Food Crops of Solomon Islands

A brief introduction to the crops

by B. Reg French
This is one of a series of publications produced for the LearnGrow™ Solomon Islands project.

Other publications in the series are:

- Food Plants of Solomon Islands – A Compendium (published July 2010). A large reference text with comprehensive scientific and technical information on all food plants of Solomon Islands.

Three field guides:

- Good Gardening and Growing Root Crops in Solomon Islands (published July 2010)
- Leafy Greens and Vegetables in Solomon Islands (published July 2010)
- Fruit and Nuts in Solomon Islands (published March 2011)

All publications are printed in paperback, and will be made available as pdf books on the LearnGrow™ website (www.learngrow.org) and the Food Plants International website (www.foodplantsinternational.com)


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LearnGrow™
A project of the Rotary Club of Devonport North, District 9830,
District 9600 & Food Plants International
Food Crops of Solomon Islands

A brief introduction to the crops

By B. Reg French

Dedication

This book is dedicated to our Creator for the amazing provision and fascinating variety of food plants that He has provided.

It is also dedicated to the 3 billion hard working farmers and families around the world who cultivate these, and other, food plants for their own subsistence, and who help conserve them in their rich diversity for other people to enjoy.
Other food plants information
Wherever possible, plants in this book are cross-referenced to the same plant in the larger and more detailed reference book, 'Food Plants of Solomon Islands – A Compendium', written by the same author. The references appear in the following format – (FP of SI) followed by the page number. More detailed information on plants, including references to material by other authors, is available on DVD from Food Plants International.

The author
B. Reg French has enjoyed visiting and working in the North Solomons Province of Papua New Guinea and has visited Solomon Islands on several occasions. He now lives in Tasmania, and continues to search for information on the edible plants of the world and how they could be better used to help hungry people feed themselves.

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Nothing would have been possible without the commitment and support of the volunteers, some affiliated with Rotary Clubs, and some not, who have shared the vision, and unselfishly given their time and energy over several years to support this project. Particular thanks to Rotarian Buz Green for his leadership and contribution to the project, and to John McPhee for his dedicated efforts in compiling and final editing of the series of publications.

About Learn© Grow
Learn© Grow was initiated by the Rotary Club of Devonport North to assist in creating awareness of the edible plant database developed by Food Plants International, and its potential in addressing malnutrition and food security in any country of the world. In June 2007, Learn© Grow was established as a project of Rotary District 9830. Food Plants International is pleased to be working with the Rotary Club of Devonport and Rotary District 9830 in the Learn© Grow project. The primary objective of the project is to increase awareness and understanding of the vast food resource that exists in the form of local plants, well adapted to the prevailing conditions where they naturally occur, and how this resource may be used to address malnutrition and food security. For more information, visit the website www.learngrow.org.
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Introduction

This book is designed as a simple introduction to the more common food plants of Solomon Islands. It is hoped people will take greater pride and interest in these plants and become confident and informed about how to grow and use them. Many of the food plants of Solomon Islands are very good quality foods. Unfortunately, people often reject traditional food plants and grow more of the introduced vegetables, such as cabbage. These do not have the same food value as many of the traditional, tropical, dark green, leafy vegetables.

Growing food in Solomon Islands

Growing food is one of the most important jobs in Solomon Islands. It may not be the easiest job, and it may not always be the most enjoyable, but growing food to feed a family well is, without doubt, one of the most important jobs anyone can do. The more interest you take in your garden and the more you find out about plants and how to grow them well, the more interesting and fun food gardening becomes.

A country with very special plants

Solomon Islands are islands of diversity, with many different cultures, languages, plants and animals. This is also true of the food plants that people grow and eat. Because people move plants around, and new food plants have been brought into the country, people are sometimes unsure about some plants, what they are called and how they are used.

The food plants of Solomon Islands have not been promoted and highlighted in the way they deserve. Visiting one of the local food markets will quickly show what a rich variety of food plants can be grown in this country. Good information about these plants is often still in the minds and experience of local farmers, and has not been written down in books. This can make it hard for the next generation of young people to find out how to grow them. These days, young people spend more time in school and less time in food gardens.

Solomon Islands has over 300 different species of edible plants. Some of these are only harvested from the wild and others are only known in small areas. Others have hundreds of varieties and are the main food for people in different regions. Information on all these plants, their food value, and the pest and diseases that damage them, is available in other publications.

Getting to know plants

People who spend time in gardens and with their food plants often get to know them very well. Different people have different levels of knowledge about different plants. It is a good idea to find someone who grows plants well and to learn from them. Each plant has its own special place where it grows best and there are often special techniques in getting it to grow well. For example, sweet potato will not form tubers
if the soil is too wet, but it may still grow lots of green leaves. Taro will grow in light shade, but sweet potato will not. Ginger can grow in fairly heavy shade. Pruning the tips of betel leaf or pepper vines will cause more side branches to grow and therefore, produce more fruit. Yam tubers in storage need special treatment if you want them to put out shoots early. There are lots of unique things about every plant and a good gardener tries to learn about these so they can produce food well.

**Naming of plants**

Many food plants in Solomon Islands still do not have names in Pidjin or a common English name. All these plants deserve a local name that is widely recognised. There are often local language names for local plants, but in a country with many plants and about 67 local languages, this can be confusing. The scientists of the world have given every plant a scientific name. This is written in the Latin language, which is often hard to spell and even harder to say. But naming them this way is important. This is the link by which people in different countries and with different languages can recognise the same plant. One common and popular vegetable, called “Slippery cabbage”, (because it is slimy if you boil it), is grown throughout most of the Pacific and most of Asia. It is a very important and nutritious vegetable for hot, humid, tropical countries like Solomon Islands. Scientists call it *Abelmoschus manihot*. By using these scientific names we can then find out that many of the food plants grown and enjoyed in Solomon Islands are also grown in other countries like Fiji, the Philippines, Papua New Guinea or Indonesia. People in these other countries have sometimes found out information about these plants that would be useful for others to know.

**Local food plants are often very good**

Sometimes people think that some local food plants are not very special and that any food plant that is new or comes from another country must be a lot better. This is often very untrue. Many of the newer or introduced food plants, such as the round or ball-headed cabbages, have very little food value at all. Many of the local green, leafy vegetables and ferns have 10 - 20 times as much food value as these cabbages. It is important to find out more information about the food value of different foods if we want to eat well. Citrus fruit, such as lemons and oranges, are often grown for vitamin C that helps keep people healthy. These fruits do not grow well in the tropics, and the common local guava fruit has three times as much vitamin C and is loved by children.

Lots of information about food plants cannot be collected from village farmers, but must be worked out by scientists and people with special equipment. For example, the food composition of food plants is something that must be worked out by chemists using tests in their laboratories. People in villages may know if a food has plenty of energy because when they eat it they can do a full day of work. But it is not as easy to know about protein, or growth food, and about vitamins and minerals and other foods called health foods. Our bodies need all of these groups to enable us to grow, stay healthy and have enough energy to work.
The following diagram highlights the iron content value of some traditional edible, tropical plant leaves, compared with cabbage. Iron is a nutrient that is very important for our bodies and especially our blood. People who are short of iron become anaemic and lack energy. This shows how some foods are better for us than others.

**A healthy balanced diet**

Good nutrition, or eating a healthy balanced diet, is really very simple. If people eat a wide range of food plants, their bodies will normally get a balanced amount of all the different nutrients they require. If some nutrient is lacking in one food plant, then their bodies will find it if they are eating a range of other plants. For this reason, everybody should eat a range of different food plants every day. The food group that is especially important for young people is the dark green, tropical leaves. They have many vitamins and minerals, as well as protein. If young children fall asleep before the evening meal, it is important to make sure they get some of these leafy vegetables next morning. There are many spices or flavouring plants that can improve the taste of foods. Everyone should eat a good serving of dark green leaves every day.

**Learning to cook well**

Even though a few of the nutrients in food can lose some of their value during cooking, it is normally much safer and better to cook all food plants, at least for a short time. There are small bugs called bacteria, which cause diarrhoea, that can occur in gardens and on food plants. These are killed during cooking. Many plants in the tropics develop a chemical called cyanide that makes them bitter and poisonous. This happens often with cassava and beans, but can also occur in many other plants. Boiling the food for two minutes normally destroys this poison and makes the food safe to eat. Some of the food nutrients our bodies need (such as vitamin A for good eyesight) only become available when food is cooked in oil. There are many local plants which provide oil for use in cooking.
Learning to grow “wild” food plants
There are still many plants in Solomon Islands that simply grow wild in the bush and are not cultivated by people. We can normally find someone who has taken an interest in them and has learned to grow them. This may be people from a different language group, and they have become the experts. It may be that in their area they have found sweeter or better types than the ones that simply grow wild. There is still a big need for people to collect these different plants and to spread them around amongst other villages so they can grow them.

Saving better types of plants
If we simply allow plants to grow from seed, then the improvements that have been made in finding sweeter or better types may get lost. Several local fruit trees are like this and the fruit produced may not be sweet at all. To stop this happening, it is often necessary to take cuttings to be sure the new plant is exactly the same as the old one. If the plants won’t easily grow from cuttings simply by sticking a piece of the branch in the ground, then there are other ways of helping these plants to form roots and start to grow. One good way is to make a small cut in the bark of a young branch then wrap dirt around this cut and cover it with plastic. With plants like guava, new roots will start to grow from this cut and grow into the dirt wrapped around the branch. It can then be cut off and planted. This is called air-layering. With breadfruit, a similar method is used but with the roots. A shallow root is uncovered and a small cut made from which a new sucker will start to grow. This can be cut off and replanted. There are also methods that an agricultural officer may be able to help you with, such as rooting hormone and grafting.

Growing from cuttings and suckers
Most of the food plants of Solomon Islands are grown from cuttings and suckers. This is very important as it allows all the different kinds of yams, taros, bananas, sweet potato and sugarcane to be continually grown and ensures the varieties are preserved. Each plant has its own special propagation method. Before simply dismissing the method used by a good and experienced farmer, it is important to watch and consider carefully. The village person has often learned the methods by experience, even though the explanation they give may simply sound like myth or “Kastam”. It is important to take healthy planting material, as diseases can be spread in planting material.

Saving seed
Some food plants are grown from seed. Sometimes this is very easy as the seeds are large, store well, grow easily and grow the same as the original plant. It is more difficult with other plants. Many large fleshy seeds, such as breadfruit, need to be planted while still fresh as they do not store easily. Other seeds do not “breed true” or do not grow into new plants that are the same as the original plants. For example, the fruit may not be as large or sweet or have the same colour or taste. With many of these plants, it may be necessary to find ways of growing them from cuttings or other methods such as grafting, if this is possible. Some plants “inbreed” and get smaller
or poorer. Corn seed grown in small plots normally does this and the plants get smaller and smaller each year. The seed needs to be saved from several different plants and then mixed together before sowing. All the seed on one cob are related and will inbreed. Some seeds develop a hard seed coat and need to be scratched, soaked in water, or even put into hot water, before they will start to grow. Saving local seeds is often a very good idea as they are already adapted to local conditions. Normally, seed saved from pumpkins grown locally will produce pumpkins with less pest and disease damage than those grown from imported seed in packets.

**Growing a garden of mixed plants**

In nature, one variety of one plant never grows alone. There are always lots of different plants of different kinds and sizes, all growing together. Anyone who has ever walked into a piece of tropical jungle will know this very well. The reason people all over the world want to save the rainforest is because it has so many different kinds of plants all growing together. Growing plants in a food garden in a way similar to how they grow in nature, as a mixed group of plants, is very good agriculture. In “Western” countries, where large machines are used for planting, maintenance and harvesting, it is normal to grow a very large area of one variety of plant. But then it takes a lot of work to control pests, diseases and weeds to produce a crop. Mixing plants in a garden usually gives more reliable food production, as any disease from one plant will wash off in the rain onto a different plant, where it cannot survive. Small plants fill the gaps and reduce the need for weeding.

**Different types of plants for food security**

There is another reason for growing a range of food plants in a local garden or around a village. If something goes wrong, like extreme insect damage to plants, some disease occurring in the garden, or a poor growing season, some plants will be more damaged than others. If we have a variety of plants, there will still be some food to eat until the other plants recover and grow again. There are shrubs that can be planted as edible hedges around houses, and fruit and nut trees that need to be planted as a gift for your children, several years before they will be able to enjoy them. The sago palm, which is very common in Solomon Islands, is usually only used as a feast or famine food, but is an important food reserve, which is well worth planting. Some nuts can be stored and eaten when other foods are not available. Most yams will store well for a few months.

**Looking after the soil**

Gardeners in Solomon Islands usually move their gardens often by shifting to a new piece of land. There are usually three reasons for this:

- In the tropical lowlands, weeds can become a very big problem. There are usually a lot fewer weeds in the first year or two after clearing and burning the land, but weeds increase in the following years.
- Some of the nutrients in the soil are used each year and the soil becomes poorer and plants do not grow as well. There are ways of reducing this loss of nutrients.
- Very small worms called nematodes build up in the soil after a few years and get into the roots, especially of annual vegetable plants, and stop their roots working properly. The roots of plants like tomatoes and beans become twisted up as if they have been tied in knots. The worm responsible is called “root knot nematode” for this reason.

**Building up the soil**

When a new garden has been cleared, it has lots of leaf mulch and other old plant material. This provides plant nutrients for new plants to grow. There is a simple rule for growing plants and improving the soil - “If it has lived once, it can live again.” Any old plant material can provide nutrients for new plants to grow, but it must be allowed to rot into mulch or compost for this to happen. If this plant material is burnt, some nutrients, especially phosphorus and potassium (“potash”), get left behind in the ashes for new plants to use. But some, such as nitrogen and sulphur, get lost in the smoke and disappear from the garden and soil. These last two plant nutrients are especially important for growing green leaves and when their levels are low, plants can be small or pale green. When nitrogen is lacking, the old leaves of the plant go pale and fall off early, and when sulphur is lacking, the young leaves go pale. Wherever possible, old plant material should be covered with some soil to allow it to rot down and not simply dry out or get burnt.

**Growing food on coral, limestone or atoll soils**

The soils along many coastlines and on coral atolls need special care when growing plants. When plants are grown in soils amongst the coral and limestone rocks, the youngest leaves of the plants will often be pale yellow and the plants will not grow properly. These leaves will sometimes have unusual coloured or dead spots. This is because these soils can be very alkaline (or bitter) and the nutrients that the plants need get fixed in the coral. Elements in the soil that are not supposed to get into plants, such as aluminium, get into the plants instead. If at all possible, compost or old plant material should be carefully preserved and allowed to rot into these soils. This plant material is acid (or sour), and makes the coral or limestone soils more sweet and better suited to grow plants. This decaying plant material holds and protects the plant nutrients ready for plants to grow. Coral soils are very poor at holding nutrients and allow water (and the nutrients) to simply soak straight through, unless decaying plant material is incorporated. On coral atolls, where people rely on the underground water for their drinking supplies, it is very important not to use artificial or chemical fertilisers as these also quickly soak through the coral and spoil the drinking water supply. Organic material, including seaweed, is very important when gardening on coral soils.

**Poor soils where crops won’t grow**

In several places, people recognise soils that are very poor and they avoid them during gardening. Sometimes, people allow missions, clinics, churches or schools to use this land as they know nothing will grow properly there. One common reason that these soils won’t grow crops is because the soil is very acid (or sour), which is
common in the tropics. When soils are very acid, plants cannot get the necessary nutrients. Elements that are poisonous to plants become soluble, get into plants and stop them growing. Adding limestone or crushed coral to these soils can improve them. Using compost won’t make them less acid, but will keep the plant nutrients in the soil in a more readily available form that plants can use. Teachers and health workers who wish to set up a demonstration garden on land such as this may need to get special help and advice.

Soil nutrients
Plants need 16 different kinds of plant food or nutrients to grow properly. They need them in different amounts. A plant that has already been growing will already have these nutrients in them and probably even have them in a balanced amount. That is why composting old plant material is so important. Plants usually show some signs or symptoms if any of these nutrients is running out.

One of the most common and important nutrients for plant growth is nitrogen, which actually comes from the air, but gets into plants through the soil. When plants, and especially grass family plants like sugarcane, pitpit and corn, are short of nitrogen, the centre of the oldest (lowest) leaves starts to develop a dry or dead V-shape. The plant can’t find enough nitrogen in the soil so it gets it from an old leaf to grow a new leaf. This makes the old leaf go dry or die, forming a characteristic V-shape. The plant does not get any bigger as an old leaf dies each time a new leaf is produced. Village farmers often walk through grassland before they clear it for gardens, looking to see if the grass leaves are dry and dead, because they know gardens on this soil won’t grow well. It is necessary to use compost or legumes (such as beans and Casuarinas) to put nitrogen back into the soil.

Corn is a good plant for indicating which nutrients are running short in the soil. If the older leaves go dry along the edges, the soil is running out of potash. If leaves that are normally green develop a bluish colour, the soil is short of phosphorus. Generally, leafy crops need lots of nitrogen, and root crops need lots of potash.

Making compost
Compost is old plant material that has been allowed to rot down into a fine, sweet smelling mulch that is full of nutrients that can be put back on the soil to grow new food plants. Making good compost is very simple. The composting process is carried out by very small bacteria that live in the soil and feed on decaying plants. They break down plants into compost suitable for plant food. These bacteria are living things, so they need air, water and food. A simple heap of plant material can be made in the corner of a garden or near a house. A good compost heap must have air, so don’t cover it with plastic or put it in a container. This makes a foul smelling compost, not sweet smelling compost, as different bacteria that don’t need air turn it into an acid mixture that preserves it. Good compost must have moisture, so keep the heap damp, but not too wet. The compost bacteria like a balanced diet, which means that both green material and dried material is needed to balance the carbon and
nitrogen in the bacteria’s diet. If the compost material gets too dry and brown, it will not break down and if it gets too green it will go slimy. Using a little bit of compost from an old heap will make sure the right bacteria are there to start the whole process off. As soon as the plant material is broken down to a fine mulch it can be put onto the garden. It is best if it is dug in, but if it is regularly put onto the surface of the garden, bugs and worms in the soil will mix it into the soil.

**Pests**
There are a very large number of insects that enjoy sharing our food with us! We should not try to kill all these insects as they have an important role to play in keeping everything in nature in balance. What we need to do is to learn to manage these insects so that we can all get some food to eat! Some insects are attracted to lights, and if the garden is near village lights, some insects can cause a lot of damage. If large areas of one particular crop are planted, insects can breed more quickly and cause a lot of damage. As an example, insects called armyworms can breed up in large numbers on the shade trees of cacao and then move “like an army” into gardens. Some insects are large and breed slowly and can be picked off and removed. The large, green grubs with pointy tips that hide under taro leaves are best controlled by simply picking them off. Some insects, like taro beetles, can be a serious problem, but the young curl grubs of this insect are nice and tasty if you can catch and cook them. Some insects do not like sunlight. The very small moth that damages banana fruit is like this. Simply pulling off the leafy bracts over the banana fruit reduces the damage, as this lets sunlight in and the insect flies away. The best rule for reducing pest damage is to grow plants as healthily and well as possible. Healthy plants get less damage.

**Diseases**
The living organisms that cause disease are much smaller than insects and are generally less well understood by village people. These disease organisms can often only be seen with a microscope or even an electron microscope. There are three main kinds of these disease organisms - fungi, bacteria and viruses. Fungi are like the mushrooms we eat, only very much smaller. They usually make distinct dry spots on leaves and other plant parts. Fungi have spores that can often blow in the wind. Bacteria are often smaller and live in damp places. They usually make plants go soft and squaishy, and they may cause a smell. Bacteria are mostly spread with rain and in water. Viruses are very, very small and usually make irregular stripes and patterns on leaves and other plant parts. Viruses usually spread in planting material or in the mouths of insects, often the small sucking insects we ignore. A disease of taro in Solomon Islands is caused by two viruses which the local people call Bobonae and Alomae. These viruses are spread between taro plants by very small sucking insects. One common fungus disease on sweet potato causes the leaves to become wrinkled and twisted. It usually gets worse in old gardens and where soils are running out of nutrients. It doesn’t affect all kinds of sweet potato to the same extent. The answer is not to stop the disease, but to improve the soil. The general rule is that healthy plants that are growing well will suffer less damage from disease.
Using this book
Wherever possible, plants in this book are named by their common English name and their scientific name. In some cases, a local (Pijin) name is used if a common English name does not exist. In other cases, a local (Pijin) name is included after the common English name. Also included next to most plant names is a page reference to the companion publication of this book, Food Plants of Solomon Islands – A Compendium. Wherever this occurs, it is shown as (FP of SI), followed by the page number that relates to the plant. Some plant names are underlined – e.g. Cassava. This is used to indicate plants which either are, or could be, of particular importance for improving the nutrition of Solomon Island diets.
## Vitamin C content of some Solomon Island fruit and leaves

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<th>Vitamin C (mg)</th>
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<tr>
<td>Kekeso/Lunga leaf</td>
<td>200</td>
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<tr>
<td>Guava fruit</td>
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<tr>
<td>Amaranth leaf</td>
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<tr>
<td>Taro leaf</td>
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<td>Bebero/Geke leaf</td>
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<td>Sweetleaf</td>
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<td>Pawpaw fruit</td>
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<td>Orange fruit</td>
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<td>Tomato fruit</td>
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*Vitamin C is important for helping us avoid sickness*

## Iron content of some Solomon Island leafy greens

<table>
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<th>Food</th>
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<tr>
<td>Winged bean leaf</td>
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<tr>
<td>Kangkong</td>
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<tr>
<td>Sweet fern</td>
<td>4.4</td>
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<td>Indian spinach</td>
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<td>Berobero leaf</td>
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<td>Watercress</td>
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<tr>
<td>Kumara leaves</td>
<td>2.9</td>
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<td>Amaranth</td>
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<tr>
<td>Taro leaf</td>
<td>1.2</td>
</tr>
<tr>
<td>Chinese cabbage</td>
<td>1.0</td>
</tr>
<tr>
<td>Ball head cabbage</td>
<td>0.8</td>
</tr>
</tbody>
</table>

*Iron is important to keep our blood healthy so we can work strongly.*
**Protein content of some Solomon Island plants**

- **Moringa seed**: 46.6%
- **Winged bean seed**: 41.9%
- **Watermelon seed**: 28.3%
- **Peanut - dried**: 24.3%
- **Coastal almond nut**: 20%
- **Pigeon pea seed**: 19.5%
- **Ngali nut**: 13.5%
- **Breadfruit seed**: 7.4%
- **Slippery cabbage**: 5.7%
- **Taro leaf**: 5%
- **White rice**: 4.8%

*Protein is important for growth, for mothers feeding babies and for recovering after illness.*

**Vitamin A content of some Solomon Island leafy greens**

- **Snake bean leaf**: 7,970 μg
- **Chilli leaf**: 7,140 μg
- **Jute leaf**: 6,410 μg
- **Kangkong leaf**: 2,865 μg
- **Indian spinach leaf**: 1,800 μg
- **Kumara leaf**: 1,700 μg
- **Choko leaf**: 1,515 μg
- **Watercress**: 960 μg
- **Winged bean leaf**: 809 μg
- **Amaranth**: 292 μg
- **Lettuce**: 189 μg

*Vitamin A is essential for eyesight. In Asia 40,000 children go blind each year from shortage of Vit A. Dark green leaves, when fried in oil, are especially rich in Vitamin A.*
Many gardens in Solomon Islands are small, informal clearings in the forest or near houses.
Root crops and starchy staples
Root crops and starchy staple foods

Solomon Islands has a root crop culture. The main food used everyday by people comes from one of the common, popular and attractive starchy staple foods. The most common staple food varies in different places around the country.

Sweet potato is grown in most places and cassava is becoming more common because it is easy to grow. There are at least 5 different taro species, each with many different varieties. Also, there are at least 5 different yam species, each with many different varieties. Some places, such as Makira, have a beautiful range of cooking bananas. Sago is often only used as a feast or famine food in Solomon Islands. There are also some other minor root crops.

Growing conditions and the environment often determine which starchy crop is used as a staple food.
1. Sweet potato must have a fertile, well drained soil
2. Swamp taro grows in swamps, Colocasia taro can grow in damp soil. Xanthosoma taro need dry soil and Giant taro is often grown in pits in coral atolls. Another taro, called Elephant foot yam, suits seasonally dry areas.
3. Yams are usually grown in places with a long dry season. Greater yam takes six months to grow and can be stored for six months. Lesser yam takes longer to grow and can be stored for a shorter time. Potato yam often grows near the edge of the rainforest.
4. Cassava can grow in poor soils and is easy to grow, so is increasingly being used near houses.
5. Bananas are usually more important in areas with a dry season.
6. Solomon’s sago needs a slightly drier location than sago that suckers.

Although rice is a popular food, it is much better suited to a monsoon climate. It is unlikely to become a popular crop in a root crop culture such as Solomon Islands.

There are many opportunities to prepare and use root crops in more creative ways to fill the gaps that are currently being filled with rice and snack foods. Most root crops and bananas can be made into chips, or dried and made into flour for cooking into snack foods. In some tropical countries, cassava flour is mixed with wheat flour to help reduce imports of flour. Cassava can also be used for making bio-fuels.
**Sweet potato** - also Kumara (FP of SI p4)  
Scientific name: *Ipomoea batatas*

Sweet potato is common in most areas of Solomon Islands and will grow up to the highest gardens in the country. Sweet potato will not grow in flooded ground, so in wet places (or soils with a lot of clay) it needs to be in large mounds.

Sweet potato has become a staple since blight devastated the taro. There are about 400 types of sweet potato in Solomon Islands and probably about 5,000 different types of sweet potato in Papua New Guinea.

In highland places, sweet potato is normally sweeter than when grown in the lowland areas. On the coast some types of sweet potato are ready to eat 6 - 8 weeks after planting, but at high altitudes plants can take many months to be ready. Sweet potato is normally grown by using the tips of the vines.

Cultivated varieties introduced from overseas may be more easily damaged by *Elsinoe scab*, which wrinkles up the leaves. A range of varieties should be preserved to reduce the risk from pests and disease. Improved varieties should be checked for their dry matter/energy content. Large, bulky, and seemingly high yielding, varieties are unpopular as they do not provide enough energy in a stomach full of food to allow the grower to work a full day. Some of the low energy types are fed to pigs.

**Greater yam** (FP of SI p15)  
Scientific name: *Dioscorea alata*

This yam climbs up stakes and has heart shaped leaves that grow in pairs opposite one another. The vine has wings or angles on it. There is normally one large tuber under the ground. This can vary a lot in shape and colour. The leaves die back before the tuber is harvested. Greater yam can give good yields provided it is staked and the soils are reasonably fertile.

It is well suited to areas with a 5 month wet growing season followed by a long dry season. It usually takes 5 - 6 months to grow and can be stored for 5 - 6 months after harvest. Because it can be stored for so long, it suits seasonally dry areas.
One of the more common diseases is yam anthracnose, which causes the leaves of diseased plants to dry off early.

Greater yam is an important crop in yam-growing competitions and ceremonies in some areas. There are over 400 types of Greater yam in Solomon Islands.

**Lesser yam** (FP of SI p20)

*Scientific name: Dioscorea esculenta*

This yam climbs up stakes and has thorny vines. There are usually some shoots with very large thorns under the ground. The leaves are almost round and grow one after another along the vine.

Lesser yam can be a very productive species in loose fertile soil in tropical lowland regions. It needs a warmer and wetter season than greater yam. There are a number of high yielding attractive varieties. There are usually several tubers in a group under the ground. These can vary in colour, shape and appearance.

This yam is mostly grown in coastal regions and takes about nine months to grow and can be stored for 2 - 3 months.

**Nummularia yam** (FP of SI p22)

*Scientific name: Dioscorea nummularia*

This yam is very similar to Greater Yam, but has round vines and can often have some thorns near the base. The leaves are heart shaped and there is usually one large tuber under the ground.

Scientists are still trying to work out clearly the difference between this yam, Greater yam and another yam with three leaflets.

This yam is commonly crushed up, cooked and used as a paste in food dishes. Like Greater yam, it can be stored for up to 6 months after harvest, so is well suited to seasonally dry areas.
**Potato yam** (FP of SI p18)  
**Scientific name:** *Dioscorea bulbifera*

This yam can have a very long vine that can climb up trees and cover very large stakes. The leaves are large and round and the vine is smooth. Fairly large “potatoes” or bulbils are often produced along the stem. These vary in colour, shape and size, and in several varieties, are picked off, cooked and eaten. There is normally only one smaller tuber under the ground that in some varieties is also cooked and eaten.

![Potato yam Image](image1)

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**Five-leaflet yam** (FP of SI p23)  
**Scientific name:** *Dioscorea pentaphylla*

Five-leaflet yam has 3 - 5 leaflets spread out like fingers on a hand. Some varieties of this yam can be wild and bitter, but other types have tubers that are cooked and eaten.

There are some other wild yams in Solomon Islands.

![Five-leaflet yam Image](image2)
**Taro** (FP of SI p8)  
**Scientific name:** *Colocasia esculenta*

This is one of the traditional food plants of Solomon Islands. It is grown in most places in the country and some wild varieties are also self-sown along creeks and drains. Since World War 2, a disease called taro blight has made it harder to grow this plant well, especially in hot, wet locations. Blight is less of a problem in drier areas, in cooler areas and when plants are more widely spaced or intercropped. Taro is also subject to virus and beetle damage. Virus diseases can destroy a whole crop if a large area with a smaller number of varieties is grown together.

Taro can be grown in light shade and in some areas is grown under Casuarina trees where the branches have been removed. It can also be grown in damp sites and can be grown in ditches. It does well in places where there is plenty of potash, such as in old burnt rubbish heaps.

The top of the corm, with some of the leaf stalks attached, is normally planted in a hole dug in the ground. This hole is left open. The plant forms suckers around the side and these can grow large enough to harvest and eat or be used for planting.

There is a slightly different variety grown in some drier places where the leaves die back and the ring of corms left behind will store for a few weeks before being replanted in the next rainy season.

The leaf stalk in taro joins onto the leaf blade away from the edge of the leaf. The leaves are a popular and nutritious food, especially when cooked in an earth oven.

**Chinese taro** (FP of SI p10)  
**Scientific name:** *Xanthosoma sagittifolium*

Chinese taro is an easier to grow and less pest-prone taro, but is less popular. It cannot grow in damp locations. This variety is often larger than taro and has leaves that are divided right up to the leaf stalk. There is also a vein around the edge of the leaf.

The main corm of Chinese taro is larger, with several smaller corms around the outside. It is normally these that are grown and eaten. The
large central corm is sometimes left growing for a few years and the side corms are harvested. The leaves are very rarely used as an edible leafy green.

**Swamp taro** (FP of SI p12)  
**Scientific name:** *Cyrtosperma merkusii*

This taro normally grows in swamps in coastal regions. The leaves are pointed, with long pointy lobes at the base. The leaves tend to stick upright. The tuber under the ground can take several years to grow large. Although it is slow growing, because it grows well in swamps, where it requires little maintenance, it is a good reserve food in times of food shortage.

It is grown and used in North Solomons Province of Papua New Guinea and in Solomon Islands.

**Giant taro** (FP of SI p6)  
**Scientific name:** *Alocasia maccrorhiza*

Giant taro grows wild in most places in Solomon Islands, even in mountain regions. This is a traditional food of significance in coastal and island regions. In some coral atoll regions it is grown in pits filled with compost. It is an important food in other Pacific islands.

The leaves are almost upright, and the base of the leaves has large rounded lobes.

This plant has to be carefully peeled and cooked before it is eaten. Some types have too many oxalate crystals to make them edible.
Elephant foot yam  (FP of SI p13)  Scientific name: *Amorphophallus paenifolius* var. *campanulatus*

This plant looks very different to a normal taro plant, but it tastes like a taro. The leaf stalk is round and sticks straight up. A large leaf, which is divided into lots of small leaflets, spreads out at the top.

The plant grows in many drier grassland areas and is not often used as food, although it is grown and eaten in some places, including in several Asian countries.

The tuber is large and round like an elephant’s foot. The tuber is harvested when the leaves die back. It can be stored for several months. If kept for a long time, it will eventually produce a very large flower that smells like rotten meat. This is to attract flies to pollinate the plant.

Cassava – also Tapiok (FP of SI p 24)  Scientific name: *Manihot esculentum*

Cassava, or tapioca, has become a common and widely used root crop because it will grow on poorer soils and is easy to grow. It has few diseases and will survive during drier seasons. Simply swapping to growing cassava is not an answer to declining soils, as soils can easily end up so poor that nothing will grow.

The cassava plant has a long, woody stalk that forms branches near the top. The leaves are divided into leaflets arranged like fingers on a hand. A few different varieties occur. Under the ground, a series of long, fattened roots spread out around the side of the plant. These can be stored for some time in the field before being harvested, cooked and eaten. Cassava is grown by planting sections of the stalk.

All cassava have a bitter poison called cyanide, so it is important to cook cassava in a hot fire or boiling water to make sure all this poison disappears. The young leaves of cassava can be cooked and eaten and are good quality food. They also need to be cooked well.
Banana  (FP of SI p30)  Scientific name:  *Musa sp (A&/or B) cv*

Solomon Islands has many different kinds of bananas. Some of the traditional ones have leaves which stick more upright and they have fewer suckers around the side. The bunch of fruit on these types is often smaller. Other types have leaves that bend over and more suckers around the side. Many of these are easier to grow but they take longer to produce fruit ready to harvest. Some types will grow on poorer soils and are damaged less by diseases.

The starchy plantain types with overhanging leaves and lots of suckers with green stems, tight leaf canals and dark red male buds yield more, grow in poorer soils and are more disease resistant.

Because there are so many types of bananas, some are eaten fresh, others are quickly roasted in ashes and others are boiled. They have lots of traditional uses.

The male flowers of some kinds of bananas are sliced and cooked. They have more food value than cabbage.

Potato  (FP of SI p37)  Scientific name:  *Solanum tuberosum*

The European, or Irish, potato is a plant from the Andes in South America. It is grown widely in cooler, temperate places. In Solomon Islands, it can be grown above about 1,300 m altitude and grows much more quickly than sweet potato at altitudes above 2,000 m. Not many places in Solomon Islands are high and cold enough for good potato production.

A potato plant grows from the buds or “eyes” of the tuber. There are several shoots, and the leaves are divided into many leaflets. Flowers have five petals which can be purple or white.

Several tubers are normally produced under the ground. Tubers have to be stored for some time before they will regrow. The tubers that are to be eaten should not be left in the sun as this makes them go green and poisonous. Leaves should not be eaten.
Sago (FP of SI p26)  

Scientific name: *Metroxylon sago and Metroxylon salomonense*

There are three different types of sago palm in Solomon Islands. One grows in moist places in the swamps and another type grows on slightly drier ground. The third type of sago is quite rare in Solomon Islands.

The Solomon’s sago palm in the North Solomons and Solomon Islands is a large plant with very large leaves, large flower and large seeds. It mostly does not have suckers and is grown from seed. This sago takes about 15 years to grow and have enough starch stored in the trunk to be ready to harvest. If left too long, it produces a large flower that uses up the stored starch. It does not have as much starch and is often tougher, with more fibres than the other sago palms. It has large leaves that are excellent for house roofing. This species needs to grow on drier soils.

Common sago is an excellent reserve food for swamps. When the main trunk is cut down and cut up to pound the starch out of the fibres in the trunk, another sucker starts to grow quickly to replace the trunk that was harvested.

Often sago is considered a wild or self-sown crop but in some regions it is actively cultivated. Sago is a good energy food, but is short on protein and other nutrients.

Sago needs to be planted 15 years before it is needed, but once a stand of common sago has been established, it can continue to produce occasionally but almost indefinitely.

Polynesian arrowroot (FP of SI p33)  

Scientific name: *Tacca leontopetaloides*

This small plant grows in drier coastal areas, especially along the Papua Coast and in Solomon Islands. The leaves look quite similar to Elephant Foot Yam. There is a stalk with a divided leaf at the top. The flower has long, hanging threads. There is a round tuber under the ground that is harvested and eaten after processing and cooking.
**Queensland arrowroot** (FP of SI p35)  
Scientific name: *Canna edulis*

This lily-like plant is often grown in flower gardens and has a starchy corm that is cooked and eaten. It has been introduced to Solomon Islands, and is enjoyed by some people.

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**Yam bean** (FP of SI p38)  
Scientific name: *Pachyrizus erosus*

Yam bean is a climbing bean with hairy stems and leaves that are toothed around the edges. It produces one large, round shaped, white tuber under the ground that can be 30 cm across.

The young tuber is eaten before it becomes old and fibrous. It can be eaten raw or cooked.

The seeds, leaves and pods can be poisonous, although sometimes, young pods are eaten.

Yam bean only grows near sea level and is both wild and cultivated.
Beans and food legumes
**Legumes used for food**

Although beans and other legumes do not make up as much of the diet in Solomon Islands as they do in some other tropical countries, there are, nevertheless, quite a few legumes grown or used for food. Legumes are important for improving soils and for providing protein in the diet.

Several different parts of these plants are used. The leaves are sometimes eaten, occasionally the flowers are eaten, the pods and seeds are eaten, and some plants have a thickened root that is eaten.

Legumes can be broadly divided into two groups:
- shrubs or trees
- small, annual plants

**Shrub and tree legumes known to occur in Solomon Islands**
- Pigeon pea
- Polynesian chestnut
- Coral Pea

**Smaller annual legumes known to occur in Solomon Islands**
- Winged bean
- Lima bean
- Lablab bean
- Common bean
- Peanut
- Snake bean
- Pea
- Soybean
- Cowpea
- Yam bean
- Mung bean
- Green gram bean
- Sword bean
- Jack bean
- Kudzu

Some of these plants are cultivated in gardens, others are ornamental or forest trees, while some just grow naturally in the rainforest or grassland.

Legumes are normally considered to be important for two main reasons. In the diet, legumes often supply good amounts of protein for the growth of children. In the soil, legumes can grow where nitrogen is in short supply and some of them can release surplus nitrogen to assist other crops to grow. Special bacteria (rhizobia) attached to the roots of legumes make it possible for these plants to produce protein and to have their own supply of nitrogen.

Nitrogen in one of the most common nutrients or plant foods, and it is often in short supply in the soil. Without it, leaves cannot grow properly. They will be small and/or pale green. Therefore, plants in the bean or legume family are very important for improving the soil.

Most bean family plants have seeds that breed true - i.e. grow the same as the parents. It is usually easy to save bean seeds and most of them grow quickly and well if planted fresh. Some legumes can develop a hard seed coat that needs to be broken before water can get in and allow the seed to germinate and start growing.
### Edible parts of beans and food legumes

<table>
<thead>
<tr>
<th>Plant</th>
<th>Seed</th>
<th>Pod</th>
<th>Leaf</th>
<th>Flower</th>
<th>Root</th>
<th>Sprout</th>
</tr>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lima bean</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
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<tr>
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<td>X</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Snake bean</td>
<td></td>
<td>O</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pea</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pigeon pea</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Soybean</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td></td>
<td></td>
<td>O</td>
</tr>
<tr>
<td>Cowpea</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>O</td>
</tr>
<tr>
<td>Mung bean</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Green gram bean</td>
<td>X</td>
<td>X</td>
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<td></td>
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<td>X</td>
</tr>
<tr>
<td>Sword bean</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jack bean</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Kudzu</td>
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<td></td>
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<td>X</td>
</tr>
</tbody>
</table>

X = more common use and O = less common use

### Protein content of part eaten (g per 100 g portion)

<table>
<thead>
<tr>
<th>Plant</th>
<th>Seed mature</th>
<th>Pod</th>
<th>Leaf</th>
<th>Root</th>
<th>Sprout</th>
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<td>2.1</td>
<td>5.0</td>
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<td>Lima bean</td>
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<td>6.8</td>
<td></td>
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<td></td>
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<tr>
<td>Lablab bean</td>
<td>22.8</td>
<td>3.0</td>
<td>4.5</td>
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<td></td>
</tr>
<tr>
<td>Common bean</td>
<td>25.0</td>
<td>3.0</td>
<td>2.5</td>
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<td>Pea</td>
<td>5.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pigeon pea</td>
<td>19.5</td>
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</tr>
<tr>
<td>Soybean</td>
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<td>13.0</td>
<td></td>
<td></td>
<td>8.5</td>
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<tr>
<td>Cowpea</td>
<td>23.5</td>
<td>3.2</td>
<td>2.6</td>
<td>4.7</td>
<td></td>
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<tr>
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<td>27.1</td>
<td>2.8</td>
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<tr>
<td>Kudzu</td>
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</tr>
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</table>
**Winged bean** (FP of SI p44)  
*Scientific name:* *Psophocarpus tetragonolobus*

This plant is called winged bean because it has wings on the pods. When grown in cooler tropical places it has a thickened edible root.

Plants are grown from round seeds and are a climbing bean. All parts are edible including the seeds, pods, flowers, leaves and tubers.

Large nodules containing bacteria are attached to the roots. These fix nitrogen, which gives the plant a high protein content and also restores the soil nitrogen.

Winged bean grows from the coast up to about 1,800 metres altitude. Thickened roots are mostly produced from 1,200 – 1,800 metres. Plants for tubers are planted at a specific time of the season, have some of the flowers picked off, and are often pruned when about 1 metre tall.

**Snake bean** (FP of SI p48)  
*Scientific name:* *Vigna unguiculata*

In coastal areas, one of the most common and popular beans is the long bean, or snake bean. It is a climbing bean, with long, wavy pods that can be 50 - 60 cm long. It can easily be grown up corn plants to save stakes.

The pods and the young leaves are commonly eaten. The bean is best if picked when young.

In warm areas, this bean quickly grows from seed to a productive plant. It mostly occurs below 400 metres altitude and gives reliable production in lowland conditions.

Snake bean is far less pest and disease prone than common bean. Seed saving for replanting is easy and reliable.
Peanut  (FP of SI p42)  

Scientific name:  *Arachis hypogea*

Although often thought of as a nut, peanut is a bean that produces its seeds underground on a long stalk. The plant is a low, bushy plant, but types vary between spreading and upright.

The pods contain 2 - 6 seeds in a hard shell. They are often eaten raw, but have better food value if cooked. The leaves can also be eaten. Peanuts grow well from sea level up to about 1,650 metres altitude.

Peanuts are best grown on a raised, flat seedbed to avoid too much moisture, which can cause rots that kill the plant. Damp soils are unsuitable for the same reason. Loose soil allows the flower stalk to extend into the soil where the pods develop.

These are a popular snack and are also a good soil improver, providing nitrogen for the soil. They can be grown in mixed gardens as long as the beds are flat enough to ensure pods develop underground. Wet seasons encourage rusts and leaf spots.

Lima bean  (FP of SI p54)  

Scientific name:  *Phaseolus lunatus*

This is a tall climbing bean that often grows up trees. It has a pod that is often slightly curved and contains 3 - 4 seeds. The colour of the seeds can vary from white to purple.

Lima bean is reasonably common in the highlands above 500 metres.

The seeds should be well cooked before eating. The leaves and young pods are also sometimes eaten.

Lima bean is one of the traditional legumes of tropical countries such as Solomon Islands.
**Lablab bean**  (FP of SI p47)  
Scientific name: *Lablab purpureus*

This is a short, climbing bean that often grows 1-2 metres high up a stick. The pods normally stick out in pairs along the flowering stalk. The plants are often purple in colour. The seeds can be white, red or black.

The young pods, leaves and ripe seeds are all eaten.

This is another traditional bean of Solomon Islands and is more common in the highlands above 750 metres altitude.

**Common bean**  (FP of SI p55)  
Scientific name: *Phaseolus vulgaris*

This bean can occur as dwarf plants or as a climbing bean. Many types occur. It is an annual plant, growing each year from seeds.

The pods are normally straight and have up to 12 seeds inside. The seeds tend to be oval-shaped, but vary a lot in colour and size.

This bean is only suited to higher altitudes. In coastal areas, it suffers fairly badly from root and collar rots. Snake bean is normally better suited to hot, coastal areas than common bean.

It is mostly the young pods that are eaten, although the leaves and mature seeds are also edible.
**Soybean** (FP of SI p53)  
*Scientific name*: *Glycine max*

Soybean is a small bean that grows 50 - 100 cm tall. It has short, hairy pods.

Soybean grows from sea level up to 2,000 metres altitude. Soybean has been planted and encouraged in many tropical countries because of its high protein content, but winged bean contains more protein.

The young pods, ripe seeds and young leaves can all be eaten after cooking. The seeds can be germinated and cooked as bean sprouts.

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**Mung bean** (FP of SI p60)  
*Scientific name*: *Vigna mungo*

The mung (or Urd) bean has hairy pods and small, black seeds. It is a small plant that grows quickly from seeds.

The mung bean is grown in small quantities in some areas of Solomon islands. The ripe seeds are the part most commonly eaten, but the young pods and the leaves are edible. The bean seeds can be added to soups and stews and are often sprouted and eaten.

The mung bean is often confused with the gram bean, but they are two different plants.

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**Jack bean** (FP of SI p57)  
*Scientific name*: *Canavalia ensiformis*

Jack bean plants can grow as climbers and last for a few years. The curved pods are about 25 cm long. The flowers are red or purple. The seeds are white, and the scar (hilum) where each seed is attached to the pod is about half as long as the seed.
Green gram bean (FP of SI p61)  
Scientific name: *Vigna radiata*

Green gram bean is a small plant with small seedpods. It suits drier, tropical areas.

The leaves, pods and bean seeds are eaten after cooking. The seeds are probably the most commonly used part. The beans can be added to soups and stews. and also be grown and eaten as bean sprouts.

Green gram bean is often incorrectly referred to as mung bean. It has green seeds, whereas mung bean has black seeds.

Sword bean (FP of SI p58)  
Scientific name: *Canavalia gladiata*

Sword bean is often a climbing bean with three large leaflets. The white flowers are in groups. The curved pods are about 20 cm long. The seeds are red or pink, and the scar (hilum) where each seed is attached to the pod is dark brown and almost as long as the seed.

Sword bean is grown in some lowland areas and up to about 1,000 metres above sea level.

The seeds can be poisonous, so should be well-cooked and the water changed during cooking.

Kudzu (FP of SI p40)  
Scientific name: *Pueraria lobata*

Kudzu is a climbing bean and an old, traditional root crop grown for the very long, fattened roots that are cooked and eaten.
**Pigeon pea** (FP of SI p51)  
**Scientific name:** *Cajanus cajan*

This is a shrubby bush or small tree up to 3 metres high. The leaves are long and narrow. The pods are short and stiff, and contain 5 - 6 light brown seeds. The bush will keep growing for 2 - 3 years and will normally regrow if cut back.

The fairly ripe seeds are eaten after cooking, but the leaves and young pods can also be eaten. Seeds also make a good poultry food.

Pigeon pea will grow from sea level up to about 1,800 metres. It is a useful short-term legume to help restore old soils. It has deep roots that help re-cycle nutrients that have washed down into the soil.

**Cowpea** (FP of SI p50)  
**Scientific name:** *Vigna unguiculata*

Cowpea has often been used as a cover crop to smother weeds, but it is also a good food and grain crop. It is a creeping plant with straight, firm pods.

Cowpea grows quickly and easily from seeds and occurs from sea level up to 1,800 metres altitude.

The seeds, young pods and leaves can all be eaten. The seeds are also used for bean sprouts.

It is a good idea to scatter cowpea seeds into an old garden site to help protect the soil and to add nitrogen.
**Pea** (FP of SI p56)  

The pea is a creeping plant with irregular shaped leaves and white flowers. The pods tend to be flattened, with round, green seeds inside.

It is mostly the seeds that are harvested when mature, but the flattened, immature pods are also eaten either raw or cooked. The leaves can also be eaten.

Pea plants will only grow well in high altitude areas where it is cooler.

**Scientific name:** *Pisum sativum*
Edible leafy greens or kebis
Green leafy vegetables

Solomon Islands has many very good quality and nice tasting, green leafy vegetables. They provide protein to grow healthy bodies and vitamins and minerals to help protect against disease and sickness. Not all of them have common English or Pijin names. Most of the traditional edible leafy greens have names in local languages, but some of the more recently introduced plants do not have local names.

Green leafy vegetables can be divided into four main groups:
1. Plants grown in gardens mainly for their edible leaves
2. Plants mostly grown for other reasons, but which have leaves that can be eaten
3. Leaves harvested from plants that grow wild in old gardens or in the bush
4. Fern fronds that are eaten

Many leaves contain poisons, so must never be eaten. Some leaves may not be good and it would probably be better not to eat them. Some leaves need cooking or processing before being eaten. Others are just excellent food. Some of the more common of these groups of edible leaves are listed in the tables below, although not all are covered in detail in this book.

1. **Plants grown in gardens mainly for their edible leaves** (* indicates the most commonly used plants)
   - Slippery cabbage *
   - Amaranth *
   - Tu-lip *
   - Blackberried nightshade *
   - Kangkong *
   - Watercress
   - Chilli
   - *Polyscias*
   - Fig *
   - Indian Spinach
   - Ball head cabbage *
   - Chinese cabbage *
   - Pumpkin *
   - Ofenga *
   - Silverbeet
   - Sweet leaf

2. **Plants grown mostly for other reasons, but with leaves that can be eaten** (* indicates the most commonly used plants)
   - Sweet potato *
   - Taro *
   - Chinese taro
   - Giant taro
   - Swamp taro
   - Elephant foot yam
   - Cassava *
   - Winged bean *
   - Lima bean
   - Lablab bean
   - Common bean
   - Peanut *
   - Snake bean *
   - Pea
   - Pigeon pea
   - Soybean
   - Cowpea
   - Mung bean
   - Cucumber
   - Angled loofa
   - Snake gourd
   - Bottle gourd *
   - Breadfruit *
   - Mango
   - Golden apple
   - Soursop
   - Jackfruit
   - Pawpaw
   - Durian

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3. **Leaves harvested from plants growing wild in old gardens or in the bush**

There are a very large number of these, but they need more study.

- Drumstick tree
- Coral Pea
- Hibiscus
- Indian mulberry
- Portulaca

4. **Fern fronds that are eaten**

A large number of ferns have fronds or leaves that are eaten. These still need more study. Although rarely grown in gardens, fern fronds are an important food in many parts of Solomon Islands. These plants are not covered in this book, but more details are available in the book Food Plants of Solomon Islands.
**Slippery cabbage** (FP of SI p67)  
Scientific name: *Abelmoschus manihot*

This is the local name of a broad-leafed shrub that mostly grows about one metre tall. There are lots of different varieties of slippery cabbage. The most noticeable difference between these varieties is the shape of the leaves, but they also vary in the amount of red colour on the stalks and in other ways.

It is normally planted by sticking a short length of the stem into the ground, although it can be grown from seeds. The soil needs to be reasonably fertile and moist, but not too damp. Narrow leafed types are better mixed in the garden as they make less shade for other plants. Broad-leafed kinds are better planted around the edges of gardens.

It grows very quickly on the coast and leaves can be picked often. It grows more slowly at higher, cooler altitudes. At higher altitudes, insects seem to eat it about as fast as it grows, so it is less worthwhile growing it.

It is a very productive, attractive and nutritious edible leafy green. Unless the leaves are fried, or steamed in a small amount of water, they tend to be slimy when cooked. They have a very nice taste and are very good quality food. Fried leaves make a good addition to rice.

**Amaranth** (FP of SI p64-66)  
Scientific name: *Amaranthus spp*

Several types of amaranth plant are used as food throughout Solomon Islands. Each type can occur with different coloured leaves, so many variations are found. Some types are planted and others grow wild. They are a very nice tasting, nutritious and fast growing leafy vegetable, which should be eaten daily.

Amaranths are grown from seeds. The seed heads are often allowed to dry in the garden, then they are picked and stored above the fire in houses. When the owner wants to plant them, they rub the seeds between their hands and let the seeds fall onto the ground. One type has spines, so be careful. Amaranths grow best in fertile soil where a layer of ashes from a fire has been spread over the ground.

The seeds grow quickly. Amaranths are used either by pulling up the whole plant when it is still fairly small, or by picking out the top leaves. The top leaves can be picked off several times before the plant starts to produce a seedhead.
They grow well if compost has been added to the soil. They should not be fertilised with artificial nitrogen as this can increase toxic nitrate compounds.

**Tu-lip** (FP of SI p70)

Tu-lip is a tree of the lowland forest. It has different names in each local language in Solomon Islands. In Papua New Guinea it is called “Tu-lip” or “two leaf” because the leaves are produced along the branches in twos.

The tree is generally quite small, although it can be up to 10 metres tall. The branches do not spread out very wide. The tree grows naturally in the lowland rainforest below about 1,100 metres altitude, and suits high rainfall areas. It is also planted around villages.

This tree, like a lot of tropical trees, has flushes of growth. The young leaves produced during growth flushes are very tasty and nutritious. The young, tender leaves that are eaten are not always available, but when they are ready for picking, they are one of the nicest and most popular green leafy vegetables in a village.

Male and female flowers are produced on separate trees. Female trees produce seeds that are green, but turn red when ripe. The flowers can be cooked and eaten, and so can the seeds (See nuts).

The tree can be grown using cuttings from a branch, or grown from seed.

**Polyscias** (FP of SI pp91-94)

Polyscias is often grown as a hedge around houses in the Solomon Islands. It has light green coloured leaves that can be eaten. Several different species and varieties occur and are used.

It is grown from cuttings and becomes a woody bush. It is formed into a hedge by picking off top leaves and pruning the branches.
This plant is also grown and used in other places. Some people grow it as a hedge, but don’t eat the leaves.

**Fig leaves**  (FP of SI p74-88)  
Scientific name: *Ficus spp*

Lots of plants in the fig family have leaves that can be eaten. One of the most common is *Ficus copiosa*. It grows naturally from sea level up to about 1,650 metres. It is also planted. It can be grown from seeds or cuttings. The small, round fruit are also eaten, and occur in clusters on the branches.

In some places, these trees are planted around gardens, pruned to be like a hedge and the leaves picked for eating. The leaves are rough and are cooked before eating.

**Indian spinach**  (FP of SI p102)  
Scientific name: *Basella alba*

This dark green, leafy climber has been introduced to some of the lowland areas of Solomon Islands. It has thick, fleshy, nutritious leaves and pink flowers on short spikes. It has groups of purple berries.

It can be grown from seed or cuttings and needs to have a stick or framework to climb up. It can form a good, shady covering near houses. Because it takes up very little ground space, it can be a very useful addition near houses and in small garden plots.

The young shoots and leaves are eaten. They are somewhat slimy.
It very rarely gets insect or disease damage, but gets badly damaged by root knot nematodes that deform the roots.

**Ofenga** (FP of SI p95)  
**Scientific name:** *Pseuderanthemum whartonianum*

This small shrub grows naturally in Solomon Islands, but is used more commonly as a food in Malaita Province. It is a shrub that often grows to about 1 m high, but can grow up to 6 m tall. Types with pale leaves have been selected and are used as food.

Ofenga can be grown from cuttings. It is scattered through food gardens and can be grown as a hedge.

The plant produces white flowers at the top about mid-year.

**Sweet leaf** (FP of SI p99)  
**Scientific name:** *Sauropus androgynus*

This is a small shrub and has small flowers hanging underneath the leaves. The leaves are cooked and eaten. Sweet leaf has become popular in tropical countries where it has been introduced, including Solomon Islands. The leaves are sweet and a little like Tu-lip or Gnetum leaves.

Sweet leaf grows easily from cuttings, but can also be grown from fresh seed. It can be pruned to control growth and enhance production and can be used as an edible hedge. It grows easily, and the leaves are nutritious and flavoursome.

Cooking of the leaf should be encouraged as health problems have been recorded from people eating large amounts of raw leaf in unusual weight loss diets. The fruit can also be eaten.
**Vegetable fern** (FP of SI p106)  
**Scientific name:** *Diplazium esculentum*

Vegetable fern can be grown from spores or by separating the underground runners. Plants should be transplanted into a moist, well-drained soil with partial shade. It can be grown in damp sites near creeks and along drains.

It is a nutritious and popular fern grown and used throughout the Pacific and SE Asia. The fronds are an attractive vegetable when cooked in coconut milk. The fronds are also used in stews.

**Kangkong** (FP of SI p89)  
**Scientific name:** *Ipomoea aquatica*

Kangkong is a coastal plant related to sweet potato. It has hollow stems and floats on water. It can often be seen growing wild in lagoons behind sand bars along the coast. Another variety is sometimes grown from seed on dry land. The type that grows on water is mostly grown from runners of old stems.

The young leaves of kangkong are picked and eaten. They are usually cooked. They are a very nice tasting and popular leafy green.

Kangkong only grows well up to about 700 metres above sea level.

**Blackberried nightshade** (FP of SI p73)  
**Scientific name:** *Solanum nigrum*

Blackberried nightshade is a small, leafy plant with flowers that look like a potato flower. The fruit occurs as groups of small black berries.

It often comes up naturally when a new garden is cleared. The plants grow quickly and easily after an area of grassland has been burnt. This plant is also grown by planting the seeds. Plants are looked after in gardens and the young, tender leaves picked off and cooked and eaten.
Watercress  (FP of SI p97)  

**Scientific name:** *Rorippa nasturtium-aquaticum*

Watercress was brought to Solomon Islands when Europeans arrived. It can be easily grown as a popular leafy green at higher altitudes.

Watercress grows in wet places and does particularly well in shallow highland creeks. It grows particularly well in streams running over limestone rocks.

The leaves have a slightly bitter taste, so are best cooked before eating. Watercress is mostly grown from cuttings. It has a white flower.

Chilli  (FP of SI p155)  

**Scientific name:** *Capsicum frutescens*

The chilli plant has been introduced to Solomon Islands for people to grow as a cash crop. They sell the small red fruits. Chilli leaves are a good edible leaf. In many places, people grow chillies just to harvest the leaves to eat. The fruit are also used to add spice to food.

The seeds are often planted but, in many places, the plants just come up naturally.

Ball head cabbage  (FP of SI p143)  

**Scientific name:** *Brassica oleracea*

Cabbages are broad-leafed plants on a short stalk. When temperatures are cold enough, cabbages form a tight round ball of leaves in the centre. These central leaves are often pale green.

Cabbages are widely grown throughout Solomon Islands, especially in higher altitude areas. They do not get damaged by frost.

Cabbages are often grown by planting the young shoots that develop on the stalk after the cabbage has been cut

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off, but they can also be grown from seed. Seeds are often sown in a nursery bed, and the small plants transplanted into the garden. Although widely grown, cabbages are low in food value. There are many more useful and valuable plants to grow and eat.

**Chinese cabbage** (FP of SI p144)  
**Scientific name:** Brassica rapa

There are several different types of Chinese cabbage. In the highlands, some types develop a tight central bundle of leaves. The plants are often more open and leafy. They grow well on the coast and are fairly widely used.

Both Chinese and ball head cabbages are often badly damaged by insects. The caterpillars of diamondback moth, cabbage cluster caterpillar moth, cabbage looper moth and others eat the leaves.

**Pumpkin tips** (FP of SI p133)  
**Scientific name:** Cucurbita maxima

Pumpkins in Solomon Islands are often more preferred for the young, edible leaf tips than for the fruit. In many areas, these plants continue growing for several years and become almost wild plants. Pumpkins grown from local seeds get less mildew and disease than most of the types grown from packet seeds. People in villages have often selected plants that produce lots of tips. The tips are cooked and eaten.

**Silverbeet** (FP of SI p98)  
**Scientific name:** Beta vulgaris

Silverbeet is a short, leafy green which normally has a dark green leaf on a pale, shiny ribbed stalk. Blue coloured varieties also occur.

Silverbeet is grown from seed and the outside leaves are broken off and cooked and eaten.

It has lots of nutrients and is a good quality green. It is reasonably common at higher altitudes.
**Horseradish tree**  (FP of SI p100)  

Scientific name: *Moringa oleifera*

Horseradish tree is a very nutritious and important tropical vegetable, but possibly not yet widely used in Solomon Islands. It can be grown from cuttings and seed. It can be grown as a hedge and pruned regularly to produce more leaves. Dried seed can be stored for a long time in sealed containers in a cool place.

It is fast growing and can be pruned or topped. One variety flowers and fruits continuously, while the other variety flowers and fruits once per year.

The young tops and leaves are eaten cooked and are very nutritious. The very young long pods are eaten cooked, especially in curries. They are also pickled. The young seeds are eaten roasted. Sometimes the roots are used as a horseradish substitute. The roots, leaves, flowers and fruits are eaten cooked in water and mixed with salt and chili peppers. The oil from the seeds is used in salads.

**Lettuce tree**  (FP of SI p369)  

Scientific name: *Pisonia grandis*

The lettuce tree is a large tree that grows near the beach on rocky headlands. It can be grown from cuttings or seeds, and the sticky seeds are often dropped by large seabirds. Many of the leaves are succulent and edible when cooked.
Vegetables
Vegetables

It is not always easy to fit food plants into food groups. Most people have a popular idea of a fruit or a nut, a leafy green or a starchy, staple crop. Vegetables tend to be the other category that is left over. They are shoots, seeds, roots and fruits that are eaten with a main meal to add variety and flavour. Some of the important vegetables of Solomon Islands are covered in this section of the book.

Fruit used as vegetables
Fruit such as capsicum, tomato, eggplant, pumpkin, chokos, cucumbers, luffas, and others are occasionally eaten raw, but more often cooked and added to other food dishes. Pawpaws can be cooked when young and used as a vegetable.

Seeds used as vegetables
For many plants, it is the seeds that are eaten as vegetables, such as corn, pumpkin seeds, watermelon seeds, sunflower, beans, amaranth seeds and many others.

Shoots used as vegetables
Coastal pitpit has an unopened flower that is a very attractive and nutritious vegetable, especially when cooked in coconut milk. Other seeds can be sprouted and the young shoots eaten, often cooked. Asparagus is a temperate vegetable grown for its young shoots. Mangrove shoots are popular in Solomon Islands after they are ground, cooked and washed. Banana buds are also commonly used and have more nutrition than ball head cabbages.

Pods used as vegetables
Many bean family plants have pods that are eaten young and usually cooked as a vegetable. These include long bean, winged bean, lima bean, lablab bean, common bean and several others. The pods of okra are added to soups to make the soup thicker.

Vegetables used as flavourings
Ginger is a common vegetable eaten raw and also used to flavour other foods. Turmeric is important to colour and flavour foods, especially on some coral atolls. There are many other herbs and spices that can be grown and added to foods in small amounts to improve the flavour.
**Pumpkin** (FP of SI p133)  
Scientific name: *Cucurbita maxima*

A large variety of pumpkins are grown and used as food. Some of these have become established in, and well adapted to, the tropics. It is much better to save seed from local plants than rely on imported seed, as the local types get less pest and disease damage. The species more suited to the tropics can be recognised by the swollen lump on the short stalk where it joins the fruit.

Pumpkins are often grown more for their leaves than for the fruit. The young leaves are an important, and popular, nutritious vegetable.

**Choko** (FP of SI p131)  
Scientific name: *Sechium edule*

Choko is a long, creeping vine in the pumpkin family. It will grow in lowland coastal regions if it is in a shady position. It will also grow very well in slightly cooler places up in the hills. The fruit is small and the seed very large. The seed will often start growing while the fruit is still hanging on the vine. The whole fruit can be planted.

The fruit can be cooked and eaten, and the seed can be fried and eaten, but it is usually the young leaf tips that are used as a green leafy vegetable. There can be a large soft yam-like tuber under the ground that can be cooked and eaten.
**Long pitpit** (FP of SI p124)  
Scientific name: *Saccharum edule*

This plant is related to sugarcane, but has thinner stalks and forms a larger clump of suckers.

Flowering is seasonal and the flower and seed head stay wrapped in the leaves. They form a thickened, edible seedhead at the top of the stalk.

Pitpit shoots are a very good quality food and can be eaten raw, although mostly they are cooked. A favourite way to prepare them is to cook them in coconut milk.

Plants are grown from cuttings of the stalk. They are often planted in an older garden site and allowed to produce while the garden site starts returning to rainforest.

Some varieties produce flower heads throughout the year. It usually gets little maintenance until harvest.

**Corn** (FP of SI p128)  
Scientific name: *Zea mays*

Corn is popular and grown in most gardens in small amounts. It grows best at less than 1,800 m altitude in the equatorial tropics. It tends to grow best in areas that are too dry for rice, but too wet for millets. Corn must have over 120 frost-free days during the growing season.

Since it is grown from seed, many gardeners save seed for sowing the next crop. Saved seed should come from several cobs, or preferably several different gardens. The seed should be mixed to avoid in-breeding, which leads to smaller plants and lower yields.

Cobs are harvested when the grains are full and the tassel is just starting to turn brown. It is sweetest eaten soon after harvesting. Corn is cooked and prepared in many different ways. The cobs are eaten cooked. The dried grains can be crushed and used.
Corn gets damaged by a range of pests and diseases but will yield a useful crop grown in a mixed garden. Corn yield is little affected if the plants are used as live stakes for beans to climb up.

Corn leaves can be used as a sign for what nutrients are running short in the soil. If the old leaves develop a dry 'V' shape down the centre, the soil is running out of nitrogen. If the older leaves go dry along the edges, the soil is running out of potash. If the leaves that are normally green develop a bluish colour, the soil is short of phosphorus.

**Angled loofah** (FP of SI p139)  
**Scientific name:** *Luffa acutangula*

The angled loofah grows in hot coastal areas. The vine grows best if it has a fence or other object over which to climb. The fruit have large ribs or angles along them.

Plants are grown from seed. The fruit need to be eaten young. Old fruit are inedible and are probably poisonous.

**Smooth loofah** (FP of SI p140)  
**Scientific name:** *Luffa cylindrica*

The smooth loofah can have a very long vine that climbs over trees. The fruit need to be eaten young. They are grown from seed.
**Snake gourd** (FP of SI p130)  **Scientific name:** *Trichosanthes cucumerina*

This is another pumpkin family plant that climbs over fences and other supports. The fruit are long and thin and can be curved. Gourds are grown from seed. The fruit are eaten when young.

![Snake gourd image](image1)

**Wax gourd** (FP of SI p141)  **Scientific name:** *Benincasa hispida*

This very large pumpkin family fruit is enjoyed in Asian cooking. The fruit is not commonly eaten by people in villages. It can be grown from seed.

The fruit has a waxy covering and the flesh inside is smooth and white.

![Wax gourd image](image2)

**Bottle gourd** (FP of SI p138)  **Scientific name:** *Lagenaria siceraria*

Most places in Solomon Islands and Papua New Guinea have a pumpkin family plant that dries out with a hard shell and is used for a container or bottle.

In some places this plant is a common and enjoyed vegetable. The vines grow amongst the sweet-potato mounds and the young fruits are cooked and eaten. The leaves are also eaten.

![Bottle gourd image](image3)
**Cucumber** (FP of SI p137)  
*Scientific name:* *Cucumis sativus*

Cucumber is a popular fruit that is grown from seed. The fruit and leaves can be eaten. The fruit are usually eaten fresh and the young leaves are cooked.

**Bitter cucumber** (FP of SI p142)  
*Scientific name:* *Momordica charantia*

This is another pumpkin family plant that grows in the lowlands. It is a slender, climbing annual plant. The fruit has a lumpy appearance and is green when young, and orange when ripe. It is full of seeds and is bright red in colour.

The young bitter fruits are cooked and eaten as a vegetable. The leaves are also edible.

Bitter cucumber grows wild in some areas and has also been tried as a cover crop in plantations. It has benefits as a medicine for virus diseases.

**Ginger** (FP of SI p160)  
*Scientific name:* *Zingiber officinale*

Ginger is grown in most areas of Solomon Islands up to about 1,900 metres altitude. It often plays a role in magic, as well as being a food and a spice. Ginger is eaten raw on its own as a vegetable in fairly large amounts. It is quite hot and spicy. It is also used with cooked foods.

Ginger needs a reasonably fertile soil, and will grow in shady places under coconuts and other trees. It is planted by putting a section of the clump into rich soil.
**Turmeric** (FP of SI p315)  
*Scientific name:* *Curcuma domestica*

Turmeric is another ginger family spice that is common in Solomon Islands. It is especially important on some coral atolls. The root can be ground and added to foods, and also used as a dye to colour foods and other things orange.

Turmeric is grown from sections of the root clump.

**Large-fruited orange mangrove** (FP of SI p301)  
*Scientific name:* *Bruguiera gymnorrhiza*

Large-fruited orange mangrove is a slow growing tree. It bears fruit in May – June in the northern hemisphere and December – January in the southern hemisphere. Flowers and fruit can also occur throughout the year. Seeds can keep their germination ability for 5 - 6 months.

It grows wild and seeds normally germinate and sprout while still attached to the tree. These seeds or seedlings can be planted or transplanted. It grows in the driest, best aerated soil in mangrove swamps and can tolerate brackish or salt water, flooded by high tide. It is a significant food, especially on some small islands.

Because the fruit contain tannin, they need to be grated, washed and rinsed before being cooked in coconut milk to give flavour. The fruit are boiled twice in water, the outer covering being removed between the cookings. The starchy fruit are then eaten. Young leaves may be cooked and eaten. The timber is a good fuel, but it corrodes metal while burning.
Jute - also Bush okra (FP of SI p313)  

Scientific name: *Corchorus olitorius*

Jute can be grown from seed and can be transplanted. Seeds are often slow to start growing, but this can be overcome by soaking them in hot water before sowing. Seeds for re-sowing can be stored for 8 - 12 months in well-sealed containers.

The young leaves and stem tops can be cooked and eaten. They are best fried, as they become slimy with other cooking methods. They are also used to make a thick soup. Leaves can be sun dried, pounded to flour, and stored for a significant time.
Nuts
Nuts

Solomon Islands has a lot of very popular nut trees. Some of these are not known outside of Papua New Guinea and Solomon Islands. Quite a few of them still need to be taken to new places within the country. The people who use these nuts like them very much.

Often the word nut is used for a seed with a hard shell. But there is no real difference between a seed and a nut, and both words are often used. There are 46 different nuts that can be eaten in Solomon Islands and 126 different seeds that can be eaten. They are not all described in this book.

Seeds and nuts are often very important for several reasons:
1. They are usually high in protein, which is important for growing bodies. This is especially true for seeds and nuts from plants that are legumes.
2. Most seeds and nuts are high in zinc. This mineral nutrient is important in about 100 different enzymes that help to keep our bodies working well. It is especially important for growing children so that they don’t become stunted. It also helps us fight disease and heal wounds.
3. Seeds and nuts can often be stored. This means they can be available during the end of the drier season when other food is short. They should be stored carefully to avoid them getting infected with toxic moulds.
4. Seeds and nuts are also important because that is the part used to grow many plants. Some seeds and nuts can only be stored for a short time before they are planted again. Other seeds and nuts can be stored for a long time, but then often have to have their hard seed coat broken before they will start to grow.
**Ngali nut**  (FP of SI p162)  **Scientific name:** *Canarium harveyi*

Of the five *Canarium* nuts in Solomon Islands, some occur only in Solomon Islands and another one occurs throughout the Pacific. This one is popular in Temotu Province.

Commercial sale of nuts to foreign markets is in the early stages of development, but there is potential for this to be an important cash crop.

**Cut nut**  (FP of SI pp168-171)  **Scientific name:** *Barringtonia procera, Barringtonia novae-ibernae*

There are about 15 different *Barringtonia* species, or cut nuts, in Asia and the Pacific. They are a popular and less seasonal than ngali nuts.

The cut nut grows on a small tree which produces a long cluster of nuts. The outside of these is mostly blue.

The leaves of the tree are quite large. The tree has a number of spreading branches near the top.

The cut nut tree grows in coastal areas up to about 600 metres above sea level. It occurs particularly in the islands and along the coast.

The kernel inside the nut is eaten, either raw or roasted.

**Polynesian chestnut**  (FP of SI p193)  **Scientific name:** *Inocarpus fagifer*

Polynesian chestnut, also known as Ailala, is a tree that grows near the sea and has a large, single-seeded pod. It can be grown in alkaline and acid soils, and can tolerate salty soils. Although it is a legume of the bean plant family, it is usually considered to be a nut. It could replace walnut for all tropical locations.

The seed can be 6 cm cross and has lines over the surface. The seeds are roasted or boiled and eaten. Seeds will only keep a short time once cooked.
The Polynesian chestnut grows in the lowland rainforest up to about 400 metres altitude. The tree grows naturally from seed distributed by bats, but is also grown from seed planted in gardens.

**Water chestnut** (FP of SI p178)

*Scientific name: Pachira aquatica*

This nut, introduced into Solomon Islands in the last few years, is becoming popular. It originally comes from Central America.

It is a small tree with spreading branches and the fruit splits open in about five sections that are full of seeds. The seeds are cooked and eaten. The seed can be stored for some time.

The tree is grown from seed or cuttings. It can grow in slightly cooler and seasonally dry areas.

**Coastal almond** (FP of SI p184)

*Scientific name: Terminalia catappa*

This tree, with its large leaves and spreading branches, grows on almost every tropical beach of the world. They are well-known and popular nuts.

The fruit are flat and have wings. Inside the green flesh is a hard shell with a small, edible kernel. This nut is very rich in zinc that is needed by young children to grow well.

Children enjoy sitting on beaches, cracking the almond nuts open on the rocks.
**Okari nut** (FP of SI p186)  
Scientific name: *Terminalia kaernbachii*

The Okari nut tree grows in lowland rainforest. It is mostly planted from seed. The branches of the tree come out in layers and the large leaves are borne in clusters near the ends of branches.

![](image1)

The fruit start as angled, green fruit, but turn dark red as they ripen. The hard shell inside the soft flesh has holes and dents. The kernel inside this shell is eaten raw or after light cooking.

The fruiting season is about mid-year.

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**Java almond** (FP of SI p164)  
Scientific name: *Canarium indicum*

The Java almond grows on a large tree in lowland rainforest. A toothed, leaf-like stipule at the bottom of the leaf helps identify the tree.

The purple fruit has a thin layer of pulp and a very hard inner shell. This shell is cracked to get the kernel that is eaten.

There can be 2 - 3 fruiting seasons during a year, but often the main season is mid-year.

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**Blue quandong** (FP of SI p324)  
Scientific name: *Elaeocarpus angustifolius*

There are several nut trees in a group that scientists call *Elaeocarpus* nuts. They mostly grow in the rainforest. The trees are large with a thick trunk. The fruit are harvested off the ground after they fall.

The flesh inside the fruit is green. Inside this there is a nut with a lumpy surface. The shell is fairly hard to break, but inside is the kernel that is eaten.

Trees normally only grow wild from seed. Fruit production is seasonal.
**Candle nut** (FP of SI p198)  
*Scientific name:* *Aleurites moluccana*

The candle nut grows on a fairly large tree in lowland rainforest. The leaves of the tree often have a silvery appearance.

The fruit are about 5 cm across and are produced in clusters. Inside it has 1 - 3 large seeds with a thick-ridged shell.

Because the nut may contain poisonous substances, it should be roasted before eating. The nut contains oil and will burn. That is why it is called the candle nut.

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**Betel nut** (FP of SI p274)  
*Scientific name:* *Areca catechu*

Betel nut is the most common chewing material in the world. It is normally chewed with lime and a spice, such as betel pepper.

The Betel nut fruit is produced in clusters on a thin, tall palm that grows in the lowlands.

The outside of the fruit is fibrous and the nut inside varies in hardness with age. While the nut can add some nutrients to the diet, it can also cause cancer.

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**Nypa palm nut** (FP of SI p195)  
*Scientific name:* *Nypa frutescens*

The Nypa palm produces a round cluster of nuts. The kernel in each nut can be eaten.

The Nypa palm grows naturally in swamps and mud along the coast. The trunk of the palm lies along the ground in the mud. The leaves do not have spines.
A very large, knobbly bunch of nuts grows on a stalk that curves up near the end of the palm. The fruit stalk can be cut and the sweet sap collected to make sugar or vinegar.

**Breadfruit seed**  (FP of SI p172)  **Scientific name:** *Artocarpus altilis*

In Solomon Islands, breadfruit is grown both for the fruit and for the seed. The fruit that is full of seeds has spikes over its surface fruit, while the smooth fruit only has few seeds.

A seed is about 4 cm across and weighs about 5 grams. The seeds are lightly roasted, then eaten. Fresh seeds can be planted. Seedless types are grown from root suckers.

**Coconut**  (FP of SI p272)  **Scientific name:** *Cocos nucifera*

The coconut is popular and well known in all coastal areas. It has many uses: for drinks, cooking, the soft flesh and other edible parts.

As the nut matures, the amount of liquid inside the nut reduces and the white layer around the nut thickens and hardens. This thick white layer is eaten raw. It tastes like a young pandanus nut. The “apple” inside nuts that are about to germinate can also be eaten.
**Finschia nut** (FP of SI pp191-192)  
**Scientific name:** *Finschia chloroxantha*

The Finschia nut tree may grow into a medium-sized tree, up to 25 metres tall. It can bear nuts when very small. The Finschia nut tree is special to Solomon Islands, Papua New Guinea and Vanuatu.

The tree produces nuts in clusters, sometimes near the bottom of a leaf, but sometimes just along a branch. The small kernel of the nut is eaten.

The flower is greenish-yellow and so is the fruit.

The Finschia nut tree grows in lowland rainforest up to about 1,800 metres altitude.

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**Pangi seed** (FP of SI p357)  
**Scientific name:** *Pangium edule*

The Pangi fruit is a large fruit with a rough skin. Inside, there are several large, red seeds, in a yellow, strong-smelling flesh. The shells containing these seeds are often used for necklaces and rattles.

All parts of the Pangi tree are poisonous. Therefore, the seed must not be eaten before processing. The seed is made safe by roasting them, washing them for a long time in running water, then fermenting them. It is a slow process.

The tree often grows near creeks in the lowland rainforest.
**Spinach joint fir** – also Tu-lip (FP of SI p70)

Scientific name: *Gnetum gnemon*

The Joint fir or Tu-lip tree is one of the very popular trees for edible leaves. It grows and is used in several Asian and Pacific countries. It grows in the lowlands up to about 1,100 metres above sea level.

The small fruits are also eaten. When they are ripe, they are either crushed or the tip end cut off before being roasted and eaten. The seeds should be developed and promoted as a nutritious snack food in Solomon Islands with far more nutritional value than snack foods from trade stores. It would also help develop a Solomon Islands based business.

This shrub often grows wild. Because there are separate male and female trees, female trees are needed for seeds or nuts.
Fruit
Fruit

Most people have a popular idea of a fruit. It is normally soft, juicy, sweet and can be eaten. That is the kind of fruit described here. Some fruit are starchy, some are sour, some are hard, and some are used only for drinks. There are 200 different types of edible fruit that grow in Solomon Islands. They are not all described in this book.

Fruit can be broadly divided into two groups:
- those that grow on long-lived trees and take some years to establish and produce fruit
- those that grow on bushes, shrubs and vines, and produce fruit within a year or two of planting.

Common and widespread tree fruit (* indicates the most commonly used plants)

- Avocado
- Bullock’s heart *
- Five corner *
- Golden apple *
- Guava *
- Ibo-Kwao
- Lime *
- Malay apple *
- Mango *
- Mon (Pisin) *
- Mulberry
- Orange
- Plentiful fig *
- Pomelo *
- Rambutan
- Soursop *
- Sweet banana *
- Sweet sop *
- Thornless rukam
- Ton (Pisin) *
- Watery rose apple *

Common and widespread shrub and vine fruit

- Granadilla
- Passionflower
- Passion fruit
- Pawpaw
- Pineapple
- Raspberry
- Watermelon

Some fruit trees can be grown easily from cuttings, and these tend to be used more widely and are of better quality.

Some fruit trees produce reasonably good fruit when the trees are grown from seed, but others produce poor or sour fruit. Fruit trees that do not grow easily from cuttings or seed have been slow to get accepted in villages. Some methods of establishing fruit trees have yet to be taught to people, including budding and grafting, using rooting hormones and propagating under mist.

One important method is called air-layering, where a shallow ring or cut is made in the bark and then some soft humus and soil is wrapped around this and covered with plastic until the branch develops roots. It is then cut off and planted.
Mango  (FP of SI p259)  Scientific name: *Mangifera indica*

The mango tree is a fairly large tree that can live for many years and can be up to 40 metres tall.

The fruit can vary in colour from green to yellow or red. It is a very popular seasonal fruit. Each fruit has one large seed inside, which can be eaten when cooked.

Mangoes usually only fruit well and give good amounts of fruit when there is a dry season at flowering. This is because a fungus damages the flowers in wet seasons, and they fall off without producing fruit. Although it is possible to treat this, it is probably simpler to concentrate mango production in areas that have a drier season at flowering. The fruiting season is near the end of the year.

Most trees have been grown from seed. When a seed starts to sprout it can often have several shoots and, with care, it is possible to choose the one that will be the same as the parent plant.

Golden apple  (FP of SI p220)  Scientific name: *Spondias cytherea*

In the lowland rainforests of Solomon Islands and other Asian countries, there is another tree in the same family as mango. It is called the Golden apple.

Golden apple grows wild, but is also planted. The tree grows up to about 15 metres tall. Leaves have saw-like teeth along the edge. The small white flowers occur in clusters. The fruit is yellow and oval-shaped. Some wild kinds have inedible fruit. The seed inside has long, spikes on the surface.

The fruit is produced seasonally from January - April. The leaves of the tree are eaten raw or cooked.
Guava  (FP of SI p218)  

Scientific name:  *Psidium guajava*

The guava is a smooth-barked, spreading tree. The fruit are yellow when ripe, with reddish pulp inside.

The tree is mostly grown from seed and also grows naturally in coastal areas. It grows easily and well and in seasonally dry areas. If people want to save and grow a particularly large or sweet variety, they should do this by a process called air-layering (see notes in Introduction).

The fruit is particularly enjoyed by children. It is high in vitamin C.

Guava grows well from sea level to about 1,600 metres, although some trees are seen at higher altitudes. Most trees on the coast are self-sown, but are planted at higher altitudes.

**Pacific lychee**  – also Fijian Longan (FP of SI p215)  

Scientific name:  *Pometia pinnata*

This large tree grows in Solomon Islands and other Pacific countries. The fruit is seasonal and the skin peels off like a mandarin. Inside, there is a clear, thick, fleshy layer, similar to a rambutan or lychee. This is eaten fresh.

This fruit tree has not yet been developed as a crop, but it is attracting increasing attention. Some types of this tree do not even have edible fruit. It has greater potential in the Solomon Islands than lychee, which needs a subtropical location.

**Bukubuk**  (FP of SI p206)  

Scientific name:  *Burckella obovata*

This very attractive and popular fruit is found in only a few areas of Solomon Islands, Vanuatu and Papua New Guinea. The fruit is large and has about five rounded bumps around it. Inside, there is soft, sweet flesh around a long, black seed. As the fruit are soft and not easy to transport, it is best for people to grow their own trees near their houses and villages. Fruit can be produced at several times during the year. There are some traditional ways of storing the fruit that should be investigated.
Like other trees in this plant family, the branches have sticky sap if broken.

The tree can be grown from seed.

**Citrus**

There are only 2 citrus species worth growing in the hot humid tropics - pomelo and West Indian lime, as they are reasonably suited to tropical conditions. All other citrus species are simply collecting grounds for a range of tropical pests and diseases. There are many tropical fruit and leaves with much higher levels of Vitamin C than citrus species.

**Lime** (FP of SI p226)  
**Scientific name:** *Citrus aurantifolia*

The lime tree is a small tree with many branches that have short, sharp spines. The fruit is yellow on the outside, with green flesh inside. Fruit production tends to continue year round.

The tree does better in a warm, coastal climate, but can be grown from sea level to 2,200 metres altitude.

The tree is often grown from seed, but better fruit can be produced from grafted trees.

**Pomelo** (FP of SI p227)  
**Scientific name:** *Citrus grandis*

The pomelo is a very large-fruited, spiny, spreading citrus tree that grows up to 15 metres high. It suits lowland areas and grows up to about 900 metres altitude.

The fruit generally have a very thick skin. The flesh inside is made up of large sacs that separate easily.

The pomelo tree is mostly grown from seed. The quality of the fruit varies.
Orange (FP of SI p231)  
Scientific name: *Citrus sinensis*

Orange trees grow in coastal areas. They are often seedling trees, so the fruit quality varies.

Orange trees grow up to 8 metres high and the leaves have narrow wings on the leaf stalks. The fruit often remain green-coloured when ripe.

Orange trees are not particularly suited to very wet tropical areas.

Soursop (FP of SI p210)  
Scientific name: *Annona muricata*

The soursop tree is a low, bushy tree that grows in the lowlands. It is mostly grown from seed.

The tree bears fruit almost continuously throughout the year. It starts bearing when about three years old.

The fruit can be eaten fresh or used as flavouring. The young fruit can be cooked as a vegetable.

The fruit is large and can weigh up to 4 kg. Fruit in this group help reduce cancer.

Bullock’s heart (FP of SI p212)  
Scientific name: *Annona reticulata*

Bullock’s heart is another fruit in the soursop family. The fruit is reddish-brown in colour.

The tree grows up to about 7.5 metres tall. Fruiting is seasonal, occurring near the end of the year.

The tree is suited to the lowlands and will grow on fairly poor soils as long as they are not waterlogged.

The tree is normally grown from seed. It is easy to transplant seedling trees.
**Custard apple** – also Atemoya  

*Scientific name:* *Annona cherimoya x squamosa L.*

This plant is a cross-breed between a cherimoya and a sweet sop. The aim of this has been to get a sweet fruit that will grow in cooler places. This tree is normally grown by grafting a cutting from a good tree onto the roots of a seedling tree. Seedling trees do not always produce good fruit.

![Custard apple](image1)

**Rambutan**  

*Scientific name:* *Nephelium lappaceum*

The rambutan tree is introduced from Asia and grows up to about 15 metres tall. The fruit hang in clusters. Fruit are a light red colour and have soft, spiny threads over them. The quality of the fruit varies between trees.

The tree only grows in the lowlands and can occasionally be found up to 750 metres above sea level. The tree can be grown from fresh seed.

![Rambutan](image2)

**Sweetsop** (FP of SI p213)  

*Scientific name:* *Annona squamosa*

The sweetsop tree has become well established and grows wild in some of the drier lowland areas.

The tree is small, growing up to about 6 metres tall. The leaves fall off the tree for part of the year.

The fruit is covered with round, fleshy scales that drop off as the fruit ripens.

Most trees are grown from seeds. Light pruning allows new branches to be produced and these carry more fruit.

![Sweetsop](image3)
Watery rose apple  (FP of SI p234)  
Scientific name: *Syzygium aqueum*

Watery rose apple is one of the fruits in a large family of similar fruit called Lauau or Lilly Pilly. The fruit is bell-shaped, about 3 - 4 cm across and red or pink.

The watery rose apple tree can grow up to 10 m tall. It grows in the lowlands, from sea level up to about 1,600 metres.

The watery rose apple tree can be grown quite easily from cuttings or from seed.

Malay-apple  (FP of SI p237)  
Scientific name: *Syzygium malaccense*

The Malay apple is common throughout Asia. The tree tends to branch near the base and can be 20 metres tall. The leaves are thick and shiny on both surfaces. The stamens of the flower are purple.

The fruit are red and pear-shaped and are produced along the trunks and limbs.

Fruiting is seasonal and tends to be December - February.

The tree grows wild in the lowlands, particularly in broad valley floors. It can be grown from seed.
**Five corner** (FP of SI p224)  
*Scientific name:* *Averrhoa carambola*

Five corner, or carambola, has its common name because of the five-angled fruit. The juicy, yellow fruit grows on a small tree about 6 metres tall. Fruit flies and fruit rot can spoil the fruit.

The tree suits the lowlands and will grow up to about 1,400 metres altitude. Some trees produce sour fruit. The fruit are sometimes used for sour flavouring in dishes such as sago.

The tree can be grown from seeds and transplanted.

---

**Bilimbi** (FP of SI p223)  
*Scientific name:* *Averrhoa bilimbi*

This is a small, cucumber-like fruit that hangs on stems. The fruit are very sour. Bilimbi is related to five corner.

---

**Avocado** (FP of SI p216)  
*Scientific name:* *Persea americana*

The avocado is a popular fruit because of the greenish-yellow, butter-like flesh of the fruit. The fruit varies between round and oval in shape, and is greenish-blue on the outside. There is one large seed inside.

The avocado tree grows about 10 metres high and can be damaged by frost and wind. Avocados must be planted in well-drained soil or they develop root rot and die.
**Mulberry**  
Scientific name: *Morinda citrifolia*

Mulberry trees have been introduced to many areas for feeding silk worms. They are mostly grown from cuttings and produce a small tree up to 9 metres high.

- Fruit is produced seasonally, about November. The berries are dark red and stain easily. The berries are eaten raw and the leaves are eaten cooked.

- Mulberries are mostly grown above 700 metres altitude.

**Thornless rukam**  
(FP of SI p241)  
Scientific name: *Flacourtia inermis*

The Thornless rukam, also called Lovi-lovi, is a small tree with a crooked trunk. It grows in Solomon Islands and New Britain. It has small (2 - 3 cm) round, red fruit. The fruit are produced seasonally, about the middle of the year. They are fairly sour.

- The Lovi-lovi tree is normally grown from seed.

**Rukam**  
(FP of SI p242)  
Scientific name: *Flacourtia rukam*

This plant is similar to Lovi-lovi and has been introduced from Asia. It grows in coastal regions. Rukam can grow into a large tree. The flowers are in clusters on the branches. The fruit can be cooked and eaten.
**Plentiful fig** (FP of SI p77)  
*Scientific name:* *Ficus drupacea*

This is one of the common fig trees that is found throughout much of Solomon Islands. It grows from the coast up to about 1,650 metres altitude.

The leaves are the part most commonly eaten, but the fruit are also eaten. The fruit are produced in clusters on the branches and trunk and they are green to yellow with a rough skin. They are starchy and eaten raw.

Several other figs also have edible fruit.

**Sweet banana** (FP of SI p30)  
*Scientific name:* *Musa spp*

Solomon Islands has many types of bananas, most of which are eaten as starchy additions to the staple foods.

Quite a few additional banana varieties have fruit that are eaten raw when ripe, and many of these are sweet.

European-type Cavendish and Gros Michel sweet bananas are also fairly widely spread throughout the country. The fruit are used as a snack and for baby food.

**Rakwan** – also Purat, Pakal (FP of SI p177)  
*Scientific name:* *Parartocarpus venenosus*

This large tree in the breadfruit family also occurs in the Philippines and Papua New Guinea. It has a large, brown fruit with seeds. The fruit can be 25 cm long and is irregular in shape. The seeds have a yellow layer over them.

The fruit can often be easily located in the bush because it develops a smell as it ripens. The ripe seeds can be eaten and the fruit can be eaten cooked.
**Ibo kwao**  – also Mundori (FP of SI p232)  

Scientific name:  *Corynocarpus cribbianus*

This is a traditional fruit tree. It is a medium-sized tree and has fruit shaped like a mango. There is only one seed inside each fruit.

The fruit are eaten raw or cooked after they fall naturally from the tree.

The tree can be grown from seed.

---

**Jackfruit**  (FP of SI p174)  

Scientific name:  *Artocarpus heterophyllus*

This is an Asian fruit that has been introduced to Solomon Islands. It grows to a very large tree and the fruit are produced on the trunk and main branches. The fruit can be very large and are spiny.

It is a plant in the breadfruit family. It is normally grown from seed, and these are best planted where they are to grow without transplanting.

The fruit is full of large seeds and the fruit and the seeds are normally cooked and eaten.

---

**Mangosteen**  

Scientific name:  *Garcinia mangostana*

Mangosteen is a popular Asian fruit that is occasionally grown in Solomon Islands. It suits the climate and trees can be grown from seed.
Sapodilla  (FP of SI p265)  Scientific name: *Manilkara zapota*

This medium-sized fruit tree has been introduced to Solomon Islands in the last few years. The leaves are in spirals near the end of the twigs. The tree has milky sap. The fruit are 5 - 8 cm across and rusty brown on the outside.

The tree can be grown from seed, but the fruit may not be good. It is better to grow trees from cuttings or by grafting.

Barbados cherry  Scientific name: *Malpighia punicifolia*

This small tree has been introduced from Central America. It often has several trunks.

The fruit are small and red when ripe. The fruit usually has three grooves and three small seeds. The fruit are very rich in Vitamin C, one of the foods the body needs to stay healthy.

The tree can be grown from seed or cuttings.

Noni  Scientific name: *Morinda citrifolia*

The “Noni” tree is a traditional tree that has recently received a lot of attention as a health food. Although some of the claims may be exaggerated, it does have some benefits. The leaves can also be cooked and eaten.
**Durian**  
**Scientific name:** *Durio zibethinus Murray*

Durian is a spiky Asian fruit occasionally seen in Solomon Islands. The tree is large and usually grown from fresh seed. The fruit have a strong smell.

---

**Pineapple**  
**Scientific name:** *Ananas comosus*

The two main types of pineapple are the thorny and the smooth-leafed types.

Pineapples can be grown from suckers, slips, or the tops of the fruit. The suckers near the bottom of the plant are the best to use.

The fruiting of pineapples is controlled by the time of year.

A pineapple plant will turn a red colour when it is short of the nutrient nitrogen.

---

**Pawpaw**  
**Scientific name:** *Carica papaya*

Pawpaw grow in most of the lowland areas of Solomon Islands and often occur naturally when rainforest is cleared because the seeds have been spread around by birds and bats.

Pawpaw fruit vary in shape because trees can have male flowers only, female flowers only or both male and female flowers. Trees that have only male flowers do not produce fruit. Trees that have male and female flowers produce long, oval fruit. Trees that have only female flowers produce round fruit.
If there are male trees growing amongst trees that produce oval fruit, the male trees can be cut down, and eventually all trees will produce oval fruit. However, male trees, either those that have oval fruit, or those that have no fruit, must be grown amongst the round fruited female trees in order for them to have fruit.

Some of the oval fruit types can have smooth and even skin, while others are bent or have ridges along them.

All pawpaw fruit taste nice and it is a popular and nutritious snack.

**Watermelon** (FP of SI p208)  
**Scientific name:** *Citrullus lanatus*

Watermelons are common and popular in the very hot, dry, sandy areas, especially near the coast.

The plant creeps over the ground and develops large, green or mottled fruit. These have red flesh with black seeds inside. Several different shapes of fruit occur. The fruit are cool and refreshing to eat on hot days, although the flesh has little food value. The seeds are very nutritious when roasted.

**Tamarillo**  
**Scientific name:** *Cyphomandra betacea*

This small tree-like shrub is grown in the highlands. It originally comes from South America. Small clusters of fruit occur on branches that stick out sideways. The fruit is egg-shaped and becomes red and looks a little like a tomato. It can be eaten raw.
Rosella  
**Scientific name:** Hibiscus sabdariffa

This plant grows as a small bush in some coastal areas. The flowers are yellow and are like hibiscus flowers.

The flowers develop fattened, red bracts and these are what are eaten. These red bracts can be very easily made into a jam by boiling them for a short time with some sugar.

The Rosella plant is easily grown from seed.

---

Raspberry  (FP of SI p243)  
**Scientific name:** Rubus dendrocharis

There are several traditional types of raspberry in Solomon Islands. The fruit often do not have a lot of taste. They are mainly eaten by children or as snacks while walking in the bush.

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Black raspberry  (FP of SI p245)  
**Scientific name:** Rubus moluccanus

This raspberry has a long, spiny cane that is usually white in colour. The fruit is black.

---

Red raspberry  (FP of SI p246)  
**Scientific name:** Rubus rosifolius

There are about three different types of small, straggly bush that have red raspberries on them.
**Passionfruit**  (FP of SI p247)  **Scientific name:** *Passiflora edulis*

Purple passionfruit has been introduced and is grown as a cash crop in the highlands. There is a yellow form with smoother skin that will grow in the lowlands.

There are many passionfruit species in Central America and some other varieties such as yellow granadilla, may also occur in Solomon Islands.

Passionfruit can be grown from seed or cuttings. The vines climb over trellises and fences.

**Passionflower**  (FP of SI p248)  **Scientific name:** *Passiflora foetida*

This small, creeping plant often grows wild in open places and in grassland. The fruit is small and round, and turns yellow as it ripens. It is enclosed in a frilly covering that is taken off before eating.

Passionflower fruit is mostly used as a snack when people are walking and is enjoyed by children.

**Granadilla**  (FP of SI p249)  **Scientific name:** *Passiflora quadrangularis*

The granadilla plant is like a large passionfruit plant. The plant is softer and greener than the passionfruit, and has angled stems. They can grow very long, climbing over fences and into trees.

The fruit is large and oval with white flesh inside. It can be cooked and eaten as a vegetable when young, or eaten raw as a fruit when ripe.
Cape gooseberry

Scientific name: *Physalis peruviana*

This small plant in the tomato and potato family has furry leaves and grows as a small bush.

The fruit are enclosed in a papery covering that dries out and is removed. The fruit are small and round and become yellow when they are ripe.
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