

Food Plant Solutions Brief Guide to Food Plant Gardens in the South Gippsland region

Our bodies need nutrients to be healthy and strong - nutritious food provides these:

- Starch:** Starch provides sustained energy for the body.
- Protein:** Protein helps the body repair cells and make new ones. Protein is also important for growth and development in children, teens, and pregnant women. Symptoms of protein deficiency include wasting and shrinkage of muscle tissue, and slow growth (in children).
- Vitamin A:** Vitamin A is very important for eyesight and fighting disease, particularly in infants, young children and pregnant women. People who are short of Vitamin A have trouble seeing at night.
- Vitamin C:** Vitamin C helps us avoid sickness, heal wounds, prevent infections and absorb iron from food. Severe vitamin C deficiency increases the risk of scurvy with symptoms such as inflammation of the gums, scaly skin, nosebleed and painful joints.
- Iron:** Iron is important because it helps red blood cells carry oxygen from the lungs to the rest of the body. Low levels of iron cause anaemia, which makes us feel fatigued. Iron is also important to maintain healthy cells, skin, hair and nails. Iron is more available when Vitamin C is also present.
- Zinc:** Zinc is particularly important for the health of young children and teenagers, and to help recovery from illness. It is needed for the body's immune system to work properly. It plays a role in cell division, cell growth, wound healing, and the breakdown of carbohydrates. Zinc is also needed for the senses of smell and taste. Zinc deficiency is characterized by stunted growth, loss of appetite, and impaired immune function.



Starting a garden

PLAN:

Identify a suitable location for the garden. Factors to consider include:

A site that receives 6-8 hours a day of sunlight and is not shaded by buildings or trees.

Easy access – a garden that is difficult to get to will not be maintained.

Protection from predators like native animals. If this is an issue, consider what can be used as a barrier and install it before planting.

Adequate and easily accessed water, whether it be a garden hose or a watering can.

TOOLS AND EQUIPMENT:

What do you need to turn over the soil, to plant seeds and seedlings (e.g. spade, hand trowel, hoe) and how will soil be moved to cover seeds (e.g. rake). Can you borrow tools to reduce your start-up costs?

SIZE:

Gardens can be all different sizes. Plan the size of your garden – what space is available and how much time do you have? Start small and increase the area as you become more confident. If space is limited, remember plants can be successfully grown in containers or pots.

BUILD:

Clear the area, removing any existing plants and large weeds (turn the soil – dig, lift and turn it over onto itself). Once the soil has been loosened,

spread compost and work it into the soil. Avoid stepping on freshly turned soil, as this will compact the soil and undo your hard work. Once the digging is complete, smooth the surface with a rake and water thoroughly. Allow the bed to rest for several days before planting. Use a good quality potting medium if using pots and containers.

PLANT:

Seeds and seedlings can be purchased from nurseries, garden centres and most hardware stores. A packet of seeds will grow a lot of seedlings but take longer to mature than transplanted seedlings. Plant seeds and seedlings in accordance with their specific directions and apply sufficient water to ensure the soil around the seeds and/or seedling roots is moist. Consider how tall and wide each plant will grow when planning the space between plants. Information on seed packets or seedling labels will indicate the appropriate distance between neighbouring plants. Add a thick layer of mulch around seedlings to help keep the soil moist. Make small signs to stick in the ground to show what you have planted.

MAINTAIN:

Plants need regular watering, which ideally should occur in the morning, never in the heat of the day. Weeds will compete with the plants for nutrients and water, so it is important to keep them to a minimum. Hand weeding and adding mulch around seedlings will help keep weeds under control.

Starchy Staples provide energy and dietary fibre

Common name: Yam daisy, Murnong

Scientific name: *Microseris lanceolata*

Cultivation: In the wild, this perennial species will tolerate a sandy soil and little water. For best results in a home garden, use a rich and loamy soil, watering well during the Summer. It prefers full sun but will also grow reasonably well in dappled shade. Murnong is suitable for both garden beds and large pots with plenty of root space.

Use: The tubers start forming in midsummer beneath clumps of yellow dandelion-like daisy flowers. When the flowers blossom in autumn, the tuber roots are ready for harvest. Simply dig them up and enjoy Yam daisy produces gangly, milky, white tuberous roots that may be eaten raw or baked. They can be prepared warm with butter, included in salads, mixed with other vegetables, or turned into a paste for desserts. They taste sweet and slightly coconutty. The slightly bitter leaves are also edible and may be enjoyed in salads.

Nutrients: energy

Common name: Oca

Scientific name: *Oxalis tuberosa*

Cultivation: Plants are grown from tubers or cut pieces of tubers which contain 1-3 eyes. Planting is normally done at the beginning of the rainy season or Spring as soil temperatures increase. Plants are weeded and soil mounded around them. A spacing of 20-40 cm x 20-36 cm is recommended.

Use: The tubers are acid when fresh but are dried slightly then cooked and eaten. The bitter kinds are freeze dried and stored for later use. They can be used in soups and stews. The young leaves and shoots can be eaten. **Caution:** Fresh tubers contain oxalates, which affects calcium absorption.

Nutrients: tuber (cooked): energy

Common name: Potato

Scientific name: *Solanum tuberosum*

Cultivation: Plants are grown from tubers. Large tubers can be cut to include a bud or "eye". A seed piece of 40-50 g is suitable. It is best to inter-crop as this stops bacterial wilt spreading. The plant is surrounded by dirt when 20-25 cm tall. Later the tubers need to be kept covered with dirt.

Use: The tubers are cooked and eaten. They are also fried, canned, and made into starch. The tubers are boiled, baked, roasted, mashed, and used in soups, stews, dumplings, pancakes and potato salads.

Nutrients: energy, iron, zinc

Legumes provide protein for growth

Common name: Chickpea

Scientific name: *Cicer arietinum*

Cultivation: Grown from seed and often with other crops but these are planted 3-4 weeks after sowing the chickpea. Seed should be sown at 2-12 cm depth. Seed will germinate at temperatures above 5°C but best above 15°C. Space plants 10 cm apart in rows 25-30 cm apart. Plants are cut and harvested when the leaves turn brown.

Use: Mainly the ripe seeds are eaten. Often they are boiled and mashed. The young leaves, shoots and pods are sometimes eaten. Sprouted seeds are eaten. The seeds can be roasted, boiled, fried and used in soups and stews. When roasted they can be eaten as a snack. It is used to make flour.

Nutrients: energy, protein, iron

Common name: Australian-pea, Dolichos-pea

Scientific name: *Dipogon lignosis*

Cultivation: Plants can be grown by seeds or cuttings.

Use: The young seeds are eaten fried or cooked and salted. The green pods are eaten. The dried seeds are also cooked and eaten.

Nutrients: energy, protein, iron

Common name: Broad bean

Scientific name: *Vicia faba*

Cultivation: The crop is grown from seed. Seeds are sown at 15-40 cm spacing. If the seed pod formation is poor, it can be improved by pinching out the tops of the plants when in flower. Hand pollination also helps. Plants are self-pollinated but also cross pollinated by insects.

Use: It is mostly the young beans that are eaten. The ripe beans and leaves are also edible. The dried beans can be boiled, ground into flour and added to soups or used for making tofu. Sprouted seeds are cooked and eaten.

Nutrients: seeds (dried): energy, protein, vit A, iron; seeds (fresh, raw): vit C, zinc



Leafy greens are a source of iron

Common name: Kale

Scientific name: *Brassica oleracea* var. *acephala*

Cultivation: Plants are grown from seed. Seedlings can be transplanted 30 cm apart.

Use: The leaves are eaten boiled, steamed and used in soups and stews. The unopened flower buds are used like broccoli.

Nutrients: vit C, iron

Common name: Silver beet

Scientific name: *Beta vulgaris* subsp. *cicla*

Cultivation: A spacing of 30cm between plants is suitable. Seed are sown 2.5 cm deep.

Use: The leaves and stalks are cooked and eaten. They can be eaten raw in salads. The leaf stalks can be cut from the leaf and cooked separately as an asparagus substitute.

Nutrients: vit A, vit C, iron, zinc

Common name: Garden sorrel, Sheep's sorrel

Scientific name: *Rumex acetosa*

Cultivation: It can be grown from cuttings or division. It is also grown from seeds

Use: The leaves can be eaten raw but are often steamed or lightly boiled then eaten. They are eaten in salads or as a potherb. They are used in soups, omelettes, sauces and chutneys. The flowers are eaten as a vegetable or used as a garnish. The juice of the leaves is used to curdle milk.

Nutrients: energy, protein, vit C, iron



Fruit are an important source of vitamins and dietary fibre

Common name: Pineapple guava, feijoa

Scientific name: *Acca sellowiana*

Cultivation: Plants are best planted in autumn. Flowers are pollinated by insects and small birds. Some kinds need to have cross pollination to produce fruit. It does not need any special pruning, although lateral branches can be removed to avoid overcrowding. A spacing of 2 m is recommended. Allow the fruit to drop onto the ground before eating.

Use: The fruit are used raw or cooked. They can be used for jellies and sauces. The flower petals can be eaten raw.

Nutrients: energy, vit C

Common name: Black currant

Scientific name: *Ribes nigrum*

Cultivation: Plants are easily grown from cuttings of 2 year old canes. The 3 year old canes are cut off at two buds above soil level. Plant dormant canes in autumn.

Use: The ripe fruit are used for jam and drinks. They can also be used in sauces and pies. The buds are used for flavouring. The fresh leaves are eaten in soups. They are also used as a spice in sauerkraut. The fruit are used to make wine. The flowers are used in ice cream and liqueurs. The seeds are a source of high omega-6 oil used in salad dressings.

Nutrients: vit A, vit C

Common name: Pink flowered native raspberry

Scientific name: *Rubus parvifolius*

Cultivation: Plants can be grown from cuttings or seed.

Use: The fruit are eaten raw. They are also made into jam and pies or brewed into wine.

Nutrients: vit A, vit C



Vegetables are an important source of vitamins and dietary fibre

Common name: Asparagus

Scientific name: *Asparagus officinalis*

Cultivation: Plants can be grown by division of the clump. A spacing of 1 m x 1 m is suitable. If white shoots are required, the shoots need to be kept covered with soil. Shoots turn green in sunlight. These are planted 15 cm deep.

Use: The young shoots are eaten cooked. They should only be washed just before cooking.

Nutrients: vit A, vit C, iron

Common name: Broccoli

Scientific name: *Brassica oleracea var. italica*

Cultivation: The seeds are planted in a nursery then transplanted after 4-6 weeks. A spacing of 60 cm x 60 cm is suitable.

Use: The central flower is cooked and eaten. The leaves are edible. The sprouted seeds are eaten.

Nutrients: vit A, vit C, iron, zinc

Common name: Kohl rabi

Scientific name: *Brassica oleracea var. gongylodes*

Cultivation: The seed can be sown direct or in a nursery and transplanted.

Use: The bulb is cooked and eaten and can be added to soups or lightly simmered in coconut milk with spices. The young leaves are edible. It is best eaten when young before needing to be peeled and this preserves the flavour.

Nutrients: protein, vit C, iron



Acknowledgements:

This guide is based on information from the Food Plants International (FPI) database, "Edible Plants of the World", developed by Tasmanian agricultural scientist Bruce French AO.

"Food Plant Solutions Brief Guide to Food Plant Gardens in the South Gippsland region" is a limited selection of food plants intended as a **Draft Guide only** to identify some local food plants that have high levels of nutrients that are important to human nutrition. This guide has been developed with the best intention to create interest and improve understanding of the important local food plants in the South Gippsland region. It is not a comprehensive guide of food plants for South Gippsland. Other important nutritious plants may be equally useful. Please contact Food Plant Solutions if you would like further information about these, or more detailed information about the ones selected.

Food Plant Solutions Rotary Action Group 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, Food Plant Solutions was established as a project of Rotary District 9830, the Rotary Club of Devonport North and Food Plants International. 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, which are well adapted to the prevailing conditions in which they are to be grown, and how this resource may be used to address hunger, malnutrition and food security. For more information, visit the website www.foodplantsolutions.org or email info@foodplantsolutions.org

Disclaimer: This Guide has been produced using information from the "Edible Plants of the World" database compiled by Bruce French of Food Plants International. Although great care has been taken by Food Plants International and Food Plant Solutions, neither organisation, or the people involved in the compilation of the database or this Field Guide:

- makes any expressed or implied representation as to the accuracy of the information contained in the database or the Brief Garden Guide, and cannot be held legally responsible or accept liability for any errors or omissions
- can be held responsible for claims arising from the mistaken identity of plants or their inappropriate use
- assume responsibility for sickness, death or other harmful effects resulting from eating or using any plant described in the database or this Brief Garden Guide.

Always be sure you have the correct plant, and undertake proper preparation methods.

Compost - if it has lived once, it can
live again.



www.foodplantsolutions.org