



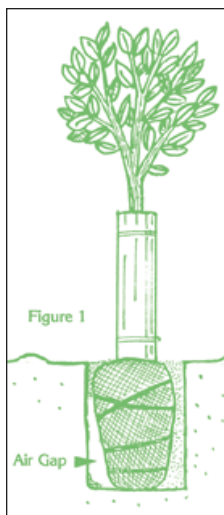
After planting a new citrus tree, the goal is to help the tree put out as much new growth as possible in the first season. Below we have listed some common challenges that a grower may encounter in the first years of a young tree's life. A young tree needs as much attention as you can afford to give it. The payoff for your efforts will be a healthier tree and a shorter wait for the first production of fruit.

1. OVER IRRIGATION

Over irrigation is a common problem. Small trees need about five gallons of water per week if planted in March-April. You should gradually increase the irrigation to 10-12 gallons per week in the heat of the summer. You need to realize that a young tree has less than 1% of the leaf surface of a mature tree and uses less moisture. Check the moisture level of the rootball as well as the soil around it before you schedule irrigations. One way to discover the perfect time to irrigate a young citrus tree is to actually let the tree get into a moisture stress situation. This would be done about six to eight weeks after planting when the tree has finished its first flush of new growth. If you hold off the water until the tree shows wilt in the morning, the tree is showing you it is ready for its next irrigation. The water must be put on that day or you might do more hurt than good. A means of fine-tuning this method is by placing a tensiometer by a representative tree with the ceramic cup about six inches deep, right next to the rootball. When the trees are in the morning wilt, check the tensiometer reading. The next time you have to irrigate, turn the water on when the tensiometer reading approaches the level you noted when the morning wilt occurred.

2. AIR GAPS AROUND THE ROOTBALL

Air gaps around the rootball inhibit root development and can create dry rootballs even though the surrounding soil may be wet. Even the best planting job can leave behind air gaps that irrigation water can't dissolve (see figure 1). A means to check for air gaps is to wait until the trees have settled in, say after the second irrigation. Then randomly walk through your field with a soil probe and probe right next to the rootball on a number of trees. If the probe goes in too easily, you have air gaps and it may be necessary to go back over the whole field using a four-foot long, 3/4-inch bar to collapse the gaps...kind of like tamping in a fence post. After you've finished, irrigate to insure that soil washes into the collapsed air gap and you may even need to scoop some soil over the rootball after the irrigation to insure it's well covered.



3. COMMON PEST PROBLEMS

Common pest problems such as citrus thrips, snails, or worms can slow a young tree's growth. It is important to work with a skilled PCA to insure your treatments are timed properly and don't create long-term problems with pesticide efficacy.

4. DAMAGED ROOT SYSTEMS

Damaged root systems can occur when trees are handled improperly or the rootball dries out. TreeSource uses bulk bins to minimize the handling of the trees. Any rough handling by planting crews may cause several fibrous roots to break off from the main root system. The tree is forced to re-grow the damaged roots and the tree's development is delayed. A dry rootball kills fibrous roots and can damage the tree's entire root system, so make sure you water them daily if you don't plant the same day of tree pick-up.

5. pH PROBLEMS

Significant pH issues are best dealt with prior to planting. Trifoliolate rootstock is the most sensitive of the rootstocks to a pH in excess of 7.0. If a high pH was not corrected prior to planting, a young tree may turn yellow because the soil is tying up key micronutrients that the young tree needs. Correcting the problem after planting is difficult and is best addressed with your PCA.

6. ANTS

Ants are sneaky and can cause a grower some confusion. They commonly operate in the late evening or at night and tend to go unnoticed. They create gummy at the leaf axils that looks similar to a disease problem. The affected trees are slower to develop and are often confused with a bad tree from the nursery. Using a good ant pesticide like Lorsban or Clinch (for fire ants only) normally solves the problem. Check with your PCA.

7. RABBITS

Rabbits will chew on all citrus varieties but prefer some more than others. They can kill a tree by eating every new flush the tree puts out. A chicken wire fence around the orchard may be the best solution for severe problems. Repellents work, but need to be retreated frequently since any new growth won't be protected. Rabbit damage looks like someone took a pair of hand shears to the small branches of a baby tree and you can often find the prunings and rabbit droppings on the ground. The problem is most severe in the Fall when other food sources aren't as available.

8. NUTRITION

Nutrition doesn't really qualify as a "challenge" but applying improper amounts can be. A baby citrus tree will not use more than 1/8th of a unit of nitrogen in its first year of life. Zinc and manganese are also necessary and are best applied through a foliar spray. A common foliar spray for young citrus trees is 10 pounds of low biuret urea with some zinc and manganese (the rates for these micronutrients will depend on what source you are using) in 100 gallons of water. Baby trees also need fertilizer applied to the root system. A complete fertilizer, such as 8-8-8 liquid mix for fertigation or 15-15-15 granular are good choices. Wait until six weeks after planting before applying these fertilizers and then put them on about every six weeks until September 1st. Check with your PCA.

9. TREE WRAPS

Tree wraps are used on young trees to protect the trunk from sun burning, but they have other uses as well. A "foam" wrap helps to protect the tree in the winter months, inhibits varmint damage to the trunk, protects from herbicide overspray, and moderates temperatures the tree experiences. Wraps can also harbor snails, cinch bugs, ants, and if they are not removed at the proper time, can actually create an environment for wood rotting organisms. Wraps are a good thing, but they need to be checked throughout the first two years of the tree's life to make sure that they do not become a problem. Take the tree wraps off when the skirt of the tree is touching the ground and avoid tying them with wire. If insect problems are serious, take off the wrap and paint the trunk white.