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CULTIVATION OF PASSION FRUIT (*Passiflora edulis* Sims)

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Introduction

The passion fruit belongs to the family Passifloraceae, of which there are about 600 species. Of these, *Passiflora edulis* Sims is the only one described as the passion fruit. There are more than fifty varieties of passion fruit, which are grown in many tropical and sub-tropical climates around the world. The passion fruit varies in colour, with purple and yellow being the most common types found. The passion fruit plant is a vigorous, climbing vine that twines around almost any support it comes in contact with. Once established, the vines can grow from fifteen to twenty feet each year. The vines need a strong support and can last between five and seven years.

Propagation

The passion fruit is normally propagated from seeds, which usually germinate within two to three weeks. The seeds are planted in potting soil to a depth of about half an inch and are transplanted when they reach a height of about ten inches. If taller plants are transplanted these can be cut back to about a foot in length. The transplanted

passion fruit plants must be well watered and protected from direct sunlight and strong winds until they become accustomed to the open environment.

Soil Preparation

The passion fruit thrives in many different soil types, but light, sandy, acid soils with a pH range of 6.5 to 7.5 are most suitable. The limestone soils of the Bahamas tend to be strongly alkaline, in the range of 7.9 to 8.3 pH. Organic material, such as degraded vegetation, humus and animal manures, need to be added to reduce the pH and enrich the soil. The passion fruit vines are shallow rooted, so a thick layer of organic mulch is beneficial. Good drainage is also important.

Planting and Trellis Support

The passion fruit vine will need some strong support to climb upon. The vine may be encouraged to spread along a galvanised fence line or it may be allowed to climb upon an established tree. A trellis-like structure can be built to support the vine growth or wiring or mesh can be attached along a wall for the vines to wind themselves around. At right, a derelict satellite dish is used as a trellis for passion fruit vines.



Irrigation

The passion fruit vines should be watered regularly, as this will allow the vines to flower and fruit almost continuously. As the fruits mature, they will require lots of water. If the soil is dried out, the fruits may wither and drop before they are ripened.

Fertilisers

The passion fruit grows very rapidly and requires fertilising to maintain a healthy, vigorous plant. A commercial N-P-K fertiliser, such 8-18-8, should be applied about three or four times per year at a rate of 2-3 pounds per plant. The granular fertiliser should be worked into the soil around the root zone of the plant and watered. Cured animal manure may be used as fertiliser, but one must be careful of too much nitrogen as this may result in the growth of lush foliage at the expense of flowering and fruiting.

Pruning

The vines might require some pruning from time to time to prevent their spreading on top of other important trees and to generally keep the vines within limits. Major pruning of the vines should be done immediately after the harvest season.

Pests and Diseases

The passion fruit is susceptible to a wide range of pests and diseases. Snails are a problem, particularly among the younger plants. They strip the bark and leaves off the vines, making the plants vulnerable to diseases. Commercial snail bait can be sprinkled around the base of the plants to alleviate this problem. Bacterial spot, fusarium wilt, anthracnose and scab are the most important diseases of passion fruit and can be controlled with commercial fungal and bacterial sprays. Insect pests include fruit flies, aphids and mealybugs. Commercial insecticides can be applied, but care must be taken not to kill off beneficial insects during pollination of flowers. Homemade pesticide remedies such as a cup vegetable oil in a gallon of water can be used to suffocate small insects, insect larvae and eggs.



Harvesting

The fruit turns quickly from green to yellow or purple, depending upon the variety, and fall off the vine within a few days. The fruit can be picked on a daily basis, as this plant is usually a heavy bearer when in season. The fresh pulp is extracted from the fruit and pulverised in a blender to make juice or it can be placed in plastic bags and frozen for later use.

Internet Resources

Passionfruit vine: How to grow passionfruit (<https://www.bhg.com.au/passionfruit-vine-how-to-grow-passionfruit>)

Passion Fruit (<https://www.crfp.org/pubs/ff/passionfruit.html>)

The Passion Fruit (<https://ufdcimages.uflib.ufl.edu/IR/00/00/33/95/00001/MG32800.pdf>)