

Acacia nilotica subsp indica:

Factsheet (013.10.02)

Botanical name:

Acacia nilotica (L.) Willd. Ex Del.

Synonyms:

Acacia arabica auct.mult., non Willdenow; *Acacia arabica* var. *indica* Benth.; *Acacia nilotica* var. *indica* Hill.

Common names:

Egyptian thorn; red heat, babul (India); kiker, babur (Pakistan); sunt (Arabic)

Family:

Leguminosae

Main attributes

In parts of tropical India and Pakistan, *Acacia nilotica* forests are extremely valuable sources of fuel, small timber, fodder, tannin, and honey. The plant is exceedingly drought tolerant and survives on many difficult sites. In Sindh, it is one of the most important species in social and farm forestry.

Description

Acacia nilotica is a moderate sized tree that grows up to 20m, but this is attenuated by site. It has a flattish or umbrella shaped crown and is easily identified by its bright yellow, sweet-scented flower heads, its sweet-smelling gray pods and its paired whitish spines at the base of each leaf. During the hot season the tree is in full leaf and its feathery foliage provides good shade.

Several subspecies of this plant are recognized. The two most widely grown for fuel are:

- *Acacia nilotica* subsp. *indica* (Benth.) Brenan; and
- *Acacia nilotica* subsp. *nilotica*.

Distribution

Subspecies *indica* is native to Sindh and Punjab areas of Pakistan.

Use as firewood

The wood is very popular fuel in Sindh and large quantities are consumed as a firewood and charcoal. The calorific value of sapwood is 4,800 kcal per kg, while that of heartwood is 4,950 kcal per kg. The wood is heavy (specific gravity, 0.67-0.68) and the trees coppice occasionally.

(Kikar / Babur)

A candidate for being
Provincial Tree of Sindh



Acacia nilotica subsp. *Indica*



Flowers of *Acacia nilotica*



Pods of *Acacia nilotica*

Yield

This is a fast growing tree under favorable soil and irrigation. In cultivation for industrial use, it is harvested on 20 years rotation. The trees add about 2-3 cm in diameter each year. In Sindh, farmers raise plantations of *Acacia nilotica* on their fields locally called "Hurries" and wood is harvested at six year rotation.

Other uses

Wood

The hard, tough wood is resistant to termites, impervious to water, and is popular for railroad sleepers, tool handles and carts. It is an attractive wood, good for carving and turnery, and is still used for boat building. It is one of the best mining timbers in Pakistan. It is widely used for furniture.

Fodder

The leaves and pods are widely used as fodder and, in arid regions of Sindh, constitutes the chief diet for goats and sheep's. Pods contain much as 15% crude protein.

Tannin

The bark and pods are widely used in the leather industry; their tannin content varies from 12-20 percent.

Gum. *Acacia nilotica* is probably the earliest commercial source of gum Arabic.

Environmental requirements

- Temperature. *A. nilotica* trees withstand extremes in temperature, but it is frost tender when young.

- Altitude. The tree grows up to an of elevations of 500 m.

- Rainfall. In general it can survive arid sites but thrives well under irrigation. In contrast, in riverine forests of *Sindh Acacia nilotica* stands are inundated with floodwaters for several months each year.

- Soil. It grows on a variety of soils, even poor ones. It prefers alluvium, but grows well on heavy clay soils as well.

Establishment

Acacia nilotica is generally propagated by seed and rarely by seedlings. Direct seeding is common practice, but the resulting stands can be disappointing because of browsing animals, inadequate soil moisture, or weed competition.

Seed treatment. Fresh seeds can be planted directly, but seeds that have been stored must be immersed in boiling water and soaked. In riverine belt of Sindh, the pods are fed to goats and the scarified seeds are either recovered from the dung, or the goats are confined in the area that is to be reseeded.

- Ability to compete with the weeds. Young seedlings require full sun and frequent weeding.

Pests and diseases

The trees are sometimes affected by wood borers. Bruchid beetles can seriously attack seed in the pods. Pathogenic fungi are also known.

Sources:

- Firewood crops 1980. National Academy of Sciences, Washington, DC.
- Natural vegetation assessment report. 2008. Indus for All Programme, WWF - Pakistan.



Traditional Hurri plantation of *A. nilotica* in Sindh