



Mango

Greg Owens, Senior Extension Officer, DPIFM Darwin

Name: Mango *Mangifera indica* L. (Anacardiaceae).

Origin: India Burma region.

Distribution: Between Tropics of capricorn and cancer and extending into the sub-tropics.

Australian Distribution: Queensland (mainly around Mareeba, Bowen and Ayr), Northern Territory (Darwin and Katherine regions), Western Australia (mainly Kununurra and to a smaller extent in Broome), Northern New South Wales.

Preferred Climate and Soil Types: Mango can be commercially grown in tropical and sub tropical climates. Temperature and rainfall have profound effect on its commercial culture. It prefers dry cooler conditions for flowering and warm and rain-less conditions during fruit development and maturity. It cannot with stand frost. Mango can be grown in a wide range of soils provided they are well-drained. Sandy loams are preferred.

Description: A perennial, evergreen tree, commercial varieties can grow up to 20 m tall with a round crown. The tap root is long with a set of dense superficial root system and another set of deeper root system closer to the water table. Leaves are alternate and appear in flushes. Inflorescence is a panicle consisting mainly of two types of flower - male (staminate) and bisexual (hermaphrodite). Total number of flowers varies from 1000 up to 6000 per panicle. Sex ratio varies with varieties and environmental conditions, especially temperature. A high sex ratio in favour of hermaphrodite flowers is desirable for higher initial fruit set. Fruit is a fleshy drupe. Fruit size, colour taste and flavour vary greatly with variety.

Varieties: There are a number of varieties grown commercially for different markets. These can be grouped into two distinct types of varieties, monoembryonic and polyembryonic. The Australian industry is largely based on a single polyembryonic variety, Kensington Pride. Other varieties grown on a smaller scale are Keitt, Irwin, R2E2, Nam Dok Mai, Calypso and Honey Gold. Research is in progress to evolve improved varieties for different markets. One variety recently released from the NT is 'Celebration'. Its features are attractive fruit colour, regular bearing, freedom from sap burn and mild flavour. Research is also in progress to test existing varieties for different markets.

Culture: Grafted plants are used for commercial plantings because they are true to type, less vigorous, and more precocious than seedling trees. Trees are normally planted at 10 x 10 m spacing (100 trees/hectare). Higher density planting with closer spacing is also practised and requires a more intensive management system of tree canopy with mechanical pruning. Trees commence fruiting within two years and commercial harvest is achievable after three years. Young trees are watered regularly for establishment. Bearing trees are watered from flowering to completion of fruit development.

**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

Disclaimer:

While all reasonable efforts have been made to ensure that the information contained in this publication is correct, the information covered is subject to change. The Northern Territory Government does not assume and hereby disclaims any express or implied liability whatsoever to any party for any loss or damage caused by errors or omissions, whether these errors or omissions result from negligence, accident or any other cause.

Pests, Diseases and Disorders: Thrips, scales, leaf and flower- eating caterpillars, plant and leafhoppers and fruit flies are some important insect pests. Anthracnose, stem end rot and scab are important diseases. Sap burn from the caustic sap at the time of harvest is a serious limitation with variety Kensington Pride. Stem end cavity is a physiological disorder commonly noticed in late harvested fruit. Refer to the illustrated field guide on Pests, Diseases and Disorders of Mangoes in the Northern Territory, available from DPIFM Publications, phone (08) 89992313. For more details on pests go to <http://pestinfo.nt.gov.au/>

Fruiting Season: The Northern Territory supplies the earliest mangoes to the domestic market. Commercial harvests extend from early September to December.

Area	Sept	Oct	Nov	Dec	Jan	Feb	Mar
Darwin (NT)							
Katherine (NT)							
Kununurra (WA)							
Burdekin (Qld)							
Mareeba (Qld)							
Central/Southern (Qld)							
Northern (NSW)							
Carnavon (WA)							

Harvesting, Grading and Packing: Mango is a climacteric fruit and is harvested when mature but still hard green. A wide range of maturity indices are used. These are flesh dry matter, fruit size, shape at the stalk end, change in appearance of beak and change in fruit colour and heat sums. Fruit dry matter is a very reliable index and makes use of increment in the dry matter of flesh at fruit maturity as an index. A range of harvesting techniques are used. These include secateurs and picking poles in smaller orchards and mechanical harvest aid in large-scale commercial orchards. Great care has to be taken to prevent flow of the caustic sap from the stem end onto the fruit at and soon after harvest. This is achieved by de-sapping the fruit on racks or by washing the fruit in detergents. Management of fruit fly infestation and post harvest rots is important for marketing and storage of fruit and is achieved by chemical dips/sprays before grading and packing the fruit.

Storage Conditions: The storage and transport temperature is very important for fruit quality. Ideal temperature is between 15 to 18°C.

Culinary Use: Mango is consumed in a number ways. Immature fruit is pickled or made into chutney. Besides its popularity as a fresh fruit, the ripe fruit can be canned as slices, preserved as nectar or juice or dried. Mango pulp is used in milk shakes, ice creams, yogurts and breakfast cereals. A unique fruity liqueur is also made from mango pulp.