

How to Grow

Broccoli

Broccoli - Brassica oleracea-var.italica is an edible plant of the cabbage family. It is often known by its Italian name of Calabrese. It originated in Italy more than 2000 years ago. It has large flower heads, usually green and resembles the cauliflower which is a different but closely related cultivar group of the same species. The word broccoli was first used in the 17th century and comes from the Italian plural of *broccodo* meaning "flowering crest of a cabbage".

The 2 most commonly grown types of broccoli are:

- **Calabrese broccoli**- usually just referred to as broccoli. It is a fast and easy crop to grow producing large blueish-green heads on thick stalks and is ready for picking in summer and autumn.
- **Sprouting broccoli** - white or purple sprouting - has a large number of heads with many thin stalks. A hardy plant, it overwinters outdoors and is ready for harvesting in the spring. Fills the gap between brussel sprouts and spring cabbage.

Broccoli can be eaten cooked or raw and is a rich source of vitamins C & K and is reputed to be high in anti-cancer agents.

How to grow sprouting broccoli

Preparing your ground. Dig your ground in the *autumn* and work in plenty of well rotted manure or garden compost. Your plants will need an area with sun or very light shade, with fertile, well-drained soil. Your plants can fail if planted in loose infertile soil so ensure your ground is firm and rich in organic matter.

In the *spring*, prepare the ground by adding a high potassium general fertiliser such as VitaxQ4 at a rate of 3 handfuls per square metre/yard. However, if your ground was prepared and ready in the autumn then only use **half** the amount of fertiliser.

Sow Indoors. Seeds of sprouting broccoli can be sown between March - June. Until April sow in modular trays, in a good seed compost - 2 seeds per module in a greenhouse or indoors. Seed germination takes between 7-12 days. When seedlings are large enough to handle, thin them to 1 per tray, removing the weaker seedling. When they are 10-15cm (4-5inches) tall and with a good rootball and 4-5 leaves they are ready to be planted outside once they have been hardened off. Space plants as below.

Sow Outdoors. From April onwards seeds can be sown outside in the place where the plants are to grow. Sow 3 seeds 2cm (3/4inch) deep every 30cm (1 foot) along the row.

When large enough to handle, thin out each "station" leaving just 1 healthy seedling every 30cm (1foot) and with 45cm (18inches) between rows. Closer spacing will reduce the number of side-shoots thus leading to a smaller crop.

****Do not fork over surface before planting out seedlings but tread soil down gently and rake lightly to remove surface rubbish. Plant seedlings FIRMLY. With the approach of winter draw the soil around the base of the stems and stake if your site is exposed. Always firm stems if loosened by wind or frost.**

++Cover seed beds and newly transplanted indoor raised plants with fleece to exclude cabbage root fly. This can be removed in May when the risk of damage has decreased.

**** If cabbage root fly is a problem turn to www.allotment-garden.org/vegetables/broccoli-growing. At the bottom of the article there is excellent information on how to control cabbage root fly.**

Control slugs and snails which can quickly demolish seedlings and net plants from birds when the heads start to form.

Hot weather can cause plants to go to seed prematurely and a cooler summer will produce better heads. Water every 10-14days in dry weather. Feed with a liquid feed occasionally.

Because broccoli is a member of the cabbage family they grow well in the company of beans, beetroot, celery, mint, thyme, rosemary, dill, rosemary and potatoes. **DO NOT** plant near strawberries or tomatoes. Not only will the broccoli not flourish, but neither will the strawberries or tomatoes.

Harvesting sprouting broccoli

The fresher the spears the better their flavour. They can be cooked in a variety of ways - steamed, boiled or stir-fried but steaming apparently tends to retain more texture and flavour. Whichever method is used, purple spears turn green when cooked.

The time to harvest is when the flower shoots (spears) are well-formed but before the small flower buds open. Once in flower the spears are woody and tasteless.

Cut off the central spear first. Remove the whole shoot, cutting at the base with about 10cm (4inches) of stem and small leaves which can all be eaten. Side-shoots will be produced which should be harvested regularly and cropping will continue for about 6 weeks. **BUT** let anyone of them flower and production will stop at an earlier stage. Mid-spring is the peak harvesting period.

How to grow Calabrese

1. Prepare your ground as for Sprouting Broccoli (above).

2. **Sow Calabrese Indoors:** Sow Calabrese seeds in a greenhouse or on a windowsill between February - April. Sow in a modular tray filled with good seed compost - 2 seeds per module. Once seedlings are large enough thin to 1 per module. Harden off before planting out.

Seedlings grown either indoors or in the seedbed should be transplanted when they are approximately 15cm (4-6inches) tall. Plant with the lowest leaves level with the surface to ensure they root securely and space plants 30cm (1foot) apart with 45cm (18inches) between rows. Water well and once a good root system is established they should only need watering during dry spells. Apply a thick mulch of garden manure around the base of the stems to hold in moisture and keep weeds down.

++Cover seedbeds and newly transplanted indoor raised plants with fleece to exclude the cabbage root fly and follow the recommendations as above for sprouting broccoli.

Once the main head starts to form the plants can become top-heavy so pile soil around the base of their stems and in exposed sites support with a cane.

**Calabrese resents root disturbance and does not transplant well in warm weather as this makes the plants prone to "bolting" or premature flowering so after April calabrese are best grown in seedbeds in their final position.

3. **Sow Calabrese in seedbeds:** Make a shallow drill 2cm (3/4inch) deep. Sow seeds thinly along the drill - 3 seeds every 30cm (1foot). When large enough thin each group leaving the strongest seedling to grow on in it's final position.

Harvesting Calabrese:

Calabrese are ready to be harvested in late summer/early autumn. The main head is ready to cut when it is 10-15cm (4-6inches) across. It should be well-formed but still in bud i.e before the flowers open. Harvest quickly when ready as flowers can open rapidly in warm weather. Once the main head is harvested further small heads will develop on side-shoots to be picked over the next few weeks. Regular picking can extend the cropping season for up to a couple of months. Young tender leaves can also be eaten.

Pests and Remedies.

Pests and Remedies

Caterpillars: a number of different types of caterpillars will feast on brassicas, but most common are those of the Cabbage White Butterfly. These can easily be seen on leaves, and will eat the leaves and bore into the heart of the cabbage.

Remedy: If only a mild attack on a few plants then pick off the caterpillars by hand. Cover plants with insect-proof mesh or fine netting (5-7mm) as this mesh can prevent egg laying on leaves.

Clubroot: Roots of plants are swollen and distorted. Leaves are pale and yellow and wilt. Plants may die.

Remedy: Improve the drainage of the soil and add lime to make the soil more alkaline. Do not grow in affected soil. *** If you have clubroot infected soil there is an excellent piece in the article "How to Grow Broccoli" in www.allotment-garden.org/vegetables/broccoli-growing. Under the item Broccoli Pests and Problems there is a link to growing Broccoli on clubroot infected soil.

Slugs and Snails: Feed on young seedlings leaving a trail of slime on crops and soil.

Remedy: Beer traps, sawdust, eggshell barriers, copper tape, biological controls.

Birds: These are a problem, attacking seedlings.

Remedy: Cover with fleece or netting.

Aphids: Sap sucking insects that can cause a lack of plant vigour and distorted growth. Some transmit plant viruses and they often secrete "honeydew" which is a sticky substance on which moulds can grow.

Remedy: Use finger and thumb to squash aphids where practical or wash off with a hose. Encourage natural enemies of the aphid onto the plot such as ladybirds, hoverfly and lacewing larvae.

Cabbage Root Fly: White larvae that feed on the roots of plants and can kill seedlings and recently planted brassicas. Plants will grow poorly and may wilt and die. See also above under Clubroot - the article on "How to Grow Broccoli"

Remedy: Brassica collar around stem. Grow under cover of insect-proof mesh. This will also help deter cabbage caterpillars. Crop rotation. There are no available biological controls.

Growing for our Annual Show:

There are so many types that each exhibit is judged on it's own merits.

Refs: www.rhs.org.uk/vegetables/broccoli/grow-your-own

www.allotment-garden.org/vegetables/broccoli-growing

