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A Passion Fruit for the Plains

by

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Introduction: Several kinds of creepers known as "passion vines" are grown for their edible fruits as well as for their ornamental flowers in India. A few of these, commonly called "the purple granadilla", "the giant granadilla", etc., have been disseminated over a number of years in certain localities and are now growing as part of the natural vegetation. Recently there has been some effort to grow one of these, viz., the purple passion fruit, commercially in South India. This purple passion fruit is an important crop in Australia, New Zealand, Hawaii and other countries and in South India it grows luxuriantly and bears heavily in Coonoor, Ootacamund, Kodaikanal, Sheveroy and other places of high altitude. It needs a mild climate and at lower altitudes the vines are found to be extremely vigorous in vegetative growth but produce very little crop. Recently an yellow fruited variety has been introduced into South India from Ceylon and investigations on this variety have shown that it is of relatively easy culture and is well adapted to the plains

and lower altitudes. It grows very vigorously, comes to fruit within a year of planting and produces an abundant crop of fruits in successive waves with little attention. Its fruits have a decidedly better flavour than that of the purple passion fruit.

Uses of the Passion Fruit: Although passion fruit has been under cultivation in India for a number of years its use is not so widespread; the fruit is acidic in taste and therefore is not much favoured for direct eating. But it lends itself excellently to be used in a number of preparations because of the peculiar aromatic pleasing flavour of the pulp, and so is much in demand in other countries. The most important of these preparations is the passion fruit squash, a very delicious product, extremely pleasing and nutritious and a most excellent drink for the summer. The squash is prepared by extracting the juice by means of pressing the pulp in a cloth and adding to the juice the calculated amount of sugar. If a chemical preservative is added, the squash will keep well for nearly two years and it should be diluted five or six times with water before use.

The fruit is also used in making various kinds of cocktails, cordials, jelly, syrup, sherbet, ice-cream, flavouring for icing, candy, cakes etc. A very satisfactory canned product may be prepared by adding the fresh passion fruit pulp to a boiling hot sugar syrup. Some of the preparations of this fruit well known in other countries are the following:

Passion fruit-coconut candy:	Prepared with passion fruit pulp, sugar and shredded coconut.
Passion fruitade:	The syrup is mixed with water, poured over crake ice and taken in summer.
Fresh passion fruit punch:	A mixture of juices of passion fruit, lemon and pineapple poured over cracked ice.
Hot spiced passion fruit juice:	A mixture of passion fruit juice, sugar, water, lemon juice, clove, allspice and cinnamon is boiled and served hot with a strip of lemon peel.
Passion fruit cake icing:	Passion fruit pulp is added to butter and sugar and spread on cakes.
Passion fruit sherbet:	Passion fruit syrup is added to boiling sugar solution, egg white is added, stirred and freezed before use.
Passion fruit ice cream:	Passion fruit syrup or juice, sugar and vanilla are mixed, added to cream and freezed..

Culture of Yellow Passion Fruit: The yellow passion fruit is found to require lower altitudes and plains for best growth; the site

selected for passion fruit should be in open situations where the air will be warm and comparatively dry which is conducive for proper fertilisation of flowers.

The passion fruit is not very exacting in soil requirements. Sufficient moisture and adequate humus in the soil are important considerations. Except very heavy and poorly drained soils and soils of very low fertility, all other types can be deemed to be suitable.

The vine can be propagated by seed or cuttings. The seeds should be sown immediately after extraction in seed pans or well prepared nursery beds. In three or four months' time when the plants are about 6 to 10 inches in height they can be set out in their permanent sites. Cuttings taken from well matured wood strike roots readily and can be transplanted in about three months. Normally, rooted cuttings will come to bearing earlier than the seedlings.

The land in which the vines are to be set out should be well prepared in order that the young plants may establish themselves rapidly and develop a good root system.

The vines are grown on trellis, fence, bowers or pergolas. The relatively small amount of space required by the plants and their early fruiting habit make them suitable to be grown as intercrops with such orchard trees as require six to eight years to come to bearing. For this purpose, in foreign countries, the vines are planted along low wire-trellises constructed in the alleys between fruit trees. The plants are set out at a spacing of ten to fifteen feet. Passion fruit can also be grown in the form of a pure plantation.

Shallow cultivation to keep down weeds may be necessary as often as possible. The vines may be manured once a year with well rotten compost or cattle manure and a little of chemical fertilisers although in South India the vines rarely receive any manure. In other countries farm yard manure applied along with a mixture of sulphate of ammonia, superphosphate and sulphate of potash at 10:6:10 ratio at 4 to 8 cwt. per acre has given excellent results.

No pruning is practised in South India. But when the tops of vines become too dense, portions of the vines may be pruned. Removal of deadshoots and interfering branches may also be necessary for promoting good crop production. In Australia pruning is regularly practised to make the vines bear crops at different periods when better prices may be obtained.

The plants will come to bearing within a year of planting and in about the sixth year maximum bearing will be reached.

The fruit is borne on the new wood arising from old laterals and leaders and occasional pruning of such laterals will help in forstoring such growth. The yellow variety produces spherical or oval fruits which are light yellow in colour when fully ripe. The central cavity of the fruit enclosed in a thick, leathery rind contains many seeds each surrounded with a juicy, orange coloured pulp which is quite acid and of a pleasing aromatic flavour. In certain areas of South India, this variety is found to be unfruitful under open pollination and in such cases hand pollination of the flowers with pollen from the same flowers has been found to promote good fruit set.

The vines are in fruit almost throughout the year but the bulk of the crop is produced from May to November.

The fruits are harvested after they attain the full colour of ripeness; some prefer to let the fruits ripen and fall to the ground and then collect them. If stored after the fruit has matured the shell dries up and becomes wrinkled but the pulp remains in good condition for several days. An yield of about 15 to 20 pounds (150 to 200 fruits) per year can be obtained from each plant.

No serious pests or diseases have been reported in this country on this fruit although in other countries several serious diseases and pests have caused much concern to growers.

Conclusion: The yellow passion fruit is a hardy, quick growing and early bearing crop and can withstand drought to some extents. It requires less attention than many other fruits and is well suited to be grown as an intercrop in orchards. The fruits lend themselves for the preparation of several delicious products and the crop is thus a rich source of subsidiary income to orchard owners. Till recently the fruit was confined only to the hill regions but with the introduction of this yellow variety, its cultivation can now be developed in the plains also. The plants are also highly ornamental and produce large, showy, fragrant flowers. This fruit merits large scale cultivation in all areas of the plains of South India.