

Food Plant Solutions Brief Guide to Food Plant Gardens in Goulburn



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

Food Group:	Common Name	Scientific Name	Cultivation:	Use:	Nutrients:
Starchy Staples provide energy and dietary fibre.	Beetroot	<i>Beta vulgaris</i>	Plants are grown from seed. Normally the plants are planted in the final site because transplanting is difficult. When the small clump of seeds or seed ball are planted more than one seedling will result. Plants get a soft heart due to boron deficiency. This is treated with borax. <i>Seeds and seedlings can be planted out in Autumn.</i>	The red tubers are eaten after cooking. The root is also dried and powdered and the flour mixed with barley or wheat. They can be pickled or fermented as beetroot juice. They are often boiled, sliced and served with vinegar. Tops or leaves are edible. They are cooked in soups and stews.	Root (cooked): Energy. Leaves (raw): ProvitA, VitC, Iron.
	Parsnip	<i>Pastinaca sativa</i>	Plants are grown from seeds. Sow direct into final growing position. Keep soil moist after planting seeds, seeds must not dry out or poor germination results. Often a board placed on top of the row after planting and lifting off as soon as seedlings emerge aids germination. <i>Seeds can be planted in Autumn.</i>	The root is cooked and eaten. It can be boiled, baked, fried or used in stews. The roots are also made into marmalade, syrup, beer and wine. The young shoots and leaves are added to soups or cooked and eaten as a vegetable. The seeds can be used as a spice.	Energy.
	Swede	<i>Brassica napus</i>	They are grown from seed. Sow in final growing place. Thin seedlings once germinated. Thinned seedlings can be transplanted if thinned when first set of "true" leaves appear. <i>Seed can be sown in Autumn.</i>	The tubers are cooked and eaten. The leaves can be eaten cooked.	Energy, Iron.
Legumes provide protein for growth.	Broad bean	<i>Vicia faba</i>	The crop is grown from seed. Seeds are sown at 15 to 40cm 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. <i>Seed can be sown in Autumn, directly into the garden or into punnets/trays and transplanted once germination has occurred.</i>	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.	Protein, Iron.

	Pea	<i>Pisum sativum</i>	Plants are grown from seed. Seed can be collected for re-sowing. A spacing about 5cm apart in rows 25cm apart is suitable. Seed can be 3-5cm deep. If rotting is a problem, plants can be supported off the ground. <i>Seed can be sown in Autumn, directly into the garden or into punnets/trays and transplanted once germination has occurred.</i>	Mostly the young seeds are eaten. They can be eaten raw or cooked. Sometimes the young pods and leaves are eaten. The flowers are eaten in salads. The sprouted seeds are eaten. The young leaves and buds are cooked as a vegetable. The dry seeds are eaten. They are used in soups and stews and ground into flour.	Seed raw: Protein, ProvitA, Iron. Seed boiled: ProvitA.
	Scarlet runner bean	<i>Phaseolus coccineus</i>	It is grown from seeds. Seed are planted 2.5cm deep. Plants are spaced 20cm apart. It needs sticks to climb up. It can be allowed to re-grow from the tubers or the tubers re-planted.	The very young pods can be eaten. They are boiled, steamed, baked etc. The seeds are edible. They are dried then soaked. The flowers have a bean like flavour and are used in salads. Young leaves can be used as a potherb.	Energy, Protein, Iron.
Leafy greens are a source of iron.	Kale	<i>Brassica oleracea var. acephala</i>	<i>Sow in a nursery and transplant to the garden in Autumn or sow direct in spring and summer. Space plants 35cm apart.</i>	The leaves are eaten boiled. They can also be steamed and used in soups and stews. Young leaves are used raw in salads.	VitC, Iron.
	Silver beet	<i>Beta vulgaris subsp. cicla</i>	<i>It is grown from seeds, or transplanted seedlings. Seed can be sown in Autumn in trays/punnets and transplanted once germination has occurred. A spacing of 30cm between plants is suitable. Seed are sown 2.5cm deep.</i>	The leaves and stalks are cooked and eaten. Can be eaten raw in salads. The leaf stalks can be cut from the leaf and cooked separately as an asparagus substitute. They can be braised and served with buttered breadcrumbs	ProvitA, VitC, Iron and Zinc.
	Amaranth Greens	<i>Amaranthus hybridus</i>	Plants are grown from seeds. Sow in Spring and summer. Do not grow in soil enriched with lots of compost.	The leaves and young shoots are cooked and eaten. They are also dried. The leaves and stems are chopped and added to pastries and salads. They are also fried with eggs.	Protein, VitC, Iron.
Fruit are an important source of vitamins and dietary fibre.	Black currant	<i>Ribes nigrum</i>	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.	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.	ProvitA, Vit C.

				The fruit are used to make wine. The flowers are used in ice cream and liqueurs. The seeds are the source of high omega-6 oil used in salad dressings.	
	Pineapple guava, Feijoa	<i>Acca sellowiana</i>	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 metres is recommended. Allow the fruit to drop onto the ground before eating.	The fruit are used raw or cooked. They can be used for jellies and sauces. The flower petals can be eaten raw.	Energy, VitC.
	Strawberry	<i>Fragaria x ananassa</i>	Plants are grown from runners. These runners form roots and then new plants. <i>Plant in August.</i> Plants are spaced about 45cm apart in rows 75cm apart.	The ripe fruit are eaten raw. They are also used in desserts. They are also used in jams, preserves and for flavouring.	VitC.

Vegetables are an important source of vitamins and dietary fibre.

Cauliflower	<i>Brassica oleracea</i> var. <i>botrytis</i>	They are normally grown from seeds and transplanted.	The thick white flower is cooked and eaten. The leaves are edible. The flower stalk and midveins of larger leaves are used in cauliflower soup. The seed sprouts are eaten.	Flower raw: Energy, VitC, Iron, Zinc. Flower cooked: Energy, Protein, VitC.
Carrot	<i>Daucus carota</i> subsp. <i>sativus</i>	They are grown from seeds sown directly. <i>Seed can be sown in Autumn.</i> Because seed are very small, seed are mixed with sand before sowing to allow a more even distribution of plants. A spacing 5cm apart in rows 15-20cm apart is suitable. Often this spacing is achieved by thinning out plants.	Both the roots and the leaves are edible. The young leaves are used in soups. The roots can be eaten raw or cooked. They can be steamed, fried, pickled, made into jam, or used in stews. Carrot seed oil is used as a flavouring. The juice is used raw and fermented. The roots can be dried and the flour used to flavour and thicken soups.	ProvitA, VitC, Iron, Zinc.
Brussel sprouts	<i>Brassica oleracea</i> var. <i>gemmifera</i>	Seedlings are transplanted after 5 or 6 weeks. The spacing needs to be about 60cm x 60cm.	The sprouts are cooked and eaten. The leafy tops can also be eaten.	Energy, Iron

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.

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 size as you become more confident.
- If space is limited, remember plants can be successfully grown in containers or pots.

Tools and equipment:

- What do you need to turn over the soil, to plant seeds and seedlings (e.g. shovel, 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?

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 seedlings directly transplanted.
- 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 either early in the morning, or late in 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.

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 Goulburn” is a limited selection of food plants, which is 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 Goulburn. It is not a comprehensive guide of food plants for Goulburn. 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 where they naturally occur, 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 Field 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 Field Guide

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