



Growing Figs in the Home Garden

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Growing fruit trees in the low desert of Arizona can be done successfully if varieties with low chill hours are selected. What does the term 'low chill hours' mean? Chill hours are the accumulation of hours between 32°F and 45°F in which deciduous trees are dormant. These hours can generally be counted between November 1st and February 15th. ¹ Deciduous fruit trees must go through this period of low temperatures to break their winter dormancy. Fruit tree buds cannot come out of dormancy and break, or open, until the number of chill hours required for that specific variety have been accumulated. Chill hours accumulated in the northern and eastern United States are quite high and chill hours in southern and southwestern parts of the United States can be quite low. This is one important factor in selecting the right fruit tree variety for your area. In Southern Arizona, the average number of chill hours accumulated each winter season can be as few as 250 and as many as 400.

Common figs (*Ficus carica*) are a popular fruit for gardeners in Southern Arizona to grow. Figs require very little maintenance, thrive in warm and dry climates, and need less than 300 chill hours each season, fewer chill hours than many other trees.¹ These characteristics make figs a great choice for the Southern Arizona home gardener.

Flowering and Fruiting

In the world of fruit trees, figs are botanically unique. A fig fruit is a pouch, called a synconium, inside of which hundreds

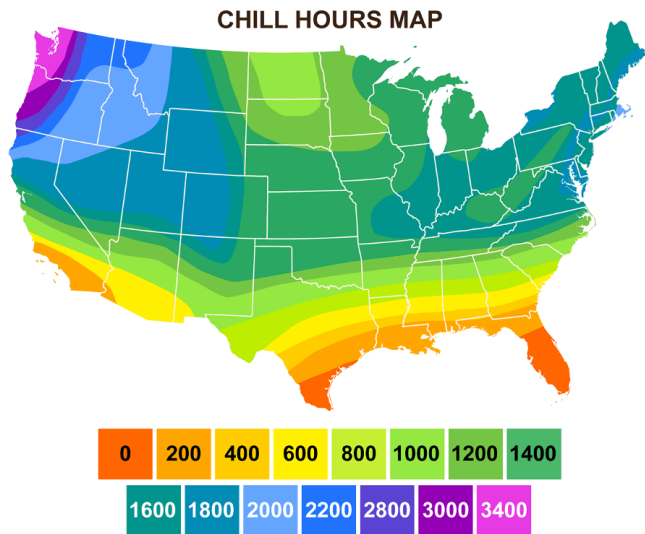
of flowers complete all their stages of development. These flowers are perfect flowers, which means they have both male and female parts present in the same flower, so can self-pollinate. Figs are also unique in that they produce two crops during the summer: one in early summer (late June) and one in late summer or early autumn (August or September). The first fruit, called a breba crop, produces less quantity, but larger fruit. The second crop yields a much larger quantity of fruit.³ Because of their heat tolerance and two harvest periods, figs are a great choice for Southern Arizona gardens.

Site Selection

At maturity, fig trees can reach 10ft to 30ft in height and width. Choose a planting location that will provide plenty of space to accommodate this growth. Keep in mind that figs are deciduous, which means they will drop their leaves during winter. A location away from areas where you don't want leaves, such as pools and patios is best. Provide a location that receives at least 8 – 10 hours of full sun a day with well-draining soil.

Tree Selection

Fig trees are one of the easiest fruit trees to propagate, which makes obtaining one from an acquaintance or propagating one yourself an inexpensive endeavor. The most common method of propagating figs is by stem cutting. Please see the instructions at the end of this publication for a step-by-step guide on fig propagation



Based on data from the University of Maryland

Photo Courtesy of USDA

Should you choose to purchase a fig tree from a local nursery, there are a few things that will ensure you get the healthiest tree possible.

- **Healthy Root System** – When shopping for a fig tree, it is a good practice to gently slip the root ball from the nursery pot to inspect the roots. The root ball should be moist, hold together when removed from the container, yet also show no signs of being rootbound. If the roots are circling the container or if there is very little media in the pot, choose another tree.
- **Healthy Foliage**- If purchasing a tree that isn't dormant, the leaves should look full, shiny and green with no obvious signs of stress. Avoid purchasing trees that have discolored, mishappen, or missing leaves.
- **Bare Root Tree**- If selecting a bare root tree, roots should still be dormant, have a fibrous, fresh, clean appearance, and the tree should not yet be leafing out.

There are many fig cultivars available to purchase. Most home gardeners can find one that will perform well at their site. Winters are relatively mild in Southern Arizona, but cold hardiness should be a consideration when selecting a fig variety. Established fig trees perform best in areas where temperatures stay above 15° F. Temperatures below 27° F can damage young trees. It is a good practice to apply frost protection to young trees during periods with low temperatures or late/early seasonal frosts. This can easily be done by applying a thick layer of mulch to the base of the tree and covering the top with row covers or other material permeable to air.¹⁰

Planting

If you choose to plant a fig tree directly in the ground, the optimal time for planting is in fall (September or October), after the heat of summer subsides, or early spring. This will

give the roots time to become established before the arrival of cold winter temperatures or harsh summer heat. To plant, simply dig the hole at least twice as wide and no deeper than the root ball. Fill the planting hole with native soil; this will encourage the roots to spread out from the planting hole in search of nutrients as the tree grows.

If a nursery stake is present, remove it at the time of planting. You can add stakes if necessary to support and anchor the tree until it becomes more established in 1 – 2 seasons. If using stakes, place one on either side of the tree, at 1 ft. from the trunk and secure to the tree using only flexible material at the lowest point possible to allow movement of the tree crown. Usually, staking figs is only necessary when planting in a very windy or sandy location.

Adding a basin around the newly planted tree is a good practice for water management. A basin is an indented area with a berm around it, much like the shape of a doughnut, that can be used to keep water from running off and away from the root zone. The basin should be as least as wide as the tree's outer canopy (drip line). This ensures that the roots are getting plenty of water where the roots are actively growing and not just at the trunk.

Irrigation

Consistent irrigation will increase fruit quality and quantity; adequate water during the hot summer months is very important. Provide water every 3-5 days during normal summer temperatures, and more often during periods of extreme heat. During the winter, trees may need to be watered every 2 weeks. Determine the duration of irrigation by using a soil probe. These simple tools can be purchased online, at garden centers, or at the local county extension office. Water all trees to a depth of 3 feet at each irrigation event. The amount of water it will take to get to 3 feet depends on your soil type and its water-holding capacity. Water depth will depend on the tree size. Small newly planted trees should be watered down to one foot. Medium sized (Shrub size) should be watered down to two feet, and large established trees should always be watered down to three feet.

Providing mulch around the base of trees can reduce water requirements and weed pressure while also enriching the soil. Apply 2 – 3 inches of mulch to the drip line of the tree canopy, but not directly around the trunk.

Fertilization

Figs planted in well-draining soil don't often require fertilization. The exception to this is when the planting location is in sand, or if the rate of growth is very slow. Branches growing less than a foot in a season is considered slow growth. If concerned about the soil quality, you can have the soil tested at a soil testing facility. Most soil testing labs can offer a breakdown of the soil and what, if anything, needs to be added. You can find recommendations on labs offering soil testing at your local cooperative extension office.

Pruning

Figs require very little maintenance, such as pruning to produce fruit, which is another characteristic that makes them a good choice for the home garden. Pruning is appropriate when there are dead or damaged branches, or to maintain a canopy open enough to sunlight and air. Since fruit is produced twice during the growing season, it is important to do any pruning during winter dormancy to avoid removing branches that will produce the early summer fruit. The first crop will be produced on last year's growth and the second crop on the current season's growth. In Southern Arizona, any pruning should be done after the second crop has been harvested. In areas with cold winter temperatures, do any necessary pruning after the coldest part of the winter has passed to protect the tree from cold damage.⁴

Growing in Containers

More compact fig varieties can be grown successfully in containers. Choose a container that is at least 24 inches in diameter. Use a growing media that is both lightweight and porous to support roots and allow good drainage. If using a soilless mix, which is sterile, add compost to provide nutrients. Prepackaged soilless mixes can be expensive; if you want to mix your own, try this combination:

- 1 part garden loam
- 1 part compost
- 1 part sand

Unlike figs grown in-ground, those grown in containers will require some added fertilizer. It's a good practice to feed container grown figs three times in a season: May, June, and July. In early spring (May), a period of active growth, supply a higher nitrogen fertilizer to support foliage and branch development. Once figlets (small fruits) appear in late spring (June and July), apply a higher phosphorus fertilizer to support fruit and root development. As a reminder, a fertilizer package will display three numbers giving the percentage by weight of nitrogen (N), phosphate (P2O5), and potash (K2O). These will be listed on the package

similarly to these examples: 10-10-10, 21-0-0, or 10-54-10. The first number in the ratio represents nitrogen content, the second number represents phosphorus content, and the third number represents potassium content. Choose the product containing the nutrient ratio your tree needs.

Check your fig tree each season to check on root growth. Increase the container size as root development increases to avoid the tree becoming rootbound. Figs grown in containers will require more frequent watering. Avoid letting the container dry out; figs are sensitive to water stress. Water regularly during hot or windy weather.

Container Friendly Varieties

There are a few fig varieties that do well in containers. Below are a few varieties to try if you're interested in growing figs on your patio or small garden.

- Figonomal
- Little Miss Figgy
- Little Ruby

Pests and Disease

Insects

Fig trees are relatively pest free. The main insect pest of concern is the green fig beetle (*Cotinis mutabilis*), native to Southwestern US and Mexico. Fig beetles are members of the scarab beetle family and known by several names: figeater beetle, green fruit beetle, and western green June beetle. These adult beetles can reach 1.25 inches long and emerges from the soil after maturing from the larval stage, at nearly the same time fig fruits are ripening. These large, emerald beetles will noisily buzz around, and land on fig trees, collecting in large groups to feed on single fruits.

The best method of control for fig beetles begins the season before. Adults lay their eggs a few inches below the soil surface. If you have a compost pile, you may have seen large cream-colored grubs with brown heads that can be up to 2 inches long. The grubs prefer feeding on organic matter around the garden and emerge to take flight after pupating.

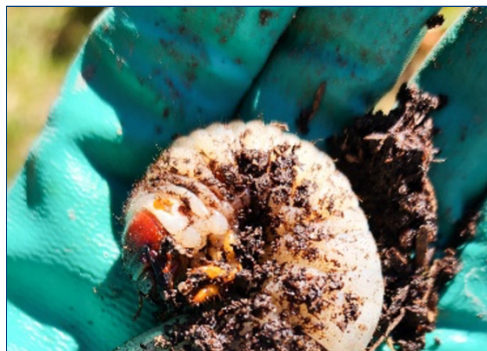


Fig Beetle Grub



Adult Fig Beetle



Group of Fig Beetles Feeding

Fig beetles like to eat ripe fruit, which means chemical treatments are not recommended so near to harvest time. Instead, practice a few management techniques to avoid significant losses.

- Keep yard debris and compost piles away from fruit tree growing areas.
- Long after pollinators do their work, but before fruit ripening and harvest time, cover fruit trees with a barrier, such as a shade cloth, row cover, or frost cloth. This will prevent fig beetle damage.
- Make fig beetle traps using an old milk jug, juice bottle, or other container with a tapered opening, such as a funnel, for easy entry. Add an enticing treat, such as grape juice as a lure.
- Create an inviting habitat for beneficial insects near fruit trees.
- Chickens will scratch away in search of fig beetle grubs if given the chance to forage around fruit trees. If you have chickens and the option to let them out, allow them the opportunity to act as natural predators

Birds and Mammals

Birds can also be pests when figs are ripening by causing pecking damage. Utilizing barriers, such as row covers, or shade cloth will prevent them from damaging ripe fruit.

Gophers, also known as “pocket gophers,” live underground in 4 – 12-inch-deep tunnels and burrows. They cause extensive damage to garden plants and tree roots and are very difficult to control. There are methods, with varying degrees of success to try:

- Exclusion:² – Purchasing pre-made wire basket made from ¾-inch mesh wire to surround the root ball when planting new trees is an option. These can also be made if time permits. This will create a barrier between tree roots and gophers. Be sure to allow 6 inches of the mesh or wire above the ground as well to prevent the gopher from digging up and over the fence boundary to access tree roots. This method can restrict tree root growth depending on the wire material. Non-galvanized wire rusts and breaks down after a few years, which will allow the tree roots to grow and expand with maturity. This method can be used to protect flower and garden beds by placing an underground barrier around the bed's sides and bottoms. Use hardware cloth or ½- to ¾-inch mesh wire at the time of constructing an in-ground bed by digging out the soil to the desired depth, installing the wire, and backfilling the soil. Be sure to allow for some of the barrier above the soil line, just as in the wire basket construction. If constructing raised beds with an open bottom, use the same hardware cloth or mesh as a barrier to exclude gophers.
- Traps – Once a tunnel has been located, excavate the opening wide enough to place a 2-pronged pincer trap inside. Check the trap often and move to a different location if there is no activity for a few days. Using bait is not necessary. Wear gloves while doing this to avoid potential bites.
- Toxic Bait – This is not recommended due to the risk of downstream toxicity to predators, such as owls and hawks.

Nutritional content

Desert Friendly Varieties

Variety	Skin Color and Size	Number of Harvests	Common Uses	Mature Size
Brown Turkey	Purplish-brown skin, pink flesh Medium	2 – May and July	Fresh or preserved	15 to 30 ft. tall and wide
Black Mission	Purplish-black skin, pink flesh Large	2 – May and July	Fresh or preserved	15 to 30 ft. tall and wide
Quitobaquito	Green skin, pink flesh Small	2 -May and October	Fresh	10 – 20 ft. tall and wide
Kadota	yellow-green skin, pink flesh Large	2 May and July	Fresh, dried	15 to 25 ft. tall and wide
Ruby	Green skin, pink flesh. Medium	1 - June	Fresh	10 – 20 ft. tall and wide
Oro Blanco	Purplish-pink skin, pink flesh Medium	2 – May and July	Fresh	10 – 20 ft. tall and wide

Polyphenols and carotenoids, often called antioxidants, protect the body against oxidative stress and diseases such as cancers, heart disease, and inflammation.⁶ These antioxidants are two of the major categories of phytochemicals found in figs, especially in dark colored, fresh figs.⁷ Figs are also a rich source of various nutrients including carbohydrates, vitamins, dietary fiber, and minerals.⁸

Figs can be eaten fresh as well as dried and can be made into a variety of foods such as jams and preserves and as additions to baked goods and desserts. Before canning figs, be sure to get the most up to date health and safety information from a reputable source such as the USDA's Complete Guide to Home Canning.⁹

Propagation

Figs can be readily propagated through cuttings with limited time and equipment. If you have a favorite variety you would like to multiply for yourself, or to share with others. The resulting new plant will be genetically identical to the parent plant. This step-by-step guide will show you how to correctly take a cutting to grow a beautiful new fig tree.

There are just a few basic tools and materials needed to take a fig cutting. Below is a list of what you will need.

1. Clean pruning shears or sharp knife.



2. Rooting hormone (liquid or powder) to encourage root development



3. Clean containers for planting the cuttings and well-draining rooting medium for planting the cuttings.



4. A cover, such as a plastic bag or dome to create a humid environment.



Step 1. Select a Healthy Fig Tree

Choose a healthy and disease-free pomegranate tree from which to take the cuttings. The branch from which you take the cuttings should be about a pencil width in diameter.



Step 2. Take cuttings

Disinfect a sharp pruning shears or a knife by dipping into rubbing alcohol or a 10% bleach solution.



After the blade dries, take cuttings that have 4 leaf nodes (the point where a leaf is or was attached). Cut just below the last node.



Remove any leaves from the lower half of the cutting to expose the nodes.



You can make several cuttings from one branch, so long as they are the width of a pencil.

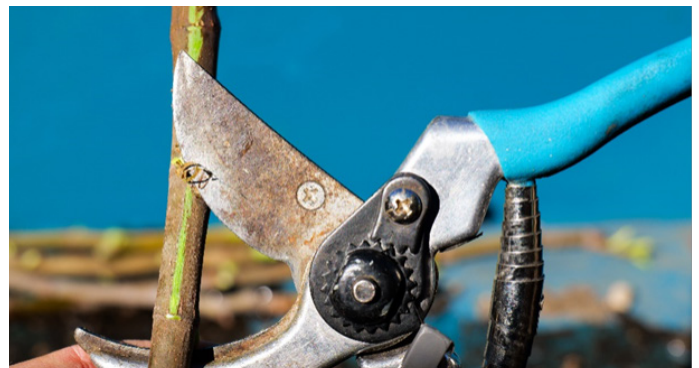


Keep all the cuttings in water while you work so they don't dry out.



Step 3. Scrape the sides of the cutting

Using the sharp edge of your shears or knife, gently scrape away the thin outside layer from one side of the cutting to encourage root development.



Step 4. Apply rooting hormone

Rooting success and speed can be improved by using a rooting hormone. Rooting hormone is available in a powder or a liquid form. Put a small amount of rooting hormone into a separate container to avoid contaminating the main container.

Dip or brush the bottom cut end of each cutting into the rooting hormone.



Step 5. Prepare the planting medium in a container

Use a well-draining potting mix, such as coarse sand, vermiculite, or a peat-free seed starting mix that has been moistened.



Step 6. Plant the cuttings

If using rooting hormone, use a screwdriver, chopstick, or pencil to pre-drill holes in the planting medium. This will prevent the rooting hormone from being brushed off as the cutting is inserted into the planting medium.



Insert the cutting so that two leaf nodes are below the planting medium and two are above. You can plant 3 or 4 cuttings in the same container a few inches apart. Ensure good contact between the cutting and the planting medium by firmly pressing around the base of each cutting.



Step 7. Create a humid environment

Cover the potted cuttings in a plastic bag or dome to create a humid environment. This helps prevent excessive moisture loss while the cutting is developing new roots.



Step 8. Water appropriately

Keep the planting medium evenly moist while the cutting is forming roots and shoots.

Step 9. Provide indirect light

Place the potted cuttings in a location with bright, indirect light.

Step 10. Monitor

After a few weeks, there may or may not be visible leaflets if the cutting has rooted successfully.

Step 11. Transplant

The cuttings should have developed a good root system after a few weeks to a few months. Not all cuttings will leaf out equally. Even if no leaflets are present, an extensive root system may have developed. Note the difference in root and leaf development between these three cuttings that were taken at the same time.

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