

# FRUIT TREES FOR PAPUA NEW GUINEA

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Visitors to Papua New Guinea sometimes remark on the lack of variety of fruits to be seen in the markets, in contrast with the range which may be seen in countries of Asia. This is because the markets generally offer surplus produce from village gardens and the range of fruit traditionally grown is small.

There are very few orchards producing fruit specifically for sale, but as our cities get bigger and the demand increases, we may expect commercial fruit production to increase and there should be more interest in trying out new types of fruit.

There are only a few fruit types that truly belong to Papua New Guinea, but fruits from other tropical countries were introduced by the first expatriate settlers, and further introductions have been made since then.

The Department of Primary Industry, Papua New Guinea, has ensured that all the better known tropical fruits have been brought in and grown on departmental stations and seed has been distributed as available. We can therefore make general comments on the suitability of various fruit trees to Papua New Guinea conditions.

The following fruits are already grown in almost every part of the country to which they are suited and I will comment only briefly on them.

## *Pineapples*

Pineapples grow in both the lowlands and the highlands, but the taste is not so good above 1 200 m. There are two main types, the large, juicy, pale-fleshed smooth-leaf cayenne (the type used for canning overseas) and the smaller, sweeter yellow-fleshed rough-leaved (spiny) variety.

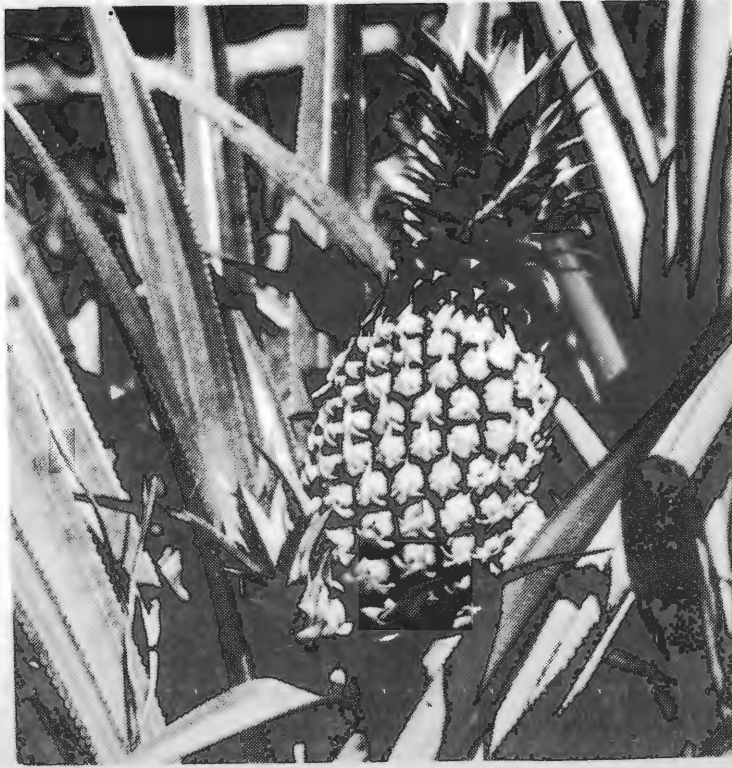
## *Pawpaws*

Pawpaws or papayas grow in the same areas as bananas and pineapples but as with pineapples, the flavour is not so good at altitudes above 1 200 m. The plants cross-pollinate and are variable in type. Many people consider that the red or pink fleshed types have the best flavour.

## *Bananas*

Bananas grow throughout the lowlands and up to an altitude of 2000 m above sea level. They are important in subsistence gardening and in some localities they form the staple food.

*This article first appeared in the Post Courier in May, 1975.*



*Pineapple*



*Pawpaw*





*Bananas*

*Citrus*

Citrus species (such as oranges and lemons) are widely grown but are not so universal as the three fruits mentioned above. Most citrus types are subtropical rather than tropical and are therefore better suited to the highlands than the coast. However, limes and pomeloos are exceptions, growing well in both coastal and highland areas.



*Mandarins on sale*



Limes are generally known in Papua New Guinea by their Motu name "sipora" or the Pidgin name "muli", though the name "muli" can be applied to any citrus fruit. The trees are quick-growing, beginning to bear in their third or fourth year and growing into medium-sized trees, bushy and very thorny.

The pomelo is at the other end of the size range of citrus, being a very large fruit. The pomelo grows into a large, spreading tree. At best, the fruit is pleasant-flavoured and good eating.

Cumquats are used mainly for jam but can be used for juice. The fruit are very small (3 to 4 cm in diameter). They turn a bright orange when ripe, making the trees quite ornamental.

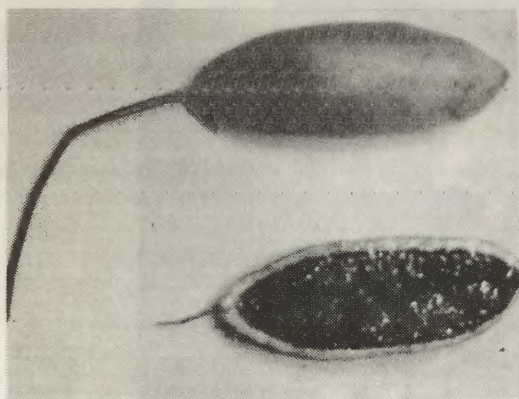
Of the other citrus species, grapefruit grows fairly well on the coast and produces fruits of good quality. It grows even better in the highlands.

Oranges will grow on the coast, but the trees often give only a few years of productive life, although they may produce prolifically for those years. They do better in the highlands.

Lemons and mandarins produce good fruit but, like oranges, the trees usually have a limited life at coastal altitudes. Lemons are not widely used, as limes may be substituted for them. Mandarins grown locally are very acceptable fruit in every way, and many more would be sold if people could get them easily and at a good price. It would be reasonable to expect that if people could buy more mandarins, they would buy less imported fruit such as apples and pears which have not yet been grown successfully in this country.

#### *Passionfruit*

Passionfruit of several types are grown. The sweet, purple skinned variety is common in the highlands. This variety does not usually get fruit in coastal areas but the yellow-skinned variety grows readily. Its fruit is not as sweet as the purple, but it can be used for similar purposes if sweetened.



*Banana passionfruit*

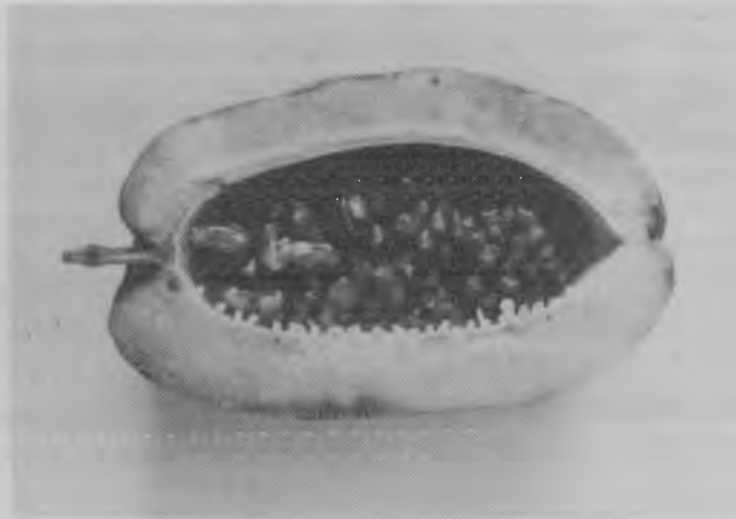
The "banana" passionfruit (so-called for its shape and colour) thrives at altitudes round 2 000 m or above. Its large pink flowers make it an attractive ornamental as well as a tasty fruit.

Granadilla is related to passionfruit but the fruit is much larger (sometimes more than 1 kg in weight), and the sweet seedy pulp is surrounded by a thick soft flesh which can be eaten, both raw and cooked. It grows well in coastal areas.





*Passionfruit*



*Granadilla*

### *Guava*

Guava is grown fairly widely and several varieties are present. The common guava has a yellow skin and a pink flesh. It can be eaten raw or cooked but many people do not like its rather scented flavour.





*Five-corner fruit*

#### *Five-corner*

Five-corner or carambola derives the name "five-corner" from its star-shaped cross section. It grows freely in coastal areas and fruits prolifically. It is a very ornamental tree with fresh green foliage, small but abundant pink flowers and bright yellow-orange fruit.

Unfortunately most of the trees in Papua New Guinea have sour fruit but sweet varieties have been introduced and these may eventually replace the sour types.

#### *Mangoes*

Mangoes thrive in Port Moresby and Rabaul (where the main street is Mango Avenue) but although the trees grow well in wetter areas they fail to fruit under wet conditions. Almost all the trees in Port Moresby are of a poorer type, stringy with a turpentine flavour.

Rabaul has some "banana mangoes", a larger, long fruit which are less stringy and have a much better flavour. It would be desirable to replace the existing seedling mangoes with better quality grafted varieties.

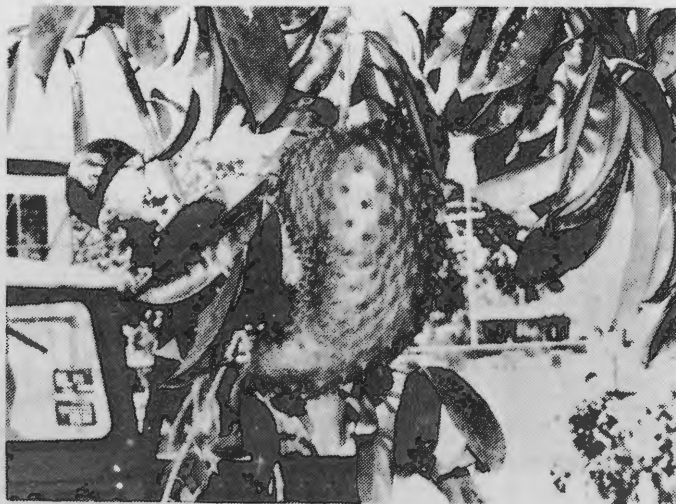
#### *Custard apples*

Custard apples grow in all coastal areas but seem to be prominent only around Port Moresby, which may indicate that, like the mango, they like a seasonal climate. Trees are small and bear quite heavily



### *Soursop*

Soursop is a relative of the custard apple, but it is a much larger fruit (2 kg or more) with a pulpy sour-sweet flesh. The flesh is like wet cottonwool, and is best used by squeezing to extract a thick juice, discarding the "cottonwool". The tree thrives in lowland areas.



*Soursop*

### *Breadfruit*

Breadfruit is a "fruit" according to the botanists, although it is not sweet-flavoured and is not eaten raw. It is important in subsistence food production in many lowland areas.

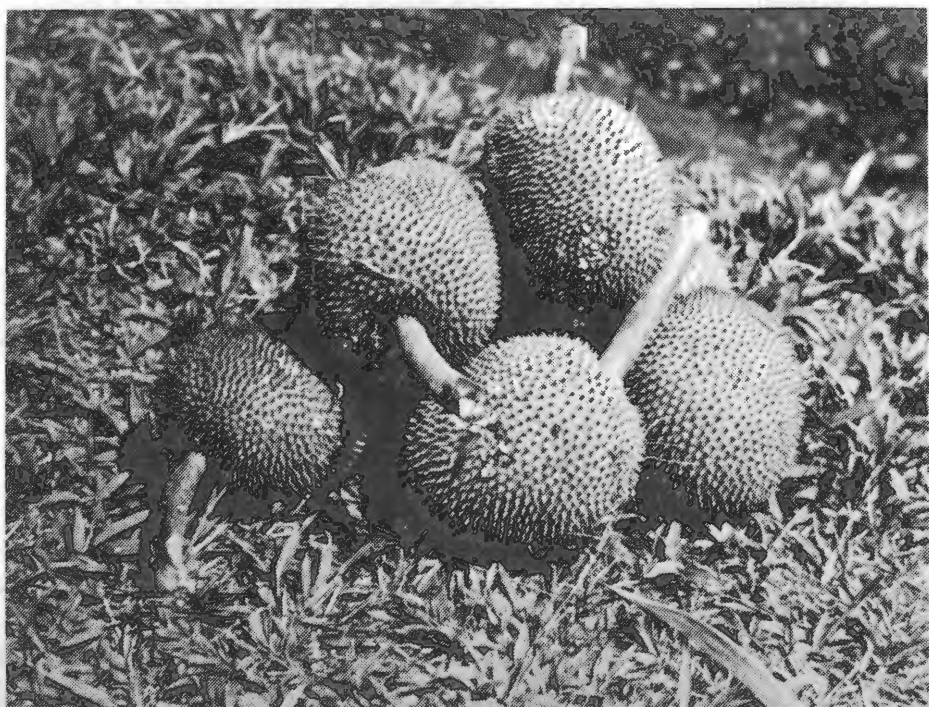
The tree is large and there are many varieties. Some are almost seedless but in others the seeds are prized above the flesh.

### *Laulau*

Laulau is the Pidgin name for what is sometimes called "Malay apple". It is applied to several varieties of the trees of the genus *Eugenia*, some of which are indigenous to this country. The trees have most attractive flowers as well as fruit and, especially around Rabaul, they provide a magnificent display in the flowering season.

### *Avocado*

A less common fruit, the avocado pear, is well established in some areas but more could be grown. Its flesh is not sweet but oily, and it is eaten more as a vegetable than as a fruit. It is regarded as a luxury item in Australia and other countries and there could be the possibility of an export market.



*Bread-fruit*

#### LESS COMMON FRUITS

##### *Mangosteen*

The mangosteen ranks high on my list of fruits that should be grown more widely. It originates in Malaysia and is very common there.

The fruit is purplish-red in colour, about the size of an apple. Within a hard outer rind are several sections something like the sections of an orange. The flesh of these is whitish and jelly-like with a delicious sweet but slightly acid flavour.

##### *Rambutan*

Another Malaysian fruit, the rambutan, is more widely distributed here than the mangosteen, but more planting should be encouraged. The fruit is very distinctive, being bright red or orange-red in colour when ripe and covered with fleshy spines.

The spines are part of a capsule surrounding the fruit, which is about 4 cm long and 2 cm in diameter. The sweet jelly-like flesh encloses a large seed. In some varieties the flesh is firmly attached to the seed and I consider these inferior to ones in which the flesh readily detaches from the seed.



Rambutan thrive in the wet lowlands and grow to be large spreading trees. They usually carry very heavy crops of fruit in season.



*Rambutan*

#### *Jak fruit*

The jak fruit, a relative of the breadfruit, is common in Asian countries but has not so far become popular in Papua New Guinea. The fruit is large and can reach 30 kg or more. The sweet yellow flesh has a strong, rather unpleasant smell, which may explain why people are not interested in growing it.

#### *Durian*

Mention of the smell of the jak fruit brings to mind the durian, another Asian fruit which is renowned for its very powerful and decidedly unpleasant smell. Although it is very popular in Asia I am doubtful whether people of this country will be able to overcome their aversion to the smell.



### *Ton*

Ton is a popular fruit which grows wild in Papua New Guinea, and is a variety of the taun used for timber. Fruits are round and contain a sweet jelly-like flesh between an outer rind and a very large hard seed in the centre.

The trees are planted as ornamentals in the streets of Kavieng and are popular in Manus and the Duke of York Islands but could well be planted more extensively in other parts of the country.

### *Cashew*

The cashew tree is best known for its nuts, which are like a small question-mark on the end of the much larger cashew apple. These fruits are quite popular, at least in some parts of Papua, as they are also in Asia.

The tree is slow-growing but hardy and will grow well in all lowland areas, including the dry parts of central Papua. The fruits I have tasted have been bitter in flavour and there is probably a need for selection of better quality types for propagation.

Regarding the nuts, these are difficult to use because the shell contains a corrosive sap. The sap causes painful blisters on the skin, and the nuts must be cooked before being eaten.

Care should be taken not to breathe in the fumes of the nuts being cooked, as this will damage the lungs. Small-scale processing should be avoided.

Factory processing is possible if sufficient nuts are available. More widespread planting of cashews for fruit could supply enough nuts to make a factory worthwhile.

### *Sapodilla*

Sapodilla is another fruit that is popular in Asia but almost unknown in Papua New Guinea. The ripe fruit looks like a small potato in both shape and colour (pale brown). The tree is of medium size and bushy.

The trunk can be tapped (like a rubber tree) to yield a latex known as "chicle", which is used to make chewing gum.

## PLANTING FRUIT TREES

Raising a few fruit trees in the backyard may be much more valuable to town dwellers than planting trees merely for ornament and shade. However, some of the trees mentioned here grow so big that they could become a problem.

Those trees which could be recommended for their relatively small size include pawpaw, citrus (other than pomelo), guava, five-corner, custard apple, soursop and mangosteen.



However, the mangosteen tree will become very large with time.

Banana, pineapple, passionfruit and granadilla are not trees, so present no problems.

Suckers of bananas and pineapples are freely available throughout the country. Almost all the other fruit mentioned can be grown satisfactorily from seed and in many cases seed can be obtained simply by buying fruit from the market.

Seedlings of rambutan, mangosteen and some other fruit trees are sometimes available from the National Botanic Garden at Lae.

Limes and cumquats grow satisfactorily from seed, but other citrus are better grown from grafted plants. Limited quantities of grafted citrus are available from the Department of Primary Industry; if not available plants may be imported from Australia but they are subject to quarantine.

Before importing citrus from Australia you should see your Provincial Rural Development Officer. He may also be able to help you if you want seed of fruit varieties not obtainable from your local market.



*Lime tree*