

## WILD SENNA

### *Senna hebecarpa* (Fern.) Irwin & Barneby

Plant Symbol = SEHE3

Contributed by: National Plant Materials Center,  
Beltsville, MD



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#### Alternate Names

Synonym - *Cassia hebecarpa*

American Senna and Partridge tree are other common names.

#### Uses

*Ethnobotanical:* Several senna species are purgatives or laxatives depending on the dose. The leaves and pods of the wild senna contain compounds called anthraquinones, which are powerful laxatives. For this reason cattle and other herbivores avoid grazing the plants.

*Landscaping and Wildlife:* This is a stunning plant in bloom and has attractive foliage. It is popular for meadow plantings and in native landscape gardens. The seed are eaten by some game birds, including quail. The flowers are primarily attractive to bumblebees and halcid bees. The extra-floral nectaries are attractive to ants, and other insects including ladybird beetles. It's thought that these

insects protect the plant from other insects that would attack the foliage. The caterpillars of some Sulfur butterflies rely on wild senna foliage as a food source.

#### Status

In the Northeast U.S. wild senna is listed as threatened or endangered due primarily to habitat loss. The Pennsylvania Biological Survey considers wild senna to be endangered. 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 and Adaptation

Wild senna is a large, long-lived, herbaceous perennial, legume, .5 – 2 meters tall. The stout, central stem is light green, and slightly hairy in the upper stem and at the base of the upper compound leaves. The compound leaves are even-pinnate with about 10 – 20 leaflets. The medium to dark green leaflets are individually up to 2 - 5 centimeters across. Each leaflet is oblong, with smooth margins and a pointed tip. Near the upper base of a compound leaf is a small club-shaped gland; this gland secretes nectar to attract certain kinds of insects. From the axils of the upper compound leaves upright racemes of yellow flowers form from July – August. Each unscented flower is about 15 millimeters across; has 5 pale yellow sepals and petals, 10 stamens with black anthers and a conspicuous pistil with long white hairs. The dark brown seedpods are about 10 centimeters long when fully mature in September – October. The seed pods have 10 – 18 segments and split explosively. There are about 50 seeds/gram.

The root system of wild senna consists of a central taproot and rhizomes which often forms vegetative colonies. It is not yet known if the plant has the ability to fix atmospheric nitrogen.

*Distribution:* Wild senna is widely distributed in the eastern U.S. from Ontario, Canada south to Georgia. It is generally found on disturbed sites, moist meadows, pastures, fields or roadsides in full or partial sun. It often flourishes within the floodplain of rivers. While it prefers moist soils it will also grow on dry sites.

## Plant Production

To produce plugs, seed should be sown indoors at least 7 weeks before transplanting seedlings outdoors. Wild senna, as with many other legumes, has a hard seed coat. Scarify or chip the seed in order for water to be absorbed. Soak the seed in warm water for three hours before sowing. Cold stratification is not needed to induce germination. Germination rates of 10 – 30% were common from propagation trials conducted by the New England Wild Flower Society. Wild senna seeds are long-lived when stored under optimal conditions.

## Establishment

This species is best planted in the spring or early fall from container stock to ensure success. They should be spaced at about 60 – 90 centimeters apart.

For direct sowing, scarified seed may be spring or fall planted at a depth of 3 millimeters and will germinate the following spring.

As with many other legumes, wild senna plants initially send their energy into their root system, therefore the top of the plant will be slow to develop. This initial slow top growth in the first two years is normal, especially in the early spring. Once plants have become established they will grow vigorously and are very drought tolerant.

Wild senna should be grown in soil that has good drainage in either a sunny or partly shaded location. This plant grows naturally in damp, fertile soils and under these conditions a height of 7 feet can be attained. In a drier soil the plant will grow to about 3 feet and tend to be less floppy.

## Management

Wild senna is a hardy plant with relatively few problems. This species is easy to grow and maintain with moderate levels of N, P and K. It forms large clonal colonies. Due to the taproot of this plant it is difficult to transplant or divide.

## Pests and Potential Problems

Wild senna is a plant with few pest or disease problems. This plant can become quite tall when the soil is fertile and moist; it may flop over while the flowers and seedpods are developing.

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

There are no recommended cultivars or selected materials at this time. Wild senna is somewhat available as seed of plants from commercial nurseries specializing in native plants.

## References:

Brown, M., Brown, R., 1984. *Herbaceous Plants of Maryland*, Port City Press, Inc., Baltimore, Maryland.

Cullina, W. 2000. *The New England Wild Flower Society guide to growing and propagating wildflowers of the United States and Canada*. Houghton Mifflin Co., New York, New York.

Clark, F., Carex Associates, 2000. *New England Plant Conservation Program Conservation and Research Plan Senna hebecarpa*. New England Wildflower Society, Framingham, Massachusetts.

Hilty, John (2002-2008) Illinois Wildflowers: Wild Senna (*Senna hebecarpa*) at:

[http://www.illinoiswildflowers.info/prairie/plantx/wild\\_sennax.htm](http://www.illinoiswildflowers.info/prairie/plantx/wild_sennax.htm). Access date: 6/3/2008

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