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How to Grow Onions: The Complete Guide



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Planting, Growing, and Harvesting Onions

By [Catherine Boeckmann](#)

Last Updated: April 24, 2025



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Onions are a must-grow vegetable! They take up little room in the garden, require little effort, and have few pest issues.

They are stored for many months for use in the kitchen. Ho

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the trade make the difference between a great crop and a disappointing one. See how to plant, grow, and harvest onions.

Should I Grow Onions from Seeds or Sets?

Onions can be grown from seeds or sets.

- **Onion sets** are tiny onions that mature in about 14 weeks. They can withstand light freezes and have a higher success rate than direct-sown seeds or transplants. The onion sets look like small bulbs sold at gardening stores; they develop into full-size bulbs once they mature. Choose onion sets with bulbs 3/4 of an inch in diameter; larger ones tend to produce stiff necks and go to seed.
- **Onions grown from seed** require the soil to be at least 50°F to germinate, so these should be started indoors about 6 weeks before transplanting to the garden.

In colder climates (Zone 5 and colder), many gardeners prefer starting from onion sets to onion seeds because you've jumpstarted the process.

However, seeds are the most economical.

Onion germination can be slow and patchy outdoors, so starting seeds indoors is recommended for cooler climates, not directly sowing outdoors.

Growing from seed also allows you to choose more interesting and different varieties vs ordering onion sets. Check out our tips for [growing onions from seed](#).

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Read Next

- [Starting Seeds Indoors: How and When to Start Seeds](#)
- [Sowing Seeds in the Vegetable Garden](#)
- [10 Tips for Selecting Plant Seeds](#)

PLANTING

Onions need to grow in full sun and also in a spot where they won't get shaded by other vegetables. The more energy they can get from the sunlight, the larger their bulbs can grow. Mix aged manure or compost into the soil in the fall or early spring to improve texture. Ensure there are no rocks or debris. Soil needs to be well-draining and loose; compacted soil affects bulb development.

In terms of location, practice crop rotation with onions. Don't plant them in the same location year after year, as this can encourage the spread of diseases that affect the crop. Learn more about crop rotation.

When to Plant Onions

- **Start onion seeds indoors** 8 to 12 weeks before your area's last spring frost date, which typically means planting them in late winter. Some gardeners will start even earlier (15 weeks) to grow seeds to roughly the same bulb size.
- **Transplant seedlings or plant starters** outside in early spring when the soil is workable, about 2 to 4 weeks before the last spring frost. This means snow has melted, the days are warmer, and nights are still near freezing. Temperatures should be at least 50°F and no longer likely to dip below 28°F (-2°C). For us in the northern zones, we're talking April or early May.
- **A fall-planted crop of onions** needs at least 4 to 6 weeks of warm temperatures to become established in the ground. They will remain dormant during the cool season; as the temperatures and soil warm again in early spring, the onions return to life.



Photo credit: YuriyS/GettyImages

How to Plant Onions Indoors

Whether you're planting seeds or sets, get a shallow tray and fill it with compost to the top. Modular trays with a small section for each bulb are ideal.

1. Plant seeds 1/4 to 1/2 inch deep, or plant the onion bulbs so that the pointy end is just peeking over the top of the soil.
2. Lightly water the tray and let it drain through.
3. Set onions in a warm place, such as a well-lit windowsill.
4. Thin to 3 to 4 inches.

Planting or Transplanting Onions Outdoors

Onion plants are heavy feeders and require constant no

big bulbs. At planting time, add nitrogen fertilizer. Many organic gardeners will add an inch of compost to the bottom of each row before planting. Or, dig a trench in the soil about 2 inches deep and 3 inches wide, and then fill the trench back in with about an inch of compost.

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- **If you are direct seeding outdoors,** sow seeds in a 2-inch wide band, 1/4 to 1/2 inch deep, in rows 12 to 18 inches apart. After seedlings emerge, thin to 3 to 4 inches apart.
- **If planting onion sets outdoors,** bury them 2 to 6 inches apart, gently pressing them 1 to 2 inches deep into loose soil. (Use the closer spacing if you want to pull im

lions.) Don't bury them more than 2 inches under the soil. Onions mustn't be planted too deep, as this can affect bulb development.

- If you are **transplanting**, space 4 to 5 inches apart and rows 12 to 18 inches apart.
- Mulch with straw between rows to help retain moisture and stifle weeds.

Make the Most of Your Available Space
See how many plants will fit and which crops can occupy the same space in your garden at different times of the year.



Onion (11 plants) - row length: 12' 7"

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GROWING

We find it helpful to think of onions as a leaf crop (like lettuce or kale) rather than a root crop (like beets or carrots).

Fostering healthy foliage growth ensures the plants have enough energy to form large bulbs.

- Ensure immature bulbs stay covered with light mulch to protect them, retain moisture, suppress weeds, and allow air circulation.
- Do not cover e-----

- Fertilize every few weeks with nitrogen to get big bulbs. Stop fertilizing when the onions push the soil away, and the bulbing process has started. Do not put the soil back around the onions; the bulb needs to emerge above the soil.
- Generally, onion plants do not need consistent watering if light mulch is used. About 1 inch of water per square foot per week, including rainwater, is sufficient. If you want sweeter onions, water more. To deter bolting, water them often during hot spells.
- To deter thrips, intercrop onions with tomatoes or carrots in closely alternating rows.

See our video demo to see how to plant and grow perfect onions!

!Grow Perfect Onions - Every Time



Growing Onions in Containers

You can also grow onions in containers!

Prepare a container that is at least 10 inches deep and as wide as possible (to allow for space between maturing onions).

A 5-gallon bucket will support 4 to 6 onions, and a tub many more. Place the container where it will receive the maximum hours of direct sunlight per day. (It will be heavy to move once filled and planted.)

Provide a well-draining potting mix that is rich in organic matter; add compost or well-rotted manure. Mix in a complete fertilizer, per the package guidance on container size, or fertilize with diluted fish emulsion or compost tea.

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Types

Onion varieties are categorized based on whether they're "long-day", "short-day", or "day-neutral" varieties. This is because they are "photoperiodic" meaning that they grow in response to day length—the number of daylight hours needed to trigger bulb formation.

Short-day onions grow best in the southern United States, between 25° and 35° north latitude, and start bulbs when day length reaches 10 to 12 hours. The earlier that short-day onions are planted, the larger they get. In the South, onions can be planted in the fall and overwintered. Since they continue to grow throughout the winter, they will be ready for harvest in the spring.

Intermediate, or day-neutral, onions are best suited to the middle tier of U.S. states, approximately between latitudes 32° and 42°, and start bulbs when day length reaches 12 to 14 hours.

Long-day onions grow best in the northern states, between latitudes 37° and 47°, and start bulbs when day length reaches 14 to 16 hours.

Do not try to fool Mother Nature: Short-day onions planted in a long-day zone will result in small bulbs—not an early harvest.

Long-day varieties:

- ‘**Yellow Sweet Spanish**’: large, round shape; yellow-white.
- ‘**First Edition**’: high-yielding, stores well, flavorful, creamy-yellow
- ‘**Red Wethersfield**’: flat bulbs that store well, white flesh, red-skinned
- ‘**Aisa Craig**’, ‘**Walla Walla**’: huge bulbs
- ‘**Buffalo**’, ‘**Norstar**’: produce early but keep only until late December
- ‘**Copra**’, ‘**Southport Red Globe**’ ‘**Sweet**

- **'Red Florence'**: heirloom; 4- to 6-inch long, dark purple-red, torpedo shape; mild, sweet
- **'Ailsa Craig'**: heirloom; named for a Scottish island; large, up to 8 inches in diameter; average 2 pounds; pale yellow skin, globe shape; mild, sweet
- **'Gold Coin'**: cipollini; 1-1/2- to 3-inch yellow flattened bulb; pungent flavor sweetens when cooked

Short-day varieties:

- **'Stuttgarter'**: sold in sets, early maturity with a slightly flat shape, yellow
- **'White Bermuda'**: extremely mild, with thick, flat bulbs; white
- **'Red Burgundy'**: good table onion with mild, sweet white inside; short-term keeper
- **'Crystal Wax White Bermuda'**: a great onion for pickling when harvested at pearl size
- **'Hybrid Yellow Granex'**: sweet, Vidalia type
- **'Red Creole'**: heirloom; 3- to 4-inch, dark red globe shape; pungent
- **'Southern Belle'**: rubv

- ‘**Texas 1015-Y Supersweet**’: stores well
- ‘**Yellow Granex**’: Vidalia type; 3- to 4-inch, yellow, flattened globe shape; crisp; said to be the sweetest of the super sweet

Day-neutral or intermediate varieties:

- ‘**Candy**’: golden, thick-flesh, jumbo bulbs; stores well
- ‘**Red Stockton**’: large, red-ringed, white-flesh bulbs
- ‘**Super Star**’: large, sweet, white bulbs
- ‘**Purplette**’: mini onion, at 1-1/2 inches; glossy, burgundy red when raw; pastel pink when cooked or pickled; mild, sweet
- ‘**Southport Yellow Globe**’: early; 2-1/2- to 3-1/2-inch thick-skin yellow globe; mild, sweet

HARVESTING

Pull any onions that send up flower stalks. This means that the bulbs have stopped growing. These onions will not store well but can be used in recipes within a few days.

- Spring-planted onions tend to be ready for harvesting by mid-summer.
- When onions start to mature, the tops (foliage) become yellow and begin to fall over. At that point, bend the tops down or even stomp on the foliage to speed up the final ripening process.
- Loosen the soil around the bulbs to encourage drying.
- Harvest by late summer in dry weather. (Wet-harvested onions do not cure well and might rot in storage.)
- When the tops are brown, pull the onions. Handle them carefully, as the slightest bruise (now and in storage) will encourage rot.
- Cut the roots and trim the tops back to 1 or 2 inches (but leave the tops on if you are planning to braid the onions together).



Photo by Rootstocks/Getty Images

How to Store

- Set onions on dry ground for a few days to cure, weather permitting, or in a protected place such as a garage or barn.
- Once cured, hang onions in a mesh bag or nylon stocking; spread up to two layers deep in a box; or braid and hang them in a cool, dry, well-ventilated area. The ideal temperature range for storage is 40 to 60°F (4 to 15°C). Do not store in a refrigerator, as conditions will be too damp.
- Check periodically for sprouting or rotting onions and remove them.
- Don't store onions with apples or pears, as the ethylene gas produced by the fruits will interrupt the onions' dormancy. Onions may also spoil the flavor of these fruits (as well as potatoes).
- A pungent onion will store longer than a sweet onion. Sweet onions have a high water content and do not keep well. Eat the sweet varieties first and save the more pungent onions for later.
- To avoid bruising, store them so that they do not touch each other—for ex-

the onions one at a time, tying a knot between each one. Hang them in a cool, dry place.

- You can also braid your onions for extended storage. [Learn to braid onions!](#)

Check out this video to learn how to harvest and store onions.

How to Harvest and Store Onions



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PESTS/DISEASES

- **Thrips:** To control thrips—tiny insects about as fat as a sewing needle—take a dark piece of paper into the garden and knock the onion tops against it; if thrips are present, you will spot their tan-colored bodies on the paper. A couple of treatments with insecticidal soap kills them. Follow the package directions. Spray the plants twice, 3 days apart, and the thrips should disappear. To prevent future infestations, consider using row covers.
- **Onion Maggots:** Cover your emerging onion crop with fine mesh netting or row covers. Seal it by mounding the soil around the edges. The onion maggot fly likes to lay its eggs at the base of plants, so the netting should prevent that. You should also keep mulch away because the insects like decaying organic matter, and make sure you completely harvest your onions as the season progresses. Onion maggots are usually a problem in very rainy periods, so these precautions may be unnecessary if no

- **White Rot:** This very serious disease starts with infected plant material. Avoid transplants grown in soil-based compost. Stick to starting from onion seeds, onion sets, and bulbs bought from inspected producers. With white rot, the foliage will yellow and wilt; below ground, white, fluffy fungal growth appears on the base of the bulb. Unfortunately, once rot sets in, there is no solution. Dig up the crop and dispose of it in the trash (do not compost). Avoid growing onions in the same location in future seasons, as the dirt will remain infected for many years.

WIT AND WISDOM

Onions were worshiped in ancient Egypt, where their concentric circles were seen as symbols of eternal life.

Can You Plant a Sprouted Onion?

Yes, you can plant a sprouted onion, though you won't get more onions from it.

You will get lots of tasty green sprouts,

however! Here's how to do it:

1. Fill a pot with potting soil and make a hole in the middle about the onion's depth and width.
2. Place the onion in the hole and cover with soil.
3. Water and put the pot in a sunny spot.
4. Harvest the green sprouts as needed for cooking.

If you get a sprout with a flower, wait until the flower goes to seed. Save the seeds for planting in the spring.

Onion Cures and Home Remedies

- In the Middle Ages, onion juice was believed to cure baldness, snakebite, and headaches.
- A generation or two ago, children were treated with a poultice of mashed onions applied as a paste to cover a wound.
- A whole onion eaten at bedtime was prescribed to l

and sliced onions were placed on the soles of the feet to draw out fever.

- Early settlers made cough syrup by steeping raw onion slices in honey overnight.
- A raw onion rubbed on a bee sting or insect bite will relieve the pain and itching.

Onion Weather Folklore

*Onion's skin very thin,
Mild winter coming in;
Onion's skin thick and tough,
Coming winter cold and rough.*

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RECIPES

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GRILLED FRENCH ONION

FRESH ONION DIP

**POTATO PIZZA WITH SWEET
ONIONS AND ROSEMARY**

**SLOW COOKER FRENCH ONION
SOUP**

COOKING NOTES

To make onions taste milder, soak them in milk or pour boiling water over the slices and let them stand for 20 minutes. Rinse with cold water.

Chopping onions can sometimes look daunting: There's

Where to begin? Check out our tips for chopping onions in four easy steps. Onion skins actually have several health benefits, too, so don't throw them out!

Check out more tips on using onions in the kitchen and cooking them correctly.

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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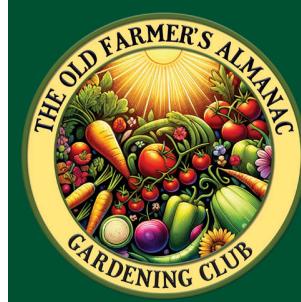
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COMMENTS

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Cathy (not verified) 8 months 2 weeks ago

This has not been as wet a summer as last, but my onions make me think it is too wet. Many of them have the tops flopping over, and it is only August, but the stems not drying or thinning, and some have mushy layers in the bulb or the stem. A few have had the entire bulb turn to mush. I am picking some but was hoping some could dry out more still in the soil. Should I just harvest them and dry them out before storing them in my cool dark basement?

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[REPLY](#)

The Editors 8 months 2 weeks ago

Hi Cathy,

Sorry to hear about the issues with your onion.

and discard any of the onions that are showing signs of rot or mushy layers.

Make sure to throw them away and never put them in your compost.

There are a few reasons why some of your onions could be turning to mush. One could be too much water this late in the growing season. If you did not amend your soil prior to planting, your soil may be too compact and leading to drainage issues as the growing season went along.

There are also a number of diseases that can affect onions during the growing season. If you planted onions in the same location last year, disease may have been able to overwinter in that area and is now affecting this year's crop. It would be best to practice crop rotation next year and plant your onions in a different garden bed.

If your soil is in good growing condition and not oversaturated disease should be suspected. If your onions seem mature at this point (or close to it) it would be best to harvest them a

eases from spreading to onions that are salvageable. Follow the instructions above for harvesting and drying before storage.

Hope this helps!

REPLY

Sandy (not verified) 11 months 2 weeks ago

Last year we used onion sets, cannot remember the name of them. But the box suggested you cut off the green tops after they reached a certain length. After i got the hang of it, it was awesome. I died them and used them for months. It appears that is not something you recommend? Do you know which onions you are able to trim the tops?

Thank you very much for all of your help

REPLY

Kimberly (not verified) 1 year 10 months ago

In your article about growing onions you mention planting sprouted onions only for their greens but I have ha

multiple onions from one sprouted onion. You just have to carefully peel away the layers and separate each little sprout (I usually get 3-5 per onion) then plant them. Tip: I like to let the individual sprouts sit in a shallow dish of water for a day or two to boost the root growth before I sow them. I have about a dozen onions in my garden currently that came from only 3 onions. I hope this helps your readers to take advantage of a veggie that might otherwise end up in the trash!

[REPLY](#)

The Editors 1 year 10 months ago

Great tip! Thanks for sharing your personal recommendations, Kimberly!

[REPLY](#)

John Holderfield (not verified) 2 years ago

Can you cut the green stems above ground and allow the bulb to continue to grow?

REPLY

The Editors 1 year 11 months ago

The bulb gets its food from the leaves, so one needs to wait until the leaves brown (and are no longer providing food) before harvesting the bulb, or the bulb won't reach its full size.

If a flowering stalk appears, however, you can cut off that green stem.

Unfortunately though, if an onion bolts (forms flowers) the first year, it will no longer focus on bulb growth, even if one removes the flowering stem. It is best to immediately harvest an onion that has bolted, as the longer it sits in the soil, the more chance its flavor and texture may change and rot may occur. However, you can leave the bulb in the soil for a few days, if needed, before harvesting.

Hope this helps!

REPLY

Michelle M (not verified) 2 years 9 months

ago

I am in zone 8a, Arkansas. I have had some success growing in a 5 gallon bucket. Maybe this would be a alternative for those with fungus/worm problems?

REPLY

The Editors 2 years 9 months ago

If you get onion maggots, we'd suggest planting in raised beds versus the ground or even containers. The worms prefer slow-draining soil. Use floating row covers after the onion seeds are first planted until harvest.

REPLY

Ollie Kovaluk (not verified) 3 years 9 months

ago

I have a beautiful lush garden; I plant everything according to tl

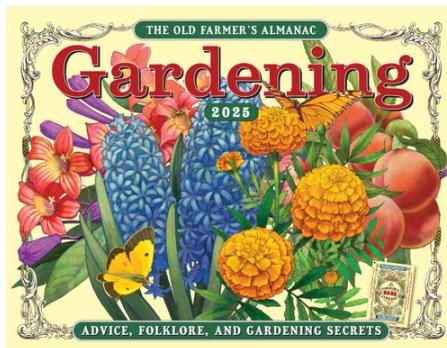
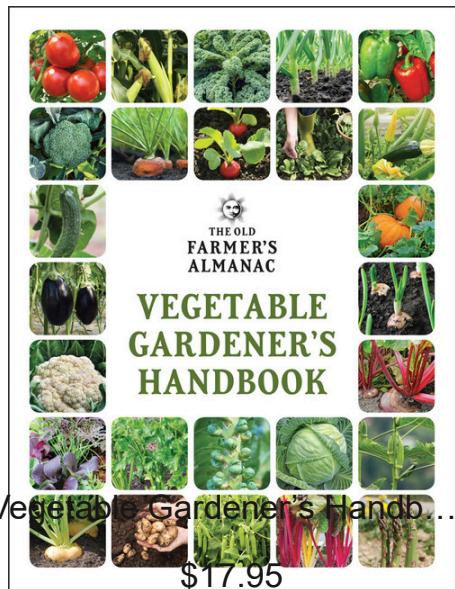
thank you so much! I'm a organic gardener.

Last year my onions were rotting early in the season...I thought it was because I used wood ashes to prevent worms. I planted onions sets in a different area this year. Same problem, greens start turning yellow and die...the small onion bulb is rotting. They are definitely not overwatered - I never had this problem before, some of my friends are experiencing the same thing. Are we buying infected onion sets?

REPLY

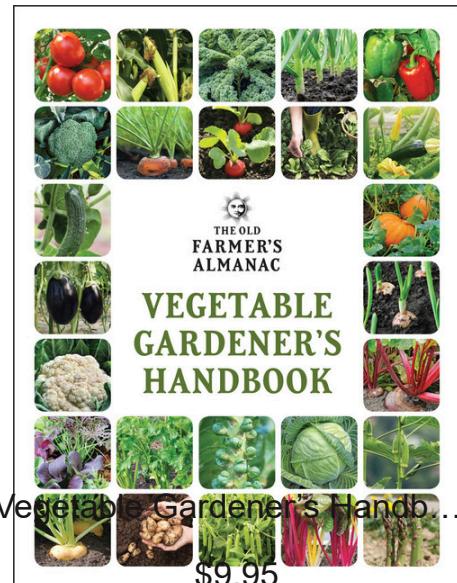
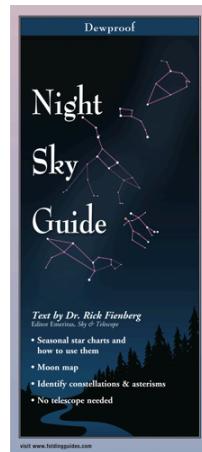
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