



## Exotic Vegetables, Spices and Herbs

For several reasons, the demand for exotic vegetables, spices and herbs is increasing. One reason is the growing number of immigrants coming to Norway. There are approximately 800,000 persons with an immigrant background from about 200 different countries in Norway. These can be divided into five to seven groups based on different food traditions. Due to this development, there is increasing demand for international foods.

Nowadays, Norwegians are travelling abroad much more than before. As a result, they are becoming acquainted with new food traditions from all over the world, and are increasingly looking to find these foods on the domestic market, as well.

New eating habits and improved storage technology are a third reason for the increased demand for exotic produce. With stores offering a wider range of products and storage methods becoming better, fresh produce is now available throughout most of the year. Traditional preservation methods like canning, drying and salting have been widely replaced by cold storage with advanced temperature and moisture control. Today, food from around the world is imported much faster than before, and is kept under optimal temperature and moisture conditions during transport. Certain exotic vegetables can now be purchased in food stores, but their quality varies due to long transports, in spite of refrigeration. Several of these crops can be grown in Norway (Fig. 1), especially numerous leafy greens and root vegetables. Some of them are also frost-hardy and can be kept outdoors until late fall or early winter.

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### Definition

Exotic crops are plants or plant parts that are introduced in Norway, and which are not common in domestic crop production or in the traditional Norwegian cuisine. The potato was an exotic plant when it was introduced to Norway by priests and sailors about 250 years ago.



Fig. 1. A selection of exotic vegetables and herbs. Photo: Bjørgli and Bergersen.



## 1. Okra

Okra is a plant in the mallow family. It is originally from Ethiopia, but is now grown in most tropical and subtropical regions.

### Cultivation

Okra is an annual plant that can be grown outdoors, in a hotbed or greenhouse. Outdoors, okra needs a warm, protected location. Seeds germinate after 10-20 days at 20 °C and plants grow to a height of about 40 cm. The decorative flowers are yellow with a brown throat. The edible pods are oblong, five or six-sided or cylindrical with a length of 5-12 cm (Fig. 2). The pods, often called 'lady's fingers', are grayish-green with white pulp and white, soft seeds.

Sow 1-2 seeds in 9 cm pots indoors, and transplant to a greenhouse or other suitable spot.

### Season

Harvested okra should be kept at 6-8 °C, but is not suited for long-term storage. A perfect lady's finger should be firm and well-formed, without looking either slimy or shriveled. Okra can vary in size. Small pods usually have the best quality, and are thus preferable because they are juicier and less fibrous than larger ones.

### Use

Okra can be used in the same way as sugar peas and beans, and they contain numerous soft, white and unripe seeds that can be eaten together with the pulp. Pods may also be covered by tiny hairs, which can be removed by rubbing the pods between your fingers. Their color varies somewhat from green to grayish-green, and they have a mild, agreeable taste. The pods can be used in salads, or marinated, blanched, cooked in stews or fried as a side with meat dishes. The entire plant is edible except for the woody stalks. Okra can also be fried in oil and served with tomatoes, onions and boiled rice.

When cooked, okra emits a slimy liquid that thickens soups and stews. To avoid this, blanch okra for about 5-10 minutes in salted water before use in other dishes.

Okra is low in calories, but high in potassium and C vitamins.

### Names

Botanical name: *Abelmoschus esculentus*

Other names: gumbo, lady's finger  
Norwegian: okra

German: Okra, Gombofrucht

French: gombo

Spanish: okra, gombo

Italian: okra, ibisco



Fig. 2. Okra. Photo: frukt.no



## 2. Garlic

Garlic is a species in the onion genus, *Allium*. It is an old cultivated plant that originated in Central Asia and is now grown in most parts of the world. Garlic is widely used as a food, spice and medicinal plant.

A garlic bulb is usually composed of several smaller cloves, which are held together by the white outer skin (Fig. 3). The outer skin can also have shades of violet and red-violet. When cut, the cloves are white and juicy with a very strong taste and odor.

### Cultivation

Garlic is relatively easy to grow, but to achieve good yields, plant in a warm, protected place in sandy or loamy soils high in organic matter. Cloves are planted about 4 weeks before the soil freezes in autumn. The plant is hardy enough to tolerate Norwegian winters. It is also possible to set garlic cloves in early spring, however, results may be more variable. Plant each clove about 5 cm deep, with the pointed end facing up. Ideal spacing is 10-15 cm between plants and 20-30 cm between rows.

Due its sparse foliage, a garlic crop allows lots of light to pass through, thus enhancing weed growth. One should allow time for weeding. You can also cover the ground with a thick layer of mulch, such as grass clippings. Remove any seed stalks, this increases bulb yields.

### Season

Garlic is harvested in July and August, after its tops have withered, if the crop is to be cured. Garlic can be used fresh from the field, or bulbs can be cured outdoors in a breezy location for one to two weeks. The bulbs can then be stored dry and airy, preferably at 0-2 °C and below 75 % humidity. At storage temperatures of up to 5-8 °C and humidity above 75 %, the garlic bulbs can start sprouting, and will eventually mould and rot. Garlic can also be harvested before the tops wilt and used fresh.

### Use

Garlic is used to spice and enhance the taste of meat and pasta dishes, pizza, soups and sauces; as garlic butter, garlic mayonnaise, etc. Divide the bulb into cloves and remove the thin, dried skin. Cloves can be used whole, e.g. in stews, minced or mashed in a garlic press.

Although garlic is best known for its use as a spice and taste enhancer, it has traditionally also been used as a medicinal plant. Often cited are its antibacterial properties, which have been known for centuries.

### Names

Botanical name: *Allium sativum*

Norwegian: hvitløk

German: Knoblauch

French: ail

Spanish: ajo

Italian: aglio

Punjabi: iasun, iasan

Arabic: fum, thoum, thum

Turkish: samisak



Fig. 3. Garlic. Photo: frukt.no



### 3. Garlic chives

Garlic chives can be used both as an ornamental and as spice or greens in the kitchen. This Asian perennial can withstand wind and temperatures as low as 40 degrees below freezing, and is thus perfect for Norwegian conditions. It can grow to be 30 years old.

Garlic chive is a plant in the onion genus, with origins in Japan, China, India and Nepal. It is similar to our native chives, but with a more characteristic taste. As an ornamental, it can be used in rock gardens, around bushes and in flower beds. The small, oblong bulbs produce 4 or 5 narrow, strap-shaped, dark-green leaves. The bulbs are clustered on underground runners, and form 40-60 cm high tussocks, similar to traditional chives. Spring growth starts about 2-3 weeks later than normal chives. Garlic chives bloom with small, white, fragrant, star-shaped, decorative flowers in an open umbel in June and July.

#### Cultivation

Garlic chives can be sown indoors or directly outdoors. Plant 3-4 seeds per cm, and cover with 1 cm soil. Seeds normally germinate after about 2 weeks. Transplant at a spacing of 20 cm between plants and 30 cm between rows, and relatively deep so that the base of the leaves is covered with soil. After 3-4 years, when the tussocks are established, plants should be divided in spring and replanted with about 15 cm between plants. Plants can grow on the same site for 30 years, but can also be moved when needed.

Garlic chives prefer a well-drained, sunny location and can be planted in normal, well-cultivated garden soil. Apply plenty of fertilizer, preferably manure or compost, before planting. Apply a maintenance dressing every spring. Garlic chives do not require much water, but when first watered, water thoroughly. Newly planted chives should not be allowed to dry out. Mulch can be used around garlic chives to suppress weeds and prevent soiling.

#### Season

Plants should not be harvested in the year of planting, but in the following year, leaves can be harvested two or three times from July to October. The harvest season can be extended by keeping some plants indoors in pots. Harvested leaves can be stored at low temperature for a few days, and can also be frozen.

#### Use

Due to the decorative flowers, garlic chives are used as an ornamental, but bulbs, seeds and flowers are edible. The leaves have a mild garlic flavor, and can be used in the same way as chives, spring onions or garlic. Garlic chives can be used in fried fish and meat dishes. Allegedly, the plant is good for digestion, helps to thin the blood and heals wounds.

#### Names

Botanical name: *Allium tuberosum*

Other names: Oriental garlic, Chinese leek, Chinese chive

Norwegian: kinagressløk, kinesisk gressløk

German: Chinalauch

Chinese: jiucai, kauchoy, kucai

Arabic: kurratseeny

Filipino: kutsay, ganda, amput, imayyaw

Thai: kuichai, hom-paen



## 4. Amaranth

Amaranth has three different uses: the seeds as a cereal or ground to flour, the leaves in salads or cooked as a leafy green in soups, or as an ornamental plant with its colorful spikes and foliage. Amaranth is similar to spinach, both in taste and usage. It is also rich in vitamins and several essential trace minerals.

Amaranth seeds have been used as food for more than 6000 years by the Aztecs, Mayas and Incas in Central and South America. Today, amaranth is used as a leaf vegetable in Southeast Asia and parts of Africa as well. There are about 60 species of amaranth. In Asia, four species are grown as vegetables: *Amaranthus cruentus*, *Amaranthus blitum*, *Amaranthus dubius* and *Amaranthus tricolor*. The green-leaved varieties are popular in India, whereas the Chinese prefer the red-leaved varieties (Fig. 4). Amaranth is related to the weed lamb's quarters, beet roots and the ornamentals love-lies-bleeding and prince's feather.

Amaranth is an annual plant in the amaranth family. There are considerable variations in size, shape and color between species. Leaves can be more or less round or lanceolate, 5-15 cm long and have a variety of colors, such as green, purple-red, golden or variegated.

### Cultivation

When the soil is warm, the seeds can be sown outdoors in rows. However, sow carefully, as the seeds are very small. Seeds germinate within about 10 days, and seedlings appear after 15-20 days. Plants should be spaced at about 50 cm, and grow in an appropriately moist, nutrient-rich soil. Amaranth is drought resistant and prefers a lot of sun and warmth. It grows fast and is considered as an easy-to-grow plant.

### Season

You can start harvesting the first small leaves after about 30-40 days. Only pick a few leaves per plant to ensure sufficient regrowth. Continue harvesting until the frost sets in.

### Use

Amaranth can be used raw, lightly cooked or stir-fried, or in soups and stews. It can be used similar to spinach, but if the leaves are cooked too long they can get a bitter taste. Try lightly stir-frying the leaves with a teaspoon of minced garlic and chili, or use small, young leaves in salads. Raw leaves are rich in vitamins A and C, calcium, iron and other minerals.

In Greece, *Amaranthus yndistil* is used in the dish *vlita*, or *vleeta*. The leaves are cooked and served with olive oil and lemon as a common side dish to fish.

### Names

The name amaranth derives from Greek *amarantos*, which means "unfading". The plant was given this name because it does not fade easily and thus symbolizes immortality. There are numerous local names for amaranth in Southeast Asia and East Africa, such as *mchicha* in Swahili.

Botanical name: *Amaranthus* spp.

Other names: Chinese spinach

Norwegian: amarant

Malayan: bayam

Chinese: een choy, in tsoi

Japanese: santonasai



Fig. 4. Amaranth. Photo: Bjørgli and Bergersen.



## 5. Malabar spinach

Malabar spinach is used as food, medicine and a coloring agent in baked goods and sweets. The plant likes warmth, but can sometimes be successfully grown in our northern regions. Malabar spinach is frequently sold as an ornamental plant; often as large, decorative plants.

Malabar spinach belongs to the basella family. It originated in India, but has also been grown in China for centuries. It was first introduced to Europe in the early 1900s, but only as an indoor ornamental. Malabar spinach is a fast-growing, perennial climbing plant that can reach a height of 10 meters in moist, tropical areas. In our northern latitudes, it will usually not survive the winters, and does not grow as large. Its stem is thick, and the thick, shiny leaves can be oval, round or heart-shaped, 8-15 cm wide. Some varieties have light-green leaves, others are red or copper-colored. In the course of the summer, small, white flowers develop, which gradually turn pink and red, and develop into shiny, small and purple berries.

### Cultivation

Malabar spinach can be propagated from seed or cuttings. Soak seeds in water overnight before sowing outdoors when temperatures reach 18-20 °C. Seeds germinate after 10-20 days. Malabar spinach can also be grown from seed indoors in small pots at around 16-18 °C. Transplant to a sunny place when seedlings are about 10-20 cm tall and the soil is warm, or to pots with a diameter of about 25 cm. If you keep some plants over winter in a greenhouse, these can be propagated from cuttings the following spring. Malabar spinach prefers loose, sandy loam, high in organic matter and moisture. The plants are not drought-resistant and tolerate lots of rain. This species does not tolerate frost, but nevertheless grows well at day/nighttime temperatures of 15/10 °C, respectively. Spacing should be 25-45 cm between plants and about 1 m between rows.

### Season

The first leaves and side shoots can already be harvested one month after transplanting.

### Use

Malabar spinach can be used instead of regular spinach, either raw in salads, cooked or stir-fried. Fresh leaves can be used as a sandwich topping. Leaves, leaf stalks and stems have a mild spinach flavor and they taste best when picked young. Leaves and stems can also be used to thicken sauces, soups and stews, but will become slimy if cooked for too long. The plant is frequently also used for medicinal purposes.

### Names

Botanical name: *Basella alba*

Other names: Indian spinach,

Buffalo spinach

Norwegian: malabarspinat, basella



## 6. Chard

Chard is a biennial plant in the genus *Atriplex*, and is thus related to the more widely known vegetables beet root and spinach. Chard is a leaf vegetable, and has been known by Norwegian horticulturalists for quite a while, although its use has been limited. It has been extensively used in the Mediterranean region, but has been used in most parts of the world, also in the Arabian cuisine.

Chard resembles Chinese cabbage, but its leaves are longer and narrower and form a loose head (Fig. 5). The leaves are dark green, whereas the thick leaf stalks can be white, yellow or even a decorative deep red.

Although mainly grown as a food plant, chard also has ornamental value due to its decorative colors. Especially in late summer, the bright yellow and red stalks together with the green leaves can be extremely decorative and actually quite impressive.

### Cultivation

Chard can be sown directly outdoors in May-June in well-drained soil with good tilth. If sown too early in cold soil, chard plants are prone to bolting. Sow with a spacing of 20 cm between plants and 40-50 cm between rows. Weeding is usually required. Chard is salt-tolerant, and thus seaweed can be used as fertilizer. Harvesting can usually start after 50-60 days. Leaves formed during summer and fall can withstand temperature and moisture variations better than spinach. Chard also tolerates light fall frosts.

### Season

The harvest season lasts from late June to October, and chard leaves can be stored at 2-4 °C. However, the leaves generally cannot be stored for too long and are thus not suitable for long-term winter storage. Larger chard heads with thick leaf stalks keep longer than small, loose chard leaves.

### Use

Chard leaves have a mild taste that is similar to spinach. Cooking the leaves reduces the slightly bitter taste. There are two different varieties; one with smaller, 8-10 cm long leaves, and a larger type, with a thick, juicy leaf stalk. Young leaves can be used raw in salads, and older leaves can be cooked or stir-fried, and used similar to spinach. One can also cut away the leaf stalk and cook it like asparagus, and use the leaves in salads. The thick stalks can also be eaten raw like celery.

### Names

Botanical name: *Beta vulgaris* var. *cicla*

Other names: Swiss chard, spinach beet, mangold

Norwegian: mangold, sølvbete, bladbete

Swedish: mangold

Danish: bladbede

Turkish: pazi

Azerbaijani: yarpaq cugundur

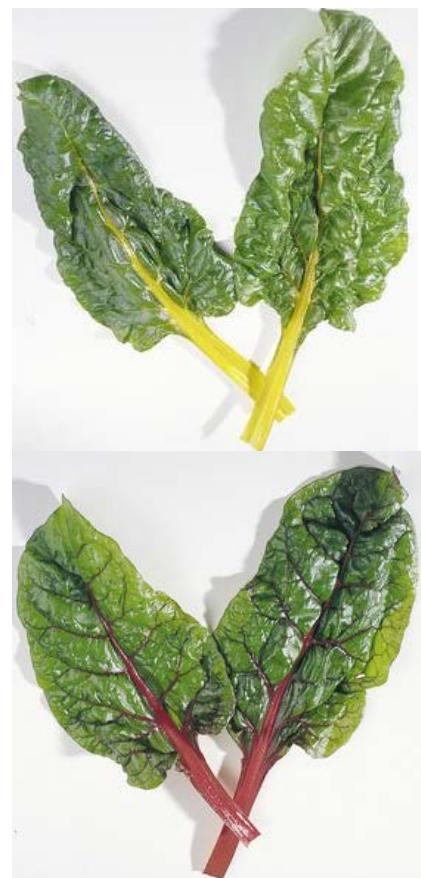


Fig. 5. Yellow-stalked (top) and red-stalked (bottom) chard.  
Photo: frukt.no



## 7. Mizuna mustard

Mizuna mustard originally comes from China, although it has been grown and used in Japan for centuries, and is thus also regarded as a Japanese vegetable. It has a rich taste, grows fast and is considered to be easy to grow. Mizuna is decorative with its glossy, serrated, dark green leaves and its short, white stalks. It can thus be used in flower beds, e.g., along the edges (Fig. 6). Mizuna mustard belongs to the cabbage family, and is closely related to the more familiar turnip.

### Cultivation

Mizuna mustard can be sown directly outdoors as soon as the soil is warm and then regularly throughout the summer. Sow at a depth of 1-2 cm, with a spacing of 20-30 cm between plants and 30-50 cm between rows. Seeds germinate and grow fast, but weeds should be removed before the plants become established.

Mizuna is prone to the same pests that otherwise attack numerous brassicas, such as flea beetle, cabbage root fly, diamond-back moth and turnip sawfly. Slugs can also be a problem. For early cultures, rows should be covered with horticultural fleece. Fleece can be omitted when sowing in July or later.

Mizuna has shallow roots, and is thus drought-sensitive and should be watered regularly in small doses. It does not require any specific soil type, but grows well in nutrient-rich, porous and well-drained soils in a sunny or semi-sunny location.

Leaves can be cut with scissors or picked. If the leaves are not used right away, they can be stored at 1-5 °C to keep them from wilting. Plants can also be cut off about 5 cm above the ground to promote regrowth and formation of new leaves. Mizuna mustard can thus be harvested several times during a growing season. One of the plant's big advantages is that it can withstand temperatures of down to -5 °C. Mizuna can be grown in an unheated greenhouse throughout autumn, but can also grow outdoors until covered by snow. Topped and small plants tolerate low temperatures better than large, mature plants.

### Use

Mizuna can already be harvested after 5-6 weeks, when the leaves are about 10 cm long. At this stage, leaves are called baby leaves and can be used in salads. Larger and coarser leaves can still be used raw in salads, whereas the most mature leaves are best suited for use in soups, stews, pasta and wok dishes, or as a boiled vegetable. Mizuna mustard is rich in vitamins and has a piquant, mild peppery flavor. Flowering shoots are also edible, and mizuna seeds are used as ingredient in the well-known Dijon mustard.

### Names

Botanical name: *Brassica rapa* var. *nipposinica*, *Brassica rapa* var. *japonica*

Norwegian: mizunakål,  
mizunasalat, kyona  
Mandarin: shui cai



Fig. 6. Mizuna mustard. Photo:  
frukt.no



## 8. Pak choi

Pak choi is easy to grow, prefers cool growing conditions and tolerates light frosts. The use of pak choi spread from China via Korea to Japan, but it is now found on markets worldwide.

Pak choi is a crucifer, somewhat resembling Chinese cabbage and chard. However, its leaves are more even, rounder and longer, and its head looser than in Chinese cabbage (Fig. 7). Its growth form is slightly similar to celery. Pak choi is cultivated as an annual, although the plant actually is a biennial. Thus, bolting can be a problem, especially in spring when night temperatures fall below 10 °C. It is recommended to delay seeding or planting until after the last spring frost date. Pak choi prefers well-drained, nutrient-rich soil that is high in organic matter and has a pH of 6.0 to 7.5. Sufficient nitrogen supply ensures a good leaf yield, and plants should be watered sufficiently and regularly throughout the season.

### Cultivation

Seeds germinate after 4-7 days at 10-25 °C. If grown from seed indoors, sow 4-6 weeks prior to transplanting. Spacing should be 15-30 cm between plants (30-50 cm for large varieties) and 20-30 cm between rows. When sowing directly outdoors, place seeds at a depth of about 1 cm and with a spacing of 3 cm. Thin to a spacing of 15-30 cm when plants have reached a height of about 10 cm. Pak choi likes full sun, but tolerates some shade. Plants grow to about 30 cm height and can be harvested about 6 weeks after seeding. Plants that are cut will put forth new shoots. Pak choi is also suited for cultivation in pots, urns and frames due to its relatively shallow root system.

### Season

It is recommended to sow pak choi both in spring and late summer to ensure having fresh leaves throughout the entire autumn season. It is said that autumn-sown pak choi is easier to grow than crops sown in spring, presumably due to a lower risk of pests and bolting. When sowing late in autumn, the growing season can be extended by greenhouse cultivation.

### Use

Leaves, leaf stalks and flowers are edible. Cut leaves with a sharp knife right beneath the node, or about 3 cm above the ground. Harvest either just the outer leaves or entire plants. Store pak choi cool, preferably in an airtight plastic bag or container. Leaves usually lose their crispiness after about one week's storage. Pak choi is similar to Chinese cabbage, but with a slightly more peppery and richer flavor, in spite of often being characterized as sweet and mild. Fresh, crispy leaves can be used in salads, but can also be cooked, stir-fried or steamed in butter. Thinned out plants can be used in salads. Pak choi is widely used in wok dishes and soups in both the Chinese and Thai cuisines.

### Names

The plant has many names, and is also called paksoi, bok choi and tai tsai. Choi and tsai simply mean vegetable in Chinese, and bok choi refers to white vegetable.

Botanical name: *Brassica rapa* ssp. *chinensis*

Other names: bok choi, paksoi, tai tsai

Norwegian: stilkål, pak choi

Mandarin: bai cai

Filipino: petsay, pechay

Vietnamese: cai thuong hai



Fig. 7. Pak choi. Photo: frukt.no



## 9. Mustard greens

Mustard greens originated in Central Asia and the Himalayas, and later spread to Caucasia, India, China and Southeast Asia.

Mustard greens is a cruciferous vegetable, and comes in various forms and varieties. Some have green leaves, others red leaves, and there are considerable variations in growth form and leaf shape.

### Cultivation

The plant is a perennial, but is usually grown as an annual. Mustard greens are fast-growing, and some leaves can become quite large. Spacing should be 20-30 cm between plants and 30-50 cm between rows. It is recommended to sow between 20 August and about 15 September for plants to overwinter, although winters in Norway may be too severe for winter survival. Established plants tolerate autumn frosts of down to -10 °C, and still continue to grow. Early sowing and sowing in cold soil can easily cause bolting, but can be done when harvesting young plants.

Mustard greens can be grown on most soil types, as long as the soil is in good tilth, and is not too acidic or course-grained. The plants have a rather shallow root system, so drought-resistant soils are most suitable and plants should be watered regularly. The mustardy flavor can become very strong when plants are grown in dry, warm conditions.

It takes 30-60 days from seeding to the first harvest, depending on variety, growing conditions and the desired maturity of harvested leaves or plants. Leaves from flowering plants can still be harvested, but growth slows down after flowering.

### Season

Mustard greens can be harvested at all stages until flowering begins. Inflorescences can be harvested when flowers are still in bud, but open flowers should be removed to promote formation of new shoots. Flower buds are excellent as food, and large plants can produce shoots for several weeks, especially in autumn and in spring on overwintered plants. Mustard greens are not suited for long-term storage, but keep best at 0-2 °C and high humidity.

### Use

Mustard greens have a strong mustard flavor, but become less pungent after cooking or frying, thus getting a milder and more aromatic flavor than other leaf crucifers. Some varieties have a more peppery taste. Leaves are used in salads, soups, meat dishes and stews, or can be pickled. Due to the strong flavor, mustard greens are best when mixed with other Asian leaf vegetables when used in salads.

### Names

Botanical name: *Brassica juncea*

Other names: Indian mustard,  
Chinese mustard, leaf mustard  
Norwegian: indisk bladsennep,  
sareptasennep



## 10. Chili pepper

Chili pepper, or just chili, is currently the world's most widely used spice. An estimated 2/3 of the global population uses chili daily in their cooking. It is said that if you first have started liking chili, it is hard to stop using it. The plant originated in South America, but is now grown in Asia, Africa and parts of Europe.

Chili contains capsaicin, which gives it its typical pungent flavor. This "heat" is located in the stalks before the chili is harvested, but after being picked, the substance migrates into the internal membrane on the inside of the fruit, to which also the seeds are attached. Both chili and Spanish pepper belong to the nightshade family, but capsaicin concentrations are 30 times higher in chilis than in Spanish (bell) peppers, so that these plants are used quite differently. The smaller chili varieties usually have a stronger taste, whereas the longer, larger varieties often are somewhat milder. Chilis often have a pointed shape, but can vary considerably with regard to length, color and spiciness (Fig. 8). There are many different varieties that are sold either fresh, dried or smoked. Well-known types are jalapeno and habanero.

### Cultivation

Chili should be started from seed indoors in January-March, and transplanted to a protected, sunny and warm location outdoors or in a greenhouse. Sow sparsely in moist potting soil and keep at about 22 °C. After germination, thin to one plant per pot, and keep plants slightly cooler and with lots of light. They can be planted outside in rich, well-drained soil when night temperatures are above 8 °C, but can also be grown in pots in a protected corner of a balcony. For field cultivation, cover plants with fleece in spring and autumn. Spacing between plants and rows should be 40 cm. Plant height varies from 60-120 cm, depending on variety. When plants start to form fruit, it is recommended to remove the first fruit to increase the size of the remaining ones.

### Season

All unripe fruits are green, but some change color to red, violet, red-yellow, yellow, etc. as they mature. The fruits can be harvested unripe or when they have reached the color specific for the variety. The use of the chili (fresh or dried) also affects time of harvest.

### Use

Chili peppers are very hot (spicy). A perfect chili should have a strong, shiny color, and should be juicy, crispy and without any dark spots. Chili contains some A, B and C vitamins, but is used in too small amounts for this to have any nutritional importance.

Before use, the stalk and seeds are removed and the fruit is cut into thin slices. These can be used directly in stews, stuffed or fried or

### Names

Botanical name: *Capsicum spp.*

Other names: chillies, hot peppers

Norwegian: chili

German: Peperoni, Gewürzpaprika

French: chili, piment fort

Italian: pepperoncini



Fig. 8. Chili peppers. Photo:  
frukt.no



blanched as an ingredient in numerous Mexican or Italian dishes.

Chili can also be used on tacos or pizzas, but remember that the dishes can become extremely spicy. Used whole, chili peppers can be used to spice soups and stews, but should be removed before serving.

### Burning hot or sweet and mild

If you taste a fresh, strong chili pepper without any other food on the side, the capsaicin causes an intensive burning sensation on your tongue. Your brain goes into alert mode and sends signals to lessen the pain. Thus capsaicin can have a pleasurable effect, and some people claim to be dependent on chili. Burning or pain from chili consumption can be relieved by eating bread, boiled rice, milk, cucumber dipped in yoghurt or something sweet. It is not unusual to serve a bowl of sugar with spicy soups in Thailand or the yoghurt beverage lassi after a hot meal in India. Holding a mouthful of water without swallowing also relieves the pain somewhat since this prevents the tongue from being in contact with air. However, any discomfort disappears after 15 minutes or so. A positive effect of chili is that it enhances circulation and causes perspiration. This is a reason for the widespread use of spicy foods in tropical and semi-tropical areas, as sweating helps to cool the body.

There are hundreds of different chili varieties, and it takes both time and knowledge to become familiar with this pungent, but extremely versatile little fruit. When used correctly, it adds flavor, pungency and character to any cuisine. Don't let yourself be frightened after an especially strong chili experience. Both the Latin American and the Asian cuisine cannot do without chili. Chili comes in all variations, from extra hot to really mild. The mildest forms, like Spanish pepper, are not hot at all.

The Scoville scale (devised in 1912) is used as a measure for the spicy heat of various chili peppers. It is named after its creator, the American pharmacist Wilbur Scoville, and indicates the contents of capsaicin in chili. The scale ranges from 0 to 16,000,000 Scoville heat units. Why not try and find the chili that fits your taste? Table 1 shows different chili varieties on the Scoville scale.



Table 1. The Scoville scale

Scoville heat units	Chili type
15 000 000-16 000 000	Pure capsaicin
2 000 000-5 300 000	Pepper spray
350 000-580 000	Red savina habanero
100 000-350 000	Habanero, Scotch bonnet
100 000-200 00	African Birdseye
50 000-100 000	Thai, Malaqueta
30 000-50 000	Cayenne, Aji, some Chipotles
10 000-23 000	Serrano, some Chipotles
4 500-5 000	New Mexican cultivar of Anaheim, Hungarian wax
2 500-8 000	Jalapeno, Dutch chili
1 500-2 500	Rocotillo
1 000-1 500	Poblano
500-2 500	Anaheim
100-500	Common black pepper (not <i>Capsicum</i> spp.)
0	Spanish / bell pepper

### 10a. Poblano

Poblano is a popular chili in Mexico. It has mild, agreeable flavor and is about 10-15 cm long (Fig. 9). It is characterized as having an earthy flavor and vegetable aroma. Poblano can be used in vegetable dishes, sauces, stews and gratinées. Its heat ranges from 1,000-2,500 on the Scoville scale.



Fig. 9. Poblano. Photo: frukt.no



Fig. 10. Ancho. Photo: frukt.no



Fig. 11. Spanish pepper. Photo:  
frukt.no

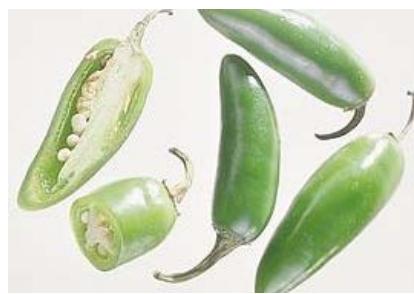


Fig. 12. Jalapeno. Photo: frukt.no

### 10b. Dutch chili

Dutch chili, also called Spanish chili, is medium strong and can be found as a red and a green cultivar (Fig. 11). The red variety is the most common type in Norwegian stores. It is usually 10-15 cm long. The green variety is about 10 cm long and is available all year round. Its heat ranges from 2,500-8,000 on the Scoville scale.

### 10c. Jalapeno

Jalapeno can be light or dark green, or red, but the green types are used most. Its narrow end is rounder than the more pointed chilis (Fig. 12). It is 5-7 cm long and about 3 cm across. A jalapeno should be firm, crispy and have a shiny peel.



Jalapeno is a popular chili that can be used in many different dishes. Its taste is characterized as fresh, round and juicy. It is excellent in all dishes that need some extra "spice". Try it in a guacamole. When ripe, it turns red and gets sweeter.

Red jalapeno is often sold dried and smoked, but then under the name of **chipotle**, which is used in many Mexican dishes (Fig. 13). Chipotle must be soaked in water, and then stalks, seeds and membranes removed before putting them in a food processor. Use this as a base in sauces and stews. Dried chipotle can also be ground and used as a spice.

Jalapeño is medium hot to hot, and a good way to become acquainted with the world of chilis. Traditional Norwegians might think that jalapenos are quite spicy, but is only among the hottest of the mild chilis. Jalapeno is a must in Tex-Mex or Central-American food. Its heat ranges from 2,500-8,000 on the Scoville scale.

### 10d. New Mexican

There are both red and green varieties of New Mexican, usually only red when dried. It has medium strength, and the red variety is somewhat milder than the green.

New Mexican is about 15 cm long, and has a sweet, earthy flavor. This chili can be used in sauces, stews, salsa, as a fresh vegetable, in vegetable dishes, filled with cheese and fried and in gratinées. Its heat ranges from 1,000-5,000 on the Scoville scale.

### 10e. Cayenne

A classic, cayenne chili also goes by the name Guinea spice, as it originates from South America. Its 10-18 cm long fruit is often curved and slender. Fruits are first green, and turn red when ripe. Cayenne is best known dried and ground as cayenne pepper. It is about 20-25 stronger than bell peppers, with a heat ranging from 30,000-50,000 on the Scoville scale.

### 10f. Rawit

Rawit is also called bird eye chili or thai chili. Both its unripe green fruit, and the ripe red fruits are somewhat milder than habanero, but are still quite hot. Both types are widely used in Southeast Asia, and go well with noodles. Its heat ranges from 50,000-75,000 on the Scoville scale.

### 10g. Habanero

Habanero means Havana, and it is one of the strongest chilis growing in South America or the Caribbean. This is the chili usually used in the famous Tabasco sauce. Habaneros are small, round and uneven-



Fig. 13. Chipotle. Photo: frukt.no



shaped, and can be green, red, yellow, orange or white (Fig. 14). They have a length of about 3-4 cm.

Most chilis are great in marinades and salsas, especially fruit salsa. For some, mango, chili, onions and coriander make the perfect salsa for pork dishes. Chili adds taste, spiciness and character to many dishes. Habanero is widely used in the Thai cuisine. It is said that in spite of its considerable heat, habanero still has a fine tropical aroma, and goes well with dishes like tropical fruit salsa, chutney, grill sauces and marinades for seafood, pork and poultry. However, don't eat habanero pure. The first time you use habanero, use half the amount given in the recipe. Use disposable gloves when cutting and preparing the fruit, and whatever you do, don't rub your eyes.

People with a heart condition are advised not to eat habanero, since it can be 30-50 times stronger than jalapeno. However, it can be tempting to taste one of the hottest chilis available. The sensation of eating raw habanero without anything else along with it has been described as: for the first few seconds it will taste sweet, followed by the feeling that your whole mouth is on fire. So this is not a chili for beginners. If you are not familiar with cooking with chilis, start with one of the milder varieties. Habanero's heat is well above 200,000 on the Scoville scale.

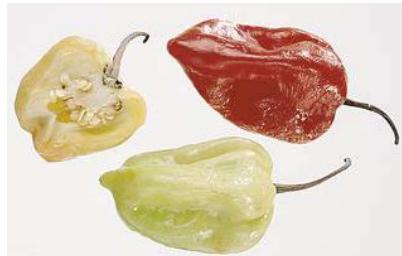


Fig. 14. Habanero. Photo: frukt.no



## 11. Edible chrysanthemum

This plant is the same genus as the ornamental chrysanthemums. Just in the course of a few early summer weeks, these plants can become a nice addition to the other flavors from your vegetable garden. Edible chrysanthemums are annual plants in the Asteraceae family, which are native to the Mediterranean area and later spread to Asia. They are popular as greens in China, Japan and Southeast Asia. Flowers are usually solitary and yellow, although there are bicolored varieties in white, yellow and orange.

### Cultivation

Edible chrysanthemums are not demanding, are easy to cultivate and grow fast. It only takes about 4-5 weeks from sowing to the first harvest. Flowering begins after about 8 weeks. This species is well adapted to the Norwegian climate since it is slightly frost-hardy and does not grow well in high temperatures. Plants tolerate both shade and full sun, but strong wind can cause damage to the leaves. They prefer well-drained soil, and do not grow well in waterlogged soils. Edible chrysanthemums are quite drought resistant, but must naturally be watered in extreme droughts. Sow regularly throughout the entire season to ensure constant access to fresh leaves. However, plants set flowers faster during the warmest part of the summer. Harvesting seeds is easy, and a few spring-sown plants should be kept as a source for next year's seed. Sow directly outdoors, with a spacing of 5-15 cm between plants and 30 cm between rows. No specific fertilizers are needed, and edible chrysanthemums are suited as an intermediate crop before or after another crop.

### Season

You can either harvest the whole plant after 5-8 weeks or harvest shoots continuously. The plants have a good regrowth. Harvest tops after 4-5 weeks to promote tiller development. If shoots are harvested regularly, the plants can be prevented from flowering. Sowing later than 15 July will inhibit flowering, and enable leaves to be harvested until the autumn frosts set in. After being picked, edible chrysanthemum leaves wilt after a few days.

### Use

Even if leaf shapes vary, they always have a typically strong aroma (Fig. 15). Young plants taste best, whereas flowering plants can be bitter. Leaves and young shoots can be eaten raw, lightly cooked or fried, either as a separate dish or in soups and stews. Edible chrysanthemum is one of the main ingredients in chop suey.

### Names

Botanical name: *Chrysanthemum coronarium*

Other names: chop suey green, crown daisy, Japanese green

Norwegian: shungiku, tong hu, spiselig krysantemum



Fig. 15. Edible chrysanthemum leaves. Photo: Bjørgli and Bergersen.



## 12. Coriander

Coriander is an annual herb in the Apiaceae family. Both the fresh leaves (known as cilantro) and the dried seeds are used as food. Seeds and leaves taste different and have different uses. Coriander is very popular in Latin America, the Caribbean, India and China. It is believed that coriander has been grown for at least 3000 years, e.g., in India, China and Egypt.

### Cultivation

Coriander is easy to grow, and is sown outdoors in May. It can be grown in common garden soil with sufficient lime and nutrients in a warm, sunny place. The herb does not grow well in cool, moist conditions, and the seeds do not develop much aroma in such sites. Germination takes 2-3 weeks, and thinning is not needed if sown carefully. The soil should be as weed-free as possible, as coriander does not compete well with other plants. However, it can be intercropped with vegetables because it has insect-repelling properties.

### Season

Pick fresh leaves anytime in summer (Fig. 16). If you wish to let the seeds ripen, the whole plant should be cut when seed maturity sets in because ripe seeds easily fall off. Hang harvested plants in bundles so that the seeds can be thrashed later. Seeds can keep their aroma for many years.

### Use

In Northern Europe, one has traditionally mostly used the ripe seeds of coriander, whereas Asian and Mexican cuisine has mostly used the leaves. Coriander is an ingredient in the spice mixture garam masala.

The seeds have a richer, but spicier taste than the leaves. Seeds should be crushed and moderately used. They go well with rice dishes, chutney, stews, salads, chicken, sauces, fish, vegetables, soups, salsa, guacamole and crackers. The plants have serrated, green leaves that resemble parsley. The leaves (cilantro) can be used in salads, vegetables and poultry dishes. They have a characteristic aroma, slightly perfumed and with a hint of citrus.

### Names:

Botanical name: *Coriandrum sativum*

Other names: Chinese parsley, Indian parsley, Mexican parsley, cilantro (leaves).

Norwegian: koriander, arabisk persille, indisk persille, kinesisk persille, hagekoriander, krydderkoriander

German: Koriander, Körnerkoriander, Wanzendill, Schwindelkorn

French: coriandre, coriandre cultivée, persil arabe

Spanish: cilantro, coriandro, culantro

Italian: coriandolo

Chinese: hu sui, hsiang sui, yuan sui

Turkish: kisniskisnic

Vietnamese: câyraumùi, hôtuyümìngò, ngòta

Arabic: kusbarah, kuzvarah

Mandarin: hu sui, yuansui, yuanxi

Malayan: ketumbar, daunketumkosu, kosu-pulbar, wansui, penjilang

Hindi: dhania, haradhania

Japanese: korianda, koendoro.



Fig. 16. Coriander. Photo: frukt.no



## 13. Zucchini

Zucchini belongs to the gourd family, and the name actually means little pumpkin in Italian. In contrast to pumpkins and gourds, though, zucchinis are harvested while still immature. Zucchinis look a bit like cucumbers, but are often harvested while somewhat shorter than these (Fig. 17). At harvest, the pulp should be firm throughout and have a neutral flavor. The skin color varies between dark green, green with stripes and yellow.

### Cultivation

Zucchini should be sown indoors in April-May and kept at about 25 °C until seeds germinate. Then lower the temperature to about 20 °C and plant outdoors after last spring frost date, usually about 3-4 weeks after sowing. Spacing should be 1-2 m, both between plants and rows. In very warm, protected locations, zucchini can be sown directly outdoors when the soil has warmed sufficiently. Plants can be covered with fleece to protect against draft and low temperatures.

### Season

Zucchini can be harvested when they are about 15-20 cm long between June and September. Store at 5-8 °C and high humidity to prevent dehydration. Zucchini should not be stored below 4 °C.

### Use

Zucchini is used in salads and stews, stir-fried or grilled, etc., and suits well as a side dish with meat and fish. Zucchini does not have much taste on its own, but easily absorbs the flavors of other ingredients. Raw, green zucchini can be used just like cucumbers, e.g., cut into slices or cubes as a salad ingredient. They can also be cut in half, filled with ground beef and chopped onions and baked in the oven. Zucchini is one of the ingredients in the French vegetable dish ratatouille. The fruit is low in calories, with only 15 calories per 100 g, and consists of 95 % water. The flowers are also edible, and can be filled and deep-fried.

### Names

Botanical name: *Cucurbita pepo*

Other names: summer squash, courgette

Norwegian: squash, sommersquash

German: Courgette, Zucchini

French: courgette

Spanish: calabazin, zucchini

Italian: zuchina



Fig. 17. Zucchini. Photo: frukt.no



## 14. Lemon grass

Lemon grass is a grass, native to India and Sri Lanka. It is an attractive crop due to its content of citral, which is used by the perfume and pharmaceutical industries. However, it is also widely used for culinary purposes, in tea and as a flavoring. In addition to Asia, lemon grass is now also grown in the West Indies, South America and Africa. Most of the essential oils made from lemon grass are produced in Guatemala and India.

Lemon grass looks like a thick sheath of grass (Fig. 18), usually light green and yellow-colored, and only the bottom 10-20 cm of the sheath is marketed. In the native growing areas, lemon grass can be harvested up to four times per year.

### Cultivation

Lemon grass is a perennial grass that usually grows to a height of about 90 cm. Leaves are narrow, blue-green, smooth and with a distinct midrib. The plant grows fast, and has a root system that removes both moisture and nutrients from the soil. Lemon grass thus requires a rich, moist soil. Apply sufficient fertilizer, otherwise the plant will not form the thick sheaths that are used as food. The plant is too sensitive to survive outdoors in Norway, but can be grown in greenhouses as long as the temperature stays above 13 °C. Cultivated plants rarely bloom, so lemon grass is usually propagated by division or root cuttings.

### Season

Lemon grass is cut when needed throughout the growing season. Store at 0-4 °C.

### Use

Lemon grass is often sold dried in ethnic grocery stores, delis and high-end supermarkets. When you squeeze or crush fresh lemon grass, it releases a mild citrus aroma. Most of this aroma is found close to the root. To preserve the taste, the plant should be crushed or chopped right before use. Lemon grass does not contain citric acid, and can thus be used in dishes that should have a taste of lemon without being acidic. Nevertheless, it is generally used in many of the same dishes in which you otherwise would use lemon.

Lemon grass is widely used in soups, salads, stews, appetizers, stir-fried and with fish and shellfish. It is commonly used as an ingredient in Asian cuisine, especially in Thailand, Vietnam and Sri Lanka. Lemon grass goes well with ginger, chili, garlic and scallions. The hearts of the lower part of the enlarged sheath can be finely chopped and cooked or fried together with the main dish. Tea made from the leaves is also popular in tropical areas.

### Names

Botanical name: *Cymbopogon citratus*

Other names: oil grass, West Indian lemongrass, Madagascar lemongrass, Guatemala lemongrass

Norwegian: sitrongress

French: verveine des Indes, lemongrass de l'Amérique Centrale

Spanish: zacate de limón, sotol, pasto limón, cedron paja, citronel

Italian: herba di limone

Swedish: citrongräs, vestindisk citrongräs

Chinese: mao hsiang



Fig. 18. Lemon grass. Photo: frukt.no



## 15. Water spinach

Water spinach is a tropical water plant that can be grown in soil, but it will only grow in Norway in warm, moist summers. If you have a greenhouse or a high tunnel and enough water, you can always try growing this interesting leaf vegetable, which belongs to the bindweed family.

The plant is a perennial, but is grown as an annual in Norway. New shoots grow straight up, but the plant eventually develops 2-3 m long winding stems that are hollow and float on water or creep along moist ground. These put forth new roots from the nodes. The flat leaves are either sagittate (arrowhead) or lanceolate (lance-shaped), 5-15 cm long and 2-8 cm across. The flowers are funnel-shaped, 3-5 cm in diameter, and usually white with a purple-blue center. There are two types, a relatively broad-leaved lowland type adapted to wet growing conditions and a narrow-leaved highland type that can be grown in very wet soils.

### Cultivation

Sow indoors, seeds germinate at 20 °C. Transplant after 4-5 weeks, or when the plants have four true leaves, after the last spring frost date. Spacing should be 15-25 cm between plants and 15-30 cm between rows. The soil should be rich in organic matter and nutrients, and retain moisture well. If sown directly outdoors, the soil must be warm and there should be absolutely no more risk of frost. From planting to first harvest, it usually takes 5-6 weeks, depending on temperature. Water spinach likes full sun, but does tolerate some shade as long as it is warm enough. Plants should be protected from wind and draft, and will stop to grow when temperatures fall below 10 °C. The ideal temperature is 20-35 °C, and the species will thus appreciate growing in a greenhouse or high tunnel. Water spinach does not tolerate frost, but needs lots of rain or frequent watering. When day length decreases, the plants begin to flower.

### Season

The plants should be harvested before flowering. Cut 20-30 cm long, young shoots of the main and lateral stems about once every third week. This will stimulate new shoot growth. Water spinach wilts quickly after being harvested and should thus only be used fresh.

### Use

Water spinach is used raw, after a short heat treatment, boiled or fried. Use in salads, soups and stews, and in fish and meat dishes. Both the leaves, which are rich in vitamins and minerals, and soft stems are edible. The vegetable is common in the Southeast Asian cuisine. The leaves are stir-fried with chili, pepper, garlic, ginger, prawns, beans, oyster sauce or soy sauce, or cooked with fish and a sweet-and-sour sauce. Elsewhere, the stems are cut in strips and served together with various types of noodles.

### Names

Botanical name: *Ipomoea aquatica*

Other names: river spinach, water morning glory, Chinese water spinach, swamp cabbage, kangkong

Norwegian: vannspinat

Vietnamese: kang kung, rau muong

Thai: pak buong, pak bung



## 16. Spearmint

Mint belongs to the mint (or deadnettle) family. There are many varieties, but all have a characteristic aroma (Fig. 19). Most of us recognize the smell of peppermint, which is used to flavor chewing gum, candy, toothpaste, etc. Mint is a perennial plant, of which the leaves are harvested. Spearmint is native to the Mediterranean region, but has been grown in temperate areas world-wide for centuries. In England it is the most commonly grown mint species.

### Cultivation

Spearmint is a perennial woody herb that can grow to a height of 0.3-1 m. Seed propagation is not advisable, as the various mint species cross-pollinate, thus giving plants with different traits. It is best to propagate by cuttings or division. Spearmint is a hardy plant that can be grown in most parts of Norway. It prefers rich, moist soil and likes either sun or semi-shade. The crop exhausts the soil's nutrients, and should thus be rotated at least every four years to ensure good yields.

Spearmint can be grown in pots filled with normal flower soil, but should then be kept in semi-shade and watered regularly. This also makes it easier to keep different varieties apart.

### Season

Pick fresh leaves for direct use throughout the entire season.

### Use

Fresh spearmint can be used to spice lamb, fish and vegetable dishes, and as ingredient in herb butter. Spearmint is better suited than peppermint for culinary purposes. The leaves can be eaten raw or cooked, and their strong mint aroma can be used to add flavor to salads and warm dishes. The leaves are often used in sauces and condiments, e.g., mint sauce and lamb dishes always go together in England. Otherwise, spearmint can be used to make mint jellies and mint vinegars. Fresh or dried mint leaves are widely used as a tea or as flavoring in other beverages. Mint-flavored beverages are pleasant and refreshing, and often leave a clean feeling in your mouth.

### Names

Botanical name: *Mentha spicata*

Other names: garden mint, lamb mint, fish mint, mackerel mint, German spearmint, green mint, silver mint, spire mint, sage of Bethlehem, our lady's mint

Norwegian: grønnmynte

German: Grüne Minze, Wilde

Pfefferminze, Ähren-minze,  
Bocksbalzam, Katzenkraut, Grüne  
Rossminte, Spearmint

French: baume vert, menthe  
verte, menthe romaine. menthe  
en grappe

Spanish: hierabuena, yerbabuena,  
menta verde, menta romana

Italian: menta

Swedish: grönmynta, spetsmynta,  
spirmynta



Fig. 19. Mint. Photo: frukt.no



## 17. Shiso

Traditionally, shiso was cultivated in East Asia. It is probably best known for its leaves, which are used in making sushi. It is now used in many countries, and has become very popular in North America.

Shiso belongs to the mint (or deadnettle) family, and is a bushy plant that grows to a height of 90 cm. Its leaves are similar to nettle leaves, but they can also be rounder or more pointed. There are green, red and bi-colored (red/green) varieties (Fig. 20). Shiso is not very demanding, although this warmth-loving plant appreciates light, sandy soil. It also tolerates slightly acidic soil and likes a lot of sun. It will tolerate some shade if the temperature is high enough.

### Cultivation

Shiso seeds are small and must therefore be sown shallow. If the seeds do not germinate, it could be because they need a period of dormancy (they can be stored in a refrigerator for a couple of months). When starting from seeds indoors, sow 4-5 weeks before expected planting date. Keep seedlings indoors at about 20 °C and transplant with a spacing of 20-30 cm between plants and 30-60 cm between rows when the soil has warmed and after the last spring frost date. Shiso can also be sown directly outdoors. If available, cover the ground with black plastic before planting to increase soil temperature and prevent soiling. Fleece covering can also be used to increase the air temperature around the plants. Shiso is fairly drought-resistant, but should nevertheless be watered during longer droughts. Standard fertilizer dressings are sufficient. There have not been reports of serious damage to shiso from pests and diseases, but one must bear in mind that there is not much shiso-growing experience in Norway.

### Season

Smaller leaves can already be harvested after 40 days, whereas larger leaves are harvestable after about 2 months. When harvesting the whole plant, it should have 2-4 true leaves. Shiso leaves can be picked until the autumn frost sets in. Each plant can be harvested several times, and leaves can be stored in a refrigerator for a few days.

### Use

With its color varieties, shiso is well suited as garnish. Red varieties give larger yields, but are considered to be poorer-tasting, and are thus mainly used for their color. Shiso's flavor varies, but is described as complex, aromatic and with a hint of citrus. The leaves are used raw or cooked as flavoring or garnish with a variety of dishes, either whole or cut into strips. They are rich in calcium and iron. Green shiso leaves are widely used as an ingredient in sushi and sashimi, and the Japanese also use them in soups, rice dishes, tofu or as meat wraps.

### Names

Botanical name: *Perilla frutescens*  
var. *crispa*

Other names: beefsteak plant,  
perilla

Norwegian: perilla, shiso



Fig. 20. Shiso. Photo: Bjørgli and Bergersen.



## 18. Borlotti bean

There are multitudes of different bean varieties. If you like beans, why not go gourmet and grow borlotti beans? These delicious beans are popular in Italy, where the decorative pods are sold in bulk (Fig. 21). These beans are also known as cranberry bean, which presumably was first bred in Colombia. However, the borlotti bean is actually a variety of the cranberry bean that was bred in Italy and has a somewhat thicker skin.

The beans are kidney-shaped and splotched with red markings. There are low-growing bush varieties and pole bean varieties. Borlotti beans are said to be easy to grow, and they do just as well outdoors as the "normal" beans commonly grown in Norway.

### Cultivation

Borlotti bean is a legume, and is grown like the other crops in this family. It can be an exciting alternative to the more common bean varieties used. The decorative, red beans also have ornamental value, but are mainly grown as food. Like all beans, Borlotti beans should not be sown until the soil has warmed sufficiently. In Norway, this means late May or early June, depending on location. They can also be grown from seed indoors and the seedlings transplanted outdoors after the last spring frost date. Outdoors, sow at a depth of about 4 cm and a spacing of 20 cm in soil rich in nutrients and organic matter, e.g., fertilized with compost. Seeds usually germinate after 7-14 days. Support growing plants like sugar peas, and keep the soil moist.

### Season

Beans can be harvested from late July until the autumn frost sets in. Borlotti beans have large, broad pods and when still young, they can be harvested as string beans. Later, one harvests the immature bean seeds, which are considered a delicacy.

### Use

Borlotti beans are popular in the Italian, Greek and Portuguese cuisines. They are marketed both fresh and dried. The beans are medium-sized, mealy, and have a mild, sweetish taste. They easily absorb the flavor of the dish they are cooked together with. Beans are easy to prepare, and can be cooked, steamed in butter, mashed or added to stews. They go well with meat and fish dishes. Immature bean seeds can be frozen, and later cooked directly out of the freezer. They do not need to be soaked before cooking. However, dried beans that have been kept in air-tight containers throughout the winter, should be soaked for 12 hrs. before cooking. The decorative pods and seeds add a colorful touch to salads and side dishes, but once cooked, the beans lose their color.

### Names

Botanical name: *Phaseolus vulgaris*

Other name: Roman bean

Norwegian: borlottibønne,  
borlottobønne, tranebærbønne



Fig. 21. Borlotti beans. Photo:  
frukt.no



## 19. Eggplant

The eggplant is a nightshade, which was originally domesticated in southern India and Sri Lanka. The fruit, like that of other nightshades, contains some solanine, and is thus toxic when raw. It has therefore been called the "mad apple". Eggplant is widely used in the Mediterranean region, perhaps best known as an ingredient in the Greek dish moussaka. It is now become a widely used vegetable, especially popular in the Asian cuisine.

### Cultivation

Eggplant should be sown indoors, and the temperature for germination should be around 25 °C. After germination, keep at 20 °C and with lots of light. Top the plants when they reach a height of 25 cm to allow 2-4 lateral shoots to develop. Transplant to a greenhouse, or plant in urns on a balcony or other protected place after last spring frost date. Botanically, an eggplant fruit is a berry, and it takes 70-80 days for it to ripen. Ripe fruits are purple-black, egg-shaped, with a smooth, glossy skin and soft, white flesh (Fig. 22). There are many varieties, which differ in size and color. Most common are white, red, purple and yellow types.

### Season

An eggplant is ripe when carefully squeezing it with your fingers leaves marks. Eggplants can be stored for about two weeks, ideally at a temperature of 8-10 °C, and preferably in an airtight container. Commercially marketed fruits should weigh between 400 and 750 grams.

### Use

Eggplants have a mild taste, but should not be eaten raw. They can be blanched and used in salads. Raw fruits have a slightly bitter taste, which can be removed by salting the fruit first. Cut into slices, add salt and a few drops of lemon juice, and rinse after 15 minutes. The whole fruit is edible, and when cooked it becomes tender and develops a rich flavor. It absorbs large amounts of cooking fats and sauces, and is thus an important ingredient in dishes like moussaka and ratatouille. Another popular way to prepare eggplant is to bake halves of the fruit that are filled with meat, rice or other stuffing. Eggplant can also be cooked, mashed, fried or grilled.

### Names

Botanical name: *Solanum melongena*

Other name: aubergine

Norwegian: aubergine, eggfrukt

German: Aubergine, Eierfrucht

French: aubergine, melongène

Spanish: berenjena

Italian: melanzane

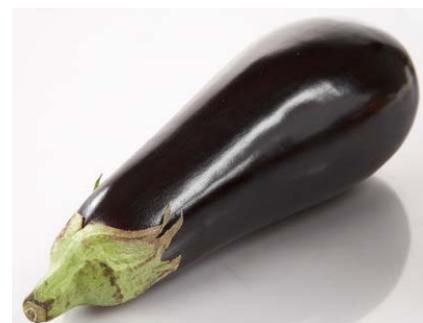


Fig. 22. Eggplant. Photo: frukt.no



## 20. Maize

Maize is an annual cereal species that originated in the highlands of Peru, Ecuador and Bolivia, and from regions in Mexico and Central America. Maize is one of the world's major grain crops, together with wheat and rice. It was originally domesticated in Mexico about 3500 BC, and from about 1000 BC maize cultivation spread across most of the area of present-day USA, Canada, the Caribbean, Central and South America. The main maize-growing regions today are the USA, China, South Africa and eastern Europe. In Norway, maize is commercially produced at small scale in the warmest areas, mainly as U-pick sweet corn.

### Cultivation

Maize is a member of the grass family. Unlike most other grasses, maize usually only forms one or two stems. It can grow to a height of 1.5 to more than 3 m. Maize normally matures within 100 to 120 days. The male flowers (tassel) grow from the top end of the plant, and usually appear after 50-60 days. The female reproductive organs (ears) develop in the midsection of the plant, between stem and the leaf sheaths. The seeds form on cobs within the ears (Fig. 23). Maize is a cross-pollinating plant. There are many varieties of maize, which have been bred in adaptation to their respective growing conditions.

Maize prefers well-drained silt or clay soils rich in organic matter, and does not grow as well on heavy clays or very sandy soils. It can be directly sown outdoors or started indoors from seed. When transplanting seedlings, make sure to water sufficiently.

For indoor sowing, place a single kernel per pot and keep in a warm place. Seeds germinate after 5-15 days, and then pots can be kept somewhat cooler with lots of light. Plant outdoors in a sunny location after the last spring frost date. Spacing should be 40 cm between plants and 80 cm between rows.

### Season

Ripe ears are harvested in August and September, but should be stored moist and cold, i.e., as close to freezing as possible. After being picked, the sugar in the kernels is transformed to starch. For best taste, maize should therefore either be eaten soon after being harvested, or stored directly in a freezer.

### Use

Before use, remove husks and rinse in cold water. Fresh maize can be boiled for 10-12 minutes in unsalted water, or grilled. Serve with butter, salt and other spices. Cooked maize kernels can be used in salads, stews or as a side dish. Maize (kernels or as flour) is widely used in traditional food in many parts of the world, and is especially a mainstay of Latin American cuisine.

### Names

Botanical name: *Zea mays* var.

*Saccharata*

Other names: corn, sweet corn

Norwegian: mais, sukkermais

German: Mais, Zuckermais

French: mais doux

Spanish: maiz dulce, mazorca

Italian: granoturco, mais



Fig. 23. Maize (sweet corn). Photo: frukt.no