

## PARTRIDGE PEA

### *Chamaecrista fasciculata*

(Michx.) Greene  
Plant Symbol = CHFA2

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#### Alternate Names

*Cassia chamaecrista* L., *C. 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  
game birds, small mammals, small non-game 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  
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

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Plant Materials <<http://plant-materials.nrcs.usda.gov/>>

Plant Fact Sheet/Guide Coordination Page <<http://plant-materials.nrcs.usda.gov/intranet/pfs.html>>

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

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 sub-erect native 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 some distance from the parent plant.

*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. It is distributed throughout the Midwest, eastern, 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 species of rhizobium 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 cold 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 62,000 seeds per pound from cultivated plants.

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 PLS per acre. Being a legume that fixes nitrogen partridge pea only needs one 20-pound application of phosphorous applied in the spring each year. Seeds are ready for harvest in late October and November. Partridge pea may be direct harvested with a combine or plants may be swathed and combined after drying. Average seed production at the Knox City Plant Materials Center has been recorded at 550 pounds per acre. About 37 percent of harvested material at Manhattan, Kansas, yields clean seed.

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

The USDA NRCS Plant Materials Centers have three releases:

'Comanche' (TX) partridge pea, a cultivar release from the Knox City Plant Materials Center (PMC) in Texas, was selected for use as a warm-season legume cover crop in the re-vegetation of critical areas, mined lands, as a wildlife food plant, and as a plant for beautification.

'Riley' (KS), a release from the Manhattan Plant Materials Center in Manhattan, Kansas, was developed to provide an adapted cultivar for use in wildlife habitat improvement, erosion control, and recreational area plantings in the Central Plains Region. Riley has also been shown to be adapted for

conservation use in southwestern and southern Missouri, Arkansas; western Tennessee, northeastern Mississippi, western Louisiana, and northeast Texas.

Lark Selection (AR), a selected class release from the Jamie L. Whitten PMC in Coffeeville, Mississippi, was 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).

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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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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