

Pitaya (Dragon Fruit)

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Name: Pitaya (Dragon fruit) *Hylocereus undatus* (Cactaceae).

Origin: Pitaya is a tropical cactus from the rainforests of Central and Northern South America.

Distribution: Pitaya is commercially grown in Central America, from Mexico and Texas to Peru and Argentina. Vietnam is also a big commercial producer of Pitaya since it was introduced by the French 100 years ago. It is also grown in Israel and Australia.

Australian Distribution: Pitaya was originally introduced into Queensland in the early 1980's. It is now grown Queensland, the Northern Territory, and parts of Western Australia and New South Wales.

Preferred Climate and Soil Types: The Pitaya prefers a dry tropical climate with an average temperature of 21-29°C, but can withstand temperatures of 38-40°C, and as low as 0°C for short periods. Rainfall requirements are 600-1300 mm with alternating wet and dry seasons. They like lots of sunshine, but can be damaged by high levels of light intensity so require some shading. There is a positive response in growth to organic matter and the sand content of the soil.

Description: Pitaya is a segmented, vine-like crawling cactus with aerial roots. Being an epiphyte, it clings to its support and can obtain nutrients from cracks where organic material concentrates. The fleshy succulent stems are three sided (occasionally 4 or 5) and lobed along the ridges, which have small swellings equipped with short spines.

Flowers appear from these swellings and are large, perfumed, ivory white with yellow centres containing a large number of stamens. The flowers open in the evening and are finished in the early morning, lasting only one night. They are very spectacular and have earned the name moonflower or Queen of the night. Fruit are large, between 150-600 g and brightly coloured pink, crimson or red with fleshy green scales. The flesh is white or red with many tiny black seeds.

Varieties: There are no varieties in the proper sense, but there are many clones which can differ in the stem type, colour, fruit shape, skin thickness and scale expression. There are however two different species, *H. undatus* which has white flesh and *H. polyrhizus* which has red flesh.

There are also several other fruiting cactus genera that are called 'pitaya' one of these is *Selenicereus megalanthus* which has smaller fruit with yellow skin, white flesh and clusters of spines on the fruit that brush off when ripe.

Culture: Pitaya is best grown from healthy green cuttings, as seedlings are very slow growing and are unreliable producers. Cuttings of 30-50 cm are cured in a dry place for a couple of weeks, and then potted into a free-draining mix. They require shade and minimal water until roots have developed.

Once this has occurred they can be sun hardened and a week foliar fertiliser spray can be applied. When they have developed a shoot they can be planted out into a well-drained mound of sand and organic material.

A wooden or concrete post is used for support, with a wooden frame at the top to train the branches over. A single stem is grown up the post then allowed to branch and hang down over the frame. When the branches hang they will flower, which is about 12-15 months after planting the cutting. A balanced NPK fertiliser every three months is suggested, with an annual application of lime and organic material.

Pests and Diseases: Many pests are known to attack cacti, and around Darwin, meat ants, ginger ants, caterpillars and mites have been recorded as causing damage. A watery rot has also been recorded if conditions are too wet or the plant has suffered injury.

Regular monitoring of plants and appropriate control measures applied will reduce the problems. Birds have also been known to eat the ripe fruit.

Fruiting Season: In Darwin the fruiting season extends from September to March.

Harvesting: Current research into fruit maturity indicates that the optimal harvest time for local markets is 28-30 days after flowering.

Storage Conditions: Pitaya should be stored at 7-10°C and 90-98% relative humidity, and can be stored for 2-3 months.

Culinary Use: The fruit is generally eaten fresh, it can be chilled and cut in half to reveal the attractive flesh and either sliced or scooped out with a spoon. The delicately sweet flesh is crisp and refreshing, and can also be used in fruit salads, marmalades, jellies, ices and soft drinks.