



## Carambola

Gerry McMahon, Senior Technical Officer, DPIFM Darwin

**Name:** Carambola, star fruit, five-corner, bilimbing, Yang Tao *Averrhoa carambola* (Oxalidacea).

**Origin:** Malaysia/ Indonesia.

**Distribution:** Malaysia is the major producer but carambola is widely grown across the world in the zone from 30°N and 30°S of the equator.

**Australian Distribution:** Carambola is grown in northern NSW, coastal Queensland and around Darwin in the NT.

**Preferred Climate and Soil Types:** Carambola prefers a wet, humid climate or climates with a distinct dry season. It likes a well-drained, clay-loam soil with a pH of 5.5 – 6.5 and will withstand some waterlogging. It cannot tolerate drought conditions or salt.

**Description:** It is a medium sized tree that will grow to 6-8 m but is usually kept much shorter for tree management. The attractive pink/mauve flowers form along all branches including some on the main trunks. The fruit has a distinctive shape with predominantly five “wings” on each fruit, hence the name, five-corner fruit. When cut into slices the characteristic star pattern emerges.

**Varieties:** The material imported into Australia can be grouped into two types with long and short styled flowers. Flowers with a short style need a long style variety to achieve pollination. Long style flowers are self-compatible.

The cultivars B2, B10, B11 and Fwang Tang are currently being grown commercially with some local selections performing well. Carambola can be grown from seed but the quality of the fruit produced by seedlings is usually poor and inconsistent. Grafted trees are recommended.

**Culture:** Carambola trees stay active all year in the tropics and need a regular supply of water and NPK + trace elements and calcium fertilisers. Fruit size and quality is quickly affected by drought stress and nutrient deficiency. Regular pruning is necessary to maintain tree size and allow light and air penetration. The trees respond very well to heavy pruning, often flowering again immediately after pruning. In the Northern Territory nets are needed to protect the trees from bird damage.

**Pests and Diseases:** Sulphur-crested cockatoos can destroy entire crops and damage the smaller branches of carambola trees. Permanent bird netting is recommended in the NT to protect the year-round production. Nets also help to reduce fruit sucking moth damage. Insect pests include fruit fly, fruit sucking moth, fruit eating caterpillars, green vegetable bugs, flatids and red-banded thrip. Treatments for all insect pests are available from DPIFM. Disease is not a big issue in the NT.

**Fruiting Season:** Fruit is produced all year round in the Darwin rural area. There is a slight drop in production during the cool period May/ June but it is not uniform across the region. Queensland on the other hand has distinct fruiting periods, which have the effect of lowering southern market prices for those periods. In a backyard situation for the Darwin region the trees will flower and fruit all year if watered regularly and fed every three months with an NPK fertiliser.

### DEPARTMENT OF PRIMARY INDUSTRY, FISHERIES AND MINES

Crops, Forestry and  
Horticulture Division

GPO Box 3000

Darwin NT 0801

Tel: 08 8999 2357

Fax: 08 8999 2049

Email: horticulture@nt.gov.au

Web: www.horticulture.nt.gov.au

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**Harvesting:** Carambola fruit is picked mature and harvested by hand to protect it from rough handling. The wings are easily damaged which makes the fruit unsaleable. The fruit is treated for fruit fly, cleaned and packed into trays and sent by surface or air transport to southern markets. Care is taken in the packing process to protect the wings from damage during transport. The fruit is picked when there is a tinge of yellow showing on the fruit called yellow/green fruit or slightly more mature as green/yellow fruit. Full yellow fruit is too ripe to send to market.

**Storage Conditions:** The fruit stores well in refrigerated conditions. Fruit can be stored for up to five weeks at 10°C and for 10 weeks at 5°C, without loss of flavour.

**Culinary Use:** Carambola is most commonly eaten as a fresh fruit that is very high in potassium and vitamin A and has good levels of iron and vitamin C. There is some astringency associated with the points of the wings, which can be removed during preparation of the fresh fruit. Cut into stars or wings, it is used to decorate salads and desserts and carambola makes a delicious fruit juice.

Refer to Carambola Preparation Information Sheet – IO8.