

VELVET BEAN

刺毛黧豆

Mucuna pruriens

Fabaceae

ECHO® 植株信息表

描述

Vining forms of velvet bean grow rapidly, with climbing or trailing vines 6-8 m long. The leaves are large and trifoliate with lateral leaflets 7-15 cm long, 5-12 cm wide. Flowers are light purple or white, resulting in pods 4-13 cm in length. Wild forms have pods with hairs that, due to a protein called mucunain, are irritating to the skin and can cause severe itching; cultivated varieties (var. *utilis*) have non-stinging hairs. Mature, dry pods have a hard shell with each pod containing 4-6 seeds which, depending on the variety, vary in color (from black to white, brown, or mottled) and are 1-2 cm long.

用途

Velvet bean fixes nitrogen, making atmospheric nitrogen available to plants, and produces high amounts of biomass. Thus, it is widely used for soil improvement as a green manure cover crop. Its dense leaf canopy gives farmers an option for controlling aggressive weeds including cogongrass (*Imperata cylindrica*). Though the seeds have been used as a coffee substitute, human consumption is not generally recommended due to the presence of antinutritive substances including L-dopa, a compound used to treat Parkinsons disease that is toxic if not taken in correct doses. Velvet bean seeds, pods, and foliage are used in a variety of ways as animal feed, usually as a supplement for ruminants; exercise caution by consulting the literature for appropriate quantities, feeding in small amounts, and taking any needed steps (e.g., ensiling, fermentation) to reduce L-dopa. Velvet bean is also noted for suppression of nematodes.

通用名称

- 英语
 - velvet bean
 - Bengal Bean
 - Poil à Gratter
 - Mucuna
 - Picapica
 - Pwa Grate
 - Fève De Velours
- 法语
 - pois mascate volubile
 - pois du bengale
- 西班牙语
 - Frijol Terciopelo Velvet Bean
 - Frijol Terciopelo
 - Chiporozo
 - guisante de Mascate
 - mucuna ceniza
 - ojo de venado
- 印地语
 - जाङ्गली
 - जड़ा
 - कवांच
 - के वांच
 - ककवांच
 - कोंच

栽培

- **Elevation** – Up to 2100 m, best at altitudes below 1,500 m
- **Rainfall** – 400-2500 mm/year; a good option for the humid tropics
- **Soil Types** – Prefers well-drained soils with pH 5-8, intolerant to water logged soils
- **Temperature Range** – 19-27° C.
- **Day Length Sensitivity** – Flowering increases with shorter days
- **Light** – Prefers full sun

The large seeds germinate quickly. Sow them 3-7 cm deep with 1 m between rows and 20-80 cm between plants (this spacing requires 20-40 kg/ha of seed). Seed does not require scarification or inoculation with rhizobia prior to planting. If interplanting vining velvet bean with maize, the beans should be planted at least a month after the maize to minimize competition. Plants of vining types grow over a longer period of time than non-vining types. Vining varieties are good choices for providing ground cover over an entire rainy season. Seeds left on the ground will regrow.

收获和种子生产

Seeds mature 100-280 days after onset of flowering with most varieties. Pods should be picked after turning dark brown or black.

病虫害

There are few pest problems due to production of toxic compounds.

烹饪与营养

Velvet bean seeds can be toxic to humans and non-ruminant animals. Extensive soaking and boiling is required for human consumption. Anti-nutrients include alkaloids, trypsin, phytate, lectins, saponins, and L-dopa.

品种

The more common 90-Day variety flowers at any time and produces seeds in about 90 days, but is less vigorous. The tropical type lacks the itchy hairs found on other velvet bean pods and produces seeds in short days.

参考文献

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