

Selecting a Citrus Variety

When selecting a type of citrus to plant, there are a number of criteria to consider. Will you eat the fruit or juice it? What's the harvest period? Other important considerations include tree size, cold and salt tolerance, fruit size, eating quality, seediness, ease of peeling and on-tree holding quality. To help in making your decision, consult the chart on our handout "Citrus Varieties", the information signs identifying Rockledge Gardens' citrus, and the nursery professionals here at Rockledge Gardens.

Selecting a Planting Site

General considerations for home planting of citrus trees include 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. In extreme conditions where hardpan or marl are involved, better drainage can be accomplished by breaking through the hard layer and packing **gypsum** around the remaining hardpan or marl. As the tree roots grow, the gypsum will abrade and break up more of the hard layer.

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

Citrus trees require well-drained soil. Prepare the soil by adding 1 part organic matter—such as our **Rockledge Gardens Planting Mix**—to 1 to 2 parts existing soil (use more Planting Mix in sandier soil). Use this mix to backfill the hole. Add a few cups of **Espoma Citrus-Tone** when planting. Work it into the soil alongside of the rootball while planting and sprinkle some on the surface. Reapply around the tree surface every 2 months. 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 poor draining areas), it should be bermed up gradually.

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.



Fruit

Large or small, citrus trees need at least a year to grow a healthy root system. Any fruit that develops during the first year should be clipped from the tree when it is about the size of a marble so that the tree's energy stays focused on root production. Likewise, allowing small immature trees to bear fruit is usually detrimental to future growth, vigor and fruit production. For this reason, fruit should be clipped for 2 or more years until the tree is bigger.

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.

Rockledge Gardens



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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 for mature trees. Scatter the fertilizer evenly from near the trunk of the tree up to at least the dripline. The fertilizing regimen above should be followed even if grass is maintained and fertilized under the tree. *Do not use fertilizer spikes!*

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.

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: before blossoms appear in February; 2 weeks after the last blossoms fall in late winter; and in early June. *Neutral 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

Leafminers are types of moth and fly larvae 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, **Borer & Leafminer Spray** 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 from about April to October, or at least 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 and the leafminer egg-layers are strongly attracted to the blue color. Simply replace the traps when they are full.

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 might. Also, if the mold becomes too widespread, the tree can eventually die. Controlling the insects controls the mold. Use **All Seasons' Oil** or **Organicide** to control most pests on your citrus trees. When the problem is severe, **Natural Pyrethrins** (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. Five to seven days 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 your insecticide. Check the tree again after 7-10 days.

