

# Garlic

## *Allium sativum*

### A Garden Guide

Grow your own garlic! Growing your own Garlic allows you to explore unique and exciting cultivars - from pungent to mellow - with the satisfaction (and peace of mind!) that comes from growing it yourself.



Garlic is native to Central Asia and Northern Iran, where it has been used as food and medicine for thousands of years. China is the global leader in Garlic production, growing over 75% of all Garlic. Garlic is a key ingredient in numerous cuisines across the world, is mentioned in multiple ancient sacred texts, and is culturally important in Europe. There are numerous festivals dedicated to Garlic. It can be eaten fresh, roasted, dried, pickled, used to flavor oils, and much more. It is thought to have numerous health benefits, from improving cardiovascular health to skin complexion to being a potent anti-inflammatory. Garlic contains lots of Vitamin B6, Vitamin C, Manganese, Selenium, Calcium, Phosphorus, and many potent compounds and enzymes. Like other Alliums, Garlic is thought to potentially deter some garden pests. It is Juglone tolerant, and therefore can be planted near Black Walnut trees.

There are two major varieties of Garlic: Softnecks and Hardnecks.



- **Softnecks** (*Allium sativum* var. *sativum*) are best for long term storage. Properly stored, they can last up to 6 months or longer. Compared to Hardnecks, they have a milder flavor and more cloves. Softnecks can be braided together for storage.

- **Hardnecks** (*Allium sativum* var. *ophioscorodon*) have a stronger flavor, grow excellent scapes, but much shorter storage life. Of the Hardnecks, there are 'Continental' and 'Rocambole' types. The Continental types have more uniform-sized cloves. The Rocamboles have cloves of varying size, and the most pungent flavor. Generally, they also have the shortest storage lifespan.

**When to plant:** Plant Garlic cloves in fall, 4-6 weeks before the ground freezes. For WNC, that usually means planting between late August to mid-September.

**Siting:** Select a sunny spot (6-8 hours of direct sunlight) with rich, loose, well-draining garden soil, high in organic matter. **Heavy clay soils will require amending** - planting in raised beds can make this easier. Rotate crop locations from year to year to decrease potential disease and pest issues.

**Planting:** Garlic prefer a pH of 6.2-6.8, with moist, well-draining soil. A good soil test will tell you exactly what to add, but usually in our soils, Garlic will need at least 1/3rd soil conditioner, up to 1/3rd rich composts, mixed with our native clay. Plant cloves 6-8" apart in rows, with 6-12" between rows (you can go wider and interplant with cool season vegetables). Plant cloves 1-3" deep into the soil with tips facing up. One pound of Garlic planted at 6" spacing will create approximately one 25' row. For most garlic, for every pound planted, you can expect a maximum yield of 10 pounds. Plant the largest, fattest cloves, and leave the thin protective "skin" on. It is important they not be planted so deep that they are prone to rotting and wasting their energy trying to find the sun, on the other hand the deeper they are planted, the more protected they are. For those with limited space, Garlic can be grown in deep containers.



Garlic bulbs can be pre-soaked in 3% hydrogen peroxide for 10 minutes to help prevent diseases. Separately, they can also be pre-soaked in Neptune's Harvest Seaweed Plant Food (Kelp) or Neptune's Harvest Fish and Seaweed for 12 hours to stimulate growth. One gallon of warm water with either of these products diluted according to their instructions is sufficient to treat 30-40 cloves.

Garlic are shallow rooted and need consistent moisture for flavorful good size bulbs to develop. They do not like root competition - keep well weeded. Mulch can help retain soil moisture and suppress weeds.





**Fertilizing:** Garlic thrive in rich soil. Espoma Bulb-tone® and Espoma Bio-tone® are good options. Neptune's Harvest Seaweed Plant Food (Kelp) is a delightful plant snack. Note that too much Nitrogen, applied to plants near maturity, can result in excessive top growth at the expense of the underground bulbs.

**Watering:** Consistent, even moisture is necessary for good yields. A few weeks prior to harvesting, when the foliage starts to yellow, cut back on watering to prevent bulb rot.

**Organic Spray Schedule:** Garlic have few pest and disease issues here in NC. If they develop issues from Onion Thrips (*Thrips tabaci*), Neem Oil or Spinosad are good options.

**Harvesting & Processing:** On Hardnecks, look for the flower stems (scapes) to develop by summer. Removing them before they bloom allows the plant to focus on bulb production. Scapes have a mild flavor, and are edible raw or cooked. Softnecks do not produce scapes.

Harvest Hardnecks when 1/3rd of the foliage has turned brown, harvest Softnecks when the foliage falls over. Avoid pulling on the stems, instead gently loosen the soil and dig up from below. Gently brush the soil off, but do not wash. Garlic can be eaten fresh out of the ground, but in order to store it for winter and beyond, curing is necessary. Garlic needs to cure in a warm dry space that is sheltered from the sun. Usually they are hung or laid out on a screen (this can take several weeks - fans may be helpful). Once the foliage has **thoroughly dried** (outer skins are crispy and dry, neck has constricted), remove the foliage, roots, and outermost papery bulb layers - but keep the stems intact. Softneck types can be braided, it is best to braid them when the stems are still flexible.



Store your Garlic in a cool (ideally 35-50°F), dry, dark, frost-free area. Try to avoid storing them near apples and potatoes. Garlic need good air flow - avoid keeping them in plastic bags. Keep the bulb whole for storage - as soon as you start breaking cloves off, the rest of the head will need to be used in 1-2 weeks. Garlic cloves can also be frozen, whole or minced.

**Usage:** The internet is awash in Garlic recipes - for scapes, foliage, and cloves - from food to herbal medicine to pest control. The deliciously pungent flavor is most intense

after being chopped. The more you cook it, the milder and sweeter the flavor, and less potent the health benefits.

Fresh Garlic scapes and foliage can be used in stir fries, omelettes, sandwiches, summer soups, and pasta. Turn cloves onto their sides and squish with the side of a knife blade to make peeling the skin off easier. Garlic cloves can be eaten fresh, roasted, dried, pickled, fermented, used to flavor oils - vinegars - dips - sauces, cooked in your favorite dish, minced with honey and hot water for tea, dried and blended with salt to make garlic salt, and so much more.

Garlic is also a key ingredient in DIY organic pest control in gardens. Garlic - combined with mint, cayenne, and a gentle dish soap - can deter certain pests in the garden.

Version 1.0 Aug 21

