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Crotalaria breviflora pdf

Crotalaria brevidens. Crotalaria medicinal uses. Crotalaria meaning.

Species of plant in the genus *Crotalaria* *Crotalaria spectabilis* Habit Close-up of flower Scientific classification Kingdom: Plantae Clade: Tracheophytes Clade: Angiosperms Clade: Eudicots Clade: Rosids Order: Fabales Family: Fabaceae Subfamily: Faboideae Genus: *Crotalaria* Species: *C. spectabilis* Binomial name *Crotalaria spectabilis* Roth
Synonyms[1] List *Crotalaria alatipes* Raf. *Crotalaria leschenaultii* Macfad. *Crotalaria lupiniflora* Graham *Crotalaria lupinifolia* Steud.



Crotalaria macrophylla Weim. *Crotalaria retzii* Hitchc. *Crotalaria sericea* Retz. *Crotalaria spectabilis* subsp. *parvibracteata* Niyomdham *Crotalaria spectabilis*, the showy rattlebox or showy rattlepod, is a species of flowering plant in the pea family Fabaceae. It is native to the Indian Subcontinent, southern China, and Southeast Asia.[1] It is a perennial herb that grows up to 0.6–1.5 m (24–59 in) tall.[2] It grows in montane grasslands.[2] It was introduced (originally as a green manure) to most of the world's tropics and subtropics and is now a serious agricultural pest species.[3] It is toxic to livestock, causing liver damage.[4] References ^ a b "Crotalaria spectabilis Roth". Plants of the World Online. Board of Trustees of the Royal Botanic Gardens, Kew. Retrieved 8 April 2021. ^ a b "Crotalaria spectabilis in Flora of China @ efloras.org". www.efloras.org. Retrieved 2023-02-23. ^ "Datasheet Crotalaria spectabilis (showy rattlepod)". Invasive Species Compendium. CAB International. 2021. Retrieved 8 April 2021. ^ "Details Crotalaria, rattlepod". Guide to Poisonous Plants. Colorado State University. 2019. Retrieved 8 April 2021. This Faboideae-related article is a stub.



You can help Wikipedia by expanding it.vte Retrieved from " View Larger DescriptionClick on the "Nutritional aspects" tab for recommendations for ruminants, pigs, poultry, rabbits, horses, fish and crustaceansSlenderleaf, rattlepod, rattle pea, Ethiopian rattlebox [English]; crotalaire, sonnette [French]; marejea [Swahili] *Crotalaria brevidens* Benth. [Fabaceae]*Crotalaria albertiana* Baker f., *Crotalaria intermedia* Kotschy, *Crotalaria intermedia* Kotschy var. *abyssinica* Engl., *Crotalaria intermedia* Kotschy var. *dorumaensis* (Wilczek) Polhill, *Crotalaria intermedia* Kotschy var. *parviflora* (Baker f.) Polhill, *Crotalaria purpureo-lineata* Baker f. Slenderleaf (*Crotalaria brevidens* Benth.) is a tropical legume mostly cultivated for food (Abukutsa-Onyango, 2004; Duke, 1981). Unlike other *Crotalaria* species, its toxicity level is regarded as low and it can safely be used for forage. Morphological description *Crotalaria brevidens* is an annual or short-lived perennial legume reaching a height of 0.4–2 m. It is erect or decumbent, and much-branched. The stems are ascending with short hairs.



The leaves are alternate, trifoliate and borne on 2-6 cm long petioles.



The leaflets are linear to lanceolate, 4-14 cm long x 0.3-3.3 cm wide, hairy on their lower face. The inflorescences are apical racemes, 10-48 cm in length. They bear numerous, closely arranged papilionaceous, cream to clear yellow, veined reddish-brown flowers. The fruits are narrow, cylindrical, pubescent pods, 35-50 mm long x 5-7 mm broad, containing about 80 seeds. The seeds are smooth, small, 2-2.5 mm long x 1.5-2 mm broad, cordiform, very variable in colour (from medium yellow to orange yellow, red to dark brown or dark grey-blue. The 1000 seed-weight is 5 g (Abukutsa-Onyango, 2004; Duke, 1981). Uses Slenderleaf is mainly a food legume; young leaves and shoots are cooked as a leafy vegetable in the East African countries of Kenya and Tanzania. Slenderleaf can be boiled or fried, or used as a potherb in stews and soups (Abukutsa-Onyango, 2004). Elderly people like its bitterness but younger people prefer *Crotalaria ochroleuca* (rattlepod), a closely related species (Abukutsa-Onyango, 2004). Slenderleaf seeds can be used to produce a hydrophilic polysaccharide with thickening and sizing properties that compare with those of guar gum (Tookey et al., 1963). Information on the use of *Crotalaria brevidens* as forage is scarce and most of it come from a series of evaluations carried out on *Crotalaria* species in Florida in the 1930s. Those evaluations concluded that slenderleaf was the best *Crotalaria* species for livestock though its palatability and nutritional value were not high (Neal et al., 1935; Ritchey et al., 1941). Slenderleaf was used in its native range in Africa for fodder at least until the 1960s (Dougall et al., 1966), and was part of a series of evaluations planned in Tanzania in the 1980s (Myoya et al., 1988).

More recent data remain elusive and it is not known if slenderleaf is currently used for livestock. Slenderleaf is native to tropical Africa. It occurs naturally from Northern Nigeria eastwards to Ethiopia and southwards to Southern Tanzania.



It was introduced into Morocco, the West Indies and the Americas. It is cultivated as a vegetable in Sudan, Kenya, Uganda and Tanzania (Abukutsa-Onyango, 2004; Duke, 1981). Slenderleaf grows well in grasslands, deciduous woodlands and bushlands, in seasonally swampy grasslands and occasionally on termite mounds. It can also be found on cultivated ground, roadsides and in clearings of upland dry forests (Duke, 1981). Slenderleaf occurs in tropical and subtropical areas from sea level up to an altitude of 2700 m. It grows best on soils with pH ranging from 6-6.5, in sunny areas where annual daily temperatures are between 16-26°C, and where annual rainfall is in the 1400-2000 mm range. However, slenderleaf can still grow in harsher conditions, where the temperature is between 12 and 30°C, annual rainfall range about 1100-2700 mm and soil pH comprised within 5 and 7.5. Slenderleaf is not tolerant of frost and can be killed at -2°C, new growth being damaged at -1°C (Abukutsa-Onyango, 2004). Slenderleaf is a smallholder crop mostly marketed as a vegetable in East Africa (Abukutsa-Onyango, 2002).

Slenderleaf (*Crotalaria brevidens*) can be broadcast or drilled in rows 30 cm apart. The seedlings are thinned to a spacing of 15-20 cm x 15-20 cm after 6 weeks. It can be intercropped with finger millet.

Vegetable harvest In Africa, slenderleaf is mainly harvested as a vegetable by uprooting the whole plant. The uprooted thinnings may be used as a first harvest and the remaining plants are ready just before flowering at about 8 weeks, when the stems are about 40 cm in height. Harvesting may continue for 4 months (Abukutsa-Onyango, 2004). Another method of harvesting is to cut the main shoot 10-15 cm above ground after 8 weeks and let new shoots grow over the next 2 weeks before picking. Up to 15 successive pickings can be done every 2 weeks until the dry season sets in and no further shoots develop. The plants are then uprooted (Abukutsa-Onyango, 2004). The leaf yield is about 10 t green matter/ha. A green manure crop yields about 20 t/ha of fresh organic matter. This species has a symbiotic relationship with some soil bacteria. These bacteria form nodules on the roots and fix atmospheric nitrogen. Some of this nitrogen is utilized by the growing plant, and some can be used by neighbouring plants. Hay and silage *Crotalaria brevidens* should be harvested before the bud stage as it then becomes woody and unusable for forage. Slenderleaf ensiled satisfactorily when the DM of the green forage varied between 20 and 32% (Ritchey et al., 1941). Slenderleaf (*Crotalaria brevidens*) is an N-fixing legume: it improves the N status of the soil and can be intercropped with finger millet crops, providing valuable N return to the next-year finger millet crop (Chweya, 1997). Slenderleaf does well on slopes and has been used in soil erosion control (Duke, 1981). In Brazil, slenderleaf has been used in coffee plantations as a green manure and cover crop. It prevented soil erosion by adding moisture and reducing soil temperature. Slenderleaf also reduced weed growth (Muzilli et al., 1992). *Striga hermonthica* controller Slenderleaf (*Crotalaria brevidens*) is reported to promote the germination of *striga*, a parasitic plant that is a major problem for maize and millet growers. In the presence of *Crotalaria*, *striga* germinates and later dies due to the lack of a suitable host plant (Abukutsa-Onyango, 2004).

Nutritional aspects *Crotalaria brevidens* has a low protein content for a legume, with values ranging from 10 to 21% of DM (though one reported value reached 28%). It is notable for the rapid increase in fibre after the bud flowering stage when crude fibre can reach 50% of DM. Unlike other *Crotalaria* species, *Crotalaria brevidens* contains very low amounts of pyrrolizidine alkaloids that are deleterious to humans and animals (Tookey et al., 1963). However, some of these toxic alkaloids have been detected (Uiso, 1991). A comparison of the palatability, feeding value and apparent toxicity for rats of 150 tropical legumes (Cassia, *Crotalaria*, *Indigofera* and *Tephrosia* species) found that *Crotalaria brevidens* resulted in poor or no growth and low intake, indicating toxicity and/or unpalatability (Strickland et al., 1986). In humans, it is possible that the elaborate cooking methods used to prepare slenderleaf for food actually result in detoxification (Uiso, 1991).

Most of the information about the use of *Crotalaria brevidens* (or more precisely on *Crotalaria brevidens* var. *intermedia*) comes from a series of trials conducted in the 1930s in Florida. These trials compared several *Crotalaria* species for pasture, hay and silage and found that *Crotalaria brevidens* was the best *Crotalaria* species for fodder. However, the stage of development is an important factor in its palatability as the fibre content increases rapidly between the bud and pod stages, making the forage unusable (Ritchey et al., 1941). Pasture *Crotalaria brevidens* was grazed without much difficulty by cows (though it was less palatable than common pasture grasses) and came second after *Crotalaria incana* in palatability. In addition to its relative palatability, it had a delayed formation of fibre in stems, kept its leaves to late in the season and was able to recover with new growth when cut and grazed. However, the plant was unusable for forage after the first pods (Ritchey et al., 1941). A report from Kenya noted that it had the reputation of being palatable (Dougall et al., 1966). Hay When cut early and high above the lower axial buds, slenderleaf made palatable hay for cattle and still produced a limited second crop. However, it was difficult to make high quality hay due to extensive leaf shattering and a tendency to become coarse and stemmy. Hay harvested in the pod stage and offered as sole feed did not maintain the body weight of dry cows (Ritchey et al., 1941). Silage Slenderleaf silage was better accepted than silages of other *Crotalaria* species. Cattle showed a preference for it when it was harvested at the bud stage or earlier. It was totally accepted when ensiled at the pre-bud stage. In trials with dairy cows, 20% of silage made at the bud stage was refused, compared to 7% for maize silage, and 6% for alfalfa hay. Slenderleaf silage gave lower milk yields than alfalfa. The OM digestibility of the silage in steers was poor (32%) due to the low digestibility of crude fibre (Neal et al., 1935; Ritchey et al., 1941). Mules given slenderleaf hay preferred that harvested before the bloom stage to more mature forage. 74% of hay harvested at the pod stage was rejected (Ritchey et al., 1941). Nutritional tables References Abukutsa-Onyango, M.

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