

Food Plant Solutions Brief Guide to Food Plants in the northern Finland 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 to move the soil to cover seed (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 mix 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 should not occur in the heat of the day, and should preferably occur early in the morning, although sometimes late in the day may be more convenient. 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: 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

Common name: Sugar beet

Scientific name: *Beta vulgaris var. saccharifera*

Cultivation: Plants are grown from seed where they are to grow. Sow thinly and thin seedlings as they grow.

Use: The roots are cooked and eaten. They can be roasted, boiled or steamed.

Nutrients: energy, protein

Common name: Burdock

Scientific name: *Arctium lappa*

Cultivation: Plants are grown from seed. Improved varieties have been selected for cultivation. Seeds are sown directly at a depth of 1.5 cm when the soil temperature is above 10°C. Seeds germinate best with temperatures of 20°-25°C. Seed should be soaked for 12 hours before sowing at a spacing of 20 cm. Seed may take 2 weeks to germinate.

Use: The young roots are stir-fried or added to soups and stews after the bitter element is removed. This is done by peeling then soaking in water for an hour. The roots can also be pickled, made into a paste or a drink. Young leaves can be eaten cooked as a vegetable. The pith of the flower stalk can be eaten in salads. Seeds can be sprouted and eaten.

Nutrients: energy



Legumes provide protein for growth

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

Common name: Lucerne sprouts (Alfalfa)

Scientific name: *Medicago sativa*

Cultivation: Plants are grown from seed sown where they are to grow. Plants can be 10 cm apart. Plants can be cut back to encourage new growth for the young leaves.

Use: Seeds are often sprouted, and the young sprouts eaten raw. Young leaves are often lightly cooked and added to meat dishes. The seeds can be ground into flour for bread. The dried and powdered leaves and flowers can be used as tea.

Nutrients: seed (sprouted): energy, protein, vit A, vit C

Common name: Pea

Scientific name: *Pisum sativum*

Cultivation: Plants are grown from seed. Seed can be collected for re-sowing. A spacing about 5 cm apart in rows 25 cm apart is suitable. Seed can be sown 3-5 cm deep. If rotting is a problem, plants can be supported off the ground. Seed can be sown in autumn directly into the garden or into punnets/trays and transplanted once germination has occurred.

Use: 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.

Nutrients: seed (raw): protein, vit A, iron; seed (boiled): vit A



Leafy greens are a source of 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: Cabbage

Scientific name: *Brassica oleracea var. capitata*

Cultivation: Plants are normally grown from seeds and can be transplanted as seedlings. They can also be re-grown from cuttings or sprouts that develop on the cut stalk.

Use: The leaves can be eaten raw or cooked. Stems can be eaten boiled or pickled. The seeds can be sprouted and eaten.

Nutrients: vit A, vit C

Common name: Brussels sprouts

Scientific name: *Brassica oleracea var. gemmifera*

Cultivation: Seedlings are transplanted after 5 or 6 weeks. The spacing needs to be about 60 cm x 60 cm

Use: The sprouts are cooked and eaten. The leafy tops can also be eaten.

Nutrients: energy, iron



Fruit are an important source of vitamins and dietary fibre

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: Highbush blueberry

Scientific name: *Vaccinium corymbosum*

Cultivation: Plants are grown from cuttings. It is best to buy established bushes from a plant nursery.

Use: The fruit are eaten as a dessert fruit and also in fruit salads, juices, syrups and other foods and drinks. They are used in jams, tarts and muffins. They can be frozen.

Nutrients: energy, vit C

Common name: Raspberries

Scientific name: *Rubus idaeus*

Cultivation: Rooted cuttings are used. Soft wood cuttings can be used. Fruit are usually produced on one-year old canes. After harvesting the fruit bearing canes are cut at ground level and removed.

Use: The fruit are eaten raw. They are also used in jams, drinks and for sweets. Young leaves can be cooked and eaten as a vegetable. Dried leaves are used as a substitute for tea.

Nutrients: energy, vit A, vit C



Vegetables are an important source of vitamins and dietary fibre

Common name: Cauliflower

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

Cultivation: They are normally grown from seeds and transplanted.

Use: 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.

Nutrients: flower (raw): energy, vit C, iron, zinc; flower (cooked): energy, protein, vit C

Common name: Swede

Scientific name: *Brassica napus* var. *napobrassica*

Cultivation: 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.

Use: The roots are cooked and eaten. The leaves can be eaten cooked.

Nutrients: energy, iron

Common name: Carrot

Scientific name: *Daucus carota* subsp. *sativus*

Cultivation: They are grown from direct sown seed. The seed are small, mix with sand before sowing to allow a more even distribution of plants. A spacing 5 cm apart in rows 15-20 cm apart is suitable. Often this spacing is achieved by thinning out plants.

Use: The roots and leaves are edible. The young leaves are used in soups. The roots can be eaten raw or cooked, 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.

Nutrients: vit A, vit C, iron, zinc



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 Plants in the northern

Finland 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 northern Finland region. It is not a comprehensive guide of food plants for northern Finland. 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.

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

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

