Markhamia lutea (Benth) K. Schum

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Markhamia lutea (Benth) K. Schum

Taxonomy and nomenclature

Family: Bignoniaceae
Synonym: *Dolachandrone platycalix* Baker, *Markhamia platycalix* Sprague.
Vernacular/Common names: Nsambia, mgambo (Swahili).

Distribution and habitat

Markhamia platycalix is native to East Africa but has been widely dispersed by cultivation. Its native range covers the wetter parts of Ethiopia, Kenya, Tanzania, Uganda and Rwanda.

It is a typical pioneer species of the humid forest, growing at altitudes 700- 2000 m.a.s.l., 800 – 2000 mm annual rainfall with short dry season(s). It grows best on well drained farm soil. It can also grow on quite heavy clay soils provided it is not water logged. It is quite light demanding.

Uses

The wood is hard, durable (moderately resistant to termites) and easy to work and thus much favoured by carpenters.

The large conspicuous yellow flowers make the species a popular ornamental, and it is frequently planted as a roadside or park tree in cities and towns.

Although not nitrogen fixing, the species is frequently used as agroforestry tree as it is fast growing, wind resistant and provides both flowers for apiculture, good quality wood and green mulch. It tolerates pruning well and can be renewed by coppicing.

Botanical description

Markhamia platycalix can grow into a very large tree of > 40 m. The stem is often crooked with basal fluting. Old bark grey-brown or reddish, flaking in irregular patches. Leaves opposite, compound, imparipinnate with 4-6 pairs of opposite leaflets plus a terminal leaflet. Leaflets are oval-ovate, 5-12 cm long, 2½-5 cm wide with pointed tip and short stalk. Large flowers in panicles. They consist of a bell-shaped, 5 lobed corolla tube with two lips above and 3 lips below. 4 stamens basically united with corolla tube. Ovary consist of two carpels.

Flowering branch of Marchamia. www.gardentia.net

Fruit and Seed description

Fruit: The fruit can be up to 1 meter with many seeds. It is straw coloured or brownish at maturity. Seeds are attached in a long row to the central fruit part, and remain so for a while after the fruit valves split apart.
Seed: The seed is oblong, about 2½ cm wide including an almost transparent wing. handling unit is the seed. There are about 70-75000 seed per kg.

Leaves, flowers and fruits of *Markhamia lutea*. From Dale and Greenway 1961

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Flowering and fruiting habit

Flowering period is often long. In West Kenya (Kakamega area) flowering occurs at the end of the rainy season in August – September. Fruit development and maturation takes place during the dry season and fruits are mature about 6 months after flowering. Eastern Kenya flowering period is December-January and fruits are mature from July-August. Pollination is by insects e.g. bees.

Harvest

Fruits must be harvested from the tree before dehiscence because the small light seeds are otherwise widely dispersed by wind. Fruits are best collected by climbing and breaking off the fruits with a sharp hook. Best quality seeds are from fruits with mature yellow-whitish colour and about to open.

Processing and handling

Seeds must be extracted from the fruits, possibly with a short after-ripening period to make the fruits open naturally. Once the fruits are dry, they can be opened and fruit parts manually removed. Fruit wings tend to gather moisture and fungi careful drying is advisable.

Storage and viability

The seed exhibit orthodox storage behaviour and dry seeds can be stored for several years at room temperature. Cold storage prolong longevity.

Dormancy and pretreatment

Seeds will usually germinate readily after sowing. However, some related species appear to exhibit moderate photo-dormancy and it is recommended to sow seeds under light.

Sowing and germination

Best germination is achieved when seeds are sown directly on the surface without covering them with soil. Germination is epigeal. Germination is often < 50% even under optimal conditions.

Vegetative propagation

The tree coppices well and can be rejuvenated by coppicing many times.

Selected readings

Beentje, H.J. 1994. Kenya Trees, Shrubs and Lianas. National Museums of Kenya, Nairobi, Kenya. 722p.

Dale, I.R. and P.J. Greenway. 1961. Kenya trees and shrubs. Buchanan's Kenya Estates Ltd.

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