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# How to Grow Garlic: The Complete Guide



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# Planting, Growing, and Harvesting Garlic

By [Catherine Boeckmann](#)

Last Updated: November 8, 2024



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You can grow your own garlic! Before you plant, know which garlic variety matches your climate and cooking. We'll also share tips on how to grow bigger bulbs. Learn all about planting, growing, and harvesting garlic and garlic scapes.

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A detailed guide on how to plant, grow, and harvest garlic.

-Yiddish proverb

## Planting Garlic—From a Clove

Yes, garlic is planted from a single clove, often from the past season's garlic harvest! Each clove will grow into a new bulb.

While garlic can be planted in early spring, however, it's more common to plant in late fall after a hard frost to give garlic plants a head start on spring growth. Why? Garlic needs a cold period to grow—about ten weeks before 45°F (or 8°C). If you live in a warmer climate, you can also put the garlic in a paper bag in the back of the fridge for 10 weeks to mimic the outdoors.

The bulbs are generally ready to harvest the following summer. But you can also enjoy the garlic leaves or “scapes,” which appear in early spring. They’re delicious stir-fried or in salads.

In addition to its intense flavor and many culinary uses, the “stinking rose” also serves as an insect repellent in the garden and has been used as a home remedy for centuries.

## **Can You Plant Store-Bought Garlic?**

We do not recommend this. Most grocery store garlic heads have been treated. Plus, most commercial garlic comes from large-scale farming areas with mild climates (such as California), so the garlic may not be suited for growing in your climate and may carry pests or diseases with it as well.

If you want big bulbs, use “seed” garlic from a local nursery, farmer’s market, or online seed supplier. Or, keep some of your best heads of garlic from your harvest to replant! But before you plant garlic, make sure you know the difference between the two main types of garlic: hardneck and softneck garlic—and

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- [When to Harvest Garlic \(Plus: How to Cure for Storage\)](#)
- [Garlic's History of Healing](#)
- [Planting Garlic in the Fall](#)

## PLANTING

Garlic thrives in full sun, so select a planting site that receives 6 to 8 hours of sunlight per day.

Feed the soil with compost or aged manure. For bigger bulbs, we also love to add an organic amendment such as bonemeal or a higher-potassium fertilizer.

It's very important that garlic doesn't sit in wet soil. If your garden soil is high in clay or

mulched raised beds instead. "I plant in raised beds for good drainage and then mulch with about 6 inches of old hay after the ground freezes. I never water my garlic—I like low-maintenance vegetables!" Raised beds should be 2 to 3 feet wide and at least 10 to 12 inches deep.

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Garlic (11 plants) - row length: 12' 5"

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## When to Plant Garlic

Probably the most important factor in growing bigger bulbs is when you plant.

Plant cloves in the late fall, about one or two weeks after the first killing frost. See timing in the chart below.

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Garlic does best if it can experience a “dormancy” period of colder weather—at least 40°F (4°C)—that lasts 4 to 8 weeks. When planted in the fall, garlic bulbs have time to develop healthy roots before temperatures drop and/or the ground freezes, but not enough time for the garlic to form top growth. Then, by early spring, the bulbs “wake up” from their dormancy and start rapidly producing foliage, followed by bulbs, before the harshest heat of summer stops their growth.

You can plant garlic cloves in mild climates as late as February or March, but the resulting bulbs won’t be as large. However, you can still enjoy the garlic scapes during the summer. (Scapes are the plant’s tender green shoots with a mild garlic flavor. Enjoy on eggs, in salads, as a pizza topping, or in stir-fries!) If you plant in the spring, wait until after the soil can be worked, and it crumbles apart easily.

| Hardiness Zone | When to Plant Garlic |
|----------------|----------------------|
| Zones 1 to 6   | Early October        |

| Hardiness Zone | When to Plant Garlic                              |
|----------------|---|
| Zones 9 and 10 | November to Early December                        |
| Zones 10+      | Put Cloves in Fridge for 10 Weeks Before Planting |

## How to Plant Garlic

- Immediately before planting, work a couple of tablespoons of 5-10-10 complete fertilizer, bonemeal, or fish meal into the soil several inches below where the base of the garlic cloves will rest.
- Select large, healthy cloves that are free of disease. The larger the clove, the bigger and healthier the bulb you will get the following summer.
- Don't break apart until one or two days before planting—crack open on the day of planting whenever possible. As soon as the cloves are separated from the root plate, they begin to deteriorate. We keep the husks on; some gardeners take the husks off, but we haven't seen that it matters too much.
- Plant cloves 4 to 8 inches apart and 2 inches deep in their upright position (with

- Plant in rows spaced 6 to 12 inches apart. Depending on the variety, a 10-foot row should yield about 5 pounds of the fragrant bulbs.



*Planting garlic clove by clove. Credit: YuriyS/Getty Images*

## GROWING

- Gardeners in areas where the ground freezes should mulch garlic beds heavily with straw or leaves to ensure proper overwintering. [Read our mulching guide for more info!](#)
- Mulch should be removed in the spring after the threat of frost has passed. (Young shoots can't survive in temps below 20°F/-6°C on their own. [Keep them under cover.](#))
- In the spring, as warmer temperatures arrive, shoots will emerge through the ground.
- Cut off any flower shoots that emerge in

- Garlic is a heavy feeder. In early spring, side-dress with or broadcast blood meal, pelleted chicken manure, or a synthetic source of nitrogen such as a pelleted fertilizer.
- Fertilize again just before the bulbs begin to swell in response to lengthening day-light (usually early May in most regions). Repeat if the foliage begins to turn yellow.
- Keep the planting site well weeded. Garlic doesn't do well with competition—it needs all available nutrients!
- Water every 3 to 5 days during bulbing (mid-May through June). If May and June are very dry, irrigate to a depth of 2 feet every eight to 10 days. As mid-June approaches, taper off watering.



Photo by YuriyS/Getty Images

## Types

Before you choose a variety of garlic, you need to consider your climate, which deter-

cooking because different varieties have different taste profiles, from mild to sweet to bold to spicy!

## Hardneck Garlic

**Hardnecks** are the best choice for Northern gardeners. This variety is extremely cold hardy for harsh winters. These grow one ring of fat cloves around a hard stem, with fewer but larger cloves per bulb than softnecks.

Bonus! Hardnecks produce flower stems, aka “scapes,” which must be cut to encourage the bulbs to reach their full potential. The scapes themselves are an early summer treat, delicious if chopped into salads or added to stir-fries.

**Popular hardneck varieties:** ‘Music’ (on the mild side yet rich and mellow); ‘Chesnok Red’ (mild and sweet, creamy texture when roasted); ‘Early Italian’ (sweeter flavor that won’t overpower dishes); ‘German Red’ (robust, classic garlic flavor which cooks well); ‘Spanish Roja’ (strong and hot, heirloom with classic garlic flavor).

## Softneck Garlic

**Softnecks** are more common with Southern gardeners, growing well in warm climates with warm winters. They have more intense flavors and tend to grow bigger bulbs with smaller cloves per bulb because energy is not being diverted to top-set bulblets like hardnecks.

They do not have scapes, but they store better than hardnecks. Like their name suggests, they have necks that stay soft after harvest and, therefore, are the types that you see braided together.

**Popular softneck varieties:** 'California White Early' (classic moderate garlic flavor, most popular grocery store type, harvest in spring); 'California White Late' (harvest in summer); 'Inchelium Red' (wonderful but mild garlic flavor, superior storage life); 'Silver White' (classic garlic, great storage, excellent for beginner); 'Lorz Italian' (hot and zesty heirloom, popular with cooks).

### Elephant Garlic

**Elephant garlic** isn't a true garlic, but it is grown similarly to hardneck varieties, requiring a long, cool growing season in zones 3

has quite a mild flavor, more similar to onion and shallots than traditional garlic. Bulbs and cloves are large (up to one pound each!), with just a few cloves to a bulb.

**See our complete video that demonstrates how to grow and harvest garlic!**

## HARVESTING

- Harvest from fall plantings will range from late June to August. If you planted in the spring, calculate your approximate harvest date based on the “days to maturity” of the garlic variety you planted.
- In general, the clue is to look for yellowing foliage, but this isn’t the case for all garlic varieties. Harvest when the tops begin to yellow and fall over, but before they are completely dry.
- Before digging up your whole crop, it’s a good idea to sample one bulb. Lift a bulb to see if the crop is ready. We often dig up a bulb before the tops are completely yellow (in late June or early July), as some garlic types will be ready earlier. The garlic head will be divided into plump cloves, and

- If pulled too early, the bulb wrapping will be thin and easily disintegrate.
- If left in the ground too long, the bulbs sometimes split apart. The skin may also split, which exposes the bulbs to disease and will affect their longevity in storage.
- To harvest, carefully dig (don't pull or yank stems by hand) up the bulbs using a garden fork. Avoid damaging the roots, especially the root plate (where they attach to the bulb). Lift the plants and carefully brush off surplus soil, but do not remove any foliage or roots before putting them to dry thoroughly.



Photo by Nikolaeva Elena/Getty Images

## How to Store Garlic

- Let garlic cure in an airy, shady, dry spot for about 2 weeks. Hang them upside down on a string in bunches of 4 to 6, or leave them to try on a homemade rack

posts. Make sure all sides get good air circulation.

- After a few weeks, the garlic should be totally dry and ready to store.
- The bulbs are cured and ready to store when the wrappers are dry and papery, and the roots are dry. The root crown should be hard, and the cloves can be cracked apart easily.
- Once the garlic bulbs are dry, you can store them. Brush off (do not wash) dirt, remove only the dirtiest wrappers, trim roots to  $\frac{1}{4}$  inch, and cut tops to 1 to 2 inches.
- Bulbs should be stored in a cool ( $55^{\circ}\text{F} / 13^{\circ}\text{C}$ ), dark, dry place, and can be kept in the same way for several months. Don't store in your basement if it's humid. Do not store garlic in the refrigerator, either, as it will be too cold and too humid.
- The flavor will increase as the bulbs are dried. Properly stored, garlic should last until the next crop is harvested the following summer.
- If you plan on planting garlic again next season, save some of your largest, best-formed bulbs to plant again in the fall.



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## PESTS/DISEASES

Garlic has very few problems with pests in the garden (in fact, it's a natural pest repellent), and very few problems with the diseases that plague other veggies. Keep an eye out for the same pests that bother onions.

| Pest/Disease         | Type   | Symptoms   | Control/Prevention  |
|----------------------|--------|--|---|
| <b>Onion maggots</b> | Insect | Limp, yellow, or stunted plants; larvae feed on roots/bulbs/stems and may spread bacteria  | Use row covers; harvest on a timely basis; monitor adults with yellow sticky traps; weed, especially wild onions; destroy crop residue; rotate crops  |
| <b>Onion thrips</b>  | Insect | Leaves, especially in folds near base, have white patches or silver streaks; brown leaf tips; bulbs distorted or stunted; curling or scarring                | Remove plant debris; choose resistant varieties; add native plants to invite beneficial insects; use row covers; use straw mulch; monitor adults with yellow or white sticky traps; use sprinklers or other overhead watering |
| <b>White rot</b>     | Fungus | Leaves yellow, wilt, and die, starting with oldest; white, cotony growth at stem base or on the bulb, later with black, poppy seed-like particles; roots rot | Destroy infected plants; choose disease-free cloves/sets; destroy crop residue; disinfect tools; solarize soil; rotating crops on 5-year or longer cycle may help   |

## WIT AND WISDOM

- Rub raw garlic on an insect bite to relieve the sting or itch. Find out [more uses for raw garlic](#).
  - Old-time gardeners swear that garlic “learns” because it adapts to your growing conditions and improves each year.
  - Garlic has a [long history of healing](#).
  - [University of Missouri Extension horticulture specialist David Trinklein](#) explains, “Garlic was given to the original Olympic athletes in ancient Greece to increase strength and stamina. Thus, this culinary staple was perhaps one of the earliest performance-enhancing agents in sports.”
- Garlic once helped win gold medals!

**\*How to Grow the Biggest Garlic (Start Early)\***



## RECIPES

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## COOKING NOTES

- Learn how to make your own garlic powder to easily spice up a recipe.
- Roasted garlic bulbs are also a favorite of ours!
- Around the summer solstice (late June), hardneck garlic sends up a seed stalk or scape. Allow it to curl, then cut off the curl to allow the plant to put its energy into bulb formation. Use the scapes in cooking the same way you would garlic bulbs. We

kick! Note that they get more fibrous and less edible as they mature.



Garlic scapes. Photo by Mikhail Naumov/Getty Images.

## VEGETABLES

## ABOUT THE AUTHOR

### Catherine Boeckmann



Catherine Boeckmann loves nature, stargazing, and gardening so it's not surprising that she and The Old Farmer's Almanac found each other. She leads digital content for the Almanac website, and is also a certified master gardener in the state of Indiana. [Read More from Catherine Boeckmann](#)

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## COMMENTS

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**Liane (not verified)** 5 months 3 weeks ago

The squirrels ate the greens as soon as they were up. They ate everything this summer including tomatoes and beets. Going to be a bad winter.

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[REPLY](#)

**The Editors** 5 months 3 weeks ago

Goodness. We're so sorry to hear that, and we know how much work you must have done during the planting season. Did they eat garlic scrapes? Usually, garlic and onion are planted near gardens because it's so unpleasant to squirrels and other pests and deter them from eating. [See tips for keeping squirrels out of the garden for next season](#). You don't mention where you live, but the good news is that a [mild winter is predicted](#) for most of the U.S. and Canada in 2024–2025.

[REPLY](#)

**Kerry (not verified)** 5 months 4 weeks ago

Great article on planting garlic. Just 2 sticky points, though...

1) You state early on (under "Planting Garlic - From a Clove") to plant 3 weeks AFTER first frost date, then a bit later (under "When to Plant Garlic"), 2)

You state in those same sections, respectively, that garlic "needs a cold period to grow—about ten weeks before 45°F (or 8°C)" and it "does best if it can experience a 'dormancy' period of colder weather—at least 40°F (4°C)—that lasts 4 to 8 weeks." I would really appreciate clarification.

In addition, as a first-time garlic grower, I think I put mine in several weeks late and I am very concerned about getting any harvest at all - I put them on Nov. 1 in Zone 4b (zip code 82834). Have I completely screwed up???

Thanks!!!

[REPLY](#)

**The Editors** 5 months 3 weeks ago

Thanks for writing, Kerry, and apologies for the confusion. We have updated the

proximate dates for different planting times by zone. We hope this is helpful.

**REPLY**

**Kerry (not verified)** 5 months 2 weeks

ago

Thank you!!!

**REPLY**

---

**Jim Parsons (not verified)** 7 months ago

Hi, great site. One of our favorite things to do with the scapes is make garlic scape butter and freeze it, great for so many things, add other herbs as well!

**REPLY**

---

**Joanne MacDonald (not verified)** 8 months 2 weeks ago

Hello Catherine, would it be okay to put chopped garlic in an ice cube tray, top it up with oil and freeze? I would then put the frozen cubes in a freezer ziplock bag for further use? Thanks, Joanne

**REPLY**

**The Editors** 8 months 2 weeks ago

Hi, Joanne. Excellent idea! You should also coat the bottom of each compartment with some oil before adding the chopped garlic.

**REPLY**

**jamie (not verified)** 7 months 3 weeks ago

Totally irresponsible to not even mention botulism while encouraging this practice. Does the Farmer's Almanac encourage creating your own canning recipes also?

**REPLY**

---

**Jude (not verified)** 8 months 3 weeks ago

In the article it recommends to separate bulbs for a few days before planting. In Ben's video he says to plant immediately after separating.

Can you give additional clarification?

Love your articles!

**REPLY**

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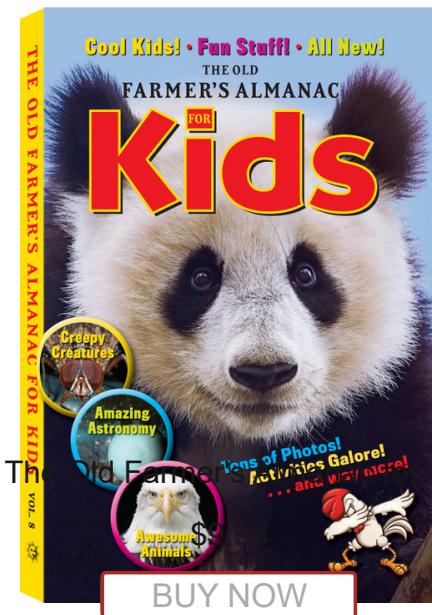
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