



UNIVERSITY OF
FLORIDA

EXTENSION

Institute of Food and Agricultural Sciences

ENH870

Fabric-Container-Grown Trees ¹

Edward F. Gilman²

Production

Some nurseries produce trees in fabric containers in field soil. Irrigation and fertilizer applied only to the top of the root ball will help increase roots in the ball better than irrigation and fertilizer applied to a larger area around the container. Typically, root balls grown in fabric containers are harvested from the ground in the dormant season and potted into containers. Less commonly, they are sold directly to the landscape industry. Root balls of field-grown trees contain the same amount of roots as those grown in fabric containers except that fabric-container-grown root balls are less than half the volume.

Their small volume makes these trees easier to handle. About the same percentage of roots are harvested from both field-grown and fabric-container-grown root balls.

Because the root ball is smaller, there is less water storage capacity in the fabric-container-grown root ball than in the larger-sized root ball of the field-grown tree. Combined with a dense root system, this lesser reserve makes trees produced in fabric containers more sensitive to desiccation immediately after digging than trees grown directly in field soil. Nursery operators make provisions for delivering the

irrigation needed to prevent desiccation immediately after harvesting.

Some growers produce trees in fabric containers above ground. The fabric allows air to prune roots and the fabric itself prunes roots. The result is a reduction in the amount of roots circling around the container wall. There is little published information on the tree growth in this production system.

Digging

Trees grown in fabric containers are easier to lift than the same size trees balled in burlap because they are smaller. However, they must be handled very carefully because unlike a rigid plastic container, there is little structure or rigidity to the root ball. Roots are easily broken inside the root ball. Fabric-container-grown trees also require more frequent irrigation than balled-in-burlap trees until they are established in the landscape. They require staking to hold them up in the landscape. With these extra precautions, fabric-container-grown trees transplant similarly to traditional balled-in-burlap trees. These trees are rarely planted directly into the landscape because of mishandling and poor understanding of the product.

1. This document is ENH870, one of a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date July 12, 2002. Visit the EDIS Web Site at <http://edis.ifas.ufl.edu>.

2. Edward F. Gilman, Professor, Environmental Horticulture Department, University of Florida, Gainesville, FL 32611

Handling at the Landscape

Root balls of field-grown trees in fabric containers are very fragile and must be handled carefully. Soil inside the ball can become loose from just a moderate disturbance. Never drop the ball because roots will lose contact with soil and trees will shock and are likely to die quickly. Always remove all fabric from the ball before carefully sliding it into the planting hole. Make a slit in the fabric from the bottom of the root ball to the top and gently pull the fabric from the ball. Most people lay the tree on its side to perform this operation.

Some fabric container designs allow only small-diameter roots to develop outside the fabric; fabric on these trees will be easy to remove without disturbing the root ball. Other fabrics allow large roots to develop through the fabric. This type of fabric is more challenging to remove. A hand pruner can be used to cut large-diameter roots flush with the inside of the fabric to make removal easier. Some nursery operators use special tools designed to quickly remove fabric from the root ball.

Hardened-Off Trees

Trees dug several weeks or months prior to shipping to the landscape site are said to be "hardened off." Freshly dug trees are not "hardened off" and are very susceptible to death if not watered appropriately. During the "hardening off" period, roots begin to regenerate within the root ball, and the tree may drop some leaves. There may be other physiological adjustments made by the tree that are not now well understood. Roots often grow through the burlap wrapped around the root ball of a hardened-off tree. Some nurseries provide overhead irrigation to the foliage during the hardening off period, especially with summer digging. Purchasing freshly dug trees that are not hardened off is not recommended.

More Information

For much more information regarding nursery production and tree planting visit <http://hort.ifas.ufl.edu/woody/planting>