PLANT FACT SHEET

Garcinia mangostana L.

GENUS *Garcinia* **FAMILY** Clusiaceae

COMMON NAMES Mangosteen

EDIBLE PARTS AND USES

Edible parts: Fruit, Seeds

Fruit is best eaten fresh. It is the arillus or layer around the seeds which is eaten. They are also cooked and used in desserts.
The seeds are eaten after boiling or roasting. They can be ground to produce a vegetable butter.

DESCRIPTION

A medium sized tree 10-20 m high with bright glossy leaves. Trees keep their leaves all year. Leaves are 15-25 cm long and leathery. Male and female flowers are on separate trees. Commercial trees only have female flowers. Male trees occur but are rare. Flowers are produced on shoots near the end of branches. Female flowers have 4 cream petals and 4 sepals and a round ovary with a thick stigma composed of 4 to 8 lobes. No pollination is required because fruit develop without fertilisation. The fruit is dark blue with 4-8 white juicy segments inside the thick skin. Each segment is enclosed in fine pinkish veins. It is 8 cm across and has flower sepals attached to the stalk end. It leaks yellow sap from wounds. Fruit is produced on side branches near to the tips of the main branches. Fruit often have no seeds or up to 2. These are not true seeds but they will grow.

HABITAT

It is a tropical plant. It needs a hot humid climate (25°C to 35°C). Temperatures below 5°C will kill the plant and temperatures below 20°C slow growth. It grows from sea level up to 1000 m altitude in the equatorial tropics although they grow very slowly at this altitude. It can stand light shade. It often does not do well with sea breezes, and needs protection from wind. It cannot tolerate drought. It needs fertile soil. Good fertility enables earlier bearing. It suits high rainfall areas over 2500 mm per year. It cannot tolerate alkaline soils. It needs a pH between 5.5-6.8. It grows between 10°N-10°S. It suits hardiness zones 11-12.

PRODUCTION

Cultivation

Trees breed true from seed because they are produced asexually. This means trees are very uniform. As well some seeds can produce more than one seedling. They germinate between 10 and 54 days. Seeds need to be fresh (less than 5 days after extraction) and undamaged, and cleaned of pulp. They quickly lose their viability. Transplanting is done with care after 2 years. Long tap roots make this difficult. Young trees require shade during

hot weather. The slow early growth is because the original roots of the seedling are replaced by new roots from the base of the stem. A spacing of 7 - 10 m suits. Grafting onto vigorous root stocks is difficult. It has been performed on Garcinia tinctoria. Budding, cuttings and layering have been unsuccessful.

Harvesting and Seed Production

Trees are slow growing and begin to bear after 8-20 years. Fruit are produced on shoots which are more than two years old so pruning is unnecessary. Fruiting is seasonal once or twice a year. Often more fruit are produced every second year. The main fruiting season is November to March. Fruit need to be harvested when mature and ripe. Fruit can only be transported with difficulty. They can be stored under refrigeration. (10°C for up to eight weeks). Between 500 to 1500 fruit are produced per tree. Fruit are best opened by cutting the skin around the middle to prevent tannins from the skin spoiling the flavour. Fruit can be stored for 3 weeks if undamaged.

NOTES

There are about 300 Garcinia species.
Correct name is probably Garcinia x mangostana L.

PICTURES



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)

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