



PLANT FACT SHEET

Ziziphus mauritiana Lamarck

GENUS *Ziziphus* FAMILY Rhamnaceae

COMMON NAMES Jujube tree, Indian Jujube

EDIBLE PARTS AND USES

Edible parts: Fruit, Leaves, Seeds

The ripe fruit is eaten raw, dried, in jelly or candied. They can be used in jellies, preserves, chutney, sauces, and drinks.

The unripe fruit are pickled. The ripe fruit are sliced or pounded and sun dried for storage.

Young leaves are cooked and eaten. They are also used in soups.

Seed kernels are eaten. The roasted seeds are used as a coffee substitute.

The fruit are used to make an alcoholic drink. Caution: Alcohol is a cause of cancer.

DESCRIPTION

A medium sized tree. It is thorny. It loses many of its leaves during the year. It grows up to 10-12 m high. The bark is grey, brown or pale red. Branches and the under surface of the leaves are densely hairy when young. The thorns arise from the base of the leaves. The leaves are alternate and simple. They are finely toothed. They can be oval or round and 8 cm long by 5 cm wide. The flowers are green and have a scent. They occur as 3-5 flowers together. The flowers are 1-2 cm long and on slender branches. The fruit are small, oval and yellow or brown. They are sweet. They are 2-5 cm long and 2.5 cm wide. The fruit are green when young and turn yellow or brown when ripe. The pulp is fleshy, acid and edible. The fruit have one seed imbedded in the flesh in a hard stone. The fruit wrinkle on drying. Many varieties exist.

HABITAT

A tropical plant. It grows well on sandy soils. It can survive droughts. It grows rapidly in dry places such as the Sahel. It can tolerate temperatures up to 44°C as well as periodic frosts once the trees are mature. It does best when the mean annual temperature is 22-30°C. It thrives in hot dry climates and arid zones. It grows in the Sahel. It needs adequate water during the fruiting season. It can grow at elevations up to 1,000 m in the tropics but does best below 600 m. It suits the lowlands. It grows in areas with rainfalls of 150-900 mm and is most common where rainfalls are 300-500 mm annually. It does not like excessive humidity for fruiting. It will grow on a range of soils but deep sandy loams with a pH of 7 or slightly higher are best. It can tolerate some salinity and water-logging. It can grow in arid places. It grows in Miombo woodland in Africa. In Sichuan and Yunnan.

PRODUCTION

Cultivation

Plants are grown from seed. The hard seed coat makes them difficult to germinate. The shell can be carefully cracked and seed should be sown fresh. They can be soaked for 50 hours or put in concentrated sulphuric acid for 6 minutes to improve germination. Seed can be sown in plastic bags then transplanted after 18-24 weeks. It does not transplant easily so direct planting is best. Grafting and inarching can be used. It is also budded onto the rootstocks of wild species. Light pruning during the dry dormant season to train the tree is recommended. Regular pruning in the hot dry season encourages new growth. A spacing of 6-12 m is recommended. For larger fruit better varieties are grafted into rootstocks of *Ziziphus nummularia* or *Ziziphus jujuba*.

Harvesting and Seed Production

A budded tree fruits are 4 years and produces for 50 years. Seedling trees take a year longer to fruit. Yields of 80-130 kg of fruit per tree per year occur. Fruit development takes 4-6 months. As fruit does not all ripen at once several harvests are needed. Unripe fruit do not ripen after picking. In northeastern India trees flower between September and November and fruit in December and January.

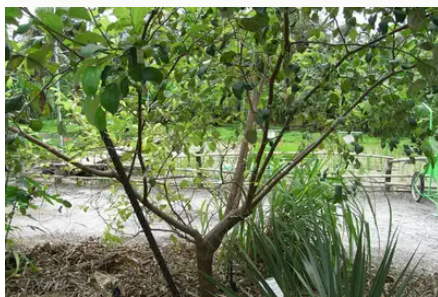
NOTES

It is classified as a weed in Queensland. It has been badly affected by a mite in Kuwait but resistant types are available.

PICTURES



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



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