

# Growing Guide: Citrus

Unlike the other fruit trees that require cold weather to bloom and produce fruit, citrus trees such as oranges, grapefruits, lemons and limes are tropical and cannot survive cold winter temperatures. In fact, many citrus trees are ready for harvest during the fall and winter months of October through February. So unless you are in an area with a moderate climate like California, Florida, or Texas, you will want to grow citrus in containers and find a warm and sunny indoor location to house them for the winter.



## Fun Facts

- Because citrus had a limited growth area and shipping fresh fruits was challenging, for centuries oranges were an expensive luxury item reserved for only the wealthiest. French royalty built special greenhouses called orangeries to specifically grow oranges in cooler climates.
- When harvesting citrus fruits, the peel color is not a good indicator of ripeness. Citrus fruits start out green because they contain chlorophyll. When the weather cools or if they are exposed to a natural gas called ethylene (which is given off by ripe fruit), the amount of chlorophyll decreases, allowing the expression of different pigments like carotenoids and anthocyanins and thus resulting in yellow, orange, or red color. The best way to judge maturity of a citrus fruit is its weight. Generally the heavier the fruit, the juicier and sweeter it will be inside.
- The fruit's location on the tree can impact its taste. The more sun exposure a fruit gets, the sweeter it will be. So fruit on the top, outside, and south side of the tree will generally be sweetest.
- During times when money was tight, such as during the Great Depression of the 1930s, many parents couldn't afford expensive gifts for their children. Oranges were a luxury, and each child received one in his or her Christmas stocking as a special treat. The tradition continues to this day in many families.

## Planning

### Choosing a Variety

Unless you live in California, Florida or Texas, most likely you will need to choose a citrus variety suited to growing in a container. Standard-size citrus trees generally grow to be 18 to 22 feet tall. Dwarf varieties grow 8 to 12 feet tall. Dwarf varieties are best suited for growing outdoors or in containers. There are many varieties of satsumas (an orange relative), lemons and limes that will do well as container plantings.

### Obtaining a Plant

Citrus can be grown from seed; however, most varieties are the result of grafting and so purchasing a nursery grown plant will often result in the most successful growing experience. There are a number of serious diseases affecting citrus plants, including citrus greening disease, which is spread by an insect called the Asian citrus psyllid. Because of the severity of this disease and its impact on commercial production, many states are under quarantine, making it illegal to move citrus plants across state lines. Be sure to purchase your citrus trees from reputable local or online nurseries that are aware

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of any restrictions pertaining in your state. Contact your state Agriculture Department office for more information.

### Choosing a Container

Use the largest container you can manage to move indoors when necessary. Placing the container on wheels or using a furniture dolly/hand truck will make moving a large pot easier. Since many types of citrus are self-pollinating, you only need one tree to produce fruit; however, if your tree is indoors when it's blooming, you may have to hand pollinate the flowers since neither insects or wind will be available to move the pollen.

### Choose a Site

- During the warmer months, find an outdoor location protected from wind, with maximum sun exposure. Make sure you have access to water since container-grown plants will dry out faster than those in raised beds or in ground.
- Move your citrus indoors to a sunny window or a heated greenhouse when temperatures drop into the 40's.
- If you live in a more mild climate and choose to plant your citrus in the ground, make sure to be prepared shelter your tree when temperatures drop below freezing.

### Preparation

- Citrus grows best in moist but well-drained soil. You can test drainage by digging a hole 2 to 3 feet deep and then filling it with water. If it does not drain within 24 hours, choose a different location. Avoid salty soils.
- If planting in containers, choose a large container (18 inch diameter is a good size for dwarf citrus plants) with adequate drainage holes. Plant your tree in a well-draining potting soil, mixing in some granular fertilizer (ideally, one formulated for citrus but any slow-release fertilizer will do). Keep soil level 1 to 4 inches from the top rim of your container to allow for easy watering.

### Planting

- In the citrus belt, trees can be planted any time of year. Spring is the best time to plant container-grown trees from a nursery outside.
- To reduce the possibility of root rot, plant the trees no deeper than they were growing in the nursery container.
- Container plants can be planted at any time although their availability may be limited in the coldest months of the year.

### Care

- Water the entire root area of in-ground trees deeply about once a week. Keep the soil of potted plants lightly moist in spring and summer when plants are growing actively; let the top inch or so of soil dry out before watering in fall and winter. Potted plants may suffer from dry heated indoor air in winter. Set potted plants on a tray of pebbles filled to half the pebbles depth with water to increase humidity around plants.

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- Give mature, in-ground trees 1 to 1-1/2 pounds of nitrogen a year. Apply in four portions throughout the year, or just once six to eight weeks before bloom. Fertilize potted citrus plants every 2 to 3 weeks with a balanced houseplant fertilizer in spring and summer, but reduce the frequency to every 6 to 8 weeks in fall and winter when plants aren't growing as actively.
- Prune any time of the year. When the trees are young, prune overly vigorous growth. Prune mature trees to remove dead, broken, and diseased branches. You may need to prune container-grown trees before bringing them indoors. Don't remove more than one-third of the tree's canopy to avoid stressing the tree.
- Most citrus trees are grafted onto a hardy rootstock (you will be able to see a slight bend in the trunk at the graft union). Make sure to protect the graft union and prune any branches that may appear below it. Keep the graft union above the soil line.
- In freezing temperatures, cover in-ground trees with blankets and bring containerized plants indoors.

## Pests

Aphids, leaf miners, spider mites, scale and whiteflies are common problems for citrus plants, but most do not cause significant damage. Outdoors, only treat if they begin to impact the growth of the tree.

Indoors, inspect plants frequently for pest activity. Insecticidal soap sprays can help keep pests in check.

## Harvesting

- Most citrus trees will need to grow for 3 to 6 years before they begin to produce fruit.
- Most citrus are harvested in the fall and winter (October through February), but there are a few that are harvested year round. Although some varieties ripen their fruit all at once, others will have fruit ripen at different times and may need to be picked over several months.
- Taste is the best indicator of ripeness. Citrus fruits will not continue to ripen after they are harvested, so they must be ripe when picked.
- Clip off ripe fruit with pruning shears. If you try to pull fruit off of the tree, you may tear the peel.

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