

LOCAL NAMES

Afrikaans (bittervalsoring); Arabic (arrad,arad); Bemba (mulalantete,chibombwesala,mulalantanga,mwikalankanga); English (bitter albizia); Gujarati (moto sirisio,krishnasirisha); Hindi (chigara,krishnasirisha,moto sirisio,unjal,tugli,sikkai,tugal); Lozi (mukangala); Lunda (kasongu); Malay (varacchi,oosulay); Nyanja (nyele,mkalanga,nsengwa); Somali (gissrip); Tamil (munja,thuringi,wunja,unjal,suranji,woomjai,sherkam); Tigrigna (nefasha,chigono); Tongan (kankumbwila); Zulu (muvola)

BOTANIC DESCRIPTION

Albizia amara is a small to moderate-sized, much-branched deciduous tree with smooth, dark green, scaly bark. It resembles the acacias but lacks thorns. Its root system is shallow and spreading.

The leaves are pinnately compound, with 15-24 pairs of small, linear leaflets, on 6-15 pairs of pinnae. The yellow, fragrant and globose flowers are in clusters. They develop when the tree is almost leafless.

Flowers pedicelled, yellow, fragrant, in 12-20 globose heads.

Fruits are oblong pods, about 10-28 x 2-5 cm, light brown, puberulous, thin, and 6-8 seeded; seeds flattened, 8-13 x 7-8 mm.

The genus was named after Filippo del Albizzi, a Florentine nobleman who in 1749 introduced *A. julibrissin* into cultivation. The specific name *amara* is probably the Latin word meaning 'bitter', although the allusion is not clear.

BIOLOGY

The yellow or pinkish-white, fragrant flower heads appear mainly in the rainy season, and the fruits ripen in the cold season.



Albizia amara (Patrick Maundu)

ECOLOGY

A. amara is a strong light-demander, is intolerant of shade, very hardy and shows marked resistance to drought. It has a wide distribution in Africa, occurring from Sudan and Ethiopia southwards to Zimbabwe, Botswana and the Transvaal, growing mainly in sandy woodlands. In India, it is one of the characteristic trees of the dry regions of Tamil Nadu, Andhra Pradesh and Karnataka. The scrub forests in which it is usually found often have thorny species, particularly acacias. The most common associates met are xerophytic species such as *Annogeissus latifolia*, *Boswellia serrata*, *Chloroxylon swietenia*, *Dalbergia paniculata* and *Ziziphus mauritiana*.

BIOPHYSICAL LIMITS

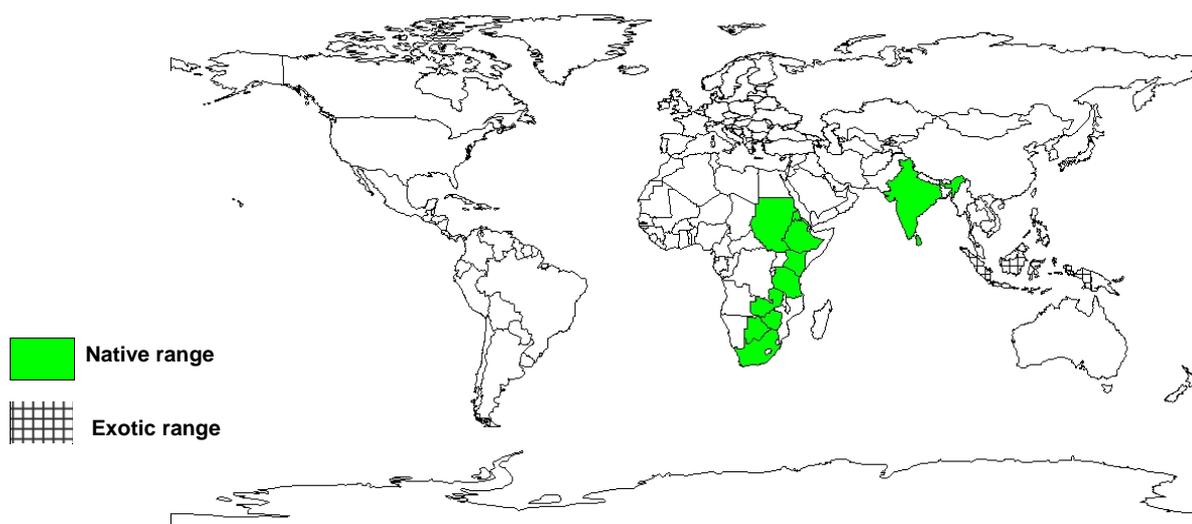
Altitude: 400-1500 m, Mean annual temperature: 10-47 deg. C, Mean annual rainfall: 400-1000 mm.

Soil type: Tolerates clays and is often found near streams, where it can reach more water.

DOCUMENTED SPECIES DISTRIBUTION

Native: Botswana, Eritrea, Ethiopia, India, Kenya, South Africa, Sri Lanka, Sudan, Tanzania, Zambia, Zimbabwe

Exotic: Indonesia



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: Leaves are used as an adulterant for tea.

Fodder: The leaves make excellent fodder.

Fuel: The branches are suited to both firewood and charcoal.

Timber: The wood from this species is darkish in colour, fine grained and hard. It can therefore be used for furniture making, agricultural implements and construction.

Tannin or dyestuff: Tannins may be obtained from the bark.

Poison: It is alleged that the seeds are poisonous.

Medicine: The tree yields a gum used against ulcers; fruits are said to cure malaria and coughs.

Other products: It is reported that soap can be made from the roots and leaves can be used for washing hair.

SERVICES

Erosion control: Its spreading root system makes it a good soil binder, deterring soil erosion.

Shade or shelter: Albizias are popular as shade trees for tea and coffee plantations.

Reclamation: This is a very good species for afforestation of degraded hilly areas in dry and semi-arid tracts in mixture with other species such as *Acacia catechu*, *A. planifrons*, *Anogeissus latifolia* and *Azadirachta indica*.

Ornamental: *A. amara* can be planted in urban areas as an ornamental and avenue tree.

Intercropping: In India, Indonesia and other countries, it is usually incorporated into smallholding, rainfed agriculture and diversified with corn, cassava and fruit trees such as papaya, mango and orange.

TREE MANAGEMENT

Spacing generally adopted is 9-10 m apart along contour lines; plants are thinned when 2-3 m tall in the first year and 5-8 m in the third or fourth year depending on the rate of growth. Young seedlings should be protected from fire and grazing livestock. Though natural thinning is universal, the best shoots left in an unthinned stump are in no way inferior to those on a thinned stump. On this account, therefore, yield of firewood is likely to be greater at the end of the rotation.

GERMPLASM MANAGEMENT

The orthodox seeds can be stored up to 2.5 years without losing viability appreciably. They are best stored in mud pots with wood ash or in sealed tins or gunny bags.

PESTS AND DISEASES

No insects pests of importance have been reported so far; the larvae of *Achaea janata* defoliate, *Bruchus uberatus* damage seeds and pods, and the larvae of *Bruchus schroderi* var. *importatus* also attack the seeds.

FURTHER READING

- Anon. 1986. The useful plants of India. Publications & Information Directorate, CSIR, New Delhi, India.
- Beentje HJ. 1994. Kenya trees, shrubs and lianas. National Museums of Kenya.
- Bein E. 1996. Useful trees and shrubs in Eritrea. Regional Soil Conservation Unit (RSCU), Nairobi, Kenya.
- Coates-Palgrave K. 1988. Trees of southern Africa. C.S. Struik Publishers Cape Town.
- Council for Scientific and Industrial Research (CSIR). 1986. The useful plants of India. Publications and Information Directorate, New Delhi.
- Hocking D. 1993. Trees for Drylands. Oxford & IBH Publishing Co. New Delhi.
- Hong TD, Linington S, Ellis RH. 1996. Seed storage behaviour: a compendium. Handbooks for Genebanks: No. 4. IPGRI.
- ICRAF. 1992. A selection of useful trees and shrubs for Kenya: Notes on their identification, propagation and management for use by farming and pastoral communities. ICRAF.
- Kadambi. 1963. Useful fodder trees and grasses for cultivation in Ghana. The Ghana Farmer. 7(2):77.
- Luna RK. 1996. Plantation trees. International Book Distributors, Dehra Dun, India.
- Mbuya LP et al. 1994. Useful trees and shrubs for Tanzania: Identification, Propagation and Management for Agricultural and Pastoral Communities. Regional Soil Conservation Unit (RSCU), Swedish International Development Authority (SIDA).
- Noad T, Birnie A. 1989. Trees of Kenya. General Printers, Nairobi.
- Palmer E, Pitman N. 1972. Trees of Southern Africa Vol. 2. A.A. Balkema Cape Town.
- Pathak PS, Deb Roy R. 1987. Silvipastoral system for forage production on wastelands. Indian Farming. 10-11.
- Sahni KC. 1968. Important trees of the northern Sudan. United Nations and FAO.
- Storrs AEG. 1995. Know your trees: some common trees found in Zambia. Regional Soil Conservation Unit (RSCU).
- Vogt K. 1995. A field guide to the identification, propagation and uses of common trees and shrubs of dryland Sudan. SOS Sahel International (UK).

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>)