

GRASSES LEGUMES FORBS TREES SHRUBS



**A FIELD GUIDE TO PLANT ORIGIN DESCRIPTIONS AND RELEASES
NATURAL RESOURCES CONSERVATION SERVICE
JAMES E. "BUD" SMITH PLANT MATERIALS CENTER
KNOX CITY, TEXAS**



Helping People Help the Land



a Field Guide to Plant Origin Descriptions and Releases
Natural Resources Conservation Service
James E. "Bud" Smith Plant Materials Center
Knox City, Texas



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WHO WE ARE

The USDA Natural Resources Conservation Service (NRCS) collects, selects and releases plants and develops plant technology to address our nation's most critical soil and water conservation problems through the agency's Plant Materials Program. There is a network of the 27 Plant Material Centers (PMC) located throughout the United States. Texas has three PMCs (Knox City, Kingsville, and Nacogdoches) to help address the complexity of soils, climate, plant diversity and conservation problems of Texas. These PMCs work cooperatively with soil and water conservation districts, state and federal agencies, commercial seed and plant industry, and other conservation partners to address resource conservation problems in the respective service area of the centers.

JAMES "E." BUD SMITH PLANT MATERIALS CENTER

The James E. "Bud" Smith Plant Materials Center began in San Antonio, Texas, in 1935 as the San Antonio Nursery. The nursery was later moved to Spur and then in 1965 moved to its present location in Knox City. The Knox City Plant Materials Center was renamed in 1967 in honor of James E. "Bud" Smith, agronomist, nursery manager and plant materials specialist from 1935 to 1965, for his pioneering work in plant science. The PMC has released more than 30 conservation plants for soil conservation, water quality protection, wildlife habitat, pollinator habitat, pasture and range improvement, and critical area protection. Many of today's plant propagation techniques were developed by conservationists at the James E. "Bud" Smith PMC.

HELPING PEOPLE HELP THE LAND

This handbook provides resource managers with a planning tool for establishing and managing conservation plants released from the James E. "Bud" Smith PMC. These plants have a place in resource conservation and environmental programs in western Texas and southern Oklahoma.





Duck Creek Germplasm
Texas drop seed



GRASSES



SIDEOATS GRAMA

Bouteloua curtipendula



Sideoats grama is a native, perennial grass that begins growth in early spring. Seed stalks appear from early July to September. Seeds produced in the fall are more viable than those produced in summer. It is a drought-tolerant perennial midgrass which is adapted to calcareous and moderately alkaline soils and rocky sites of prairies. Sideoats grama provides good quality winter and summer forage and is highly palatable for livestock.

RELEASE NAME: ‘Haskell’

ATTRIBUTES: Plants are 2 to 2½ feet tall, with green to blue-green leaves. ‘Haskell’ is a southern variety of sideoats grama that is rhizomatous and provides good ground cover. ‘Haskell’ was selected out of 54 accessions based upon forage productivity and rhizome production. ‘Haskell’ has approximately 579,000 seeds per pound.

SEED HARVEST INFORMATION: ‘Haskell’ sideoats grama is harvested by swathing and combining or a flail-vac seed stripper.

ORIGIN: NRCS personnel collected ‘Haskell’ sideoats grama near Haskell, Texas.



INDIANGRASS

Sorghastrum nutans



Indiangrass is a native, perennial, tall grass that starts growing in mid spring. Seed stalks usually form in late August and September. Plant height ranges from 3 to 7 feet tall. The seed head is golden bronze to yellow resembling a feather. Indiangrass is an excellent forage grass which can easily be killed by overgrazing.

RELEASE NAME: ‘Lometa’

ATTRIBUTES: Plants average about 4 feet in height at maturity. ‘Lometa’ flowers approximately two to four weeks later than ‘Cheyenne’ indiangrass, and approximately two weeks later than ‘Tejas’ Indiangrass. ‘Lometa’ Indiangrass seed is 3 to 4 times as long as it is wide. ‘Lometa’ has approximately 168,434 seeds per pound.

SEED HARVEST INFORMATION: ‘Lometa Indiangrass’ is harvested with a flail-vac seed stripper or direct combining.

ORIGIN: NRCS personnel collected ‘Lometa’ Indiangrass from a native stand east of Lometa, Texas.



SWITCHGRASS

Panicum virgatum



Switchgrass is a native, perennial plant that develops major growth from March through September. Its growing points are 4 to 5 inches above ground during the latter part of its growing season, and the seed heads form during late August and September. Rhizomes grow actively during January, February, March and April. The plant grows equally well on the highly calcareous soils of central Texas, the wet, acid soils of south Florida, and grows well in brackish (partly fresh and salt) marshes. Switchgrass is used primarily for livestock grazing, haying and has potential to be used as a biofuel. Switchgrass seed is used as a food source for certain birds.

RELEASE NAME: ‘Alamo’

ATTRIBUTES: ‘Alamo’ switchgrass grows taller than ‘Blackwell’ switchgrass. The stems are larger and the leaves are usually longer and wider. Flowering occurs one to two months later than ‘Blackwell.’ Seeds are smooth and shiny with about 427,365 seeds per pound. ‘Alamo’ is used extensively by researchers investigating potential alternative biofuels.

SEED HARVEST INFORMATION: ‘Alamo’ switchgrass is harvested by swathing and combining or direct combining.

ORIGIN: NRCS personnel collected ‘Alamo’ switchgrass from the north bank of the Frio River in Live Oak County.



SANDHILL LOVEGRASS

Eragrostis trichodes var. *pilifera*



Sandhill lovegrass is a native, perennial bunch grass found on sandy soils within the central and southern Great Plains. The grass has a high stem to leaf ratio which becomes very stiff and harsh to the touch following grazing. The plant reaches 2½ to 5 feet tall in height. Sandhill lovegrass is grazed by livestock and sometimes cut for hay. Occasionally, it is included in range seeding mixtures for quick cover and forage production. It cures well on the stem and provides good grazing in fall and winter, if grazing is deferred during summer months.

RELEASE NAME: ‘Mason’

ATTRIBUTES: ‘Mason’ sandhill lovegrass is a palatable and nutritious range grass for central Texas and the southern High Plains. It is best adapted to light, sandy soils with 18 to 35 inches of rainfall, but can thrive in heavier soils. ‘Mason’ was selected for its ease of establishment and forage quality. ‘Mason’ has 2,014,852 seeds per pound.

SEED HARVEST INFORMATION: ‘Mason’ sandhill lovegrass is harvested by direct combining.

ORIGIN: Original seed collected in 1957 from native stands near the city of Mason, Texas.



GREEN SPRANGLETOP

Leptochloa dubiad



Green sprangletop is a native, perennial, warm-season bunchgrass. Initial plant growth begins in April and becomes dormant in late fall. Green sprangletop grows to a height of 1 to 3 feet tall. It is adapted to rocky hills, canyons, and sandy soils. Forage value for livestock is good and fair for wildlife. Green sprangletop is used regularly in range seeding mixtures.

RELEASE NAME: 'Van Horn'

ATTRIBUTES: 'Van Horn' was selected from 26 accessions for seedling vigor, high nutrition and drought tolerance. This plant is easily established by seed, volunteers aggressively and produces abundant amounts of forage.

SEED HARVEST INFORMATION: 'Van Horn' green sprangletop is harvested by direct combining.

ORIGIN: NRCS personnel collected seed from a native stand near Van Horn, Texas.



BIG BLUESTEM

Andropogon gerardii



Big bluestem is a tall native, perennial, warm-season grass. The plant grows to an average height ranging from 3 to 6 feet tall. The seed heads usually come out in groups of three resembling a turkey's foot. Big bluestem is an excellent forage grass which can easily be killed by overgrazing. Big bluestem prefers light and medium textured soils, and its appearance creates interest in formal landscapes.

RELEASE NAME: 'Earl'

ATTRIBUTES: 'Earl' was selected for its moderate forage and good seed production. 'Earl' is adapted in Texas and Oklahoma in deep fertile soils, but will grow well on calcareous, shallow or gravelly soils when adequate moisture is present. It will survive in moderately wet bottomlands. It has the ability to establish and provide ground cover and forage with as little as 18 inches of precipitation. 'Earl' out performed the cultivar 'Kaw' big bluestem in forage production, length of grazing period, and seed production. 'Earl' has about 145,000 seeds per pound.

SEED HARVEST INFORMATION: 'Earl' big bluestem is harvested by flail-vac seed stripper or direct combining.

ORIGIN: Seed was originally collected in a native stand located nine miles northeast of Weatherford, Texas, in Parker County.



BUFFALOGRASS

Boutaloua dactyloides



Buffalograss is a perennial, stoloniferous warm-season, native sod-forming grass. The average height is from 4 to 6 inches tall. The leaf blade is 1/8 inch wide and 3 to 6 inches long and sometimes curls. Foliage turns reddish-brown in color after frost, Buffalograss produces separate male and female plants. Female plants bear seed in clusters among the leaves and resemble a bur. Male plants have a two or three spiked flag-like seed head. Buffalograss grows throughout the Great Plains. The plant withstands submergence and prolonged summer droughts. It is used primarily for range grazing, but can be used for seeding waterways on farms, lawns, and recreational areas.

RELEASE NAME: 'Texoka'

ATTRIBUTES: 'Texoka' was selected for high seed yield and forage production. It was superior to most commercial sources of buffalograss in forage production. It is well adapted to western Oklahoma, western Kansas, and northwestern Texas. It is well suited for forage production on rangeland, control of erosion on critical areas, and turf on recreational areas.

SEED HARVEST INFORMATION: 'Texoka' is harvested with an adapted combine or forage cutter.

ORIGIN: 'Texoka' is a broad-based synthetic variety derived from 10 selected clones consisting of four females and six males. The parents of these clones were selected from Texas, Oklahoma, and Kansas buffalograss populations and the name 'Texoka' was composited from these three named states. 'Texoka' was a cooperative release with Oklahoma, Kansas and Texas Agricultural Research, USDA Agricultural Research Service and the Natural Resources Conservation Service.



ALKALI SACATON

Sporobolus airoides



Alkali sacaton is a perennial, warm-season, native bunchgrass which will grow to a height of 1 to 3 feet tall. Alkali sacaton reproduces from small seed that remains viable for several years and will germinate without scarification. It is adapted throughout several western states and Mexico. The plant grows in pure stands on moist alkali soils and produces abundant forage that is grazed by cattle and horses.

RELEASE NAME: ‘Saltalk’ alkali sacaton

ATTRIBUTES: ‘Saltalk’ was selected for use in erosion control, range seeding and revegetation of saline and alkaline sites. ‘Saltalk’ germinates and establishes well in highly saline and alkaline soils of fine to moderately fine texture. This variety requires little maintenance except grazing management and withstands flooding and silt deposition. ‘Saltalk’ has about 1,669,812 seeds per pound.

SEED HARVEST INFORMATION: ‘Saltalk’ alkali sacaton is harvested by direct combining.

ORIGIN: NRCS personnel collected original seed from a native stand near Erick, Oklahoma.



EASTERN GAMAGRASS

Tripsacum dactyloides



Eastern gamagrass is a rhizomatous perennial, warm-season, grass that grows to a height from 5 to 9 feet. It is a relative of corn and is a highly productive and nutritious native grass which is readily grazed by livestock. Eastern gamagrass exhibits major growth in early spring and stays green until late fall or frost. Eastern gamagrass grows best on moist, well-drained fertile soils and does not tolerate standing water for long periods.

RELEASE NAME: ‘San Marcos’

ATTRIBUTES: ‘San Marcos’ was selected out of 40 accessions based on seed and forage production. Seed production for ‘San Marcos’ averages 215 lb/acre; there are approximately 7,107 seeds per pound of ‘San Marcos’ seed.

SEED HARVEST INFORMATION: ‘San Marcos’ is harvested by direct combining.

ORIGIN: NRCS personnel originally collected seed from a native stand in Hays County, Texas.



SPIKE DROPSEED

Sporobolus contractus



Spike dropseed is a perennial, warm-season, native bunchgrass which grows in small clumps ranging in height from 15 to 45 inches. The inflorescence of spike dropseed is a densely contracted spike-like panicle which can grow from 6 to 20 inches long. Spike dropseed is native to the southwestern United States and northwestern Mexico. It occasionally grows on open sandy fields, mesas, or dry bluffs. The forage value for spike dropseed is fair for all livestock and wildlife. Spike dropseed is utilized by ground nesting birds.

RELEASE NAME: Potter County Germplasm

ATTRIBUTES: Potter County Germplasm spike dropseed was selected from 17 accessions based upon survivability, vigor and overall plant performance. The average seed yield for Potter County Germplasm is 230 pounds per acre with two harvests; there are approximately 2,885,000 seed per pound of Potter County Germplasm Spike dropseed. This plant reseeds itself regularly and may be used for range seeding and site stabilization plantings.

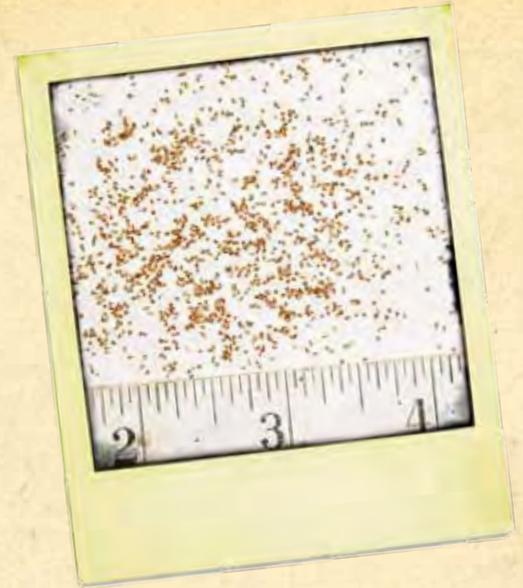
SEED HARVEST INFORMATION: Potter County Germplasm spike dropseed is harvested by direct combining.

ORIGIN: NRCS personnel originally collected seed from native plants located in the Canadian River bottomland approximately 18 miles north of Amarillo, Texas.



SAND DROPSEED

Sporobolus cryptandrus



Sand dropseed is a weak perennial, warm-season, native bunchgrass. The height of the plant is 2 to 3 feet tall. Sand dropseed is a prolific seed producer which produces seed that remains viable for many years. Sand dropseed reseeds itself readily on ranges following overgrazing or drought. The forage value of sand dropseed is fair to all livestock and certain wildlife utilize the seed for food and leaf material for nesting cover.

RELEASE NAME: Borden County Germplasm

ATTRIBUTES: Borden County Germplasm sand dropseed was selected from 46 accessions based upon survivability, plant vigor and biomass production. The average seed yield per acre of Borden County Germplasm is 550 pounds with two harvests; there are approximately 5,638,000 seed per pound of Sand dropseed. This plant reseeds itself regularly and may be used for range seeding and site stabilization plantings.

SEED HARVEST INFORMATION: Borden County Germplasm sand dropseed is harvested by direct combining.

ORIGIN: NRCS personnel originally collected seed from native plants located approximately 12 miles west of Gail, Texas.



SAND BLUESTEM

Andropogon halli



Sand bluestem is a rhizomatous perennial, warm-season, native grass that begins growth in late spring. The leaf blades of sand bluestem are generally long, flat and strongly ribbed, and the plant will reach an average height of 4 to 6 feet tall. Other characteristic features of sand bluestem are stems with a flat base that are pale purple in color during early spring growth. Sand bluestem is best adapted in sand hills and in the deep, sandy soils of the High Plains. Sand bluestem is grazed by cattle and horses any season of the year, and deer graze basal leaves in early spring.

RELEASE NAME: Cottle County Germplasm

ATTRIBUTES: Cottle County Germplasm sand bluestem was selected from 43 other accessions based upon survivability, vigor and forage quality. A growing season forage analysis study documented an average percent crude protein of 6.5 and digestibility of 41.7 percent (ADF). These results were similar to 'Woodward' and 'Elida' cultivars. Cottle County Germplasm may be used in range seeding mixtures for forage production and site stabilization on sandy soils.

SEED HARVEST INFORMATION: Cottle County Germplasm sand bluestem is harvested by swathing and combining and flail-vac seed stripper.

ORIGIN: NRCS personnel originally collected seed from native plants located along U.S. Highway 62/70 in western Cottle County located approximately 14 miles west of Paducah, Texas.



LITTLE BLUESTEM

Schizachyrium scoparium



Little bluestem is a drought tolerant perennial, warm-season, native bunchgrass. The average height of the plant is 2 to 4 feet tall. Growth starts in late spring and continues throughout summer if moisture is adequate. Seed from this plant generally ripens in October and November. Little bluestem grows on a wide variety of soils, but grows best on calcareous soils derived from limestone. Little bluestem is an important forage grass for livestock, deer, and elk.

RELEASE NAME: OK Select Germplasm little bluestem

ATTRIBUTES: OK Select Germplasm little bluestem was selected for seedling and plant vigor, as well as leafiness and aggressiveness to crowd out weeds in critical areas. The average seed yield per acre for OK Select is 206 pounds; there are approximately 379,000 seed per pound of Little bluestem.

SEED HARVEST INFORMATION: OK Select Germplasm is harvested by swathing and combining, flail-vac seed stripper or direct combining.

ORIGIN: OK Select Germplasm little bluestem was originally collected from native stands in Caddo, Grady, Jefferson, Stephens and Washita counties of southwestern Oklahoma.



TEXAS DROPSEED

Sporobolus texanus



Texas dropseed is a warm-season, native grass which grows in close tufted clumps. Mature plant height will range from 12 to 28 inches. Texas dropseed is commonly found growing in low, moist alkaline or saline areas.

RELEASE NAME: Duck Creek Germplasm

ATTRIBUTES: Duck Creek Germplasm was selected out of 57 accessions for moderate palatability and salinity tolerance. Forage analysis documented the percent crude protein range between 4.1 to 6.9 percent. Duck Creek Germplasm is adapted to the western part of north central Texas and the Panhandle of Texas and southwestern Oklahoma. Duck Creek Germplasm can tolerate low levels of salinity, but slightly less than that of alkali sacaton (6 to 12 millimhos).

SEED HARVEST INFORMATION: Duck Creek Germplasm Texas dropseed is harvested by direct combining.

ORIGIN: NRCS personnel originally collected seed from native plants in Dickens County, Texas.



KLEINGRASS

Panicum coloratum L.

Kleingrass is a warm-season, perennial bunchgrass which is native to Africa. It grows 3 to 4 feet tall. Kleingrass reproduces by both seed and rhizomes. Kleingrass is widely used as a forage or hay production for cattle. This grass produces a toxin which can be harmful to horses, sheep and goats.

RELEASE NAME: 'Selection 75'

ATTRIBUTES: 'Selection 75' Kleingrass was selected at the USDA Soil Conservation Service Nursery in San Antonio, Texas and was informally released in 1957. 'Selection 75' was formally released in 1969 cooperatively by the James E. "Bud" Smith Plant Materials Center and the Texas Agricultural Experiment Station. 'Selection 75' Kleingrass was selected for forage production from a large number of similar African accessions. This release produces abundant hard seed, is readily grazed by cattle, tolerates moderate salinity and is drought tolerant. A three-year replicated study at the James E. "Bud" Smith PMC documented 'Selection 75' Kleingrass' range of forage quality of 16 percent crude protein (CP) and 74 percent In Vitro Dry Matter Digestibility (IVDMD) in April to 7 percent CP and 56 percent IVDMD in November.

SEED HARVEST INFORMATION: 'Selection 75' Kleingrass is harvested by swathing and combining or direct combining.

ORIGIN: Africa

RELEASE NAME: 'Verde'

ATTRIBUTES: 'Verde' Kleingrass was developed and selected for increased seed size from the same African accessions that 'Selection 75' Kleingrass was selected. Verde does not differ appreciably from 'Selection 75' Kleingrass with the exception of seed size. 'Verde' Kleingrass was released cooperatively by the James E. "Bud" Smith PMC and the Texas Agricultural Experiment Station in 1982.

SEED HARVEST INFORMATION: 'Verde' Kleingrass is harvested by swathing and combining or direct combining.

ORIGIN: Africa





COMMON REED

Phragmites australis



Common reed is a rhizomatous, stoloniferous perennial, warm-season, native grass which grows to a height ranging from 6 to 12 feet tall. Common reed initiates growth as early as February in some locations, and its foliage remains green until frost. This plant grows in marshes, swamps, banks of streams and lakes, and around springs. Common reed does best if water level fluctuates a few inches below and above soil surface. This plant reproduces by rhizomes and not seeds.

RELEASE NAME: 'Shoreline'

ATTRIBUTES: 'Shoreline' was selected and released to reduce wave action erosion at the waterline on ponds and earthen dams. This plant is best adapted to areas receiving 30 inches or more annual precipitation. Stolons spread rapidly near the waterline where plantings are established. Shoreline common reed is a long-lived perennial that tolerates slight salinity and establishes easily from rhizomes.

SEED HARVEST INFORMATION: 'Shoreline' common reed is harvested by digging up rhizomes, cutting at 12 to 18 inches in length for establishment.

ORIGIN: NRCS personnel vegetatively collected 'Shoreline' common reed from a railroad right-of-way in Lawrence, Texas.





LEGUMES



ILLINOIS BUNDLEFLOWER

Desmanthus illinoensis



Illinois bundleflower is a perennial, warm-season, native legume which spreads by seed. It occurs throughout Texas except in the east Texas timberlands and the Rio Grande Plains. Illinois bundleflower has leaves that are long and twice divided into 20 to 30 pairs of small leaflets. The flowers are white and the plants grow to 3 feet high. Illinois bundleflower is a deep-rooted native legume that is adapted to clay or calcareous soils. It is palatable and eaten by all classes of livestock.

RELEASE NAME: ‘Sabine’

ATTRIBUTES: ‘Sabine’ was selected for forage abundance and seed production. The average seed yield is 1,075 pounds per acre. It maintains green foliage until frost, shows good drought tolerance, and has good re-growth abilities. ‘Sabine’ has proven to be excellent for range and pasture mixtures as well as mined land revegetation mixtures and wildlife plantings. ‘Sabine’ has approximately 64,014 seeds per pound.

POLLINATOR INFORMATION: The white flowers bloom between May and September.

SEED HARVEST INFORMATION: ‘Sabine’ Illinois bundleflower is harvested by direct combining.

ORIGIN: NRCS personnel originally collected seed from native plants located near Crystal Beach, Texas, in Galveston County.



PARTRIDGE PEA

Chamaecrista fasciculata



Partridge pea is a native, warm-season, annual legume that spreads by seed. It has dark green leaves that are uniformly short and grow opposite of each other. Partridge pea flowers are yellow in color and produce legume seed pods. It is commonly found on sandy loam soils of the central and eastern United States.

RELEASE NAME: ‘Comanche’

ATTRIBUTES: ‘Comanche’ is more widely adapted than ordinary partridge pea probably because of its ability to hybridize with several varieties. The most important use of ‘Comanche’ is providing cover for slower establishing perennial plants in the revegetation of critical areas and mined land reclamation. The seed of ‘Comanche’ is a food source for quail and the leaves are eaten by deer and many other upland wildlife species. The average seed yield is 515 pounds per acre. ‘Comanche’ has approximately 65,376 seeds per pound.

POLLINATOR INFORMATION: The yellow flowers bloom between June and October.

SEED HARVEST INFORMATION: ‘Comanche’ partridge pea is harvested by direct combining.

ORIGIN: NRCS personnel originally collected seed from native plants located in Throckmorton County, Texas.



VELVET BUNDLEFLOWER

Desmanthus velutinus



Velvet bundleflower is a native, perennial, warm-season legume with a low, widely-spreading growth form. It has small bluish-green leaves which grow opposite from each other along a central stem. It produces white flowers that are about one inch in diameter. This legume is found growing mostly on calcareous and limestone soils and is favored by goats, sheep, and deer as a food source. Quail and other wild birds eat the seeds.

RELEASE NAME: Hondo Germplasm

ATTRIBUTES: Hondo Germplasm velvet bundleflower was selected from multiple collections of velvet bundleflower based upon plant survivability, vigor, biomass and seed production. The average seed yield is 500 pounds per acre with two harvests possible each year. It has approximately 59,474 seeds per pound.

POLLINATOR INFORMATION: The white flowers bloom between April and June.

SEED HARVEST INFORMATION: Hondo Germplasm velvet bundleflower is harvested by direct combining.

ORIGIN: NRCS personnel originally collected seed from native plants located in the eastern part of Medina County, approximately 8 miles from Hondo, Texas.



PURPLE PRAIRIE CLOVER

Dalea purpurea



Purple prairie clover is a native, warm-season, perennial legume which can grow to a height of 3 feet. It has a woody taproot that produces several woody stems and leaves that are alternate, with blades divided into five leaflets. The flowers are purple to lavender in color with five irregularly placed petals. It is adapted to sandy soils and is valuable wildlife forage.

RELEASE NAME: Cuero Germplasm

ATTRIBUTES: Cuero Germplasm purple prairie clover was selected from multiple collections of purple prairie clover based upon plant survivability, vigor and biomass productivity. Seed production averages about 200 pounds per acre each year.

POLLINATOR INFORMATION: The purple flowers bloom between June and September.

SEED HARVEST INFORMATION: Cuero Germplasm purple prairie clover is harvested by direct combining.

ORIGIN: Original seed was collected from native plants located in the southern part of DeWitt County, approximately 11 miles from the town of Cuero, Texas.



PRAIRIE ACACIA

Acacia angustissima



Prairie acacia is a deep-rooted, warm-season, perennial, native legume that reproduces by seed and vegetatively. It grows to height of 6 to 18 inches. It is often mistaken for catclaw sensitivebrier (*Mimosa microphylla*) or Illinois bundleflower (*Desmanthus illinoensis*). The flowers are very small, creamy-white in color and numerous in number. It is adapted to various soil types but grows most abundantly in heavy, tight soils. Prairie acacia is highly nutritious and is readily eaten by all classes of livestock and is valuable for wildlife.

RELEASE NAME: Plains Germplasm

ATTRIBUTES: Plains Germplasm prairie acacia has excellent drought tolerance, seed production and seedling vigor. It produces approximately 290 pounds of seed per acre. It has approximately 22,600 seeds per pound.

POLLINATOR INFORMATION: The white flowers bloom between June and November.

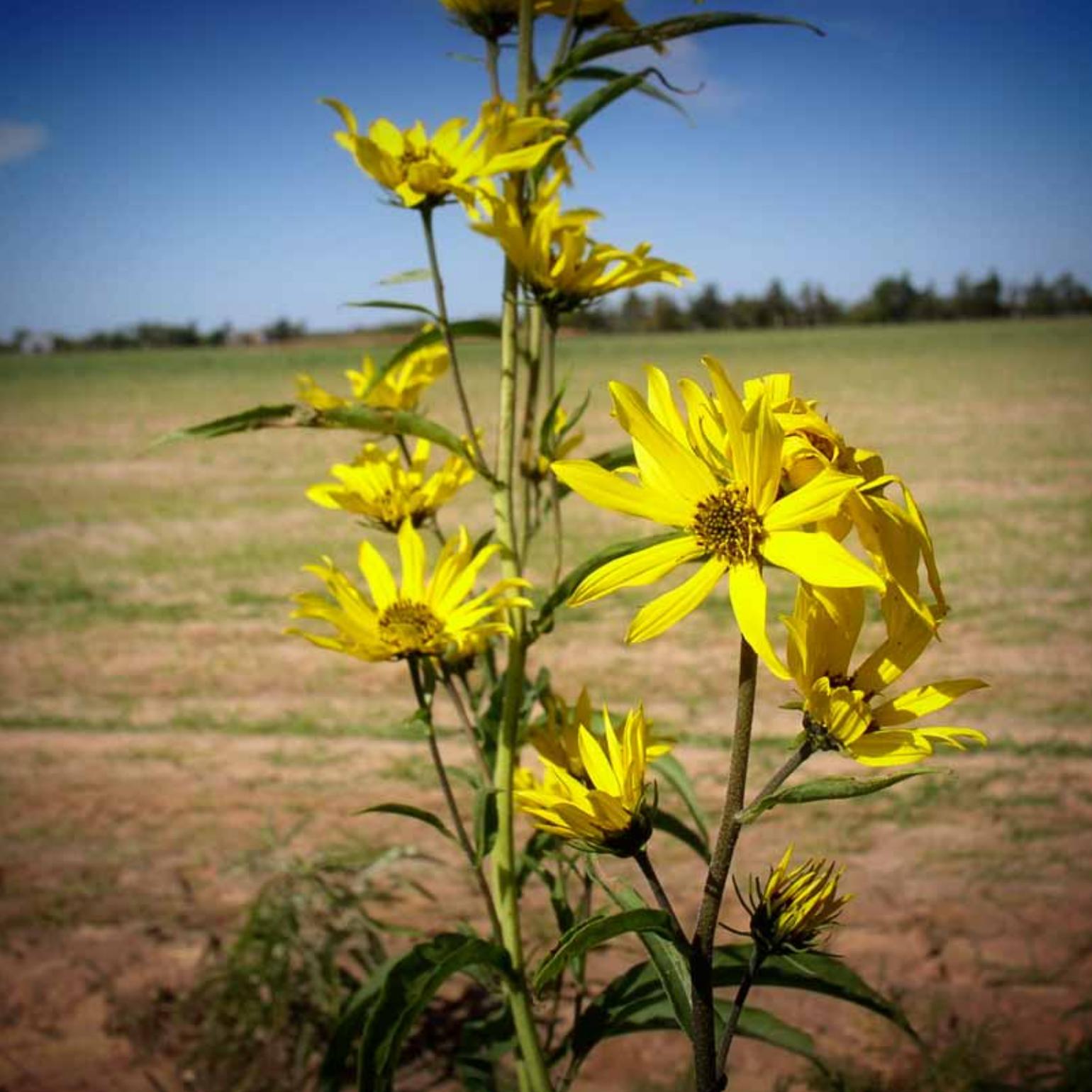
SEED HARVEST INFORMATION: Plains Germplasm prairie acacia is harvested by direct combine.

ORIGIN: Plains Germplasm is a composite of 17 accessions collected by NRCS personnel from different vegetative regions in Texas.

ca/vq
less push sunflower



FORBS



MAXIMILIAN SUNFLOWER

Helianthus maximiliani

Maximilian sunflower is a native, warm-season, tall-growing perennial forb that reproduces from seed and vegetatively. It grows upright, singly or in a close cluster from a common rhizome. The stems are 3 to 6 feet tall and gray-green in color. The leaves are long and narrow, trough-shaped, which taper at both ends, and has a rough upper surface and curve downward. The flowers appear in the upper half of the main stem and have deep yellow ray flowers. The plant is adapted in seasonally moist, fertile calcareous or clay soils. Maximilian sunflower is highly palatable and eaten by all classes of livestock and wildlife.



RELEASE NAME: 'Aztec'

ATTRIBUTES: 'Aztec' is adapted to most soil types and used in range seeding mixtures in areas receiving 18 inches or more annual precipitation. The adaptability range of 'Aztec' is throughout the southern three-fourths of Oklahoma and within all parts of Texas except the Trans-Pecos region. 'Aztec' may be used in conservation filter strip plantings as well as wildlife food plots. 'Aztec' adds a brilliant splash of color and texture to natural areas and landscapes. The average seed yield per acre is 85 pounds. It has approximately 302,364 seeds per pound.

POLLINATOR INFORMATION: The yellow and brown flowers bloom between July and October. In early fall a large number of monarchs are present during flowering.

SEED HARVEST INFORMATION: 'Aztec' is harvested by direct combining.

ORIGIN: 'Aztec' Maximilian sunflower is a composite of five county collections from different vegetative regions in Texas.



AWNLESS BUSHSUNFLOWER

Simsia calva



Awnless bushsunflower is a native, semi-woody perennial, warm-season forb that grows 3 to 4 feet tall. Awnless bushsunflower is not a true sunflower. The coarse and rough leaves are nearly all opposite. The flower stalk divides three times and produces solitary yellow flowers with a brownish-yellow center. The flowering period begins in April and extends into late spring and fall. It grows in well-drained sunny locations, but is not adapted to east Texas timberlands sands. Awnless bushsunflower can be used in a natural garden as a single specimen or clump to attract songbirds and pollinators. Seeds are eaten by birds and are a preferred food of deer, sheep and goats.

RELEASE NAME: 'Plateau'

ATTRIBUTES: 'Plateau' was selected for range seeding mixtures and wildlife food. It has good drought tolerance and responds positively under good grazing management. It is best adapted in sandy loam to clay loam soils. 'Plateau' produces an average seed yield of 120 pounds per acre. It has approximately 330,966 seeds per pound.

POLLINATOR INFORMATION: The yellow flowers bloom between April and October.

SEED HARVEST INFORMATION: 'Plateau' awnless bushsunflower is harvested by flail-vac or direct combining.

ORIGIN: NRCS personnel originally collected seed from native plants located in Kerr County, near Junction, Texas.



WRIGHT PAVONIA

Pavonia lasiopetala



Wright pavonia is a native, upright, perennial, warm-season forb that can grow up to 3 feet tall. It has a woody base and is herbaceous above with light green, heart-shaped leaves and solitary, five-petal flowers on slender stems. Wright pavonia grows naturally on dry, rocky, and usually calcareous soils. It is palatable to sheep, goats and deer. Pavonia is a popular garden accent plant throughout Texas due to having a long bloom period and ability to grow in full to half sun.

RELEASE NAME: Kerr Germplasm

ATTRIBUTES: Kerr Germplasm Wright pavonia was selected from multiple collections based upon plant survivability and vigor for use in range and wildlife plantings. It has an aesthetic value for native landscaping. The average seed yield is 229 pounds per acre. It has approximately 35,866 seeds per pound.

POLLINATOR INFORMATION: The pink and yellow flowers bloom between April and November.

SEED HARVEST INFORMATION: Kerr Germplasm is hand harvested.

ORIGIN: Original seed was collected from native plants located at the Texas Parks and Wildlife-Kerr Wildlife Management Area near Hunt, Texas, in Kerr County.



ENGELMANN DAISY

Engelmannia pinnatifida



Engelmann daisy is a native, cool-season, perennial forb that grows up to 3 feet tall. The leaf blades are deeply toothed and occur mostly at the base of the plant. Engelmann daisy produces several branched stems, which together form a plant with a rounded crown. The flowers are numerous and yellow in color. The plant is adapted to calcareous loam and clay soils and is commonly found on roadsides. Engelmann daisy is highly palatable and is readily eaten by livestock and wildlife.

RELEASE NAME: ‘Eldorado’

ATTRIBUTES: ‘Eldorado’ was released for range and wildlife plantings. It has dark green foliage and bright yellow flower clusters, which makes ‘Eldorado’ an attractive choice for highway and urban landscaping. The average seed yield is 252 pounds per acre. It has approximately 58,414 seeds per pound.

POLLINATOR INFORMATION: The yellow flowers bloom between April and October.

SEED HARVEST INFORMATION: ‘Eldorado’ Engelmann daisy is harvested by swathing and combining with a front-end pickup attachment, flail-vac harvester or direct combining.

ORIGIN: NRCS personnel originally collected seed from native plants located northwest of Eldorado, Texas, in Schleicher County.





SHRUBS & TREES



WILD PLUM

Prunus sp.



Wild plum is a native, perennial, warm-season shrub or small tree. The leaves are simple and grow alternate or in a cluster of each other. The flowers of wild plum are white in color, fragrant and small. The flowers typically have five petals with many stamens. The round edible fruit is a fleshy drupe that is red, purple or yellow in color.

RELEASE NAME: Rainbow Germplasm

ATTRIBUTES: Rainbow Germplasm wild plum was selected due to its hardiness and survivability; it will typically keep its leaves well into periods of freezing temperatures. Like other wild plums, Rainbow is slightly suckering creating thickets seldom reaching 10 feet in height. Fruit with colors, ranging from deep to bright yellow to bright red and measuring in size from $\frac{1}{2}$ to 1 inch, will ripen over long periods from June through September. Rainbow wild plum performs best on well-drained sandy loam soils and is adapted throughout northwest Texas and southern Oklahoma. It has proven useful in erosion control, reclamation, and shelterbelt plantings. The plant is important for wildlife, providing food and cover.

POLLINATOR INFORMATION: The white flowers bloom between February and May.

SEED HARVEST INFORMATION: Rainbow Germplasm is hand harvested and pulped removed with a Dybvig cleaner.

ORIGIN: NRCS personnel originally collected seed from native plants found in Kent, Fannin and Wise counties in Texas.



LITTLELEAF LEADTREE

Leucaena retusa



Littleleaf leadtree is a native, perennial, warm-season shrub which can grow up to 21 feet tall. The leaf form is alternate and twice pinnately compound. Littleleaf leadtree flowers from spring to fall with bright yellow, aromatic flowers. Its fruit is a thin pod. Littleleaf leadtree is commonly found growing on dry rocky hills and canyons.

RELEASE NAME: Yellow Puff Germplasm

ATTRIBUTES: Yellow puff Germplasm littleleaf leadtree was released for use in revegetation of critical areas, wildlife habitat enhancement, and aesthetic plantings. Yellow puff Germplasm can grow up to 25 feet tall, is drought tolerant and is an attractive plant that has potential ornamental use.

POLLINATOR INFORMATION: The yellow flowers bloom between April and October.

SEED HARVEST INFORMATION: Yellow puff Germplasm littleleaf leadtree is hand harvested.

ORIGIN: Original seed was collected from native trees located across the Edwards Plateau and Trans-Pecos areas of Texas. Yellow puff is a composite selection made up of a group of five collections.



BUR OAK

Quercus macrocarpa



Bur oak is a native, perennial, warm-season deciduous tree that can grow up to 50 feet tall and 30 feet wide. It is a slow-growing tree with ridged dark brown bark. The leaves are glossy and dark green. Bur oak produces large acorns. It is native to the Great Plains of the United States, which ranges from southern Texas and north into Canada.

RELEASE NAME: ‘Boomer’

ATTRIBUTES: ‘Boomer’ performs well in dry areas. It consistently outperformed other Bur oaks based upon growth rate and habit under windbreak field conditions. ‘Boomer’ provides shelter and food to many wildlife and makes an attractive landscape plant for urban and recreation areas by providing dense shade.

SEED HARVEST INFORMATION: ‘Boomer’ is hand harvested.

ORIGIN: NRCS personnel originally collected acorns from native trees located in Custer County near Clinton, Oklahoma.





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a Field Guide to Plant Origin Descriptions and Releases
James E. "Bud" Smith Plant Materials Center
Knox City, Texas

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