

Plant Care Basics - Garlic

Allium sativum



Garlic Magic

We are not doctors: this section for educational purposes only.

The wide range of benefits and therapeutic effects garlic has is enough to fill an entire encyclopedia. [A review of the potential therapeutic effects of garlic](#) reveals a sea of studies confirming the powerful and versatile health and therapeutic benefits of garlic.

DNA Protection: It is known that the use of antigenotoxic agents is effective in preventing cancers. While the majority of studies related this to antioxidant activity in garlic and other fresh fruits, vegetables and herbs, there is evidence to suggest there is more to garlic than just its antioxidant attributes in regards to gene protection.¹

Immune Power: *A. sativum* helps moderate cytokine secretion which can profoundly affect the immune responses from the body, making garlic a perfect candidate for therapeutic regimens.²

Studies show garlic to help the immune system function by stimulating specific cell types which contributes to the treatment and prevention of obesity, metabolic syndrome, cardiovascular disorders, gastric ulcer, cancer, etc.

1. *Immunomodulation and Anti-Inflammatory Effects of Garlic Compounds*. (2020, October 20). PubMed Central (PMC). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4417560/>

2. *Garlic (Allium sativum L.): A Brief Review of Its Antigenotoxic Effects*. (2019, August 1). PubMed Central (PMC). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6722787/>



Origin

The word garlic is believed to originate from the Old English, *garlēac*, meaning *gar* (spear) and leek, as in 'spear-shaped leek'.

Measurements

Garlic and other alliums are measured for pungency using the pyruvate scale. Soil type, rain, and sunlight affect the pungency in onions and garlic. So using clean filtered water, ensuring full sunlight hours and cultivating healthy soil will increase the flavor and quality of your garlic.

Unsolved Food Mysteries

The history of garlic has an unsolved mystery. The Biblical book of *Numbers* (11:15) presents the statement: "We remember the fish, the leek, and the garlic." But research has found no evidence that garlic was used in Egypt prior to the Greek-Roman period, nor is there any known word for garlic from Egypt prior to that period either.



Avoiding the Tiger

The Koreans believed that tigers disliked garlic, so if they ate pickled garlic before passing through a mountain path, it would protect them.



1. Plant It!

Garlic is one of the easiest plants to grow if you have temperatures below 80° F (26° C)

Seeding: Direct sow individual cloves from the garlic bulb outdoors, with the wrappers kept on the clove and the pointy end facing up. There are two types of garlic: soft neck (for warmer climates) and hardneck (for cooler climates).

Successions: Garlic is only planted once a year, so make sure you plant the amount you want for the whole year.

Germination time & temp: Best to sow hardnecks when temps will be between roughly 32-55°F (0-12°C) for at least 4-6 weeks (<65°F / 18°C). Softneck and warmer tolerant garlic varieties can be planted in warmer temps (<75-80°F / 18-23°C). Garlic prefers never to grow in hot temperatures so you want to plant in fall to ensure temps don't exceed 80°F for the duration of the entire grow period.

Mulch It!: After 4-6 weeks and sprouts are at least 6" tall, mulch the garlic bed with a light material, like organic straw or leaf mulch to insulate through the winter. Helps garlic withstand winters <10°F (-12 ° C) or hot temps >80° F (26 ° C)

Spacing: Plant 4-6" (10-15cm) apart, 2" (5cm) deep.

Water: Water 1" (3cm) until sprouting. Then reduce water. Avoid watering during the winter months.

Average days to maturity: 250-290 days (variety dependent).

Containers: Garlic can grow in containers, though it can be challenging to insulate it and keep it hydrated during freezes. Choose a pot at least 10" deep. You can plant three to four cloves in a 12-15" diameter pot.

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There are hundreds of cultivars of garlic! Below is a list of some of our choice favorite cultivars and what makes those varieties a good choice. Whether your choosing for ease of growing, climate, flavor or longevity, there's a garlic cultivar for everyone. There are two sub species of garlic:

Softneck

Originally bred from hardnecks, soft necks are generally chosen for warmer climates and their long shelf life. Softnecks do not produce flowering stalks or scapes and have cloves of various sizes. Softneck have more cloves per bulb but are often harder to peel and less flavorful.

Hardneck

Ideal for colder, northern climates, hardneck produce flowering stalks and scapes and generally have cloves of similar size. Hardnecks have less cloves per bulb but are often easier to peel and have higher flavor with more bioactive constituents.

Softneck (Braiding Garlic)

Artichoke

These are the main varieties you'll find in the grocery stores and are grown primarily for their long shelf life. They are ready to harvest earlier than other varieties and adapt to many different growing conditions and soil types. California Early, California Late, Inchelium Red, Red Toch, Applegate, Polish Red, Early Red Italian, Galiano, Italian Purple, Thermadome and Lorz Italian are some of the varieties of artichoke garlic you'll find.

Silverskin

These garlics are especially high yielding, adaptable to many climates and are the type of garlic used in garlic braids. Garlic plant varieties for silverskins include Polish White, Chef's Italian Red, and Kettle River Giant.

Thermadrome is a very unique artichoke softneck variety with a deep garlic flavor and a dijon mustard note in the middle that goes well with any buttery dish.

Hardneck

Purple Stripes

These are the ancestors of all garlic cultivars, these garlics store well and adorn various beautiful purple streaks and splotches. A great choice for really harsh cold environments. Persian Star, Purple Glazer, Vietnamese Red, Red Rezan, Brown Rose, Chesnok Red, and Russian Giant.

Hardnecks need to be exposed to 40-50°F outdoors for 6-12 weeks during the winter to stimulate bulb formation. If you live in a warmer climate, you can often grow hardnecks successfully by refrigerating your garlic bulbs for 10-12 weeks. Mulch and cover with shade cloth in hot climates to keep the roots cooler.

Rocamboles

One of the more challenging garlics to grow with a short storage life, but the reward is worth it! These garlics are regarded as the best tasting garlics with complex flavor characteristics. Requires good soil fertility and cold winters. Bavarian, German Red, Legacy, Penasco Blue, Russian Red, Spanish Roja, and Turkish Red are just some of the varieties that belong to the Rocambole garlics.

Porcelain

These are the easiest of all garlic varieties to grow, have large bulbs and cloves and contain the highest amount of allicin. Very cold hardy, good for northern and southern growers. Varieties include: Armenian, Georgian Crystal, Georgian Fire, German Extra Hardy, Italian Red, Leningrad, Majestic, Music, Polish, and Romanian Red.

Asiatic, Creole & Turban

Known for their exceptional flavor and extreme heat, these varieties are recommended for mild northern climates and warmer climates. Harvested early summer. Creole & Asiatic varieties store well. Asiatics varieties include: Asian Tempest, Japanese, Korean Mt, Korean Red, Pyongyang & Tibetan. Creole varieties include: Rose de Lautrec & Pescadero Red. Turban varieties include: Chengdu, Chinese Purple, Lotus, Thai Purple, Tzan, Uzbek and Xian.

Find great hardneck garlic varieties [HERE](#) at this amazing 250 acre garlic farm in Greensboro, Vermont growing over 90 hardneck varieties!

Not many vegetables and herbs have festivals dedicated just to celebrating them. Garlic however, has many festivals sporting all things garlic! Find a list at the [The Garlic Seed Foundation](#).

Save the Date: APRIL 19th is NATIONAL GARLIC DAY!

Check out this great [garlic recipe book](#). With hundreds of garlic recipes, this cookbook has recipes for every diet... so long as you love garlic that is!

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2. Nurture It!

Soil: Well-drained soil, with a pH range of 6.0-7.0

Fertility: Add minimum 2" compost across garden bed before planting. If you notice any leaf discoloration, add a seaweed emulsion for healthy, robust leaf production.

Water: 1" per week in temps 60-70°F (15-21°C) and 2" per week in temps 70-80°F (21-26°C). You want the ground moist, but never soggy. When ground freezes, no watering needed. When ground thaws, water 1" (3cm) of water/week when soil is dry. When hardneck varieties scape, dial back the watering a bit.

Container-grown: Feed with a seaweed solution once per week for optimal growth. Watch for excessive salt build-up from nutrients and do clean water flush if needed. Mulch top of container for winter. Make sure the media stays moist (water before the hottest part of the day through the winter as needed).

Sunlight: Because sunlight course will change in winter, you want to make sure that wherever you plant your garlic it is getting 6-8 hours of full sun in fall, spring and summer. Click here to learn about sunlight in winter and the Persephone period.

Temperatures: Ensure temps do not exceed 80-90°F (26-32°C) while growing garlic or the plant will flower and stunt the growth of garlic bulb.

Diseases: Most susceptible to rots and fungal diseases. Avoid most diseases by not overwatering, using proper spacing, and by starting with healthy, well draining soil.

Pests: Nematode (*Ditylenchus dipsaci*) - avoid by using clean seed and rotating crop on a three year rotation (ideally four). [thrips](#), [leafminer](#), onion maggot.



Garlic Power¹⁰

Black garlic is garlic that's aged and cured using a process called the Maillard reaction. Black Garlic is highly prized by chefs but also shows potential for medicinal benefits. A [2016 study](#) revealed black garlic has 4-10 times more potent as an antioxidant and anti-inflammatory than raw garlic, due to its higher phenolic compounds.



Garlic Fear

Individuals with a phobia of garlic have Alliumphobia. People with this sometimes also avoid other plants that have pungent odors.



Mightier than the Sword

Roman generals believed that garlic gave their armies courage, so they planted fields of garlic in the countries they conquered, subscribing to the superstition that the courage was transferred to the battlefield.



3. Harvest It!

NOTE: Expect a strong flavor with more medicinal benefits from homegrown garlic. Over time, you'll realize store-bought garlic has almost no flavor.

You can dig up your garlic anytime and enjoy it, but here's how to reach peak maturity and the largest possible bulb:

All garlic varieties are ready for harvest when lower leaves turn brown and papery. Carefully use digging fork to remove garlic heads from soil. To enjoy spring harvest, simply remove outer papery layers, cook and eat garlic

HINT: When hardneck varieties "scape", cut scapes and enjoy them raw or cooked.

PRO TIP: For larger garlic cloves, plant the largest cloves. Choose the healthiest, best looking bulbs for planting next year.



4. Store It!

Spring Garlic: Chop & eat fresh to enjoy PEAK flavor.

Cure It: Brush excess dirt off of bulbs gently. Hang garlic upside down in bunches or lay on wire rack out of sunlight for 2-4 weeks in temps > 80° F (26 ° C). You can braid the stems of softneck varieties together to make hanging easier.

Store it: Cut stems & peel off outer layer of bulbs. Store in ventilated, dark, dry area for up to 6-8 months at a temperature of 60°F (15 °C).

To learn more about growing your own food, [join Harvest Club](#), the only online garden club that gives you the resources, community and personal garden support you need to reach your fresh food goals for a lifetime of health and well being.



City of Garlic

The city of Chicago got its name from a French derivative of the Native American word, 'shikaakwa,' known to botanists as *Allium tricoccum*. The first known reference of the place known as Chicago was in a memoir by Robert de LaSalle around 1679 and referred to as 'Checagou.'