

LOCAL NAMES

Hausa (turburku); Yoruba (ito)

BOTANIC DESCRIPTION

Millettia thonningii is a deciduous tree that can attain a height of up to 20 m and a short bole of diameter up to 1 m with a dense crown. Bark smooth, grayish and thin, when slashed shows creamy yellow.

Leaves pinnate (simple-compound) with a slender, glabrous common stalk, 10-15 cm long and 3-4 pairs of opposite leaflets with terminal leaflet 6-10 cm long and 2.5-5.5 cm broad, elliptic or obovate, shortly acuminate with blunt tip or slightly notched, cuneate at base. The lower leaflets are progressively more rounded at the base, glabrous above, minutely hairy or glabrous beneath except for the characteristic brush of stiff white hairs at each side of the mid rib at the base with about 6 pairs of thin, up-curving lateral nerves running out very close to the margin. The lower leaflets are ovate or ovate-elliptic about 4-7 cm long and 2-4 cm wide.

Flowers are blue, mauve or purple, 1.5 cm long, becoming paler as they expand, arranged singly or in pairs along a glabrous central stalk, 12-22 cm long pendulous among newly forming leaves. The racemes sometimes are grouped in terminal panicles. Individual flowers have slender, slightly hairy stalk 6-12 mm long with a pair of very small but conspicuous linear bracteoles half way up.

Fruit is a dehiscent pod, 12-15 cm long and 18-25 mm broad, with more or less parallel margins or slightly broader towards the apex, sharply beaked, cuneate at the base, glabrous, smooth, flat and woody, usually containing 3-6 discoid black seeds about 10 mm across.

The generic name is after C. Millet, c.1830, an officer of the East Indian company.

BIOLOGY

Flowering occurs between November and March. The fruiting season is between March and November, however fruits are ready for collection around the end of November.

ECOLOGY

This is a savanna and secondary forest species, often found on riverbanks. *M. thonningii* occurs as clumps or thickets on plains usually associated with termitaria belonging to the genus *macrotermes*.

BIOPHYSICAL LIMITS

Mean annual rainfall: 600-1 000 mm

DOCUMENTED SPECIES DISTRIBUTION

Native: Congo, Cote d'Ivoire, Democratic Republic of Congo, Ghana, Nigeria, Togo

Exotic: Angola



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

Fodder: Both cattle and sheep consume leaves of *M. thonningii*.

Apiculture: Flowers provide nectar in the dry season for bees and this potential can be utilized for honey production.

Fuel: The wood and the woody dry pods which drop after releasing the seeds are a source of fuelwood.

Timber: The sap wood is yellowish-white with a darker greenish brown heartwood, heavy and fine grained, very hard, flexible and polishes well. It is used to make handles for implements such as axes, knives, tools, and the flexible young branches are used in construction of huts yam stakes, fencing poles and making traps.

Poison: Leaf juice is poisonous and is used to poison water snails.

Medicine: Root and bark decoctions are used for worms expulsion and as laxative, while the boiled pulverized roots and the bark are used for blood purification. Leaf extract is used for diarrhoea or dysentery and a decoction of the bark is purgative.

SERVICES

Erosion control: Production of heavy litter by *M. thonningii* coupled with a network of lateral roots makes it good for soil conservation and erosion control especially on sloping ground.

Shade or shelter: The tree produces leaves heavily, hence when in leaf provides shade on avenues.

Nitrogen fixing: The tree has nodulation and nitrogen fixing ability.

Soil improver: Leaves are shed in large quantity during the dry season and serve as mulch.

Ornamental: Because of its flowers that appear in the dry season as well as the dark green foliage, it is often cultivated as an avenue tree or as a living fence.

GERMPLASM MANAGEMENT

Seed storage behaviour is orthodox, long-term storage at IITA Genebank.

FURTHER READNG

Adewusi HG. 1997. Variations in Nigerian provenances of *Millettia thonningii* (Schum & Thonn.) Baker. Ph.D. Thesis. University of Ibadan, Nigeria.

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Keay RW. 1989. Trees of Nigeria. Clarendon Press Oxford.

Skerman PJ. 1977. Tropical forage legumes. FAO Plant Production and Protection Series No. 2.

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>)