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The little book of micronutrients



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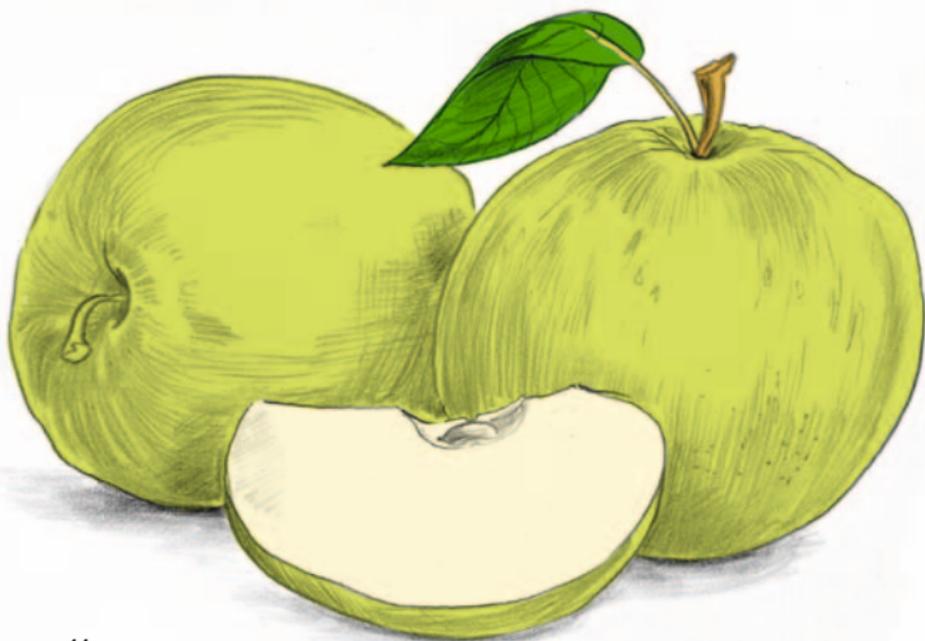
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Fruits and vegetables

Apples

Hardy apple trees grow on every continent and are very fruitful. They love sunny spots and sandy, loose soils. A small apple tree can be grown in a flower pot and later planted in the garden. It is best planted in autumn. The tree can then slowly grow its roots during winter.

Apples are rich in micronutrients, especially in the peel. This is why apples should always be eaten unpeeled. An apple contains B vitamins, vitamins C and A, folic acid, antioxidants, potassium, magnesium and pectin.



Apricots

Apricot trees love warm and wind protected areas, such as those close to house walls. The soil needs to be warm and always moist. Especially clayey sandy soils with a high humus content are an advantage. Apart from a yearly cutback, the tree doesn't need much maintenance and can produce many kilos of fruit each year.

Apricot pips contain the important vitamin B 17, that has highly anticarcinogenic properties. Apricots also contain carotenoids, vitamins C, A and E, potassium, calcium, phosphorus, magnesium and B vitamins.



Eggplant

Eggplants come from India and love warmth. That's why in cold regions they can only be cultivated in greenhouses where they grow very well. They need to be watered carefully, they don't like wet leaves. They can grow up to a height of 2 meters and need to be tied to sticks to grow fruit. They love nettle swill and liquid manure as a regular fertilizer.

They contain a lot of micronutrients, such as carotenoids, B vitamins, vitamin C, potassium, calcium, phosphorus, iron, bitter compounds, magnesium and phenolic acids.



Avocado

A small avocado tree is easy to grow. Simply wash the seed of a ripe avocado and let it dry a few days on the window sill. Plant the dry seed in compost with the flat side down, only covering one third of the seed. With indirect sunlight and enough watering, it will start to sprout after 4 weeks. To become a tree in cold places, it needs to move into a greenhouse as avocado trees can't tolerate freeze.

Avocado delivers important fatty acids and nutrients like folic acid, vitamins B, C, A, D and E and B vitamins, iron, calcium and potassium.



Banana

Bananas grow in large tropic plantations. They need humidity and warmth. They are imported into Europe. All together, there are more than 70 banana species, such as red bananas and mini bananas.

They are a natural energy supply and contain a lot of potassium, B vitamins and manganese.



Broccoli

Broccoli is related to cauliflower and belongs to the cruciferous vegetables group. Broccoli needs a sunny and wind protected area and loose sandy soil.

It is rich in micronutrients, such as vitamins C, E, A, K and B vitamins, lysine, leucine, phenylalanine, zinc, manganese, calcium, magnesium, methionine, phosphate and glucosinolates.



Blackberries

Blackberries are climbers and can grow up to three meters. The prickles serve as a climbing aid and help protect the plant from being eaten by animals. Botanically, they are drupes and not berries.

The black colour of the fruit is from its flavonoids anthocyanin. The tannins in the berries are beneficial for the immune system. Blackberries contain a lot of vitamin C, carotenoids, B vitamins, folic acid, potassium, calcium, phosphorous, magnesium and anthocyanins.



Button mushroom

Button mushrooms best grow on dark and wet substrates that mostly consist of wood or straw. They are easy to grow on window sills and the substrate needs to be changed only after five to six harvests.

Button mushrooms contain a lot of vitamins E and D, potassium, copper, arginine and B vitamins.



Belgian endive (chicory)

Belgian endive (Chicory) grows from the end of May to the beginning of July in outdoor beds. After the plants have germinated, the seedlings need to be selected so they can expand. They need a constant moist environment and some compost in the soil. Single leaves can be taken from the plant and as long as there is no damage to the inside, the plant will continue growing.

Belgian endives are rich in the bitter tasting compound intybin with vitamin C and B vitamins, potassium, carotenoids, calcium, iron, magnesium and inulin.



Peas

Peas are creepers and can grow up to 2 meters high. They need a growing aid, such as wooden sticks and need to be planted between the middle of March and the middle of April. They are tough plants and have low demands on area and soil. Waterlogging should be avoided though.

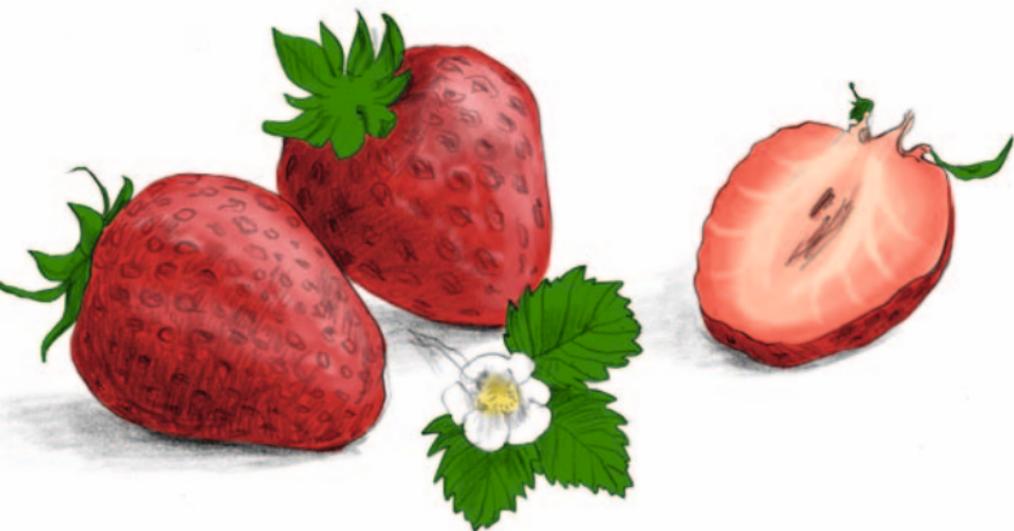
Peas are very rich in vitamins C, E, K, B vitamins, lysine, potassium, manganese, methionine and copper.



Strawberries

Strawberries grow in outdoor open beds from the middle of March and from May to June they can be harvested. Strawberries love warm and wind protected environments. They like straw as a top layer substrate, as it is a natural snail repellent and keeps moisture off the leaves. It also preserves warmth.

Strawberries contain a lot of vitamin C, calcium, magnesium, folic acid and potassium.



Lamb's lettuce

Lamb's lettuce belongs to the valerian family and is small growing. It is quite cold resistant and can be planted throughout the entire year. Cultivation is easy: the seeds are planted in rows with a distance of about 11.8 inches. They need to be well watered. The sprouting grows quickly and the first harvest is ready after a few weeks.

Lamb's lettuce is particularly rich in micronutrients, such as vitamins A, C, K, folic acid, iron, calcium, magnesium and chromium.



Fennel

Fennel has to be cultivated in small pots and then planted outdoors by the middle of May. There needs to be a 10 inch gap between them, to let the bulbs fully develop. During early growth fennel appreciates some organic fertilizer. Fennel is a tough vegetable, it even tolerates the occasional freeze.

The bulb and its fine leaves are rich in: vitamins C, K, E, iron, phosphorus, potassium, B vitamins and folic acid.



Green beans

Green beans are creepers and love sandy and loose soils. They grow on poles. Raw beans should be avoided. They are only palatable when cooked. Before sowing, they should be soaked in water for at least 24 hours. They will sprout quicker and can be harvested sooner.

Micronutrients: vitamins C, K, E, and B vitamins, potassium, phosphorus, calcium, silicon and copper



Kale

Kale is a superfood. It grows easily and contains a variety of micronutrients. From the middle of April onward it can be seeded and then later selected and planted on a vegetable patch. Kale loves lettuce as a neighbour or to be planted on an old potato field.

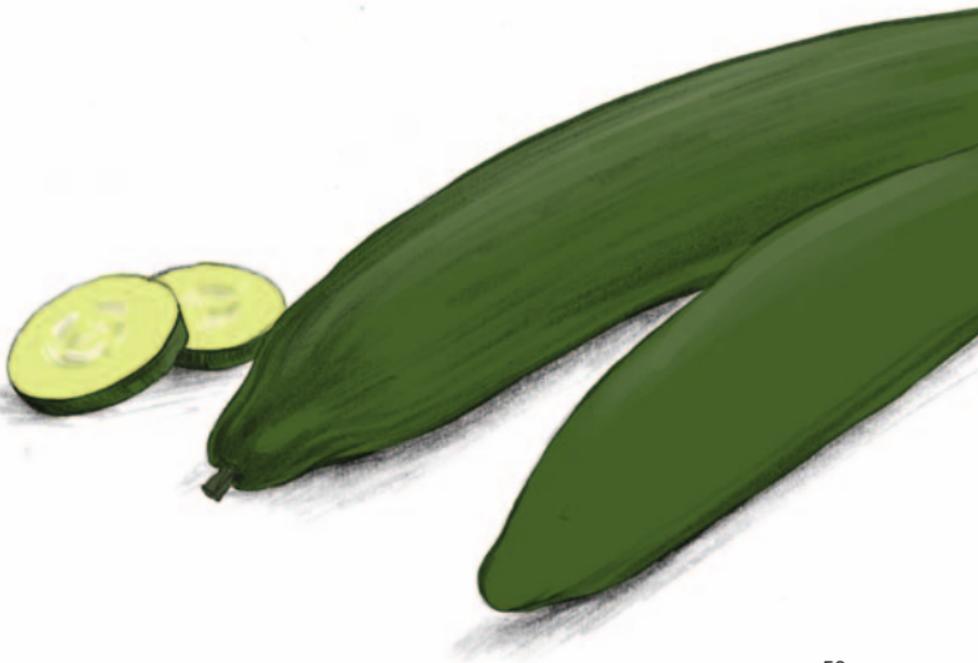
Besides vitamins C, K and E it contains B vitamins, manganese, copper, calcium and potassium. Its high amount in antioxidants protects the cells.



Cucumber

Cucumbers are very tasty in salads and as raw foods and belong to the family of pumpkins. They grow up to four metres long and have no specific needs to soil and position, however, they love sunlight. Sowing should take place at the beginning of May.

Most of the nutrients are in the shell that's why it is best to enjoy them unpeeled. Cucumbers contain vitamins C, K, B vitamins, potassium, calcium, zinc, magnesium and phosphorus.



Blueberries

Blueberries need a sunny and sheltered spot. They need constant moisture and should never dry out. A mixture of lime deficient garden soil, leaves, compost and sand, which stores water is ideal. The young sprouts appear after a few weeks but the plant may take a few years to fruit. Blueberries are very sensitive to lime so it is best to use soft rainwater for sprinkling.

Blueberries contain lots of antioxidants and vitamin C, B vitamins, magnesium, potassium, calcium and anthocyanins.



Raspberries

Raspberries belong to the bushy rose family and carry an extremely high amount of spikes on the backside of their leaves and stems. We differentiate between summer and fall bearing raspberries so you can harvest almost the entire year. It has low demands in soil quality but it is sensitive to wind. Raspberries are creepers and need a climbing aid. The more sunlight the plant gets, the more sprouts will shoot and develop and the more blossoms and fruits are produced.

Raspberries are rich in antioxidants, vitamins C, E, A and B vitamins and calcium, folic acid, magnesium, flavonoids, copper, potassium and anthocyanins.



Redcurrants

Redcurrants are extremely rich in vitamins and belong to the gooseberry family. The bushes will grow up to two meters high and develop fruit in small panicles. They are frost resistant and grow along almost the entire northern hemisphere.

There are red and black varieties. The black ones are very high in vitamin C. They have a short expiry date and need to be consumed 2 days after picking. They contain a lot of vitamin E, calcium, potassium, magnesium and anthocyanins.



Carrots

Carrots love a sunny and partially shaded place in the garden. The soil needs to be loose and crunchy. The looser the soil, the straighter the carrots grow into the ground. It is best to soften up the groove before sowing, 8-12 inches deep.

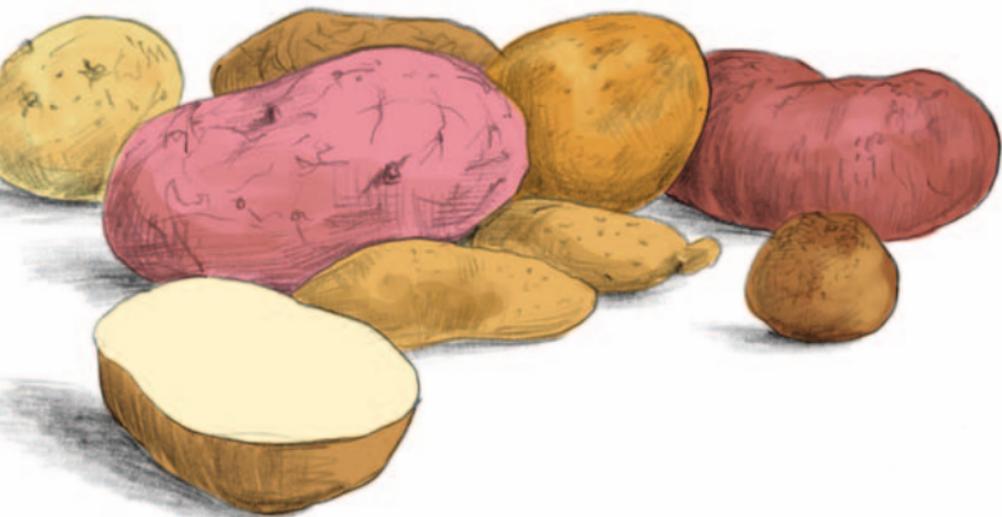
Carrots are rich in fibre and extremely good for the immune system. They contain vitamins C, A, D, iron, zinc, magnesium, phosphorous, manganese, potassium and flavonoids.



Potatoes

Potatoes love sandy and loose soils without waterlogging. If you let them sprout at a warm and dry place, harvest will be a few weeks sooner. Potatoes are sensitive to frost, so they cannot be planted before the middle of April.

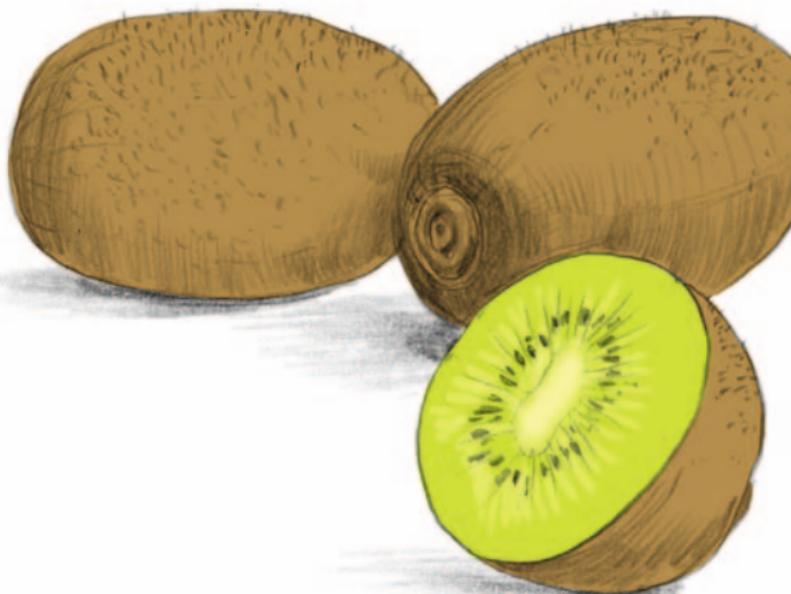
Micronutrients: magnesium, phosphorus, chromium, calcium, iron, potassium, copper, vitamin C and B vitamins.



Kiwifruit

Kiwifruit originates from China and belongs to the gooseberry family. In the 19th century they were brought by missionaries to New Zealand, which is the main exporter of kiwifruits today. They have a similar growth to a liana and need a warm and sheltered position with slightly acidic soil (pH 5.5). If they get protected from frost, they may even grow well in Europe. Peat supports the root development.

Kiwifruits are rich in micronutrients. They contain vitamins C, K, and E, B vitamins, potassium, magnesium, phosphorus, iron and calcium.



Garlic

Garlic is a miracle plant. It disinfects the intestinal system, inhibits cancer cells and protects vessels. The typical garlic smell comes from specific aetheric oils, which are extremely cell-protecting. Garlic grows in most vegetable patches and can be harvested throughout the entire year.

It contains the vitamins C, E, A, sulfides, molybdenum, polyphenols and B vitamins in high amounts.



Lettuce

Lettuce is best sprouted under a thin plastic sheet, which can be removed once the seedlings are bigger. The young plants get hand selected and planted with a distance of 10 inches. The hole mustn't be too deep to avoid rot. Its nutrient requirements are low, so it can be planted easily on unfertilized soils. Lettuce attracts snails, so it is best to add some sawdust into the soil, which makes it difficult for the snails to reach the leaves.

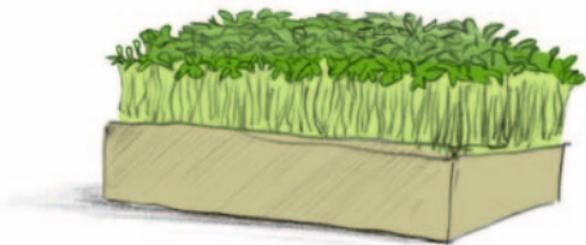
Lettuce contains vitamins C, A, K and B vitamins, carotenoids, phosphorus, magnesium, zinc, chromium and potassium.



Cress

Cress originates from Northern Africa and has been known in Europe since the middle ages. It sprouts even on cotton wool or a kitchen towel. All the nutrition which is needed is already present in the seed.

It is very rich in glucosinolates, which are extremely good for the immune system. Cress is rich in vitamin C and B vitamins, bitters, calcium, potassium, magnesium and iron.



Pumpkin

Pumpkin originates from Central America and was brought by ship to Europe in the 16th century. Pumpkins need a high amount of humus and therefore love the area around a compost heap. They need a lot of space, a single plant can use up to ten square meters. They need regular watering without wetting the leaves, which can easily rot.

Pumpkins contain lots of carotenoids, B vitamins, vitamin E, potassium, iron, magnesium, phosphorus and orthosilicic acid.



Leek

Like other bulbous plants, leek belongs to the family of lilies and needs to be sowed by the end of March. When selecting the young seedlings, the hole where the young plant is going to be planted needs to be deep to ensure the white stem can grow extra long. Nettle brew is a very good fertiliser.

Leek is full of sulfur compounds, B vitamins, polyphenols, vitamins C, K and A, potassium, calcium and iron.



Corn

Corn is a staple food in many South American countries. Corn was sacred to the ancient Incas. It even grows on extremely meager soils and has a high saturation value. It can be used for flatbread or farina.

Corn is rich in B vitamins, vitamins C, E and A, folic acid and minerals like calcium, magnesium, sodium and phosphorus.



Mango

Mangoes grow in warm and subtropical areas. A mango tree needs a lot of half shade and water. It takes a few years until the young tree will carry fruits. It is recommended to first grow a seedling at home and then plant it outdoors. The seed needs to be dry and then soaked for 24 hours in water. It prefers sandy and nutrient deficient soils.

Mangoes contain vitamins C, A, B vitamins, folic acid, proline, glutamic acid and leucine.



Nectarines

Nectarines have been cultivated in China for 4000 years. Today most nectarines are produced by Mediterranean countries. The trees grow extremely well on loose and sandy soils and appreciate warm and sunny spots.

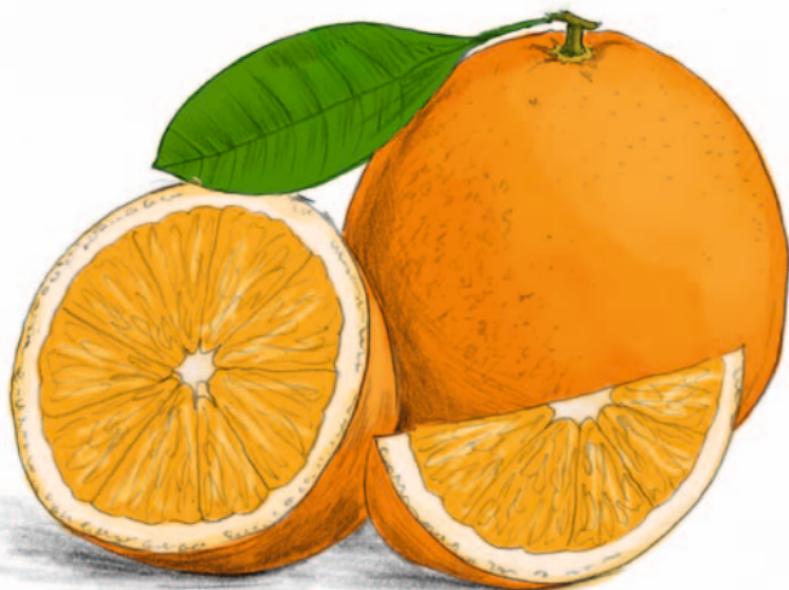
Nectarines are very rich in potassium. They contain vitamins C and E, calcium, carotenoids and magnesium. They are a natural diuretic and support digestion.



Oranges

Like all citrus fruits oranges prefer warm and bright spots with sandy and loose soils. They can be planted as seeds or as cuttings. In any case, some patience is needed as an orange tree needs a few years before it can produce fruits. In summer the plant needs moisture, but without waterlogging. In winter it needs no watering at all but needs to be protected from frost. That's why the main producing area is in Southern Europe, as the climate there is ideal.

Oranges are rich in vitamins C, E, magnesium, potassium, calcium and B vitamins.



Pawpaw

Pawpaw is a tropical tree-like shrub, which belongs to the carica family.

Its pulp contains extremely high amounts of papain, which is a proteolytic enzyme. Pawpaw contains other important micronutrients, such as vitamins C, E, B vitamins, potassium, calcium, iron, selenium and magnesium.



Parsley

Parsley was already known to the ancient Greeks as a medicinal herb. It is rich in micronutrients and easy to grow. It is also ideally suited as a windowsill herb for the kitchen. The taste of fresh parsley suits almost every savory dish. It is tolerant to low temperatures and at times even a freeze. The sowing is possible between March and September. The seeds sprout easily if soaked in water a day before.

Parsley has a high amount of folic acid, vitamins C, E and A and calcium, magnesium, flavonoids, iron and potassium.



Plum

Plums are ready to be picked from the end of July to the middle of August. A single tree can produce almost 100 kilograms per year. As a young tree, it needs to be soaked (waterlogged) so the roots can develop.

Plums are outstanding suppliers of antioxidants. They contain B vitamins, vitamins C, K, leucine, flavonoids, potassium and anthocyanins.



Radish

Like carrots, radish grows outdoors on sandy and loose soils. There are red, pink, white, yellow and black varieties. Radish is to be sowed from the end of April to the end of October. It is best sowed in a furrow filled with fine compost on which the radish seed can sprout. There needs to be an 8-12 inches distance between the furrows.

Radish grows large roots and has a strong flavor that comes from sulfurous glucosinulates, which have anti-inflammatory and antibacterial properties. Radish is rich in manganese, vitamins C, K, E, sulfur, zinc, magnesium, calcium and boron.



Rhubarb

Rhubarb grows as a shrub. It loves direct sunlight and needs to be planted on a calm, but sunny spot. Because it is quite a tough plant it grows quickly on almost every soil. Once a year in the middle of June, after harvest, the rhubarb needs to be fertilized with manure to ensure more resistance against diseases the following year.

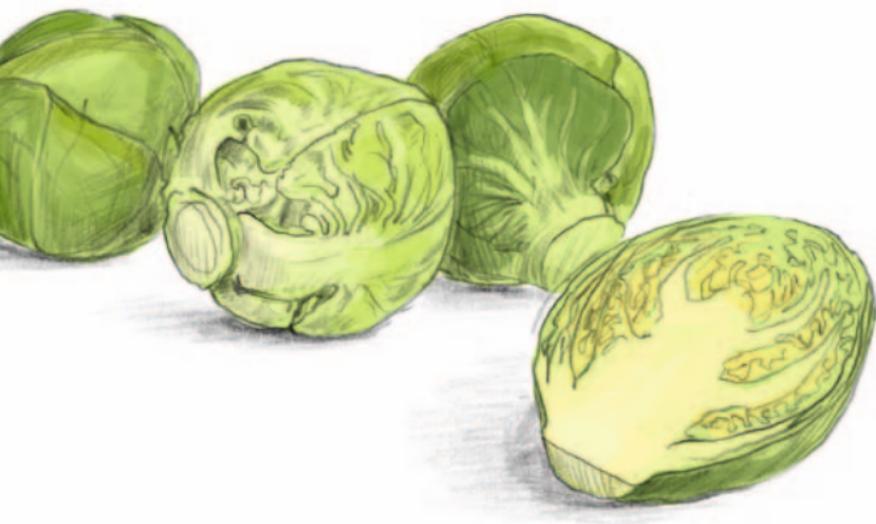
It is very rich in vitamins C, E, K and B vitamins, potassium, calcium and phosphorus.



Brussel sprouts

Brussel sprouts prefer heavy soils. They are sowed in April and the seedlings get planted in June, with a distance of 24 inches between the plants.

Brussel sprouts are rich in vitamins C, E, K, B vitamins, potassium, magnesium and phosphorus, anticarcinogenic bitters and flavonoids.



Beetroot

Beetroot is a biennial plant and closely related to sugar beet and swiss chard. It can be cultivated easily in half shade and has no specific requirements on position and soil. For best results, sow beetroots in June, so that they can be harvested in September.

Its red colour comes from the glycoside betain and is particularly healthy. It also contains vitamins C, E, B vitamins, potassium, iron and folic acid.



Sauerkraut

Sauerkraut is made from white cabbage, which grows on clayey, heavy soils from the middle of April. During growth the cabbage needs a lot of water. The bacteria needed for the fermentation of the cabbage (to develop into sauerkraut) lives on the leaf surface.

Sauerkraut is rich in vitamins C, A, K, as well as B vitamins.



Black salsify

Black salsify is an old type of vegetable, which comes originally from Southern Europe. It is easy to grow and tolerant to cold, which makes it an ideal winter vegetable. Cultivation should start at the end of March and the seeds need to be planted singly and about 4 inches apart. After a few weeks the black salsify is ready to be harvested.

It contains a high amount of micronutrients, such as vitamins C, E, A, B vitamins, sodium, phosphorus, iron, calcium, potassium, inulin and choline.



Celery

Celery is a shrub or nodule, which contains high amounts of micronutrients. It grows very well outdoors in humus rich soils from the beginning of April to the end of September. There is some patience needed, as the plant grows slow, especially in the beginning. It loves the company of cabbage, lettuce and cucumber but dislikes carrots, fennel and parsley.

Celery is rich in vitamins C, E, B vitamins, folic acid, potassium, lysine, calcium, iron, manganese and phosphorus.



Sunflower seeds

Sunflowers are among the most popular annual garden plants and can grow up to 3 meters high. The seeds are sprouted in small clay pots and then planted outdoors 12 inches apart. The seeds are tasty and particularly nice in stews and salads.

They contain a lot of vitamin E, B1, calcium, potassium, iron and phytosterines, phenylalanine.



Asparagus

It is easy to cultivate an asparagus patch in the garden. A 16 inch hole is filled with compost and a 2 inch layer of soil where the seedling is planted. After winter rest a heap of soil needs to be added to the patch so the young asparagus can sprout. Asparagus can live up to 15 years.

The plant is rich in vitamins C, E, K and A, copper, folic acid, magnesium, sulfides and calcium.



Spinach

Spinach is ideally planted before and after other vegetables because it grows best when the days are short and the nights are long, like in winter and spring. It is sowed in grooves with about 12 inches distance and is ready to be harvested after few weeks. It fits well between bean patches. The spinach is harvested when the beans start to grow.

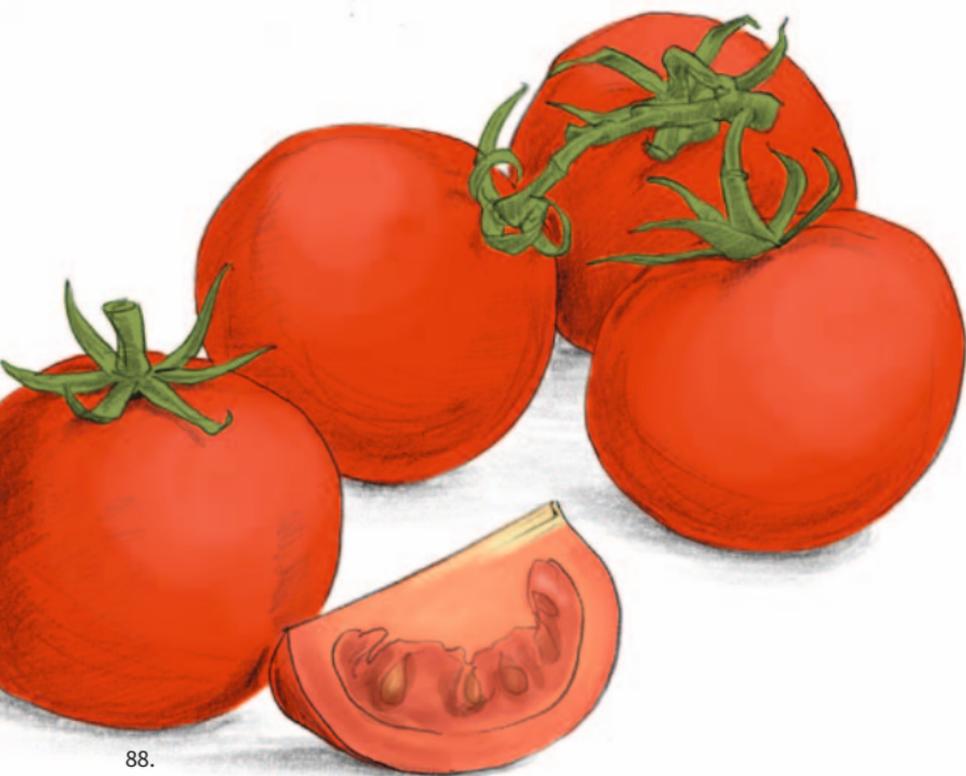
Spinach is rich in vitamins C, E, B vitamins, potassium, magnesium, iron, chromium and sodium.



Tomato

Tomatoes belong to the nightshade family and are rich in carotenoids, which are a natural antioxidant. They love warm and sunny positions and need a lot of light. It is best to soak the seeds overnight in water and then plant them first in small clay pots. When the seedlings are about 6 inches long they can be moved outdoors.

Tomatoes contain a lot of micronutrients, such as potassium, magnesium, folic acid and vitamins C and E.



Walnut

Walnuts are among the oldest cultivated plants, with archaeological evidence of their cultivation 9000 years ago. Walnuts thrive even on acidic soil and are best planted as cuttings. A fully grown walnut tree produces about 88 pounds of nuts yearly.

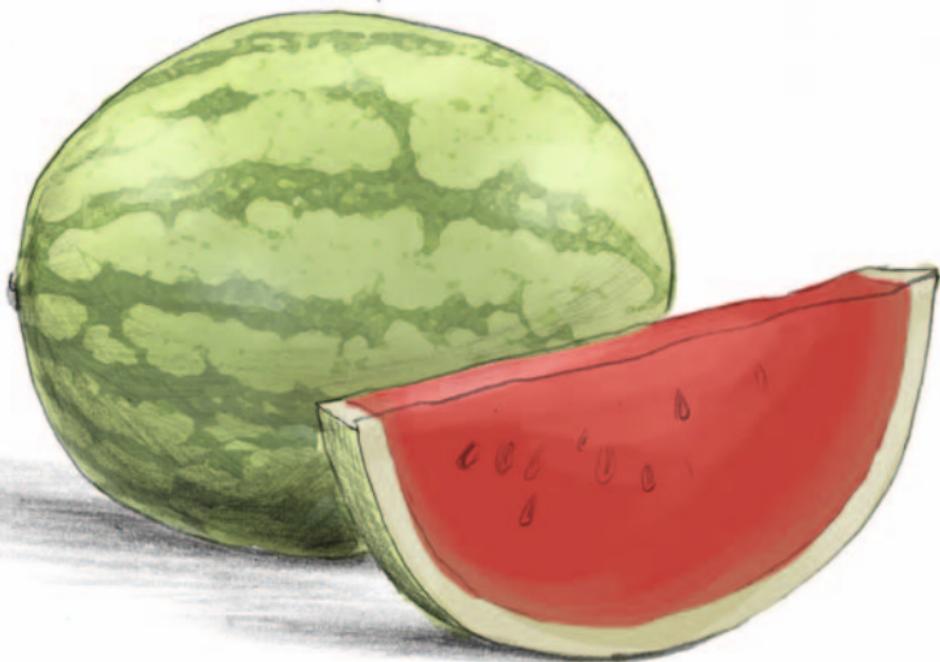
Nutritional value: vitamin E, potassium, magnesium, iron, chromium, proline and phytosterols.



Watermelon

Watermelons grow in warm and sunny flat spots. The soil needs to be moist, but not wet. Sowing should be done by the end of April. A watermelon fruit can grow into soccer ball size within a few weeks. If some small melons get cut off early the remaining ones grow bigger.

Watermelons contain vitamins C and K, B vitamins, potassium, lysine and proline.



Grapes

Grapes ripen on extremely sunny slopes. They are creepers and need a climbing aid. The vine stock needs several years to mature in order to produce grapes.

Picking is at the end of September. Grapes are particularly rich in polyphenols. They also contain lots of vitamins C, E and A and the amino acids phenylalanine, methionine and arginine.



Savoy cabbage

Savoy cabbage grows quicker than white or red cabbage and takes about 26 weeks to be harvested. Savoy cabbage is tough and belongs to the eldest crop of plants in the world. In the early middle ages it was a famous dish. It can be planted from March to October and has no special needs for soil or weather.

It contains a lot of micronutrients, such as vitamin C, iron, phosphorous, B vitamins, magnesium and glucosinolates.



Lemon

Lemons need loose and peat containing soil. It is best to grow a lemon tree from a cutting. It needs to be cultivated under a thin plastic layer, when it grows bigger it needs a mild and wind protected spot. Lemons protected sailors 300 years ago from scurvy.

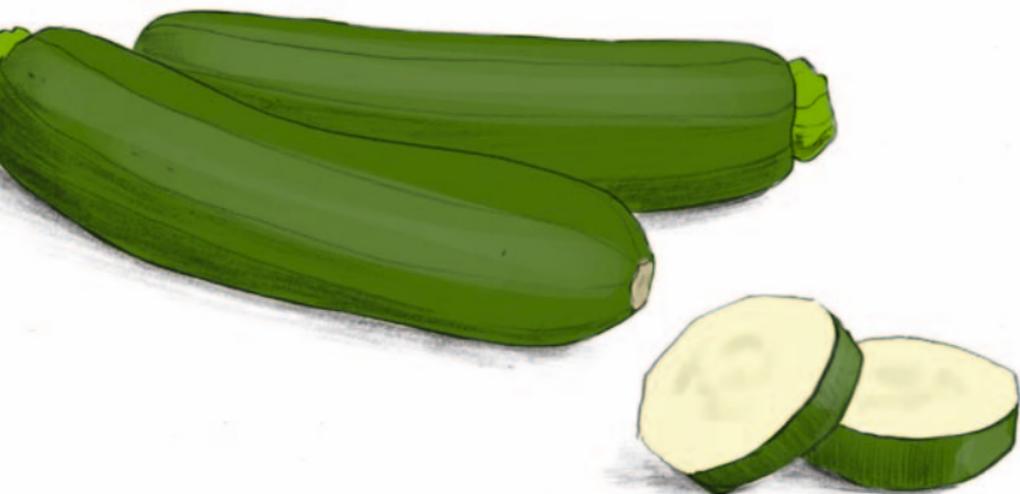
They contain a lot of vitamin C, B vitamins, calcium, magnesium and flavonoids.



Zucchini

Zucchini is a subspecies of marrows. They need to be sprouted (seeds need to be soaked in water for one day) in small clay pots and then later planted outdoors in the garden, after they reached a height of 8 inches. They love southern exposure and lots of sun. Each plant needs 1 square foot of space and moist soil. The flowers can also be eaten and taste delicious. Zucchini pollinate each other through insects and there are male and female plants. The fruit grows from the flower and is ready to be harvested after 6 weeks.

They contain a lot of vitamin E, C, A and B vitamins, iron, zinc and magnesium.



Onions

Onion seeds can be sowed in February as they tolerate the cold. However, the patch should not be too wet. While sowing there needs to be a distance of 8 inches between the grooves. Onions need four weeks to sprout. They dislike competition, so the patch needs to be completely weed free.

Because of their high content in sulfurous substances, they lower cancer risk and protect the cell walls. They are also rich in vitamin C, carotenoids, polyphenols, potassium, calcium and zinc.





Important Micronutrients
in a nutshell.

A reference work
perfect for travel.

