

## **Senna singueana**

(Del.) Lock

Fabaceae - Caesalpinioideae

### LOCAL NAMES

English (winter cassia, sticky pod, scrambled egg)

### BOTANIC DESCRIPTION

*Senna singueana* is a shrub or small tree 1-15 m high; branchlets glabrous to densely pubescent, crown open; bark reddish, becoming grey-brown and rough with age.

Leaves compound, with 4-10 pairs of oval leaflets, 2.5-5 cm long, rachis with a conspicuous gland between each pair of leaflets, rounded at apex, glabrous or nearly so to densely pubescent.

Flowers deep yellow, fragrant, in racemes to 15 cm, often aggregated towards branchlet-ends and often produced when the plant is leafless; flower stalks 2-4 cm, with conspicuous glands.

Pods linear, straight or somewhat twisted, torulose, slightly compressed, 5-26 cm long, indehiscent, with stiff and rather hard valves, glabrous to pubescent, rounded to abruptly acute and often apiculate at apex; yellowish when ripe.

Seeds dull brown, almost circular, flattened, 5-6 mm in diameter, with a small areole 2-2.5 x 1-1.5 mm on each face.

The specific name means 'from Singu'. The type specimen was collected at Singu in Ethiopia.

### BIOLOGY

*S. singueana* is a hermaphroditic species flowering from around April to June. Its fruits are ready for collection around September.



Leaves and flowers (G.A. Cooper @ USDA-NRCS PLANTS Database)

**ECOLOGY**

*S. singueana* is a species of the drier tropical Africa regions and is often found in thickets, deciduous woodland, and savannah. It is frequently associated with termite mounds, in luggas or riverine. In Ethiopia and Eritrea, it is a component of the mid- and highland dry evergreen forests.

**BIOPHYSICAL LIMITS**

Altitude: 0-2 400 m

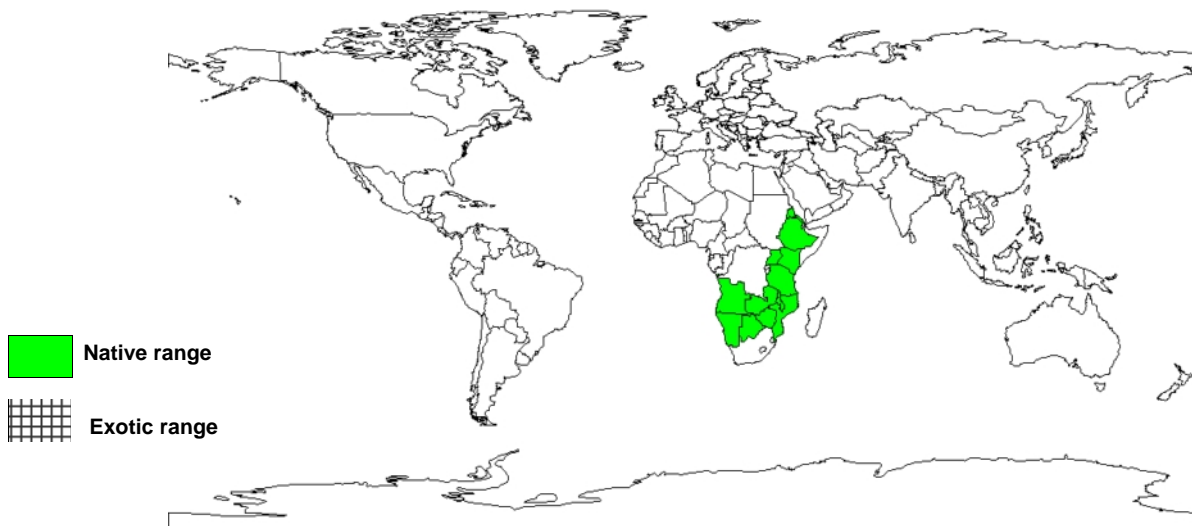
Mean annual temperature: 25-30 deg C

Mean annual rainfall: 500-1 000 mm

**DOCUMENTED SPECIES DISTRIBUTION**

Native: Angola, Botswana, Comoros, Eritrea, Ethiopia, Kenya, Malawi, Mozambique, Namibia, Tanzania, Uganda, Zambia, Zimbabwe

Exotic:



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

**PRODUCTS**

Food: Pods are edible raw or cooked, whereas leaves are eaten as a vegetable.

Fodder: Leaves, pods and seeds are fed to livestock.

Fuel: The wood is commonly used for fuel.

Timber: The conspicuously pitted wood is light brown with a distinct grain. It is used for small furniture, carving and trinket boxes.

Tannin or dyestuff: In Eritrea, the bark is used for tannin production.

Medicine: The root bark is used in Tanzania against convulsions, gonorrhoea, bilharzia, heartburn, stomach-ache, constipation, wounds and snake bites. The ash from the burnt roots mixed with porridge provides a remedy for stomach pains.

Other products: Two compounds, 7-Methylphyscion and cassiamin A have been isolated from the root bark of *S. singueana*.

**SERVICES**

Shade or shelter: The crown provides shade.

Soil improver: The leaves are said to make green manure.

Ornamental: *S. singueana* is quick growing and very ornamental, often being in full flower at the height of the dry season.

Other services: The plant is used in smoke baths and the bark is used to "chase devils" out.

**TREE MANAGEMENT**

*S. singueana* can be coppiced. The tree is often browsed by cattle and wild animals and should be protected. It is also susceptible to fire.

**GERMPLASM MANAGEMENT**

Seed storage behaviour is orthodox. Well-dried seeds stored in airtight containers remain viable for more than three years. A purity of 99% can be achieved. There are 13 000 seeds/kg. Ripe fruits collected direct from tree branches and seeds can be extracted by water maceration, thresher machine or opening the fruits by hand. Under ideal conditions, the seeds germinate within 8-10 days. The average germination rate of mature, healthy and freshly sown seed is 78%.

**FURTHER READNG**

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Mutasa SL, Khan MR and Jewers K. 1990. 7-Methylphyscion and cassiamin A from the root bark of *Cassia singueana*. *Planta Medica*. 56(2): 244-245

Nduwayezu JB. 2001. *Senna singueana*: yield, decomposition and nitrogen mineralization. 258p.

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**SUGGESTED CITATION**

Orwa C, A Mutua, Kindt R , Jamnadass R, S Anthony. 2009 *Agroforestry Database: a tree reference and selection guide version 4.0* (<http://www.worldagroforestry.org/sites/treedbs/treedatabases.asp>)