

Growing Garlic

Garlic growing is easy in the home garden. Maintaining top quality requires care and attention. Weeding is important as garlic does not like competition. Watering and not watering, harvesting on time and curing properly are all important for producing bulbs with good keeping qualities.

Soil Preparation

Garlic will grow under a wide variety of soil conditions. It is said to prefer free draining loam with lots of organic matter. Building up your soil with green manures as part of your crop rotation is a good practice. We like to get all our soil amendments tilled into the bed before planting. Compost and composted manure are popular fertilizers. We use ground alfalfa meal and a small amount of ground fish bones.

When to Plant Garlic

In Canada most varieties of garlic, under most conditions, do best when planted in the fall. The timing of fall planting should be such that the roots have a chance to develop and the tops do not break the surface before winter. Spring planted garlic matures later than fall planted.

Preparing Cloves for Planting

Shortly before planting break the bulbs apart into cloves. This is called 'cracking'. The cloves are attached to the basal plate, the plate that the roots grow from. When you crack the bulb each clove should break away cleanly, leaving an image of a 'footprint' on the basal plate. With true hardneck garlics you can crack them by giving the woody stem a sharp rap on a hard surface. The root nodules begin growing from edge of the foot of the clove. Be careful not to damage the foot of the clove. It is more important to keep the clove intact than to remove the basal plate.

Set aside the very small cloves to eat or preserve, or to plant close together for spring greens, like green onions. Each larger clove will produce a good sized bulb by the end of the growing season. The smallest cloves require as much attention and produce significantly smaller bulbs.

Planting Garlic

You can plant garlic in single or double rows or in wide beds of four to six plants across. We have lots of land and plant garlic in well-tilled beds of six rows, with about eight inch spacing between rows and between plants. Tighter spacing in the beds will produce a greater number of smaller bulbs for a higher total yield in terms of pounds of garlic per square foot of garden.

It is important to plant hard neck garlic with the top (pointed end) of the clove up, at least two inches below the surface. When you have planted the garlic you can cover it with a layer of mulch if you wish.

Mulching

Mulching conserves moisture, moderates soil temperatures and inhibits weeds. It also shelters rodents and attracts deer and elk. All these factors need to be considered in deciding whether or not to mulch.

Mulching can even out the soil moisture between rains and irrigation cycles. It is not recommended in wetter climates where excess water can be a problem for garlic.

Moderating soil temperature is helpful where there are extremes of heat and cold. Garlic does not like repeated freezing and thawing. Frost heaves can tear the young roots from the cloves. A thick layer of winter mulch is a good insurance against winter kill. Garlic does not like extreme heat either and mulch will moderate the daily fluctuations in summer soil temperatures.



Chopped leaves, swamp grass, reeds and alfalfa hay are among the preferred mulch materials. Grain straw is not recommended because it can host wheat curl mite which will attack garlic. Grass hay is fine if you don't mind lots of grass seed in your soil.

In our area, about zone 4, growers put on about 10 cm (4") of mulch in the fall for winter protection. By spring this has settled to 5 cm (2") which is enough for weed suppression and heat and moisture control. Where winters are harsher, thicker winter mulch is advisable and then some may need to be pulled back in the spring.

Garlic Scapes

Hardneck varieties produce a central stalk which goes straight up and then usually makes one or two loops. The garlic top is called a scape, garlic flower or top set, and contains a bulge where bulbils will form. On true hardneck garlic plants we leave the scapes on until they have formed two full loops, or for longer, and then we cut them off at a convenient point between the loops and the leaves. For Turban variety garlics we leave the scapes on until harvest time. For Asiatic and Creole variety garlics we cut the scapes after the hardnecks or at harvest.

If you want to use the bulbils to propagate more garlic, leave the plants in the ground later than your normal harvest and leave the bulbils in place until they are pushing their capsules open. Harvest and cure the bulbs and bulbils separately if you want to avoid getting soil on the bulbils.

Watering Garlic

Garlic requires fairly even soil moisture during its early growth and then no additional moisture during the last few weeks. Mulch is one way of maintaining an even moisture regime. Not enough moisture means that garlic does not develop a full sized bulb. Over watering results in garlic with poor keeping qualities - poor wrappers, burst skins and mold.

Harvesting Garlic

A few weeks before harvesting stop watering the garlic. Different growers have different rules of thumb regarding the best time to harvest. The dying back of the leaves is only an approximate indicator. Inspect a few bulbs in the ground by carefully scraping away the dirt. You can feel the bumps of the cloves through the wrappers of a mature bulb.

Lift the garlic from the ground when the bulb has reached a good size and before the wrappers begin to deteriorate or the bulbs begin to split open. If a bulb is not well-wrapped, and the skins on the cloves are not intact, the garlic will not keep well. Learning exactly when to stop watering and when to harvest is a matter of judgment that comes with experience.

We have a late spring and in our location we begin harvesting our earliest varieties in mid to late July. The main harvest continues into August with the late varieties and spring planted beds being harvested in late August. We use a flat, narrow-bladed shovel to loosen the ground beside the garlic - we pierce fewer bulbs with it than we did with a fork - and pull the plants by hand. Be careful as garlic bruises easily. Garlic can get sunburned and may change flavour from the sun and so we take the baskets of garlic to the curing shed as they are harvested.

Managing Garlic Beds for Pests and Disease

There are a number of practices that minimize the risk of pests or disease. The ones we consider the most important are:

- Use only clean, sound cloves from disease-free stock.
- Allow at least two years, and preferably longer, between successive crops in the allium family (garlic, onions, leeks, chives, elephant garlic).



- During the growing season remove (rogue) plants that are not doing well and send suspicious plants to the dump.
- Do not put your allium waste in the compost.

Curing Garlic

After garlic is harvested it needs to be cured. In curing the energy from the leaves goes into the bulbs as they dry. Remove any chunks of dirt from the roots, being careful not to bruise the garlic. Leave the roots on as they have a moderating effect on the drying rate.

If you have a small amount you can spread the plants out where they are protected from the sun and rain and there is good air circulation. We hang the plants - about 25 to 40 to a string in bunches of 4 to 6. The appropriate number of plants in a string depends on their size and moisture level at harvest. You want the circulating air to be able to reach all sides of all bulbs. Hang the strings out of direct light where it is warm with good air circulation - a temperature of 27°C (80°F) is ideal and two weeks drying time is ideal. This way the bulbs dry evenly and without spoilage. You want the wrappers to dry and the garlic to retain its moisture and oils.

We hang our garlic in an open shed in a breezy location. If you do not have enough air movement use fans.

Cleaning Garlic

When the wrappers are dry, prepare your supply of garlic for long term storage, selling or for planting.

We recommend that you select your own seed first. Select good sized, fully mature bulbs with nice plump healthy cloves and set these aside for planting. If you are planting in the fall you do not need to do as much cleaning as you do for selling or long term storage.

Cleaning consists of trimming the leaves and roots and removing the dirty outer wrappers. If the roots are crispy dry the roots and dirt will come off with a couple of rubs with a glove, leaving a short brush of roots. If the roots have picked up humidity you will need to trim them with snips, leaving 1 or 2 cm (1/2 to 1 inch). For many markets it is acceptable for the roots to be a little dirty - a quick brush with a glove on the trimmed roots is enough.

Trim the tops, being careful not to cut the skins protecting the individual cloves. Leave enough stem on hardnecks to make cracking easy. The papery wrapping protects the garlic and keeps it fresh. Remove just the dirtiest outer layers of wrappers.

Place the clean bulbs in clean mesh bags or horticulture boxes (plastic boxes with lots of ventilation), well labeled.

Storing Garlic

Under good home storage conditions a solid, well-cured, well-wrapped garlic bulb will keep 6 to 8 months or longer. The actual keeping time is affected by variety and many other factors. Store garlic at a cool, stable room temperature. A temperature of 15 - 18°C (60 - 65°F) with moderate humidity and some air circulation works well. We hang our garlic in mesh bags or keep it in horticulture boxes.

