

PARTRIDGE PEA *Chamaecrista fasciculata*

(Michx.) Greene

Plant Symbol = CHFA2

Contributed by: USDA NRCS Knox City, Texas Plant Materials Center



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Alternate Names

Cassia fasciculata, Michx., sleeping plant, prairie partridge pea, showy partridge pea, prairie senna, large-flowered sensitive-pea, dwarf cassia, partridge pea senna, locust weed, golden cassia

Uses

Wildlife: The seed is one of the major food items of northern bobwhite and other quail species because it remains in sound condition throughout the winter and early spring. Partridge pea was found to be one of the most important fall and winter foods of bobwhite quail in Alabama. Partridge pea seeds are high in phosphorus content and protein value, and low in crude fiber and lignin making digestibility generally high.

Seeds of this legume are also eaten by the greater and lesser prairie-chicken, ring-necked pheasant, mallard, grassland birds, and field mice. Deer can eat it without being poisoned (note livestock use).

Partridge pea often grows in dense stands, producing litter and plant stalks that furnish cover for upland gamebirds, small mammals, small nongame birds, and waterfowl.

Partridge pea is considered an important honey plant, often occurring where few other honey plants are found. Nectar is not available in the flowers of

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National Plant Data Center <<http://npdc.usda.gov>>

showy partridge pea but is produced by small orange glands at the base of each leaf. Ants often seek the nectar and are frequent visitors. The common sulfur butterfly lays its eggs on the leaves, and the larvae use the leaves as a food source.

Erosion control: The plant can be used along road banks and stream banks to control erosion. Partridge pea most commonly occurs as a pioneer or colonizer of disturbed areas.

Recreation and beautification: The flowers of this plant can be used to beautify areas where wildflowers are planted. The foliage is somewhat sensitive and will partially close when touched. Partridge pea is commonly grown as an ornamental. The bright yellow flowers make it a popular choice for use in native gardens.

Ethnobotanic: Cherokee Drug (Sports Medicine), Root medicine used to keep ball players from tiring. Cherokee Drug (Stimulant), Compound infusion given for fainting spells. Seminole Drug (Antiemetic), Cold decoction of plant used for nausea. Seminole Other (Tools), Plants used as a bed for ripening persimmons.

Livestock: *Although partridge pea foliage is nutritious, it can be poisonous and should be considered potentially dangerous to cattle.* Partridge pea leaves and seeds contain a cathartic substance. This substance is effective either in fresh plant material or in dry hay. Domestic livestock will eat partridge pea leaves. However, if large quantities are consumed, the animal may be stressed and die.

Restoration: Partridge pea is considered an excellent species for planting on disturbed areas for erosion control and improving soil fertility. It establishes rapidly, fixes nitrogen, reseeds, and slowly decreases as other species in the seeding mix begin to dominate the site. Nitrogen fixation is greatest during the flowering stage. To help prevent weed establishment and control soil erosion along county roadsides in Iowa, partridge pea is often included in the seed mix with other forbs and grasses.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

General: Pea Family (Fabaceae). Partridge pea is an annual suberect legume plant that reaches a height of 1 to 3 feet. The leaves consist of 10 to 15 pairs of small, narrow leaflets that are somewhat delicate to the touch. The showy yellow flowers, about 1 inch across, grow 2 to 4 together in clusters on the stem. Flowers normally bloom July-September. The fruit is a straight, narrow pod 1½ to 2½ inches long, which splits along 2 sutures as it dries; the pod sides spiral to expel the seeds.

Distribution: For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Habitat: Partridge pea grows on prairies, bluffs, riverbanks and river bottoms, as well as upland woods of the Great Plains. Partridge pea is common on sandy savannahs of the lower Gulf Coastal Plain. Partridge pea is most common on sandy to sandy loam soils. It grows best in full sunlight but will survive under shady conditions. Partridge pea has low water requirements and will grow and produce seed under stressed conditions. The lower pH limit of showy partridge pea is 5.0.

Adaptation

The USDA hardiness zones for showy partridge pea are 3 to 9. Showy partridge is distributed throughout the eastern, midwestern, and southern United States.

Establishment

Drill seeds at 1/4 to 3/4 inch deep at a rate of 10-15 pounds of Pure live Seed (PLS) per acre. If broadcasting seeds, the rate should be increased and seed covered by lightly disking or by cultipacking. Partridge pea can be planted from late winter (March) to late spring (May). Scarification will improve germination of seed, but it is not necessary to establish plantings of partridge pea. Seed should also be inoculated with the correct rhizobial bacteria before planting. Fertilizer should be applied at the recommended rate, based on soil samples, at time of planting.

Management

Established stands should be disked lightly in the spring to expose mineral soil on which the seed can germinate. Partridge pea usually reseeds but will gradually disappear without regular maintenance. Light disking to remove weeds, small brush, and old sod is necessary for healthy stands. In areas where prescribed burning is permitted, controlled fire is an excellent method for controlling unwanted

vegetation. Fire or disking should be done in late winter for best results. Weeds can also be controlled during the growing season by mowing over the top of partridge pea plants.

Seeds and Plant Production

Showy partridge pea seed can be moist stratified for 56 days to improve germination. Under controlled conditions germination occurs at an alternating cycle of 30°C daytime and 15°C nighttime temperatures. The optimum soil temperature for germination is 20°C to 30°C. Seventy percent of seeds will germinate in 7 to 25 days. The seed count of partridge pea is approximately 28,000 seeds per pound.

Seed for production fields should be planted ¼ to ¾ inches deep on raised beds 36-40 inches apart. The seeding rate for seed production is 2-3 pounds of pure live seed per acre. Being a legume that fixes nitrogen partridge pea only needs one 20-pound application of phosphorous applied in the spring each year. Average seed production at the Knox City Plant Materials Center has been recorded at 550 pounds per acre. Partridge pea may be direct harvested with a combine or plants maybe swathed and combined after drying. Seeds are ready for harvest in late October and November.

Cultivars, Improved, and Selected Materials (and area of origin)

The USDA NRCS Plant Materials Centers have released 3 improved varieties:

‘Comanche’ partridge pea a cultivar release from the Knox City Plant Materials Center in TX, selected for use as a warm-season legume cover crop in the revegetation of critical areas, mined lands, as a wildlife food plant, and as a plant for beautification.

Lark Selection a selected class release from the Jamie L. Whitten Plant Materials Center in Coffeerville, MS, selected to provide an adapted partridge pea for use in critical area seeding mixtures, wildlife food and cover, and beautification of roadsides in Arkansas, Louisiana, Mississippi, Alabama, and western Tennessee (mid-South region).

Riley Germplasm a source identified release from the Manhattan Plant Materials Center in Manhattan, KS, developed to provide an adapted source for use in wildlife habitat improvement, erosion control, and recreational area plantings in the Central Plains Region.

Contact your local Natural Resources Conservation Service (formerly Soil Conservation Service) office

for more information. Look in the phone book under "United States Government". The Natural Resources Conservation Service will be listed under the subheading "Department of Agriculture."

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Prepared By and Species Coordinator

Morris J Houck

USDA NRCS Plant Materials Center
Knox City, Texas

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://Plant-Materials.nrcs.usda.gov>>

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