

Tree Species No. TTS17

Faidherbia albida, Family Mimosaceae (Leguminosae)

F. albida is a large thorny tree, that may reach 31m. The trunk is commonly 6-8m high and is thicker at the base. The bark is light grey and smooth when young, but becomes cracked with age. *F. albida* is characterised by a long, deep taproot that can reach 7m long on seedlings just 5-6cm high. It is valued for its green manure and fodder, it sheds its leaves at the beginning of the rainy season providing nutrients for the new crops and reducing the shade of the canopy. *F. albida* is a nitrogen fixing tree and therefore can enrich the soil and improve crop yields.

Synonyms: *Acacia albida*, *A. gyrocarpa*, *A. leucocephala*, *A. saccharata*.

Common names: Gao, haraz, apple-ring acacia, cadde, faidherbia.

Distribution: It is a Sudano-sahelian species but is also found in the Middle East.

Ecology

Rainfall: 500-800mm. (Extremes of 250mm and 1000mm may be tolerated).

Temperature: 9-42°C. It is sensitive to the cold but may survive temperatures as low as 6°C.

Altitude: Usually 0-3000m. It is grown 270m below sea level in Israel and up to heights of 2500m in Sudan.

Soil type: Will succeed on most soil types but will not tolerate lateritic or waterlogged soils.

Other notes: It is usually associated with the presence of ground water above 15m.

Botany

Height: Usually between 15-25m but may reach 31m.

Diameter at breast height: 1m (maximum 2m).

Crown: Umbrella shaped when mature and pyramidal when young.

Flowers: 7-10cm, fragrant and creamy white.

Fruit: The seeds are encased in thick, twisted and brittle pods that are 10-15cm long.



Uses

Main: Crops are often planted beneath the canopy of *Faidherbia albida*, where it provides a useful green manure, the leaves fall at the start of the rainy season and quickly decompose to provide nutrients for the soil. The canopy is bare during the rains reducing the light competition with the growing crops.

The leaves are a useful fodder providing a steady supply of food throughout the dry season. The pods are also a highly palatable and nutritious fodder, providing a useful food source at the end of the dry season when other animal foodstuffs may be sparse.

Others: Fuel, the production of tools and implements, tannin, soaps, medicine and dugout canoes.

Yield: 120-140kg pods/tree/year can be expected

Cultural instructions

Seeds: There are 10-20 oval seeds per pod ranging from 6-12 x 4-8mm in size. The seeds are protected by a waxy cuticle and therefore can remain viable for several years.

Pre-treatment: To improve germination nick the seed coats or soak in water at 80°C for 5 minutes. The seeds can also be activated by passing through the digestive systems of animals.

Nursery: Select seeds from the most healthy trees that are free from disease and plant approximately 3 per poly bag. At one month remove two of the seedlings so that the most vigorous and successful remains.

Planting out: Direct sowing can be advantageous because it avoids damage to the tap root, however mortality rates can be high.

Spacing: 10x10m but thin out once the canopy closes.

Management: Protect from trampling because the seedlings are small and fragile.

Other

Pests and diseases: *Cryptoditia conifera* can cause damage to the foliage and *Pachymercus longus* may attack seeds.

Limitations: The wood is vulnerable to termite attack. The seedlings are spindly when young.

Produced by the Tropical Advisory Service, December 2002

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