

Selecting a Citrus Variety

There are a number of criteria to consider when selecting a citrus variety. Will you eat the fruit or juice it? When's picking season? Other important considerations include tree size, cold and salt tolerance, fruit size, eating quality, seediness, ease of peeling, etc. To help in making your decision, consult our handout "Citrus Varieties" and the nursery professionals here at Rockledge Gardens.

Selecting a Planting Site

Plant citrus trees where there is adequate space for growth, maximum exposure to sunlight, good air circulation, and adequate irrigation and drainage. If your yard tends to stay wet during the rainy season, it is very important to build a berm and plant your tree on it to allow for drainage.

Ideally, citrus should be planted to the south and west of your home, generally the warmest spots in your yard. If you're planting several trees, put them in a north-south row to allow better sun exposure. Trees should be planted 10-15 feet apart and rows, where there are more than one, should be 20-25 feet apart. Allow 5 extra feet for grapefruit trees, which are larger, and 5 feet less for smaller varieties such as satsumas, kumquats and calamondins.

Planting Instructions

Before planting, clip off any fruit that may be on the tree. Additionally, remove any fruit that may grow for the first year when it reaches the size of a marble. Grapefruit, orange and tangerine trees should not be allowed to have fruit until they are about 6-feet tall. Young trees should be able to divert all their energy into growing a strong and healthy root system.

Citrus trees require well-drained soil. Prepare the soil by adding 1 part organic matter—such as our **Rockledge Gardens Planting Mix**—to one part of existing soil (use more planting mix in sandier soil). Use this mix to backfill the hole. Add the prescribed amount of **Espoma Bio-Tone Starter Plus** when planting. Work it into the soil alongside of the rootball while planting. These organic products will serve to stimulate root growth for quicker establishment.

The planting hole should be wider—but no deeper—than the rootball. When planted, the tree should be no lower in the ground than it was in the pot. If higher (recommended for areas with poor drainage), it should be gradually bermed up.

When removing the tree from the container, use care: do this right next to the hole you have just prepared. Examine the tree roots closely for injury. If any of the roots are crushed or broken, cut them at a point just inside of the injury. If there are roots encircling more than one-third of the root ball, cut these by making 3 vertical cuts spaced equally around the rootball. This will not harm the tree if it is properly watered. Prune any broken branches just beyond the branch collar. Before planting, scrape a small amount of soil and root hairs away from the sides of the tree. If some of the dirt should fall off of the rootball, don't panic! Carefully place the tree into the hole and backfill with your mixture.

Gently place the tree into the hole, again checking that the soil at the top of the root ball is level with the soil in your yard. Fill in the sides of the hole around the rootball and gently firm the soil around the base of the tree.

Eliminate air pockets by using a gentle stream of water from a hose. Form a ridge or berm of soil 2 to 3 inches high around the margin of the hole to serve as a reservoir when watering. This berm should have a diameter a little wider than the pot the tree was growing in.

Watering

When temperatures are in the 80s, water your tree daily for the first two weeks by filling the water reservoir (or use two gallons of water per inch of trunk diameter). In cooler weather, water every other day. Weeks 3 and 4, water every other day (twice a week in cooler weather). Continue reducing in two-week stages until you're applying water only once per week.

During the dry season and periods of drought, you should supply even mature trees with an inch of water weekly in warm weather (every two weeks in cooler weather). Inconsistent watering often results in dry, pithy and even split fruit.

Citrus foliage will not tolerate salt spray from the ocean or the spray from wells containing even moderate levels of salt. Citrus trees should not be watered at all with water from wells containing more than 2,300 ppm salt.

Fertilization

After planting, wait about one month before fertilizing. For the first year, fertilize monthly from February to September with $\frac{3}{4}$ to 1 $\frac{1}{4}$ pounds (1 $\frac{1}{2}$ to 2 $\frac{1}{2}$ cups) of **Sunniland Citrus Fertilizer** (use the smaller amount for trees 3- feet or smaller and the larger amount for trees 5 or more feet tall). During the 2nd year, apply fertilizer 5 times (approximately every 6 weeks) from February to September in the amount of 1 $\frac{3}{4}$ pounds (2 $\frac{1}{2}$ cups) for 4-foot trees to 2 $\frac{1}{2}$ pounds (5 cups) for trees 6-feet or taller. Thereafter apply fertilizer 3 times per year (February, June and September) in the amount of one pound (approximately 2 cups) per foot of tree height, up to a maximum of 10 pounds (20 cups) per application

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for mature trees. Scatter the fertilizer evenly from the trunk of the tree (keep it 6 inches away) up to the dripline. The fertilizing regimen above should be followed even if grass is maintained and fertilized under the tree. Do not use fertilizer spikes or weed killer!

Spray the foliage with **Citrus Nutritional Spray** in February before blossoms appear and again in April, June and September. This provides essential minor nutrients to the tree that can only be taken in through the leaves and leads to new leaf flushes that are green and healthy. Never spray mature trees when they are flowering, even with water!

Perhaps the best overall foliar spray for citrus trees is **KeyPlex Citrus**. Distressed trees should be sprayed often (ask us for a regimen) and even healthy trees benefit from regular treatments.

Preventative Medicine

We strongly recommend spraying citrus trees with **Maxicrop Liquid Seaweed** at least four times a year, and especially in February and November, to boost the immune system of the tree, thus making it more resistant to insect and fungal attacks. More applications of this product has shown to greatly reduce incidences of these problems. A November spraying toughens the tree up for cold weather. (Note: Liquid Seaweed can be sprayed together with Citrus Nutritional Spray.)

Most common fungal problems can be avoided if trees are also sprayed with **Liquid Copper Fungicide** 3 times per year. Copper can be sprayed together with Citrus Nutritional and Seaweed sprays.

Citrus & Lawn Care

The root system of citrus trees includes small fibrous feeder roots that grow close to the surface. Since grass roots will compete with these roots, it is best to remove sod from the trunk to the dripline of the tree. Recent studies have shown not only that mulch can be used around citrus trees, but also that the proper amount and application of mulch will actually benefit the tree. Mulch should be kept at least 6 inches away from the trunk and be not more than 3 inches thick.

Citrus roots also usually travel well past the dripline, so for this reason you must be careful what you spray on the lawn around your citrus trees. Certain lawn treatments can adversely affect the health and performance of citrus trees.

Never use "weed and feed" products near your tree! When used as they normally are in the spring, their high nitrogen content can result in a tree's failure to blossom and fruit for an entire season. For the same reason, other high-nitrogen lawn boosters should not be spread close to citrus or other fruit trees.

Atrazine should also not be sprayed on grass within the vicinity of citrus trees. If it leaches into the ground as far as the citrus surface roots, serious damage to the tree can result.

Finally, the ground under fruit-bearing trees should never be treated with systemic insecticides or fungicides since these poisons will eventually be stored in the fruit, making them unfit for consumption.

Pests & Disease

The best advice for insect and disease control is to prevent problems by following good cultural practices as outlined above. Drought-stressed, badly planted, and improperly fertilized plants are more susceptible to pest and disease problems than well-nourished plants.

With all sprays, check the label to see how close to harvest they can be safely used. We suggest that you use controls which are safer than traditional pesticides. Rockledge Gardens carries a full line of safe solutions.

Insect and fungus damage usually results in discolored or distorted leaves or fruit. Check the tree carefully and often. Many pests like the crevices where the leaf joins the stalk as well as the undersides of leaves. For a more detailed description of particular pests, refer to a citrus or fruit book. Also, you may bring a sample in a sealed plastic bag to us for identification and recommendations for a cure.

Leafminers

Citrus leafminers are the larvae of moths that, once hatched, live within the leaf. Leafminer damage is evidenced by white (fresh) to yellow or brown (old) squiggly trails in the leaf. They will not kill a citrus tree, but they can stunt the growth of a young tree. Since these pests do not spread from leaf to leaf, there is no need to remove affected leaves from the tree. Leafminer activity on mature leaves and trees is usually not a serious problem. However, when leafminer activity is noticed on new growth flushes, it should be treated.

For small or dwarf trees, **Captain Jack's Dead Bug Brew**, **Borer & Leafminer Spray** or **Natural Guard** containing spinosad can be used to kill these larvae while they are on the leaf surface, but it works only as a preventative. For optimum effect it should be applied to both sides of the foliage every 2 weeks whenever trees get flushes of new leaves or when large numbers of flies and moths are active around the trees.

For larger trees, "old" technology seems to work best. Hang 1 or 2 **Blue Sticky Traps** around the center edge of the tree. The traps work like flypaper; the leafminer egg-layers are strongly attracted to the blue color. Simply replace the traps when they are full. However, if the traps catch an unusually large number of moths, even larger trees should be sprayed with spinosad.

Black Sooty Mold

This is a black mold that grows on secretions left on leaf, twig and bark surfaces by insects such as aphids, mealybugs or scale. While the mold, which can be rubbed off, does not initially harm the tree, the insects causing it do. Also, if the mold becomes too widespread, the tree can eventually die. Controlling the insects controls the mold. Use **All Seasons' Oil** to control most pests on your citrus trees. When the problem is severe, **Pyrethrins** or **Earth-Tone Insect Control** (organic) or **Malathion** can be sprayed together with **All Seasons' Oil**. As above, avoid daytime spraying in hot weather.

Affected twigs, bark, and the upper and lower surfaces of leaves should be sprayed to the point of runoff. A week later, a strong spray from a water hose should knock off much of the mold and dead insects. If there is still mold on the tree, let the tree dry for about 4 hours and reapply the insecticide. Check the tree again after 7-10 days.