



Growing & Harvesting Garlic



Garlic, grown in your own garden and properly stored, has a fresh pungency quite unlike the musty odor and bitter flavor too often present in cloves that have been sitting on a grocery shelf. Fortunately, for those who enjoy cooking with it, this bulbous herb is easy to grow and requires very little space in the garden.

Although you can plant garlic in the spring, the secret to a harvest of large garlic bulbs is **fall planting** -- generally four to six weeks before the soil freezes. By planting early in the fall, the roots can become established before winter sets in, and it will be ready to support the vigorous leafy growth early next spring. Fall planting also makes for larger plants and therefore larger bulbs at harvest time. The plants will begin to produce bulbs once the long days of June arrive.

Steps for planting.

1. Prepare the planting bed. Always rotate your garden. It is not wise to plant garlic in the same spot previously used for garlic, or other plants in the onion family, year after year. Rotating crops helps prevent the buildup of disease organisms in the soil.



Garlic requires a reasonably fertile, well-drained soil. Avoid planting in areas where water can collect around the roots, causing them to rot or become diseased. Planting garlic in a raised bed works well. A raised bed lined with chicken wire will also exclude gophers, which are fond of garlic. Work several inches of **Bumper Crop, Soil Pep, or well-rotted manure** into the bed. Avoid the use of 'fresh manure' in vegetable gardens. Also apply three to four pounds of **16-16-8 Multi-purpose Fertilizer** per 100 square feet. Garlic, and onions, require a steady supply of nutrients during their growth cycle.



2. Planting Time. The best time to plant garlic is in the fall, six to eight weeks before the ground freezes. Planting at this time gives the garlic time to root before it freezes. Don't plant garlic too late in the fall, it may not survive the cold if it doesn't have a chance to form a few roots before the cold weather arrives. If you don't plant garlic in the fall, plant it as early in the spring as the ground is workable. Garlic planted in the spring will usually not grow as large as garlic that is planted in the fall, but it will still provide a good harvest. Garlic needs four to six weeks of temperatures between 32° and 50° F in order to stimulate bulb formation. Garlic will not grow properly if it is planted too late in the spring.

Garlic reproduces vegetatively -- that is, it grows from individual cloves broken off



from a whole bulb. Each clove multiplies in the ground, forming a new bulb that consists of 10 to 20 cloves. Garlic does not produce viable seed.

3. Planting Instructions. Garlic is susceptible to several viruses and diseases. Because of this, do not use garlic cloves found in grocery stores; they may also have been treated to slow sprouting. Break each bulb apart into individual cloves, keeping only the largest, and most firm ones for planting. Use the smaller cloves for cooking. This is just opposite from onions; with onions it is best to plant the smallest onion bulbs, and eat the larger ones.



Do not separate the cloves until you are ready to plant them. Early separation usually results in a reduced yield. Space the cloves four to six inches apart and allow about twelve inches between rows. Be sure to set the cloves in the ground with the pointed end up. Push each clove an inch or so into the ground, firm the soil around it, and water the bed.

After planting, cover your garden with a protective mulch of soil pep, chopped leaves, straw, or grass clippings. The mulch should be two to three inches thick to prevent the roots from being heaved out of the soil by alternate freezing and thawing. Don't worry if only a few garlic leaves sprout in the fall; most of the plant's above ground growth will occur next spring.

4. Spring Care. When the leaves begin to grow in the spring, fertilize the plants regularly, to encourage leaf growth. Cool weather and short days stimulate leaf growth. Longer days and warmer weather stimulate bulb production and stop leaf growth. So, the more leaves that grow early in the spring, the larger the bulbs will be when it is time to harvest them. The size of the garlic bulb is directly related to the size of the plant.

Garlic is very drought sensitive. Be sure to keep the garlic patch uniformly watered, especially during hot, dry spells. Garlic has very shallow roots



that can dry quickly. A layer of mulch helps to cool the soil, and helps to maintain a more uniform moisture content.

Stop fertilizing garlic when the warm weather arrives. Too much fertilizer late in the season may cause garlic to store poorly.

Sometimes, during the spring growth, garlic plants will send up flower stalks that will eventually produce small bulbs. Cut these stalks off as soon as you see them (you can add them to salads and vegetable dishes if you wish). Removing the flower stalks helps direct the plant's energy into forming larger bulbs in the soil.

As summer approaches, garlic plants stop producing new leaves and the bulbs begin to increase in size.

5. Harvest and Storage.

Fall planted garlic is ready to harvest late-June to mid-July. Let the plants start to dry out a week before harvest. The outer bulb covering disintegrates quickly and the bulbs shatter easily if they are not harvested at their peak. Be sure to monitor their progress so you can harvest at the best time.

When 2/3 of the lower leaves have turned yellow, gently pull or dig up a few of the bulbs, being careful not to bruise them. If the bulbs have segmented into cloves that can be separated, it is time to harvest. If not, leave the remaining bulbs in the ground for another week and check them again. The bulbs should be fully segmented and covered by a tight outer skin. Don't leave them in the ground too long, or they may begin to separate and will not store well.

After harvest, lay the plants, leaves and all, out to dry for two or three weeks in a shady spot with good air circulation. Garlic cures best at 75° to 90° F and low humidity. Be sure to protect them from the rain or sprinklers. When the roots feel dry and brittle, rub them off, along with any loose dirt. Don't wash the bulbs or break them apart, or the plants won't store as long.

Either braid the garlic, tie it in bunches, or cut off the stems a few inches above the bulbs. Hang the braids, or store the loose bulbs on slatted shelves or screens in an airy, cool (but not freezing) location. You can also put bulbs in mesh bags and hang them in your storage area. Garlic will store longer when the stems are left attached.

Store garlic near 32° F. During winter storage check your bulbs often, and promptly use any bulbs that show signs of sprouting. Garlic may begin to sprout at 42° to 50° F if the humidity is too high. Garlic can be stored three to five months if kept below 55° F, depending on the variety.

You can set aside the largest bulbs to re-plant later in the fall.



6. Types of Garlic. There are two main types of garlic, soft neck and hardneck.

Hardneck garlic produces a woody flower stalk with sterile flowers. It produces clusters of bulbils. These bulbils can be planted, but it will take two or three years to produce a full-size bulb. Most hardneck varieties produce large bulbs that are separated into just a few, large cloves.

Hardneck garlic includes Rocamboles, Porcelain, and Purple Striped types. Rocamboles send up flower stalks that are twisted or coiled. Porcelain varieties have very large cloves that are sometimes mistaken for Elephant garlic. They have very tall seed stalks. The bulbs are white and they store well. Purple Striped varieties have bulbs with 8 to 12 long, crescent shaped cloves. They are covered with a purple-striped wrapper and retain their flavor very well.

Softneck garlic does not produce a woody stalk. They have flexible leaves that can be braided. Bulbs from this type usually have more individual cloves. They usually have a higher yield than the stiff necked varieties.

Softneck garlic includes Artichoke and Silverskin varieties. Artichoke varieties are vigorous and productive. They do not produce bulbils. They are the easiest varieties to grow and they even yield well when planted in the spring. Silverskin varieties have thin stalks that make braiding easy and the bulbs have white skins that are very attractive.

Elephant Garlic

Elephant garlic is actually a '*bulbing' leek*. Plant and grow elephant garlic the same way as regular garlic. Elephant garlic usually grows much larger than the common garlic, up to eight times larger. It can range in size from a golf ball to a softball. Elephant garlic usually has a little milder flavor than regular garlic, however, the flavor of garlic is influenced by heat, water stress (too much or too little) and by soil fertility.

To grow the best quality of garlic (either common or elephant garlic):

1. Fertilize well before you plant;
2. Water consistently during the growing season;
3. Plant garlic in the fall.

Varieties

There are several hundred varieties of garlic grown throughout the world. Each has its distinct flavor and characteristics. Unfortunately, we only have 6 to 10 varieties to choose from in the fall, and even fewer in the spring. Many of the more unique varieties are available from specialty Garlic Farms.



Silver Rose Garlic - Softneck

Late-season. Artichoke variety. It has Rose-colored cloves in very smooth bright-white bulbs. Mild, robust flavor.



A beautiful garlic to braid. A long-storing garlic, can store 8 to 10 months.

This variety can be planted in the fall or spring. Very fast growing.

Inchelium Red Garlic - Softneck

Mid-season. One of the most productive of all the heirloom garlics, this softneck variety is also an artichoke type.

This mild flavored garlic is great baked and blended with mashed potatoes. Flavor is mild at harvest but increases in flavor during storage, with just a touch of spicy heat, but never overpowering. Stores very well for 6-9 months.



Late Italian Garlic - Softneck

Mid-season. A very late maturing variety, that stores exceptionally well.

Perfect variety to extend your harvest time. Softneck variety that is medium in size with a short and round bulb. The skin is very tight.



Can be stored for 6-9 months after harvest. Also a good braiding type. Nice pungent and mild Flavor; not too hot or overwhelming as other garlics can be.

Early Red Italian Garlic - Softneck

Early-season. An excellent garlic; ripens weeks before most other varieties. It is a prolific grower. This mild, artichoke variety is richly flavored.



It has a light-to medium pungency, that also has a lot of color. It produces large bulbs with easy to peel cloves. Stores well for 4 to 6 months.

German Red Garlic - Hardneck

Mid-season. German Red is a full-bodied, strong and spicy rocambole garlic that reliably produces large, satiny white and purple heads.



The easy-to-peel cloves are wrapped in fawn colored skins. A widely popular variety that sets the standard for true garlic flavor. Grows particularly well in colder regions of the country.



Tip: Garlic Chives look like regular onion chives, but they taste more like garlic.

The subtle garlic flavor of Garlic Chives may be a perfect alternative for use in dishes where regular garlic might be a little overwhelming, or may be too spicy.

Spanish Roja Garlic - Hardneck

Mid-season. Probably the most popular hardneck type, because most garlic lovers find the flavor to be “true garlic”.



Being a Rocambole garlic, its flavor is very strong, hot and spicy and sticks around for a long time. It peels easily and stores up to 4-6 months. The large, flat bottomed, purple streaked bulbs often reach three inches in diameter and typically have eight to twelve large tan cloves.

It has the deep, rich, complex flavor of gourmet garlic at its very finest. It has been described as the most piquant garlic in the world.

Nootka Rose - Softneck

This variety has become a favorite softneck variety on organic farms throughout the northwest. Beautiful white skin with rose colored clove wrappers and long necks that are perfect for braiding.



Many describe it as having a bold, robust taste with a medium to hot flavor.

This is a late maturing variety, compared to other softneck and hard neck garlics. Tolerates heat better than many other garlic varieties.

The bulbs can range from medium-large to large. The bulbs can store very long, up to a year under the right conditions. Heirloom Variety.

Elephant Garlic

Late season. Elephant garlic prefers a long, cool growing season and is best planted in early fall. Elephant garlic is closely related to the leek. Elephant garlic usually has a little milder flavor than regular garlic, however, the flavor of garlic is influenced by heat, water stress (too much or too little) and by soil fertility.



Elephant Garlic is ready to harvest when the majority of leaves and stalk become yellow and start turning brown.

Elephant garlic can range in size from a golf ball to a softball. The truly impressive plants may easily reach 4-5 feet tall. The flowers can dry nicely for arrangements. Remove the flower head if you want to promote larger clove size.

There are many uses for elephant garlic. It's often served raw in salads or it can be sliced and sautéed in butter. When cooked, it often browns very quickly, and can become bitter.

More Resources

http://extension.usu.edu/files/publications/publication/HG_2004-02.pdf
<http://www.wegrowgarlic.com/7422.html>
<https://njaes.rutgers.edu/pubs/fs1233/>
<http://www.extension.umn.edu/garden/yard-garden/vegetables/growing-garlic-in-minnesota-home-gardens/>



Uses for Garlic in the Yard.

Use Garlic to Protect Fruit Trees

Garlic planted at the base of fruit trees have flowers that attract a variety of beneficial insects. Garlic's strong sulfur odor also deters many types of insect browsers. It may be effective as a peach tree borer deterrent.



Use Garlic as a Companion Plant in the Garden

In general, garlic is one of those plants that you should plant throughout your garden. Not only is garlic good to eat, it is good for you.

It helps to naturally deter pests, such as aphids, ants, and snails.

It accumulates sulfur, which is a naturally-occurring fungicide, that will help protect your plants from some diseases.

Plant Garlic near Tomatoes, Peppers, Eggplant, Potatoes, Cabbage, Broccoli, Cauliflower, Kale, Beets, Kale, Spinach, Potatoes, Kohlrabi, Carrots, cane fruits, fruit trees, and roses.

Keep away from Beans and Peas.

Use Garlic as a Fungicide

If you spot gray or white powdery spots on your plants, odds are you're dealing with a fungus. The active sulfur compounds contained within garlic will control a variety of fungal and mildew infestations. A garlic water foliage spray can be an effective treatment, and preventative measure, for Powdery Mildew.

It will sometimes help control Late Blight. Late blight was responsible for the Irish potato famine, and has decimated many tomato and potato crops. It turns potato tubers into black mush, and makes plant foliage look like it was killed by frost. Tomatoes get brown lesions and then rot.

Garlic can be used as an insecticide.

When used as a foliage spray, garlic is effective against: Aphids, Colorado Potato Beetles, Whiteflies, Bean Beetles, Cabbage Worms, Spider Mites, Moths, Ants and Termites. If used as a soil treatment, garlic water is a recognized treatment for nematodes and fungus gnats.

Unfortunately, a garlic spray does not distinguish between a good bug, and a bad bug, so watch out for beneficial insects while spraying.

Use Garlic for Animal Control

When used in combination with chili peppers, garlic works well as a preventative deterrent against mice, rats, voles, elk and deer. Homemade animal repellents can be made using garlic mixed with herbs, eggs, peppers,



The active sulfur compounds in garlic not only act as a powerful natural pesticide, they can help eliminate fungus problems, and it may help deter 'unwanted grazing animals'. Best of all, you'll be able to accomplish it without using chemicals, or leaving harmful residues.

human hair, dish soap, or bar soap. Garlic is the main ingredient in many animal repellents such as **Liquid Fence** and **Bonide Repels All Animal Repellent**.

Garlic mixed with fish emulsion may help keep rabbits away, if it is sprayed on the plants that they are munching. Rabbits generally don't like strongly scented herbs, or fish emulsion.



Use Garlic for Mosquito Control

Garlic has a reputation for protecting people from mosquito bites. There are a number of garlic based oils that can be sprayed outside, to keep mosquitoes away, such as Garlic Barrier and Mosquito Barrier.

Some gardeners think that a paste of mashed garlic can help take the sting and itch away from a mosquito bite.

Some people swear garlic works, and they swallow slivered garlic to ward off these pests. Others take garlic tablets, or rub garlic juice directly on their skin.

There is no scientific evidence that eating garlic, vitamins, onions, or any other food, will make a person less appealing to mosquitoes.

The attractant level of each individual depends on a complex interaction of many chemical and visual signals, such as body heat, color, and scent.

Certain foods, in certain individuals, may effect their individual response to mosquitoes, for better or for worse.

Garlic is more effective at repelling some species of mosquito than other species. Garlic also works better for some people than it does for others.



Warning: Don't Feed Your Pets Garlic. Some people believe that garlic will help protect dogs and cats from fleas, ticks, and other pesky critters. While this is true, garlic can be very toxic for animals.

The ASPCA notes, "An occasional small amount of garlic, such as that in most commercial pet foods and treats, may not cause a problem. But because of the risk, we generally recommend that you avoid feeding your pets products that contain more concentrated amounts of garlic." *American Society for the Prevention of Cruelty to Animals*

