Acacia mellifera

(Vahl) Benth.

Fabaceae - Mimosoideae

LOCAL NAMES
Afrikaans (swarthook,swartaak); Arabic (kitr,kedad,kitir); English (wait-a-bit thorn,black thorn,hook thorn); Ndebele (umngaga,mukotokwa,muguhungu,katogwa); Somali (bilel,laner,lanen); Swahili (kikwata); Tigrigna (tselim kenteb); Tongan (mupandabutolo); Tswana (wynruit,mongana,hakiesdoring,haakdoring,blouhaak)

BOTANIC DESCRIPTION
Acacia mellifera is a low, branched tree with a more or less spherical crown. Black bark on stem becomes ash-grey to light brown on the branches, bearing small, short, sharply hooked spines in pairs. It has a shallow but extensive root system radiating from the crown, allowing the plant to exploit soil moisture and nutrients from a large volume of soil. The roots rarely penetrate more than 1 m.

Leaves characterized by 2 pairs of pinnulae, each with a single pair of leaflets. Leaflets elliptic 0.6-2 cm long and 0.6-1.2 cm wide, glabrous and highly coloured beneath.

Flowers sweetly scented, especially at night, in elongated spikes, cream to white in spiciform racemes, up to 3.5 cm long; pedicels 0.5-1.5 mm long; calyx up to 1 mm long; corolla 2.5-3.5 mm long.

The papery pods with 2-3-seeds are reticulate, flat, elongated, 2.5-5.5 cm long, 6 cm wide, hemmed, sometimes more or less narrowed between the seeds.

The generic name ‘acacia’ comes from the Greek word ‘akis’, meaning point or barb. The specific name means ‘honey-bearing’.

BIOLOGY
Flowering and fruiting start 3 years after planting and generally occur twice a year. Flowers are borne on shoots produced the previous year, that is, old wood. The flowers open and shed before the leaves appear. In southern Africa, flowering occurs from September to November and fruiting from January to April.

Tree habit: A. mellifera ssp. mellifera in the Rift valley, Kenya. (Chris Fagg)

Tree habit: Multistemmed habit of A. mellifera ssp. mellifera close to the Angolan border in Namibia. (Chris Fagg)

Acacia mellifera folliage (Chris Fagg)

ECOLOGY
A. mellifera is a commonly occurring shrub on rangelands throughout the savannah in western, eastern and southern Africa. The terrain preference is rocky hillsides with rainfall along seasonal watercourses, mixed with other trees. If left unattended, especially if grazing is heavy and no fires check its spread, it may form dense, impenetrable thickets, 2-3 m high and sometimes hundreds of metres across, slowly taking over good grazing land. This species is drought-tolerant.

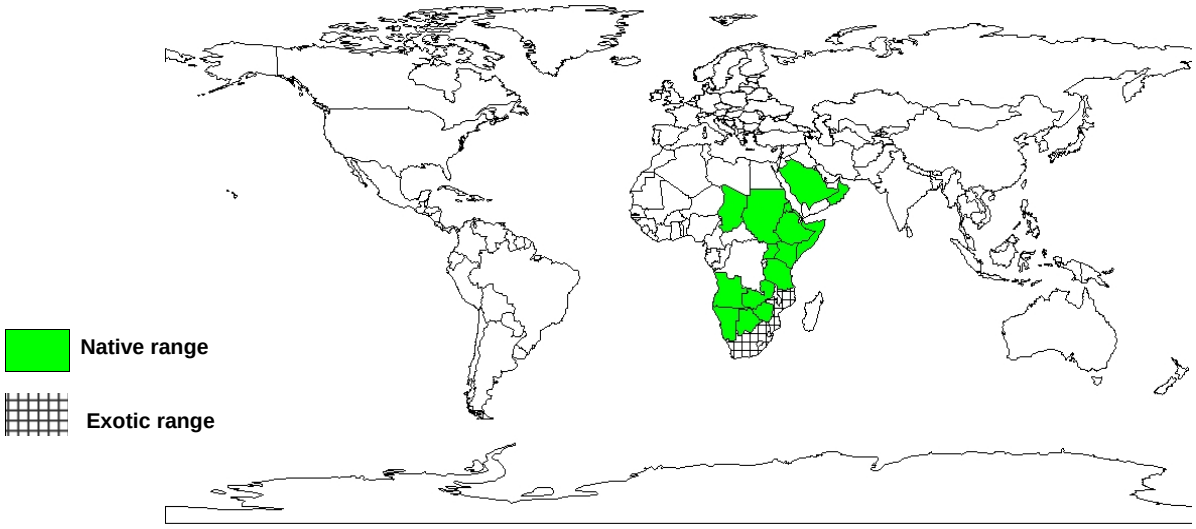
BIOPHYSICAL LIMITS
Altitude: 0-1500 m, Mean annual rainfall: 250-700 mm

Soil type: A. mellifera is normally found on hard-surfaced, sandy soils and rocky hillsides. It grows well in black cotton soils but prefers loamy soils.

DOCUMENTED SPECIES DISTRIBUTION

Native: Angola, Botswana, Chad, Eritrea, Ethiopia, Kenya, Namibia, Oman, Saudi Arabia, Somalia, Sudan, Tanzania, Uganda, Yemen, Republic of, Zambia, Zimbabwe

Exotic: Mozambique, South Africa



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: Gum collected from injured stems is edible and relished by children, animals and birds.

Fodder: Camels and goats browse the leaves, which are rich in protein, taking them from the shrubs or from the ground.

Apiculture: The cream/white flowers produce excellent quality honey ('mellifera' = producing honey). Bees forage in the late morning to mid afternoon when hot and dry.
The honey is water colour and granulates slowly.

Fuel: The wood is used for fuel and charcoal.

Timber: The wood is taken for building huts and the branches for fencing.

Poison: The poison with which Bushmen tip their arrows is often made from a powdered grub mixed with the sap of A. mellifera.

Medicine: The bark decoction is used for stomach-ache, sterility, pneumonia, malaria and syphilis. In Botswana, a decoction of the roots is a medicine for stomach pain.

Other products: In Sudan, baskets made of the roots serve for collecting gum arabic. The bast fibres are used for wickerwork.

SERVICES
Shade or shelter: When pruned regularly, A. mellifera in arid areas provides animals with shade from the hot sun.

Boundary or barrier or support: Makes a good live fence and hedge.

Intercropping: A. mellifera has an aggressive root system, limiting its use in farms with crops.

TREE MANAGEMENT
Young trees are subject to heavy browsing by stock and game and must be protected for the first two seasons. A. mellifera has a moderate growth rate of up to 500 mm/year. It does not coppice well.

GERMPLASM MANAGEMENT
Seed storage behaviour is orthodox; viability can be maintained for several years in hermetic storage at 10 deg. C with 4.5-9% mc. There are approximately 20 000 seeds/kg.

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