

RPG Times

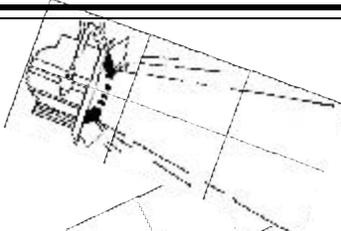
Winter 2003

A Publication of the Roots Plus Field-Growers Association of Florida



Project spotlight

Seaworld Orlando



Seaworld Orlando is the worlds premier marine adventure park. The park is 200 acres of unique shows, rides, and animal encounters. Visitors from around the world enjoy all the thrills and amaz-

ing animals the park has to offer. Bob Vidler, Seaworld's director of horticulture, and his team of horticulturalists work together behind the scenes to help ensure that park visitors have a place to relax in the shade among any park's most important feature - it's trees.

Bob has been with Seaworld for nearly 23 years, and at Seaworld Orlando for the last 16 years. Bob learned about the Roots Plus method of tree production through Stewart's Tree Service, and over the years, he's come to appreciate Roots Plus Grown Trees as a great choice for use in any project at Seaworld. "We've used RPG trees in all of our landscape plantings and in planters around the

park. It seems that RPG trees just take off after planting - there's no waiting period - they grow and do well immediately." Bob attributes this to a better root system and the hardening off period prior to shipping, along with proper planting and irrigation after installation. "I don't think we've ever lost an RPG tree." His experience with RPG trees means that's the only tree they'll use at Seaworld.

In recent years, Seaworld created pathways lined with live oaks to provide cool, shady areas for guests to enjoy between roller coaster rides and shark encounters. Changes in the park also necessitated a move of several large live oaks. Originally planted at about a 6-inch caliper size, the trees were 18-24 inch caliper when moved successfully.

The Roots Plus Growers Association is proud to have Seaworld as an associate member of the organization, and proud that this premier park is a showcase for RPG Trees!

Percent Roots Harvested on Field Grown Trees

There is a huge misunderstanding in the popular and scientific literature on the percent roots harvested on field-grown nursery trees. Dr. Gary Watson performed the first work in this area in 1982 (Watson and Himelick 1982) and this work has been quoted in publications for the past 20 years. There have been at least three additions and refinements of this original work in the past 15 years (Gilman 1988; Gilman and Beeson 1996b). Unfortunately, this additional information is rarely included in popular publications, web sites, or pamphlets written on the subject of tree planting. This has led to misinformation and confusion about the percent roots harvested when a typical field-grown nursery tree is harvested. No longer can we simply say "most of the roots are lost from field-grown trees when they are dug from the nursery".

There are several ways to express the percentage of the root system lost when field-grown trees are dug from a nursery.

1) One is to calculate the soil **volume** in a typical root ball (using ANSI Z60.1 standards) and compare this to the total theoretical root system volume on the entire tree (assuming roots extend a distance equal to three times the dripline and roots are 18 inches deep). This is what Watson and Himelick did and they found that from 2 to 5% of the total theoretical root volume was harvested with a field-grown tree.



Percent Roots Harvested, continued page 3

Species Spotlight

Crapemyrtle

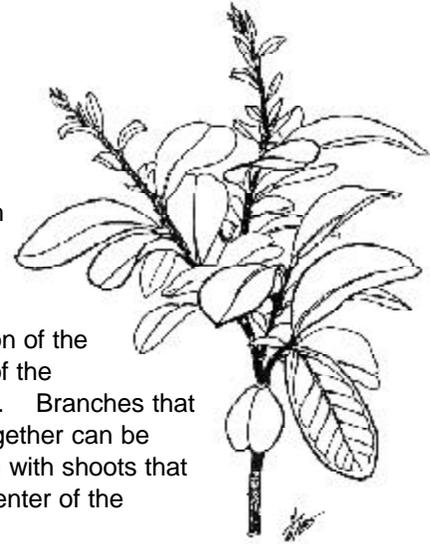
Perhaps the most popular flowering shrubs and small trees in the southeast, Crapemyrtle rewards those who grow it commercially or select it for the landscape with plentiful flowers in clusters 6 to 12 inches long. In a spectrum of flower colors including reds, pinks, white, and purples, these small trees put on a show here in Florida from spring into summer. Crapemyrtle are not all show – beneath the delicate blooms is one tough urban tree, with good drought tolerance and cultivars with a good resistance to powdery mildew.

Crapemyrtle thrives in full sun and moist, well-drained soil. However once established it will tolerate less ideal conditions, including urban areas where soil space may be limited. When placing crapemyrtle in parking lots, small pavement cutouts, or along sidewalks, be sure to provide adequate irrigation until the tree is well established.

When it comes time to choose a crapemyrtle, an important aspect to consider is mature height. Crapemyrtle are available in cultivars with mature heights ranging from shrub types used in hanging baskets to elegant trees that reach 25 or 30 feet. Choosing the right size crapemyrtle will reduce maintenance costs in the long run. The appropriately sized crapemyrtle will not outgrow the boundaries of a site, offering a graceful flower display with little or no pruning. Pruning may be required as the tree matures to allow for pedestrian or vehicle traffic. Very heavy pruning does not necessarily improve flower display, and may result in increased basal sprouts that detract from beauty of the tree until they are removed.

Crapemyrtle needn't be pruned heavily to promote heavy flowering. While flowers do appear on new growth, a light

pruning in late winter or early spring will promote vigorous growth and profuse flowering and should be done with preservation of the natural shape of the cultivar in mind. Branches that cross or rub together can be removed, along with shoots that grow into the center of the canopy.



Professionals charged with the maintenance of this landscape favorite should know that the beautiful smooth peeling bark on crapemyrtle is thin. As with any tree in the landscape, care should be taken to avoid injury to the trunk from maintenance equipment.

The chart below includes a list of recommended cultivars in the large shrub/patio tree type and tree type from trials conducted by the North Florida Research and Education center near Tallahassee Florida. All the cultivars listed below were found resistant to powdery mildew.☺

Information in this article is from the Clemson extension publication HGIC 1009 Crape Myrtle Pruning, and Fact Sheet ST-343, Lagerstroemia x 'Acoma' a series of the UF Environmental Horticulture Department, and Proceedings of the SNA Research Conference, Vol 41-1996, Evaluation of Crape Myrtle Cultivars, by Gary Knox.

Size Group	Cultivar	Flower Color	Comments
Large Shrub/ Patio Tree (12-20 ft after 10 yrs)	Apalachee	Lavendar	Beautiful cinnamon-brown bark; flowers are faintly fragrant
	Osage	Pink	Glossy leaves & broad-rounded form, rich red-brown bark
	Sioux Pink	Med Pink	Distinct upright, narrow habit, great flowers
Tree (> 20 feet after 10 years)	Biloxi	Pale Pink	Outstanding rich brown bark; vase shaped habit and open canopy
	Miami	Dark Pink	Chesnut brown bark, good orange fall color
	Natchez	White	Outstanding cinnamon brown bark; early blooming

Tree Research: Structural Soil Update

A Research Note published in the March 2002 *Journal of Arboriculture* provided an update regarding research to evaluate the performance of trees planted in one type of skeletal soil, CU Structural Soil®. The hope is that skeletal soils can be used to improve tree establishment and growth in urban settings where soil is compacted to meet load-bearing specifications. Skeletal soils are designed to provide a rigid matrix with large pores to allow for root growth, while still providing the required load bearing capacity.

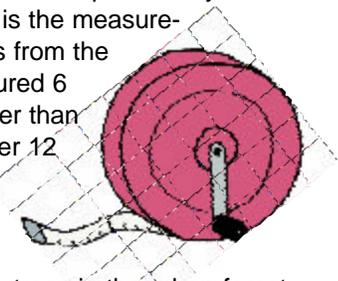
Trees established in CU Structural Soil® are being monitored annually to check tree growth response. The sites under evaluation consist of trees growing in paved systems that incorporate CU Structural Soil® and in lawn areas. The sites in Brooklyn, NY and Ithaca, NY were chosen to minimize potential differences in growth due resulting from light levels, traffic, wind, and adjacent building height.

Data collected since the installation of trees in 1997 shows either comparable growth between lawn and paved skeletal soil installations, or that trees in the skeletal soil were growing more. Continued research on the sites will take into account variables that are not under control of the study, including competition from turf in lawn areas, soil quality, effect of construction activities, and mower damage in lawn areas. These preliminary results, while consistent with previous observations on the effectiveness of skeletal soils in improving tree establishment for street trees, show some contrasts to data collected in earlier experiments as well. For the entire Research Note, visit the *Journal of Arboriculture* archives at www.isa-arbor.com.

DBH or Caliper: Know the difference

When I was in college studying to be a forester, my classmates and I learned that DBH was used to refer to tree trunk diameter at breast height. Diameter at breast height is trunk diameter 4.5 feet from the ground. This remains the standard method for recording trunk diameter in the woods in the traditional forestry industry. However, it has no place in the horticultural or nursery professions.

The standard for measuring trunk diameter in urban forestry and in the nursery and landscape industry is trunk caliper, not DBH. Trunk caliper is the measurement of trunk diameter 6 inches from the ground. If trunk diameter measured 6 inches from the ground is greater than 4 inches, then measure diameter 12 inches from the ground. It is as simple as that.



If you are in the landscape or nursery industry, or are planting trees in the urban forest, or you are specifying or inspecting trees planted in your city, do not use DBH. DBH has no meaning and is inappropriate for urban and suburban landscape plantings. The Florida grades and standards for nursery stock published by the Florida Department of Agriculture and accepted as the standard for nursery stock for more than 35 years uses caliper to specify trunk diameter. Please leave DBH where it belongs, i.e. as a useful tool for measuring trees for timber sales in the forest. 🌳

by Dr. Ed Gilman, University of Florida

Percent roots harvested, continued from page 1

2) A second way to calculate the percentage of roots harvested in a field-grown tree is to measure **root length** harvested in the root ball and compare this with the amount left behind in the nursery. Gilman did this in 1988 and found for honeylocust, green ash and poplar that from 5 to 8% of the root system length was harvested on a field-grown tree.

3) A third method is to measure the surface area of the roots in the root ball and compare this with the **surface area** left behind in the nursery. Harris and Gilman did this in 1993 and found that 55% of the root surface area was harvested in the root ball, leaving 45% in the nursery.

4) A fourth method that has been used is **root weight**. Gilman and Beeson did this in 1996 and found that up to 82% of the root weight was harvested with a

typical root ball.

So, what percentage of the root system is harvested in a typical root ball? The answer to this question appears to depend on what question you ask. If you ask what percentage of root weight is harvested, the answer is up to 82%. If you ask what percentage of the root length is harvested, the answer is more like 5 to 8%. There is a further complicating factor—root pruning in the nursery. None of the above mentioned studies were performed on root pruned trees and root pruning increases the amount of roots in the root ball. This is why survival of root pruned trees after transplanting is so much greater than on trees that were not root pruned (Gilman 2001, Gilman et al. 2001).) by Edward F. Gilman, Professor, Environmental Horticulture Department, IFAS, University of Florida. 🌳

Planting Pointers



Planting Trees in compacted soil

*trees in compacted sites need some extra special
attention at planting*

- ☞ It is essential when planting trees in compacted soil to loosen soil around the planting hole in as large an area as possible.
- ☞ Plant trees on a mound of soil to allow roots access to vital oxygen during establishment.
- ☞ Prepare the planting hole 3-4 times the diameter of the root ball.
- ☞ Roughen the sides of the planting hole to allow easier root penetration.



**Mark your
calendar for
the next
RPG Field Day!**

Tree nursery production and landscape practices

a day of hands-on instruction

March 13, 2003

Stewart's Tree Service, Brooksville

co-sponsored by the Florida Chapter ISA
& University of Florida Extension
for registration details call 352-528-3880

RPG Notes for Growth

by Jack Siebenthaler



A recent RPG meeting, held at Jimmy Stewart's, proved again that attendance at one of these informal get-togethers was good for the mind.

Not only were the topics of the meeting important, they were interesting and held the attention of all who were there. While everyone had something to say, they were courteous, (not always the case in some of the business gatherings we attend), and their thoughts were given due consideration.

A solid point of agreement was the matter of using the RPG tags on every sold tree. The cost is negligible and the promotional value far exceeds any such perceived cost-of-use. A possible exception is if the contractor customer insists, for the purpose of not revealing his source of purchase, that the tags be left off.

An important point of progress in the functioning of RPG is the institution of a Board of Governors for the purpose of handling otherwise difficult or unaddressed business of the association. This will serve as a streamlining of the group's business and will place important decisions in the hands of those with the most experience in the group.

It is imperative that our mailing list be expanded with the addition of Plant Inspectors, Landscape Designers, Landscape Architects, Landscape Contractors, etc. The more individuals who know about RPG and its work, the better off we and the landscape industry will be.

So let's remember that attending one of RPG's meetings is good business. It's Good for the Mind!



Roots Plus News

A Little Background...

The Roots Plus Growers Association is a group of professionals committed to improving the image and the quality of field grown trees. The association was established in 1994 by nurserymen, horticulturalists, and members of the allied trades. In the years since it's inception, RPG has hosted several educational programs geared toward growers, and landscape professionals. Research and educational endeavors are a top priority for RPG and we have supported many different tree research projects resulting in over 8 scientific publications. RPG members have also donated trees to the University of Florida for research projects and are sponsors and supporters of the Great Southern Tree Conference at the University of Florida.

Changes for RPG

At the most recent meeting of the Roots Plus Growers Association, members approved a change that will make more growers eligible for RPG membership. Now growers who produce ligustrum or palms without allowing for a hardening off period will be welcome to

join RPG. While many species produced in a field grown nursery require a hardening off period between

harvest and shipping to ensure survival after transplanting, experience with ligustrum and palms show that these species will perform well after planting without hardening off.

Sleeve ¹ RPG

Regular buyers of field grown trees are most likely familiar with the black sleeve of weed-cloth like material over the root ball of each tree. This sleeve covers the wire basket after harvest and helps to prevent new roots from taking hold in the ground during the hardening off period. Please note that though many growers ship trees with these sleeves over the root ball, that does not guarantee that the trees have been hardened off. Be sure to look for the RPG tag on the trees you buy as your guarantee of hardened off trees – not just the black sleeve.

Spring Field Day a Success; 5th Annual event planned for March

As we put the finishing touches on the last issue of the RPG Times, we were also busy preparing for the Field day hosted by RPG on April 4. The event was a success, drawing more than 200 growers, landscape inspectors, arborists, and urban foresters to RPG member nursery Marshall Tree Farm in Morriston, FL. This successful event will be held for the 5th consecutive year on March 13, 2003, at Stewarts Tree Service in Brooksville. This year's hands on event will feature a special out of state expert, Dr. Dan Struve of Ohio State. Look for a registration brochure in the mail soon, or call 352-528-3880 for more information.

RPG Welcomes New Members!

The Roots Plus Growers Association is growing! We welcome three new association members, Alturas Native Nursery of Alturas, Ellenton Nursery Growers of Parrish, and Walsh Brokerage, also in Parrish. RPG is now 14 grower members and 11 associate members strong. If you are interested in membership or in learning more about the Roots Plus Growers Association, please give us a call at 352-528-3880.



Download your cue cards at rootsplusgrowers.org

If you don't already have the handy RPG tree grading and tree planting cue cards, there's an easy way to get them...online at rootsplusgrowers.org. For laminated copies, just give us a call at 352-528-3880.



Roots Plus Growers Association Members

locator map and available species

① Alturas Native Nursery, Alturas

863-326-5639
 RPG Trees Available: bald cypress,
 live oak, laurel oak, red maple

② Arborgate Farms, Odessa

813-920-8325
 RPG Trees available: 'Natchez', 'Catawba', and 'Muskogee' crape myrtle,
 live oak, laurel oak, sycamore, red cedar, sweetgum, red maple, pond cypress, bald
 cypress

③ Be-Mac Tree Farms, Odessa

813-920-224
 RPG Trees available: live oak, pine, sycamore, sweetgum, and elm

④ Champion Tree Farm, Gainesville

352-375-6001
 RPG Trees available: live oak, southern magnolia, red maple, east palatka holly, and crape
 myrtle

⑤ Ellenton Nursery Growers, Parrish

863-326-5639
 RPG Trees available: sycamore, ligustrum, red maple, live oak, pine spp., palm spp.

⑥ Fort Drum Growers, McAlpin

386-776-2727
 RPG Trees available: live oak, laurel oak, drake elm, sycamore, sweetgum, river birch, east
 palatka holly, bradford pear, slash pine

⑦ Keystone Farms, Odessa

813-920-0894
 RPG Trees available: live oak, ligustrum, variegated ligustrum

⑧ Marshall Tree Farm, Morriston

800-786-1422
 RPG Trees available: live oak, 'Highrise' live oak, southern magnolia cultivars, crape myrtle,
 slash pine, bald cypress, holly cultivars, winged elm, 'Allee' lacebark elm, sweetgum,
 sycamore

⑨ Nature Coast Tree Corp, Bell

386-935-9349
 RPG Trees available: live oak, ligustrum, holly, 'Highrise' live oak, 'Shadowlawn' live oak,
 'Alta' and 'D.D. Blanchard' magnolia cultivars

⑩ Southern Pride Tree Farm, Bell

386-935-3636
 RPG Trees available: live oak, ligustrum, holly

⑪ Skinner Nurseries, Bunnell

800-741-2020
 RPG Trees available: live oak, ligustrum, holly, crape myrtle

⑫ Stewart's Tree Service, Brooksville

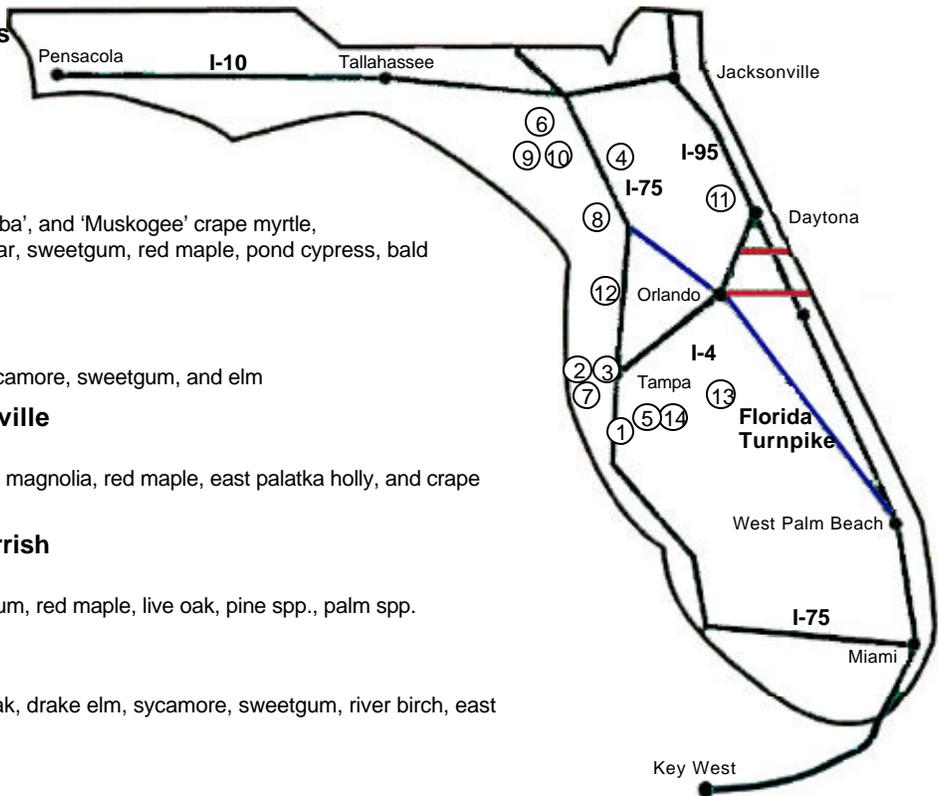
352-796-3426
 RPG Trees available: red cedar, live oak

⑬ Tiger Lake Nursery,

863-692-1009
 RPG Trees available: live oak, laurel oak

⑭ Walsh Brokerage, Parrish

863-326-5639
 RPG Trees available: palm spp., live oak, laurel oak, sycamore, pine spp. large specimen
 material in holly, magnolia



Associate Members

Braun Horticulture

Caretree Systems

Cherokee Manufacturing

Graco Fertilizer Company

Rainbow Landscaping

Schickedanz Brothers West

Jack Siebenthaler

Seaworld

Sunrise Landscape

Treemart

RPG TIMESline

January 24-25, 2003 - Gulf States Horticultural Expo, Mobile, AL
contact Gulf States Horticultural Association, 334-821-5148

February 14-15 Jacksonville Horticultural Tradeshow, Jacksonville, FL
contact northeast FNGA at nefnga@aol.com or 904-292-1117

February 21-23, 2003 - Tampa Spring Expo, Tampa, FL
813-655-1914

June 21-24, 2003 - Trees Florida 2003, Orlando, FL
Wyndham Orlando Resort
contact the Florida Urban Forestry Council at 407-872-1738 or fufc@aol.com

August 1-3, 2003 SNA 2003 Trade Show and Convention, Atlanta, GA
contact the Southern Nurserymen Association at 770-973-9026

July 31-August 2, 2003 FC/ASLA Annual Conference, Ft. Lauderdale, FL
Harbor Beach Marriot Resort & Spa
www.fcasla.com

RPG Information

If you would like more information about the Roots Plus Field-Growers Association of Florida please complete the following and return it to:

Roots Plus Growers
17350 SE 65th Street
Morrison, FL 32668

Please add me to your mailing list

Please send me information on the following:

Tree Transplanting Research

Tree Transplanting Tips

RPG Membership

Other _____

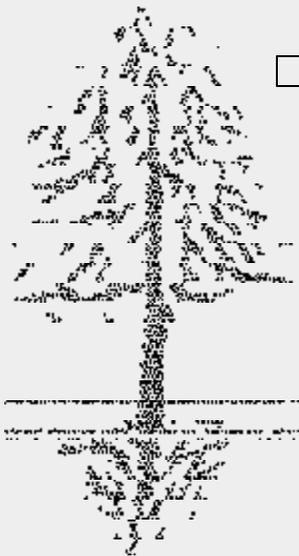
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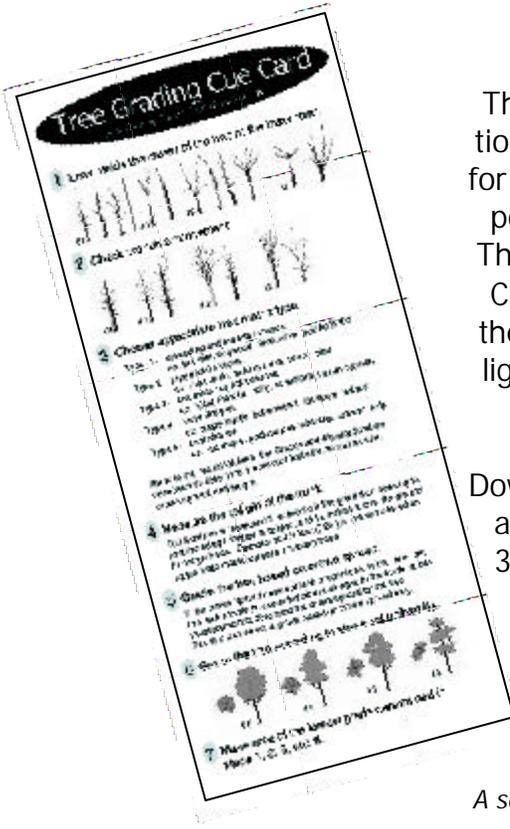
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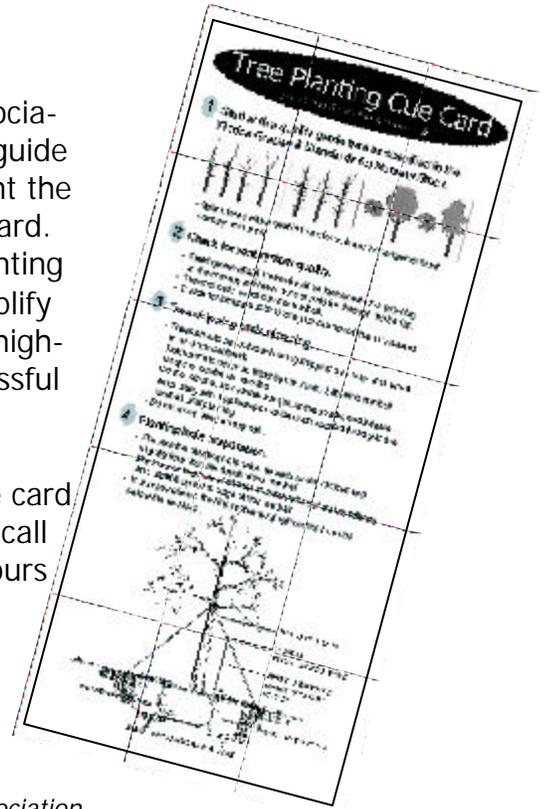
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The Roots Plus Growers Association has developed a pocket guide for tree planting to supplement the popular Tree Grading Cue Card. This 3x7" laminated Tree Planting Cue Card is intended to simplify the tree planting process by highlighting eight steps for successful transplanting.

Download a copy of each cue card at rootsplusgrowers.org, or call 352-528-3880 to request yours today!



A service of Roots Plus Growers Association



17350 SE 65th Street
Morriston, FL 32668