

Vitex payos

(Lour.) Merr.

Verbenaceae

LOCAL NAMES

Swahili (mfuu,mfufu,mfudu)

BOTANIC DESCRIPTION

Vitex payos is a small tree, 2-10 m tall; branches stiff, crown rounded; bark brown or grey-brown, deeply fissured, stems densely pale ferruginous woolly, hairy becoming glabrous, sometimes thick and corky with prominent large petiole scars.

Leaflets (3-)5-foliolate, elliptic to obovate, 3-19 cm long, 2-10 cm wide, broadly rounded or obovate at the apex, rarely emarginated, cuneate at base, roughly pubescent above, densely floccose velvety beneath; petiole 6-15 cm long.

Flower cymes few, many-flowered, axillary, sometimes almost globose, 6-15 cm long, peduncle 2.5-10 cm long, bracts linear, 8-20 mm long, 5-10 mm wide, projecting in very young inflorescences. Calyx abconical, densely ferruginous, pubescent, tube 2.3-3 mm long. Corolla fragrant, white, blue or mauve, tube 3-4 mm long, hairy outside.

Fruit black, oblong or sub-globose, 2-2.5 cm long, 1.4-2.4 cm wide, shiny, glabrous. Calycine cup dark, 1-2 cm high, 1.5-2.5 cm wide, broadly crenate, fruiting pedicel 2-5 mm long.

BIOLOGY

Flowering takes place during the rainy season (September-December), while fruit ripening occurs during the dry season (April-June). *Vitex* species generally exhibit hermaphroditism, where both functional male and female organs are in the same flower (Lars Schmidt, 2000).



Vitex payos (Patrick Maundu)



Vitex payos fruits (Patrick Maundu)

ECOLOGY

V. payos is a species of hot, low and semi-arid places with high water table. In more arid zones it is found near rock outcrops. The most commonly associated tree species are *Acacia polyacantha*, *Dalbergia melanoxylon*, *Brachystegia spiciformis* etc.

BIOPHYSICAL LIMITS

Altitude: 0-1 600 m

Mean annual temperature:

Mean annual rainfall: 650-850 mm

Soil type: *V. payos* often grows in sandy soils, less often clay red and rocky ones.

DOCUMENTED SPECIES DISTRIBUTION

Native: Kenya, Malawi, Mozambique, Tanzania, 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: The ripe fruit contains a black, mealy and sweet pulp.

Fodder: Leaves are used as fodder.

Fuel: The tree is used for fuel.

Timber: Wood is very hard and is used for making wooden spoons and poles.

Medicine: *V. payos* is used as medicine for stomachache.

SERVICES

Soil improver: The tree improves the soil through leaf fall.

TREE MANAGEMENT

Partial clearing of vegetation is essential before planting out to open up space. Tending should include spot weeding and slashing until the crop is well established. The tree coppices well.

GERMPLASM MANAGEMENT

Seed germination is hindered by the hard seed coat. This is normally broken by annual fires in the wild.

FURTHER READNG

Buwalda, AO. Et al 1997. Indigenous miombo fruit trees: health and wealth for the Sukuma people. *Agroforestry Today*. 9(3): 23-25.

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Nyamutowa, E.and Mushonga, J.N. 1995. Improvement and conservation of potential fruit crops of Zimbabwe. In: *Genetic Resources and Utilization of Underutilized Crops in Southern and Eastern Africa* (Anthony, K.; Haq, N. and Cilliers, B. eds.) pp. 165-171

Rukuni D. et al. 1998. Selecting Indigenous Trees for Domestication in Southern Africa: priority setting with farmers in Malawi, Tanzania, Zambia and Zimbabwe. (Maghembe, J.A. et al eds). pp. 72-94

SUGGESTED CITATION

Orwa C, Mutua A , Kindt R , Jamnadass R, Simons A. 2009. *Agroforestry Database:a tree reference and selection guide version 4.0* (<http://www.worldagroforestry.org/af/treedb/>)