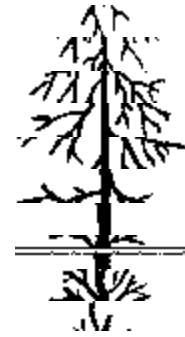


RPG Times

Spring 2002

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



First Annual Great Southern Tree Conference a Success

Species Spotlight Winged Elm *Ulmus alata*

By Ed Gilman and Michael Marshall

The First Annual Great Southern Tree Conference was held last November 30 and December 1 in Gainesville Florida, and was host to more than 300 green industry professionals from throughout the southeast. This conference is one with roots right here in Florida. Growers and educators from around the state conceived a plan for a conference focusing specifically on trees and tree research in the southeast. The cooperative work of the FNGA, the University of Florida, and the Environmental Horticulture industry, along with the support of many conference partners, made the Great Southern Tree Conference a reality last fall.

The event was particularly unique in one vital aspect: the conference is centered on an outdoor demonstration area that was developed in conjunction with the conference. The 30-acre site is part of the University of Florida's Environmental Horticulture Department. The outdoor demonstration area makes projects developed by the GSTC committee and its partners available to conference attendees year after year. Professionals attending the Great Southern Tree

Conference won't just hear about the tree research that affects their nursery crop or the urban forest in their community – they'll see it year after year. The site also allows for hands-on demonstrations of proper tree production, planting, and handling techniques, new products, and many more aspects of landscape establishment and maintenance.

On the first day of the conference, some of the University of Florida's top extension specialists offered a morning's worth of discussion on topics including the evaluation of crape myrtle cultivars, new tree planting specifications, palm nutrition, and water in the tree industry. After lunch at the University of Florida's new hotel and conference center, attendees were transported to the outdoor demonstration site. Tree topics from root manipulation to pruning and staking to tree handling do's and don'ts were presented outdoors, allowing for hands-on instruction.

The program on Saturday was highlighted by Dr. Ken Tilt of Auburn University, who discussed the results
Success, continued page 5

Usually seen at 40 to 50 feet high, Winged Elm can reach 90 feet in height in the woods with a 30 to 50-foot spread. Canopy form is variable from pyramidal to vase or rounded. A North American native, this fast-growing deciduous tree is quickly identified by the corky, wing-like projections which appear on opposite sides of twigs and branches. Branches rise through the crown, then bend in a sweeping manner toward the ground. The size of the wings varies greatly from one tree to another. Because it is found growing in wet sites as well as dry, rocky ridges it is a very adaptable tree for urban planting.

Use and Management

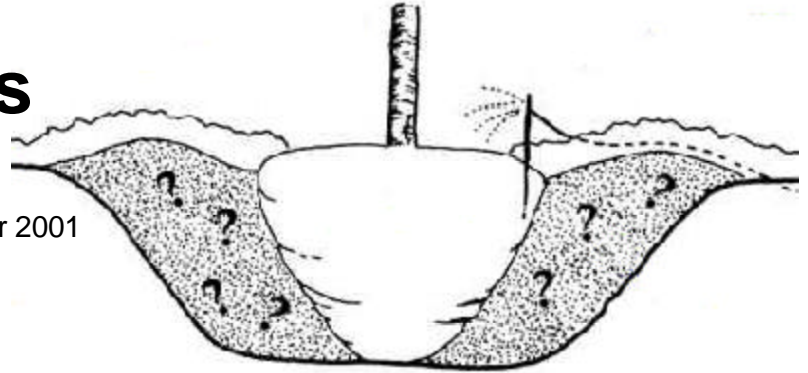
Winged Elm will easily adapt to full sun or partial shade, growing relatively quickly on any soil. It is an extremely sturdy and adaptable tree and is well-suited as a shade or street tree. It grows very well in urban areas and is suited to parking lot islands and other confined soil spaces. It must be pruned regularly at an early age to eliminate double and multiple trunks. Select branches which form a wide angle with the

Species Spotlight, continued page 5

Tilt Ramblings

Soil Amendments

By Dr. Ken Tilt
article from *Something to Grow On*, December 2001
online at www.ag.auburn.edu/landscape



Introduction

What is “The Best” way to grow a tree in a nursery so it will transplant and survive in the landscape? We have been arguing that question for years and will continue to take our stands for our chosen method as long as people get up on different sides of the bed. Early in my career I was on a nursery program with Milton Schaefer, a quality liner grower from Winchester, TN, debating field-grown liners vs. container-grown liners. We stated our cases with knowledge and confidence but in the end I think the conclusions are the same as they are now. There are many different ways to get to the same point in the nursery industry. Our methods are as different as the managers of the nurseries but as we cross the finish line with our plants, everyone has a quality plant that will grow and survive. The method we choose depends on our personalities, location, customer preference, available labor and resources and making the necessary adjustments to make our systems work. What are the arguments today?

The Vision Revealed:

I just returned from the first annual Great Southern Tree Conference in Gainesville, Florida. Dr. Ed Gilman, in cooperation with other Florida Extension Specialists and Nursery and Allied Industry supporters, brought to reality a vision for a regional educational event centered around an outdoor demonstration area. The vision was to take ideas and research from the lab, classroom and industry inventors’ dreams, put them side by side in a controlled replicated demonstration and evaluate the pros and cons of all the production and planting methods. It was a great idea (wish I had thought of it) and a successful conference (the parts I heard).

Excuses and Complaints:

Many of you, who like me, were not the model student in earlier years may have heard your teachers say, “If you would listen more instead of talking, maybe you would learn something!” Unfortunately, I did not get to hear the

whole meeting but I had a good excuse (that is the same thing I told my teachers). So, I can not share all the good stuff. I was manning my post explaining the value of soil amendments and talking about the planned demonstration as everyone else rotated through the various sites hearing about irrigating new trees, planting depths, live oak cultivars, new pruning equipment, marketing in the tree industry, staking, root manipulation, irrigation methods, tree handling, crape myrtle pruning and seeing a host of new, cutting edge equipment demonstrations.

Wow! I was jealous and frustrated that I could not hear all that was going on. However, that is a sign of a good educational program. Sometimes, as the coordinator of an event, you have complaints that you have too much going. The participants say that you need to change the format so people do not have to be in two or three places at once. That is a compliment. The answer to that great problem is to bring several employees to take notes at the events that you are unable to attend and share them with your other employees when they return.

Bring on the Meat:

Back to the topic at hand, I can share my part on the program at the demonstration area. I presented it 8 times so I know my lines. Again, I discussed soil amendments and reviewed research on production methods. This demonstration had not been installed yet so I was painting the vision for them to see next year and the following 4 years as well as reviewing previous work that had been done on the topic. I will start there.

Finally, the Players and Plot

Dr. Ed Gilman published a great paper in the Journal of Arboriculture on “Effects of Nursery Production Method, Irrigation, and Inoculation with Mycorrhizae-Forming Fungi on Establishment of *Quercus virginiana*”. Whew!, re-

continued page 3

search articles begin with a mouthful and go downhill from there but if you can drag your way through them to the bottom line, there is some good stuff. Ed took live oak seedlings, grown in 3-gallon containers painted with Spin-out and transplanted them into four above-ground production systems and into a field soil. The four, 15-gallon container systems were: traditional black plastic pots, black plastic pots treated with Spin-Out (root pruning paint on interior of container), an Accelerator pot (innovative container with holes for root pruning) and a low profile Accelerator pot (wider than tall rather than traditional taller than wide containers with the same volume of media). All good research practices were followed so that direct comparisons could be made between the systems. Half of the trees in the field were root-pruned after 6 months on the north and south sides of the tree. After 12 months, the same trees were root-pruned on the east and west sides followed by a north/south pruning again at 18 months. In February, two years after planting, all the trees were dug B&B using treated burlap and wire baskets. The trees were placed back in the holes for holding until planting in the landscape along with the different container treatments. Half of all the transplanted tree backfills were treated with MycorTree TreeSaver. All the trees were irrigated the same for 9 days and then half the trees received no additional supplemental irrigation while the rest were irrigated 2 times per week until October. So, after all this, everything was painstakingly eyed, measured, crunched and results came out the other end. I am sharing the short version with you. If you want all the details, email or call me for a copy of the article or if you have access to the Journal of Arboriculture, see the January, 2001 issue and turn to page 30.

The Bottom Line:

So, who were the winners and losers in this research and how much does it cost to use each method? One thing I have learned from the nursery producers and landscapers over the years (it has been hammered in regularly and with gusto) is that it does not matter what the statistics say if it does not make any dollars for their business. I heard you and so did Ed Gilman.

Here are his conclusions based on the statistics.

1. All the live oaks grew at nearly the same rate regardless of production method.
2. Adding mycorrhizae-forming fungi to the backfill at planting offered no advantage to growth and survival of the trees 30 months after transplanting.
3. Nursery production methods had no impact on transplant survival or growth as long as trees were irrigated throughout the season.
4. North Alabama/Tennessee ... this is your part

to crow. However, re-read #3 so as not to gloat too much. B&B trees that did not receive supplemental irrigation after the first 9 days had the greatest survival of all the treatments. Container tree survival under the same conditions were reduced by 55% compared to only 14% that died from field transplanted trees.

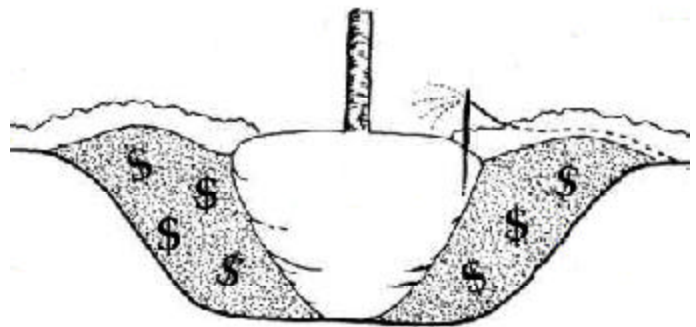
5. Once established, however, growth rate of the surviving trees was equal or there were no statistical differences in growth that could be attributed to the various production methods.

6. Under the limited irrigation treatment, B&B trees that were root-pruned provided the most live trees per dollar. In other words, root pruning is good!

7. The least expensive way to produce a live oak and successfully transplant it to the landscape is to field produce B&B, root-pruned trees, dig and hold them for 10 weeks prior to transplanting, add nothing to the backfill in the hole and irrigate the trees for 6 weeks after transplanting.

Disclaimer and Hedging:

This does not say that transplanting B&B is the best in all situations. Container plants obviously have other factors that make them attractive but it does mean that you have to irrigate a container plant and provide more care for it in the landscape for it to survive and thrive. Also, note the emphasis on digging and HOLDING a B&B tree. Research shows these trees are better able to withstand transplanting if these trees are allowed to acclimate after digging.



The Hard Numbers:

How much did it cost per live 2.5-inch live oak tree successfully transplanted? All the costs of production plus the number of trees that did not survive were used in the calculations for determining cost for each live tree in the landscape.

Tilt continued page 4

Tilt continued from page 3

Cost per Tree

<u>Production Method</u>	<u>Summer Irrigation</u>	<u>No Summer Irrigation</u>
Plastic container	\$445	\$588
Plastic container With Spin-Out	\$445	\$784
Air Root-Pruning (ARP)	\$445	\$672
ARP Low-Profile	\$445	\$1,176
Root-pruned Field-grown B&B	\$383	\$274
Non-root-pruned field- Grown B&B	\$383	\$383

THE DEBATE CONTINUES!

Future Demonstration, Just for Good Measure:

As an added note, this research is being repeated at the demonstration site. The station I narrated at the site will be installed this year to evaluate 7 treatments of soil amendments. They include additions of: compost, no amendment, Superthrive, mycorrhiza, a shallow hole dug 3 times the width of the root ball and a hole just large enough to plug in the root ball. Previous research shows that the compost and mycorrhiza will be of little value. Many of you have seen Superthrive advertised in *American Nurseryman* or have a drawer full of samples from past SNA Trade Show where you took a sample like me with good intentions of trying it out. It is great that someone is going to subject this product to a controlled study. We are always looking for a magic bullet. The testimonials that come with this product sound great. I hope it works. The wide shallow hole treatment intuitively seems like a guaranteed success but sometimes logic does not win out. Even if there is a difference, is there an economic difference? Industry professionals have taught me well. You will be able to watch it over the next four years and draw your own conclusions.

Congratulations to the Florida Extension and Research faculty and the FNGA for not only having a great idea but the initiative and the dogged determination and management skills to make it a reality. The whole industry will benefit from this cooperative effort. ☺

RPG Notes for Growth

by Jack Seibenthaler



Raising the Bar – Ain't it Wonderful!

About eight years ago, a small group of tree growers in West Central Florida decided to form a special group for the introduction and promotion of better tree growing methods. Due to the way the trees were being produced, it was decided to name the group Roots Plus Growers. Not only was this a fortunate choice of terminology, it was a notice to the nursery and landscape industry that the bar in quality tree production was being raised!

And ain't it wonderful?

In the ensuing years, the use of roots plus grown trees has increased exponentially. Not only have the original growers amazingly increased their production capacity, the number of members in this top group in the industry has grown impressively.

The pressure on the old fashioned (yes, that's the term to use), growers who stuck to their generations old ways of tree production was increasing. And the pressure has come from amazingly successfully tree growers who dared to use their imaginative and progressive methods to introduce a more viable and appealing system to the industry.

What does this mean for those who are already "in the barn" in this race for success in furnishing beer trees to the industry? It means that these forward looking growers are already ahead of the curve in the tree producing industry in the southeast. In other words, the sooner a wholesale grower comes under the aegis of Roots Plus, the better off he will be. After all, it takes setup time and growing time to realize the benefits of making the change.

While the horizon is expanding in better tree production, there is still a great deal of room for these tree growers to increase their "take" of the market. The only way to go is up. The only way to get there is to enhance procedures and marketability.

Raising the bar is good hard work and, ain't it wonderful? ☺

trunk, shortening or eliminating those with narrow crotches. Strive to produce a central trunk with major lateral limbs spaced along the trunk. This trunk will not be straight (unless it is staked) but this is fine. Purchase trees with good form in the nursery and be selective since form varies greatly from one tree to the next. It is not an easy tree to train and prune, requiring perhaps three or four

prunings in the first several years after seed germination. Trees look very open and lanky following proper pruning and this may be one reason the tree has not been very

popular with nursery operators, architects, and urban foresters. But after this initial training period, trees fill in nicely to make a well-adapted, beautiful shade tree. Propagation is by seed which, when sown immediately after harvest, germinate quickly and easily.

Pests & Diseases

Some trees are susceptible to powdery mildew, causing varying degrees of leaf color changes in fall, right before leaves drop. Mites can yellow the foliage but usually cause no permanent damage. Scale insects can infest Winged Elm along branches. Scale infestations are often missed due to the thick, corky bark along the twigs.

Information in this article is from Southern Trees - An Expert System for Selecting Trees, Copyright 1996, University of Florida.



of species evaluation work at Auburn University, and by presentations focusing on marketing and e-commerce as it relates to today's nursery industry. More time in the afternoon at the outdoor demonstration site put the spotlight on planting depths, irrigating new trees, new pruning equipment demonstrations, and evaluation of live oak cultivars.

In addition to the education sessions, attendees browsed the 45 conference partner booth displays during session breaks. It was a perfect opportunity to meet with colleagues and learn more about the products and services available to nurserymen, buyers, and tree and landscape maintenance companies in Florida and the south-east.

The conference committee is very optimistic about the future of the conference. Conference chairman Mike Marshall says that the registration response exceeded first year expectations, and that the committee looks forward to building on feedback from this year's conference to make sure next year's conference program is one that remains relevant to the interests and concerns of the tree industry professionals in the south-east.

If you'd like more information about the Great Southern Tree Conference to be held December 6-7, 2002 and the benefits of becoming a conference partner, contact the FNGA office at 800-375-3642.



Roots Plus Primer:

What is hardening-off?

Quality field-grown trees should be hardened-off, or cured, after harvesting. This hardening-off process lasts 3 to 4 weeks and it simply involves providing the tree with optimum irrigation during the few weeks after harvesting. This step, as simple as it may seem, is crucial to the health and survivability of the tree. After the tree is hardened-off it is ready to ship to the landscape site. New roots that have begun to develop are ready to grow immediately into the landscape. These new roots growing outside of the burlap are a sign of quality.



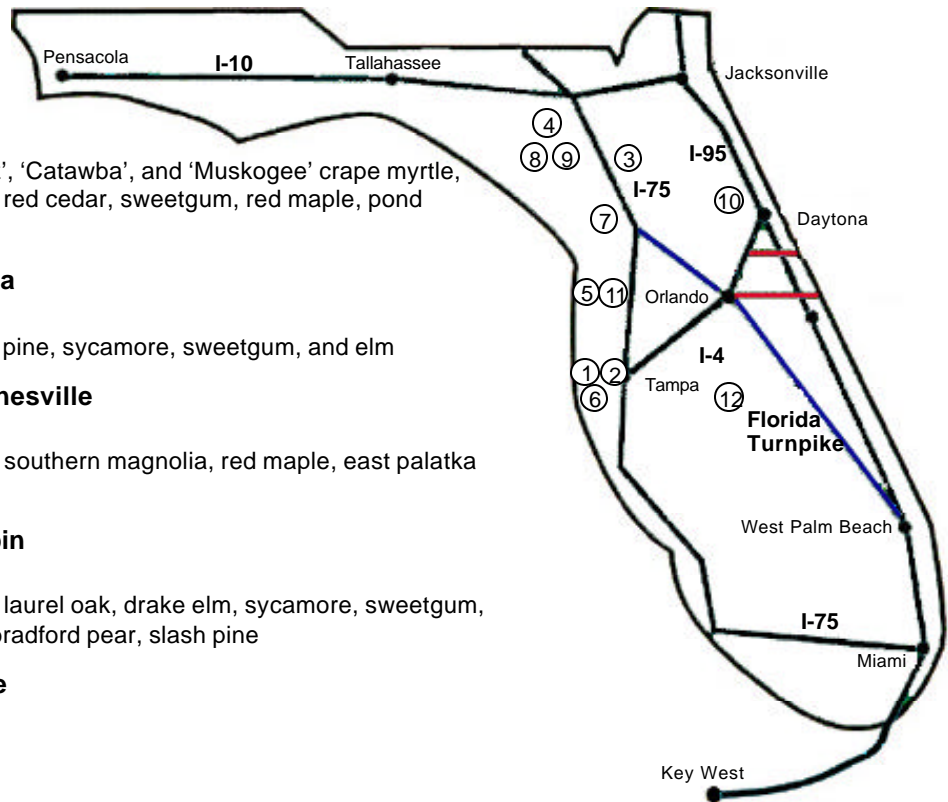
Next time you're online, visit rootsplusgrowers.org

Roots Plus Growers has joined the World Wide Web! We're online at rootsplusgrowers.org. While we look forward to adding lots of educational information to the site in the coming months, the first visitors to the site can read about the origin of the Roots Plus Growers Association, its mission, and find contact information and a locator map for our members. You can download the popular tree grading cue card and the new tree planting cue card, peruse the RPG Times archives, and visit links to our members and to other online resources for growers and landscape architects.

We hope you'll check it out, and we welcome your comments!

Roots Plus Growers Association Members

locator map and available species



① 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

② Be-Mac Tree Farms, Odessa

813-920-2247

RPG Trees available: live oak, pine, sycamore, sweetgum, and elm

③ Champion Tree Farm, Gainesville

352-375-6001

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

④ 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

⑤ J&J Tree Farm, Brooksville

352-796-3426

RPG Trees available in 2003

⑥ Keystone Farms, Odessa

813-920-0894

RPG Trees available: live oak, ligustrum, variegated ligustrum

⑦ 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

⑧ 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

⑨ Southern Pride Tree Farm, Bell

386-935-3636

RPG Trees available: live oak, ligustrum, holly

⑩ Skinner Nurseries, Bunnell

800-741-2020

RPG Trees available: live oak, ligustrum, holly, crape myrtle

⑪ Stewart's Tree Service, Brooksville

352-796-3426

RPG Trees available: red cedar available summer 2002, live oak

⑫ Tiger Lake Nursery,

863-692-1009

RPG Trees available: live oak, laurel oak

Associate Members

**Arbor Greene
Land Development**

Braun Horticulture

Caretree Systems

Cherokee Manufacturing

Graco Fertilizer Company

Rainbow Landscaping

Schickedanz Brothers, West

Jack Siebenthaler

Seaworld

Sunrise Landscape

The Willows Nursery

Treemart

RPG TIMESI ne

April 20-28, 2002 - National Landscape Architecture Week
visit www.asla.org for local events and information

June 22-25, 2002 - Trees Florida 2002
Wyndham Orlando Resort, Orlando, FL
contact the Florida Chapter ISA at 941-342-0153

August 1-3, 2002 - Annual Conference of the Florida Chapter ASLA
Sawgrass Marriott Resort, PonteVedre, FL
visit www.fcasla.com

August 1-4, 2002 - Southern Nursery Association
Researcher's Conference and Trade Show, Atlanta, GA
contact the SNA at 770-953-4636 or visit www.sna.org

Sept. 12-14, 2002 - Florida Nursery and Allied Trade Show (FNATS)
Orlando, FL
contact the Florida Nurserymen and Growers' Association at 800-375-3642

October 18-22, 2002 - ASLA Annual Meeting and Expo
San Jose, California
contact the ASLA at 202-898-2444 or visit www.asla.org

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 _____

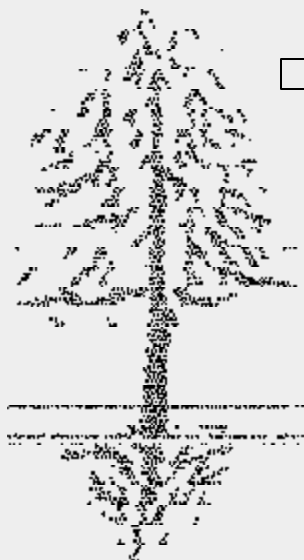
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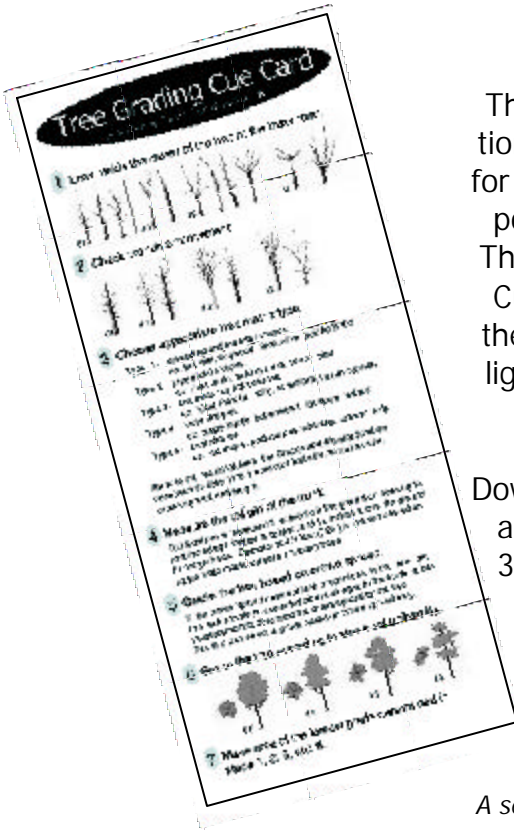
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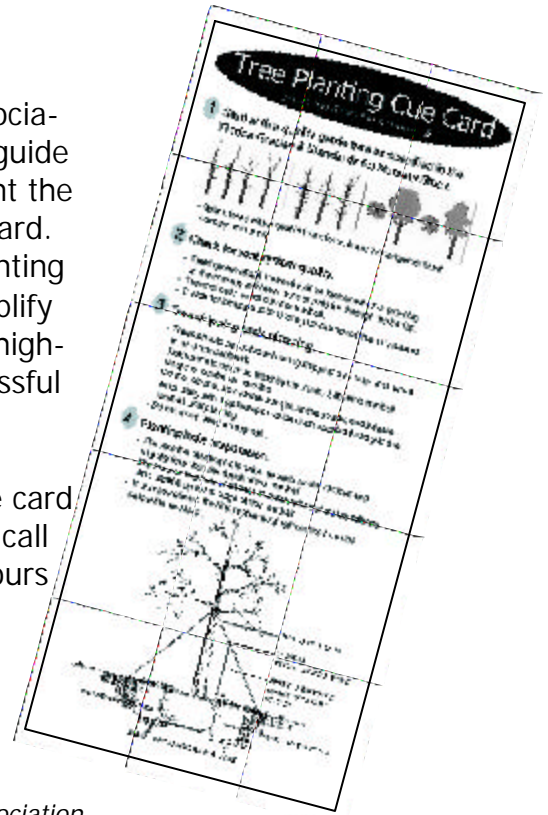
Phone _____ Fax _____





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