rhynchosia Lour.

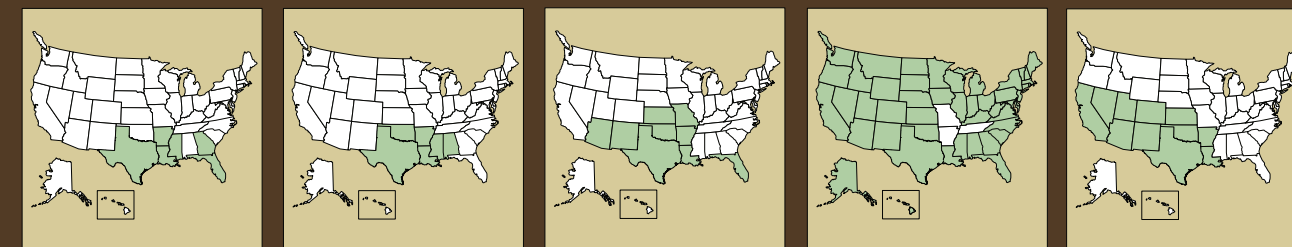
Joint Vetch
Aeschynomene L.

Downy Milkpea
Galactia volubilis

Western Indigo
Indigofera miniata



© Hal Horwitz



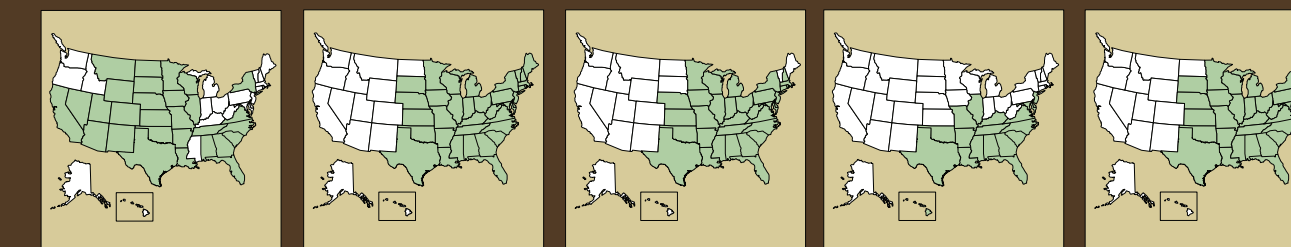
Powder Puff
Mimosa strigillosa

Yellow Puff
Neptunia lutea

Prairie Acacia
Acacia angustissima

Lupines
Lupinus spp.

Smallflowered Milkvetch
Astragalus nuttallianus



Indian Breadroot
Pediemelum Rydb.

Roundhead Lespedeza
Lespedeza capitata

Goat's Rue
Tephrosia virginiana

Butterfly Pea
Centrosema virginianum

Trailing Wildbean
Strophostyles helvula



Duration	Perennial	Perennial	Annual	Perennial	Perennial	Duration	Annual	Perennial	Annual and Perennial	Perennial	Perennial	Duration	Perennial	Perennial	Perennial	Annual and Perennial	Annual	Duration	Perennial	Perennial	Perennial	Perennial	Perennial
Season	Warm Season	Warm Season	Warm Season	Warm Season	Warm Season	Season	Cool Season	Warm Season	Warm Season	Warm Season	Cool Season	Season	Warm Season	Warm Season	Warm Season	Cool Season	Cool Season	Season	Cool Season	Warm Season	Cool Season	Warm Season	Warm Season
Bloom Time	May - September	June - September	June - October	June - July	June - August	Bloom Time	March - May	June - September	March - April	July - September	April - October	Bloom Time	May - July	April - June	May - July	March - May	March - May	Bloom Time	April - July	August - September	May - June	April - November	July - October
Bloom Color	White	Pink - Purple	Yellow	Purple	White	Bloom Color	Purple	Yellow	Yellow	Lavender	Pink - Red	Bloom Color	Pink	Yellow	White	Blue to Variable	Lavender	Bloom Color	Blue - Purple	Green - Brown	Yellow and Pink	Lavender	Pink
Height (ft)	2 - 4	3 - 6	1 - 3	1 - 3	1 - 3	Height (ft)	Climbing Vine	Climbing Vine	6	Prostrate Vine	Up to 1	Height (ft)	Less Than 1	Less Than 1	4	3	1	Height (ft)	1	4	2	Climbing Vine	Climbing Vine
Soil Types	Fine - Coarse	Fine - Coarse	Medium - Coarse	Medium - Coarse	Medium - Coarse	Soil Types	Fine - Medium	Fine - Medium	Fine - Medium	Fine - Medium	Fine - Coarse	Soil Types	Fine - Coarse	Fine - Coarse	Fine - Coarse	Fine - Coarse	Fine - Medium	Soil Types	Fine - Coarse	Medium - Coarse	Medium - Coarse	Medium - Coarse	Fine - Coarse
Drought Tolerance	Medium - High	Low - Medium	Medium	Medium - High	Medium - High	Drought Tolerance	Low - Medium	Medium	Low	Low	Medium	Drought Tolerance	Medium - High	Medium - High	High	High	Low	Drought Tolerance	High	High	High	Medium - High	Medium - High
Commercially Available	Yes	Yes	Yes	Yes	Yes	Commercially Available	No	No	Yes	No	No	Commercially Available	No	Yes	Yes	Yes	No	Commercially Available	Yes	Yes	Yes	Yes	Yes
Light Requirement						Light Requirement						Light Requirement						Light Requirement					
Propogate	Seed	Seed	Seed	Seed	Seed	Propogate	Seed	Seed	Seed	Seed	Seed	Propogate	Seed, Sprigs	Seed, Sprigs	Seed	Seed	Seed	Propogate	Seed, Root	Seed	Seed	Seed	Seed
Seed/Pound	80,000	72,000	64,000	300,000	280,000	Seed/Pound	66,000	n/a	200,000 (dehulled)	n/a	n/a	Seed/Pound	40,000	30,000	25,000	1,500 - 80,000	90,000	Seed/Pound	17,000	150,000	32,000	100,000	11,000

Remarks	Members of this genus are some of our most valuable wildlife plants. The foliage is highly palatable and ranges from 12 - 20 % crude protein. The seed are eaten by game and song birds while its bush like canopy provides cover from aerial predators.	Known for their velcro like seed pods that adhere to clothing; members of this diverse genus are highly palatable to livestock and browsers. Crude protein can be up to 25%, and the seed are an important food source for ground foraging game and song birds.	Partridge pea is considered toxic to livestock. Deer will browse it occasionally and are not affected by the toxicity. It is a valuable honey plant, and provides nectar for many pollinating insects. The seed is utilized heavily by quail, dove, turkey, and song birds.	Purple prairie clover is highly palatable to livestock, deer, antelope, and bison. It has excellent protein content and remains nutritious throughout the growing season. The blooms attract many species of pollinating insects.	<i>Dalea candida</i> shares the same wildlife benefits as <i>Dalea purpurea</i> . It has larger leaves and is usually slightly smaller in stature. It may be more common in some areas than <i>Dalea purpurea</i> , but together they occupy a vast portion of the central United States.	Remarks	Deer pea vetch has a similar growth form to hairy vetch and will climb onto adjacent vegetation. It is palatable to livestock and is browsed by deer and other herbivores. Many species of bird utilize the seed. It is capable of reseeding itself once established.	Snout beans are utilized by livestock and deer and have a crude protein value of 11 to 14 percent. They are tolerant of shade, and if managed properly will make valuable woodland food plots for game animals.	Cattle prefer some species of <i>Aeschynomene</i> over others, but deer readily browse members of this genus. It provides excellent forage value and is one of the few legume that thrives in wet conditions, surviving periodic flooding. Waterfowl utilize the seed.	This viney legume is less apt to climb than other vining species. Forage value is good and it decreases if over grazed. Deer browse the foliage and game and song birds utilize seed.	This low growing legume has a turf like growth form which has potential for use in soil erosion prevention. It has excellent forage quality and is palatable to livestock and deer. Its long bloom period makes it a good plant for attracting pollinators.	Remarks	This highly palatable, turf like legume produces up to 6700 lbs/acre of forage with up to 25% crude protein. The low growth form and insects it attracts create bugging habitat for turkey. It produces large quantities of seed that are consumed by game and song birds.	This bi-pinnate, low growing legume is similar to <i>Mimosa strigillosa</i> . It is highly palatable to livestock, deer, and antelope. It attracts pollinating insects and seeds are utilized by many species of game and song birds.	This shrub like, deep rooted, hardy legume provides excellent forage value to livestock and deer with crude protein levels up to 22 percent. It produces copious amounts of seed that game and song birds utilize, provides cover, and attracts pollinating insects.	One of our showiest native legumes, the blooms are usually blue, but horticultural varieties can be highly variable. It's early bloom period makes it valuable for pollinators. The seeds of many species in this genus are toxic to animals and humans.	With crude protein values up to 18 percent, livestock and deer readily graze this legume. This genus also comprises similar looking plants commonly known as locoweeds. Unlike locoweeds, <i>Astragalus nuttallianus</i> shows no toxic effect on livestock.	Remarks	Similar in appearance to lupines, it is more vine like and sprawling. A good seed producer, it is valuable to game and song birds. Deer browse this plant and it has good forage value. The large, starchy roots were used as a food source by Native Americans.	Roundhead Lespedeza is palatable to all classes of livestock and game animals, and birds utilize the seed. It will decrease due to selective grazing if not managed properly. It is an important soil builder and component of the prairies and open woodlands.	Deer, livestock, and turkey eat the foliage and birds utilize the seed. Its vast root system provides erosion protection in sandy soils, and contains the toxin rotenone. Native Americans pounded roots in streams to release the toxin and stun fish.	Butterfly pea has excellent forage quality and is readily eaten by livestock and deer. It does not produce as much forage as other legumes, and its role is less significant in dietary intake. Birds consume seed and the blooms are highly attractive.	<i>Strophostyles</i> spp. produces high quality forage utilized by livestock and deer. It generally produces more forage than butterfly pea. It is a pioneer species on disturbed sites. Seed is utilized by birds, and Native Americans used the roots as a food source.
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