

LOCAL NAMES

Gujarati (khaiger); Hindi (khaiger, kanta chira, kaigu, banni, ansandra); Nepali (khour)

BOTANIC DESCRIPTION

Acacia ferruginea is normally a smallish, drought-resistant, deciduous tree, not more than 12 m tall and 50 cm DBH. Commonly attaining 35 cm DBH with a bole rarely straight for more than 2-3 m. Branches slender, armed with conical prickles; spine persist on bole until it reaches about 15 cm DBH. Twigs are zigzag at nodes, wiry, glabrous, green or reddish. Primary roots are long, thin, tapering, wiry, yellow to brown.

Leaves alternate; prickles twin, infra-stipular, slightly curved. Common petiole 7-15 cm long; pinnae 4-6 pairs; leaflets 15-30 pairs, grey to glaucous (almost white when dry), linear, 0.6-1.25 cm long.

Flowers pale yellow in numerous lax axillary spikes about 14 cm long, which are often paniced at the end of the branches. Corolla white, glabrous, 2-3 times as long as the calyx.

Pods glabrous, 7-18 x 2-2.5 cm, contain a dry sweetish pulp, dark brown and pinnately dehiscent, 3-7 seeded.

Seeds 0.5-0.7 x 0.35-0.5 cm, flat ovate, oblong, distinctly stalked, and this is a diagnostic feature, greenish to brown.

The generic name 'acacia' comes from the Greek word 'akis', meaning point or barb.

BIOLOGY

In India, flowers appear from March to May when the tree foliage is very scanty; pods ripen from November to February.

ECOLOGY

A. ferruginea is found in the Peninsular India, from Gujarat to Gunjam in the east. It is occasional in the scrub in Southern interior and occurs in the dry forests of Sri Lanka.

BIOPHYSICAL LIMITS

Altitude: 150-1 500 m

Mean annual temperature: Up to 40 deg C

Mean annual rainfall: 350-750 mm

Soil type: The preferred soils are loose and friable, as of cultivated fields, ranging from heavy black vertisols to light, gravelly alfisols. It also survives in shallow stony soils around boulder outcrops.

DOCUMENTED SPECIES DISTRIBUTION

Native: India, Nepal, Sri Lanka

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

Fodder: Leaves are lopped for fodder.

Timber: Wood is very heavy (1120-1168kg/Cubic M), straight grained and very coarse-textured. Sapwood is thick; yellowish white. Heartwood is olive-brown, turning darker with age. It can be seasoned well with considerable care. The wood is mostly used in cartwheels, posts, beams and agricultural implements.

Alcohol: The bark is steeped in jaggery and then distilled, yielding intoxicating liquor

Medicine: A bark decoction, in conjunction with ginger is frequently used as an astringent for the teeth.

SERVICES

Nitrogen fixing: *A. ferruginea* is a nitrogen-fixing species.

Intercropping: Various arable crops from ground nuts and sorghum are grown with the trees. It has been observed that this tree does not interfere with the growth of trees in the farm. In some crops there is even an apparent advantage when grown under the canopies of such trees.

Other services: Lac insect feed on this tree.

TREE MANAGEMENT

It coppices and pollards well up to a moderate age; less when old. It is a traditional practice in India to retain the old growth or new growth of *Acacia ferruginea* in the middle of cultivated land. Tree densities of 50-70/ha are common. The saplings grow slowly in open grazing lands due to browsing, but they grow fast on field bunds and in loose soils of cultivated areas.

Farmers recognize and protect the naturally propagated saplings in their fields, due to the trees religious significance.

GERMPLASM MANAGEMENT

Seeds weigh about 5 900/kg. They germinate freely without any pre-treatment and retain viability for about 1 year if stored properly in pest-free conditions.

FURTHER READNG

Brandis D. 1984. Indian trees. BSMPS, Dehra, India.

Hocking D. 1993. Trees for Drylands. Oxford & IBH Publishing Co. New Delhi.

Singh RV. 1982. Fodder trees of India. Oxford & IBH Co. New Delhi, India.

Suresh G and Rao JV. 1999. Intercropping sorghum with Nitrogen fixing trees in semiarid India. Agroforestry systems. 42:181-194.

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/>)