Food Plant Solutions Brief Guide to Food Plant Gardens in District 5300

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.					
	Sweet potato	*Ipomoea batatas*	Vine cuttings are used for planting. Cuttings are planted on mounds. It needs a sunny position. Tubers won't form if the ground is waterlogged when tubers start to develop. Sweet potato are not tolerant to shading.	Tubers are boiled or baked. They can be steamed, fried, mashed or dried. The young leaves are edible.	Good energy and ProvitA.
	Potato	*Solanum tuberosum*	Plants are grown from tubers. Large tubers can be cut to include a bud or "eye". The tuber is placed in a “trench” approximately 25cm deep, then covered. As the foliage appears, soil is mounded around the foliage as it grows. The plant is surrounded by dirt when 20-25cm tall. Later the tubers need to be kept covered with dirt.	The tubers are cooked and eaten. The tubers are boiled, baked, roasted, mashed and used in soups, stews, dumplings, pancakes and potato salads.	Good source of energy with some iron and zinc.
	Corn	*Zea mays*	It is grown from seeds. It is normal to plant one seed per hole at 1-2cm depth. A spacing of about 30cm between plants is suitable.	The cobs are eaten cooked.	Energy, protein, ProvitA, and iron.
Legumes provide protein for growth.					
	Pigeon pea	*Cajanus cajan*	They are grown from seeds. It is best to sow seeds where the plants are to grow. Seeds normally germinate easily and well. Before sowing seed it helps to soak them in cold water for one day. Seeds store well if kept cool and dry. A spacing of 1.5m x 1.5m is suitable. Plants can be cut back and allowed to re-grow. Plants can also be grown from cuttings.	Young leaves, shoots and pods are eaten. The pods can be used in curries. The leaves and shoots as potherbs. Young seeds are cooked and eaten like peas. Ripe seeds are also cooked and eaten in soups and curries. Bean sprouts can be produced and eaten.	Energy, protein, ProvitA, and iron.
	Scarlet runner bean	*Phaseolus coccineus*	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 and iron.

	Common bean	*Phaseolus vulgaris*	Plants are grown from seed. Climbing types need stakes. Bush types can be spaced at 25cm by 25cm. Or they can be put closer together in rows wider apart to make weeding and harvesting easier.	The young pods, leaves and mature seeds are edible. The pods are eaten raw in salads and also boiled, steamed, marinated and pickled. The young seeds are boiled and served as a vegetable.	Energy, protein, ProvitA, VitC, iron and zinc.
Leafy greens are a source of iron.					
	Spinach	*Basella alba*	It can be sown from seeds or cuttings. Seeds germinate in a few days. Normally sticks are provided for support or it is allowed to grow over fences and stump	The young shoots and leaves are eaten cooked. They are somewhat slimy. The leaves can be eaten raw in salads or cooked like a vegetable. They are also dried and stored. When fresh they can be stored for 4 -5 days.	Iron
	Amaranth Greens	*Amaranthus hybridus*	Plants are grown from seeds.	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 and iron.
	Silver beet	*Beta vulgaris subsp. cicla*	It is grown from seeds, or transplanted seedlings. A spacing of 30cm between plants is suitable. Seed are sown 2.5cm deep.	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.

Fruit are an important source of vitamins and dietary fibre.					
	Watermelon	*Citrullus lanatus*	Plants are grown from seed. They are suitable mainly for the dry season. A spacing of 1.5 to 2m is suitable. They grow easily from seed. They do best when fully exposed to the sun. Seed can be dried and stored. If too much vegetative growth occurs picking out the tip to produce side branches with more fruit.	The fruit is eaten raw when ripe. Small unripe fruit can be cooked as a vegetable. Seeds are also eaten. They are dried, soaked in salt water then roasted.	Seeds: energy, protein, iron and zinc. Fruit:-ProvitA and VitC.
	Strawberries	*Fragaria x ananassa*	Plants are grown from runners. These runners form roots and then new plants. For some varieties flowers require short days and warm weather, otherwise only runners form. Plants form few runners when there is no winter cold. 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.
	Melon, Cantaloupe, Honey-dew	*Cucumis melo*	They are grown from seed. The seeds are planted about 1-4cm deep. Plants need to be 1-2m apart. Seedlings can be transplanted when about 10-15cm high.	The ripe fruit are eaten raw. The seeds are sometimes eaten. They are roasted. The young leaves are eaten as a potherb.	Fruit: ProvitA and Vit C. Seed: Energy and protein.
Vegetables are an important source of vitamins and dietary fibre.					
	Okra, Lady's fingers	*Abelmoschus esculentus*	They are grown from seeds. Seeds are easy to collect. They need high temperatures for germination (over 20°C) and a sunny position. Often seeds are soaked for 24 hours before sowing to give quick germination. Seeds are sown 1.5-2.5cm deep with 2-3 seeds per hole. Later these are thinned out to one plant. Seeds can be sown in nurseries and plants transplanted. Pinching out the tops of plants when 30cm high encourages branching. A spacing of about 90 x 45cm is suitable.	Pods are eaten cooked. They are slimy, but less so if fried. They are also less sticky if a little lemon is added. Dried powdered seeds can be used in soups. It thickens the soup. They can also be pickled. Young leaves can be eaten cooked. They can be dried and stored. Flowers can also be eaten. Okra is frozen and canned.	Energy, protein, ProvitA, VitC, iron and zinc.

	Marrow, Pumpkin	*Cucurbita pepo*	They are grown from seeds. The seeds germinate after one week. They are best planted on mounds. A spacing of 2-3m between plants is needed.	The young fruit are cooked and eaten. They can be steamed, boiled or fried. They are used in pies, soups, stews and cakes. The young leaves and the ripe seeds can also be eaten cooked. The seeds are dried, salted and toasted and eaten as a snack food.	Seeds: Energy, protein and iron. Fruit: ProvitA. Leaves, ProvitA and VitC.
	Carrot	*Daucus carota subsp. sativus*	They are grown from seeds sown directly. 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.	Raw – ProvitA, energy, iron and zinc. Cooked – ProvitA.

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 District 5300" 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 District 5300. It is not a comprehensive guide of food plants for District 5300. 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

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