

## Container Tree Production at Trail Ridge Nursery

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Trail Ridge Nursery, P.O. Box 967, Keystone Hts., Florida 32656

Trail Ridge Nursery is in northeast Florida about 45 miles southwest of Jacksonville. We grow trees in 1- to 30-gal containers. We had originally intended to grow only up to the 15-gal size, but many municipalities are now requiring a minimum caliper of 2 to 2½ in., and we are not able to grow a tree of that size in a 15-gal container.

We have 4½ acres of bed space under overhead irrigation and 5 acres under low-volume irrigation. Our sales are primarily to other nurseries who intend to grow the tree to a larger size and to landscapers.

### PROPAGATION

We propagate most of our own trees either from seed or cuttings. We feel that by doing this we have better control of our final product. Whenever possible we collect the seed from local trees and keep a record of the performance from each parent tree. This is especially important with oaks since you can get a high degree of variability.

Another advantage of growing our own liners is that we have more control of the root system. Whether we start the trees in a standard 2¼-in. rose pot, bottomless container, or Dr. Whitcomb's 'Rootmaker'<sup>1</sup>, we can pot up to the next container size before we get into trouble from a circling root system.

With seedlings we are able to grow enough excess plants to be able to select the most vigorous plants for potting up. This reduces the number of inferior trees we must cull after they have been potted into large containers.

We like to pot up liners into 1- to 2-gal containers as soon as the roots will hold a root ball. In cases where the root system is more developed, we break up the root system when potting. Unless we break up the root system at each stage of transplanting, the trees wobble in the containers as they get larger due to a constricted root system earlier.

We grow our 1- and 2-gal containers can to can. We once grew only the 1-gal size but found for some trees the 2-gal container allows extra space between the trees and allows those trees to support themselves rather than lean on each other. The trees develop better trunks when they grow without support.

### STAKING

We try to do a minimum of staking throughout our production. I personally don't like to see a stake on a tree because staked trees tend to develop trunks that won't support the top. Some trees, however, require staking at one or more stages of production in order to develop a straight trunk. *Salix babylonica*, *Cercis canadensis*, *Eucalyptus cinerea*, *Ulmus parvifolia* 'Drake,' and some *Ilex* species fall in that category. Other species only require a stake on an occasional tree. Examples of this are *Quercus virginiana* and *Cornus florida*.

## PRUNING

I feel that the most important pruning of our trees is in the early stages of production. A few months after potting up, when the trees have started to grow, we walk through the beds and prune as necessary. We trim terminals to maintain a single central leader, tip the lateral branches that are growing too vigorously, and remove any lateral branches that are becoming dominant. Usually these are branches that are more than half the diameter of the main trunk where they are attached. When we have a tree that can't be straightened with this pruning method, we stake it. I believe in removing as little top growth as possible in order to produce a better root system.

Each species is different, but we repeat this procedure as necessary. For *C. florida*, usually twice is enough. We prune *Q. virginiana* and *Q. laurifolia* about every 4 to 5 weeks. This might seem like a lot of effort; however, after the initial pruning it takes very little time once the pruner is experienced.

## SPACING AND TREE SUPPORT

We like to space our trees as soon as we have room for them. Most of our 3- and 7-gal trees are grown on 2-ft spacing. Our tree support system consists of four 12-gauge wires attached on each end to a 4-ft treated 2 × 4 supported by two treated fence posts. In the ground we attach a treated 1- × 6-in. batter board between the post on the bed side and just below the soil line. At the bottom of each post we nail a scrap piece of board on the opposite side of the post. The top and bottom boards stabilize the posts considerably and eliminate the need for guy wires. The beds are 50 ft wide. In order to prevent the wires from giving in a heavy wind we run a chain down the center of the bed for the length of the bed. The chain is attached to each wire with a hog ring and is supported with treated 4- × 4-inch posts every 40 ft. This does a good job of stabilizing the wire. The trees are attached to the wire with a device called a TrellisLok<sup>2</sup>. This is a plastic device that attaches to the wire with a plastic nut and attaches around the tree trunk with a strap that works much like an electric wire strap except that it is reusable.

Our support system for larger trees is similar but built with heavier material. We use 8-ft, 4- × 6-in. treated posts placed 3 ft in the ground. The top batter board is a 2- × 10-inch nailed across the posts just below the soil line. At the bottom of the post on the opposite side we nail a 1-ft piece of 2- × 10-in. board. Each bed is four posts wide; the posts are spaced every 40 ft in the row. We use 3/16-in. aircraft cable to support the trees and also our black polyethylene irrigation line. The cable is attached to each post rather than having one long run the length of the bed. This puts much less total stress on the cable. Trees are spaced either 3 ft or 4 ft on center depending on the individual tree's growth characteristic.

We use low-volume irrigation. A 3/4-inch black polyethylene line starts at the center of the bed and runs to either end. It is attached to the cable with plastic rings. At each pot we drop a length of spaghetti tube to a Roberts Spitter Stake. The trees are attached to the cable with a device called a Dickinson Tree Clamp<sup>3</sup>. It is a plastic device much like an oversized TrellisLok except that it uses a large O-ring instead of a strap to wrap around the tree. We prune the larger trees primarily by limbing up the trunks to get the desired amount of clear trunk, tipping lateral branches to develop a full crown, and removing problem crotches.

## CONCLUSION

We attempt to fit in all production procedures at the optimum time. However, like most nurseries we seldom get all stages completed exactly when we would like. We feel strongly that the key to growing a quality tree is early selection of superior trees in the production process, timely pruning and spacing, and a minimal amount of staking.

<sup>1</sup> Lacebark, Inc., P.O. Box 2383, Stillwater, OK 74076

<sup>2</sup> TrellisLok, AgFast Corporation, 1617 S. California, Monrovia, CA 91016

<sup>3</sup> Dickinson Nursery Products, 4044 24th Avenue East, Palmetto, FL 34221