

# Mangosteen

*Garcinia mangostana*



Common names	Manggis, manggustan, mongkhut, cay mang cut, manggustan, Queen of fruits.
Origin	Place of origin is unknown but is believed to be from the Sunda Islands and the Moluccas; still, there are wild trees in the forests of Kemaman, Malaysia. Belongs to Clusiaceae family.
Description	The mangosteen is dark purple when ripe, but the rind cannot be eaten. The inside of the mangosteen is edible, it's actually the ovary of the fruit which looks like the inner segments of a tangerine but white in colour. It tastes both sweet and tangy and is juicy and fibrous.
Growth Habitat	Mangosteen is a lowland humid tropical forest tree. An equatorial climate, a high even temperature with high humidity, is ideal. A temperature range from 20°C to 33°C is desirable.

Foliage	The evergreen, opposite, short-stalked leaves are ovate-oblong or elliptic, leathery and thick, dark-green, slightly glossy above, yellowish-green and dull beneath; 9-25 cm long, 4.5-10 cm wide, with conspicuous, pale midrib. New leaves are rosy.
Flowers	The flowers are borne singly or in pairs at the end or on the terminal raceme on the outer canopy. Although perfect flowers are borne, they are effectively unisexual since pollen is not produced at any stage. The flowers are large and creamy-yellow in colour with a red tinge.
Fruits	The young fruit is yellowish until it ripens to red crimson, deepening to a dark brown, purple or a deep purple-black colour. Mangosteens are a round fruit with flattened ends, about 4-8cm in diameter, weighing approximately 80-150g. It takes between 100 and 160 days from flowering to fruit maturity depending on the temperature.
Soil	The tree is not adapted to limestone and does best in deep, rich organic soil, especially sandy loam or laterite. The mangosteen must be sheltered from strong winds and salt spray, as well as saline soil or water.
Pruning	Following harvesting of fruit, any suckers and dry panicles are removed to promote healthy and vigorous regeneration of the crown. Any large cut surfaces should be treated with a bituminous paint.
Fertilization	Mangosteen are low maintenance trees. The fertilizer requirements are low for young trees. Mature bearing trees will need greater fertilizer inputs to ensure high yields. 0.5kg of N:P:K 15:15:15 for the first year, 1kg for the second year 3 times/year. 3 to 8 years N:P:K:Mg 12:12:17:2 1.5kg increasing to 6kg 3 times/year.

Propagation	Propagation by seed. Plant seed as soon as possible after extraction. Make sure all the pulp is removed from the seed. Larger seeds (greater than 1.0 g) are generally preferred.
Harvest	The mangosteen is best picked at a uniform red stage. Picking the fruit at a fully ripe purple colour makes it prone to damage during packing and transport.
Nutritional Properties	Mangosteen has fair amount of calcium, magnesium, phosphorus and potassium. Contains more than 40 biologically-active, natural chemical compounds called Xanthones. Alpha-mangostin, for example, is a very potent antioxidant. Gamma-mangostin is a powerful anti-inflammatory. Garcinone E is a strong anti-tumor agent. Mangosteen also contains other potent natural compounds like catechins, polysaccharides, quinones, stilbenes and polyphenols.
Health Benefits	<p>A mangosteen contains some of the most potent antioxidant, anti-inflammatory, antiviral, antibacterial and anti-fungal compounds in nature.</p> <p>Here are some of the healing properties of mangosteen:</p> <ul style="list-style-type: none"> <li>• Anti-aging - helps prevent aging</li> <li>• Anti-allergenic - helps prevent allergic reactions</li> <li>• Anti-arthritic - helps prevent arthritis</li> <li>• Anti-atherosclerotic - helps prevent the hardening of the arteries</li> <li>• Antibiotic - prevents or modulates bacterial infections</li> <li>• Anti-calculitic - helps prevent kidney stones</li> <li>• Anti-cataract - helps prevent cataracts</li> <li>• Antidepressant - helps with depression</li> <li>• Anti-diarrheal - helps with diarrhea</li> <li>• Anti-fatigue - helps relieve fatigue</li> <li>• Antifungal - prevents or modulates fungal infections</li> <li>• Anti-glaucomic - helps prevent glaucoma</li> <li>• Anti-Inflammatory - helps with inflammation</li> </ul>

	<ul style="list-style-type: none"> <li>• Anti-lipidemic - helps lower blood fat</li> <li>• Anti-neuralgic - helps in nerve pain</li> <li>• Anti-obesity - helps in weight loss</li> <li>• Anti-osteoporosis - helps prevent the loss of bone mass</li> <li>• Antioxidant-rich - rich in antioxidants</li> <li>• Anti-oxolytic - anti-anxiety</li> <li>• Anti-Parkinson - helps with Parkinson's disease</li> <li>• Anti-periodontic - helps prevent gum disease</li> <li>• Antipyretic - helps lower fever</li> <li>• Anti-tumor and cancer-preventive</li> <li>• Anti-vertigo - helps prevent dizziness</li> <li>• Antiviral - prevents or modulates viral infections</li> <li>• Cardio-protective - helps in the protection of the heart</li> <li>• Hypoglycemic - helps stabilize blood sugar</li> <li>• Hypotensive - helps lower blood pressure</li> <li>• Immunostimulant - helps the immune system fight infection</li> </ul>
Commercial Uses	<p>The fruit rind is ground and used in the treatment of diarrhea and dysentery, and for skin diseases. A tea made from the leaves and bark is used to lower fever and for urinary disorders.</p>
Food Suggestion	<p><b>Vietnamese Mangosteen Salad Recipe ( Goi Mang Cut )</b></p> <p><u>Ingredients (serves 4) :</u></p> <ul style="list-style-type: none"> <li>• 4 mangosteens</li> <li>• 200g shrimps, boiled, shelled .</li> <li>• 200g pork belly(or lean pork), boiled, cut into threads</li> <li>• 50g shredded dried squid</li> <li>• lettuce, vietnamese herbs</li> <li>• 2 lemon</li> <li>• 2 tablespoons sugar</li> <li>• For the sauce:</li> <li>• 4 tablespoons mayonnaise sauce</li> </ul>

- 1 tablespoon chilli sauce
- 1 tablespoon tomato sauce
- 1 tablespoon cooking oil

Method :

Combine : mayonnaise + chilli sauce + tomato sauce + cooking oil. Set aside.

Using a sharp fruit knife, cut through the skin of the mangosteen in a circle around the centre of the fruit. Only insert the knife deep enough to get through the skin. Once you feel that the knife has reached the cavity containing the flesh, don't cut any deeper as you will be cutting into the flesh. With a fork, pick out the white flesh.

In a salad bowl, Marinate all the remaining ingredients with sugar and lemon juice. Transfer to serving dish. Top with the sauce. Served with shrimp crackers.