

# RPG Times



Winter 1998

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

## Roots Plus Growers

### *Our History and Our Future*

Four years ago, growers of quality field-grown trees from around the state formed the Roots Plus Field-Growers Association of Florida (RPG). The founding members were looking for a way to distinguish quality hardened-off field-grown trees from the poor-quality trees that were being put on landscape jobs throughout the state.

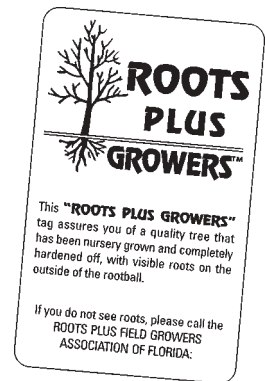
They decided to do this first and foremost by guaranteeing the consumer they were buying a quality hardened-off field-grown tree. When we say quality we are not only referring to what you can see above the ground but also the root system belowground.

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.

RPG members place tags on their trees reminding you to look for roots outside of the burlap. The RPG tag assures that you are planting a quality hardened-off tree.



Southern Magnolia with new roots ready to grow in the landscape.

Parts two and three of our mission are to share new ideas to continually improve tree quality and to sponsor research and educational programs. The association meets quarterly to discuss new ideas and they have hosted educational programs on pruning for the new grades and standards and proper handling of trees. Members of the association are also very active in sponsoring research at the University of Florida.

The *RPG Times* is the new quarterly newsletter of the Roots Plus Field-Growers Association of Florida. The newsletter is intended to inform our friends of what is happening within the industry and with RPG. This will include articles on new research, tree planting tips, your favorite tree nursery, industry events and much more. We hope you enjoy the *RPG Times* and don't hesitate to let us know if you have topics you would like to see addressed in future issues.

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# Field-grown Trees

## *Just the Facts*

Field growing and transplanting of trees has been practiced for thousands of years. Newer systems for growing and transplanting trees, such as container production, have been introduced during the last fifty years. These two different production methods have both proven capable of producing high quality landscape trees. However, field-grown trees have received negative publicity for having low survival rates and being of poor quality in general. Research from the University of Florida and other universities has proven this untrue.

A field-grown tree is planted into native soils, grown to a harvestable size, harvested prior to sale, and transported to the job site. Field-grown trees are referred to as balled and burlapped (B&B) because the root system is harvested and wrapped in burlap. Trees are frequently placed in wire baskets to support the root system and to make it possible to lift the tree by the root ball rather than the trunk. Research has shown that tree roots are not girdled by the wire basket, instead the roots grow around the wire and the xylem tissues reconnect, likely having very little influence on the effectiveness of the root. Trees in a field-grown nursery are often maintained with drip irrigation, fertilizer, selective shoot pruning, and root pruning (be sure to read about root pruning on page 3). Root pruning, drip irrigation and fertilizer help build a strong, dense root system, while

selective pruning is used to guide the tree into the desired form. Field-grown trees should be

*Roots on container-grown trees regenerated slower than the field-grown trees... and ...field-grown trees grew more than container-grown trees the first year after planting.*

hardened-off or cured after harvesting. This means providing the tree with optimum irrigation during the first few weeks after harvesting. During this 3 to 4 week

and water stress of field-grown and container-grown trees after transplanting. In this study, roots on container-grown trees grew slower than the field-grown trees. Also, field-grown trees grew more than container-grown during the first fourteen weeks and one year after transplanting. When irrigation was discontinued, the container-grown trees were more stressed than the field-grown trees.

Research comparing root area and root number of field-grown and container-grown trees has been done on live oak. After three years of growing in the landscape,



*Field-grown (left) and container-grown (right) root systems during excavation at the University of Florida. This research project and others are supported by RPG members.*

period the plant regenerates roots to replace any roots cut during harvesting. After the tree is hardened-off the newly generated roots that have begun to develop are ready to grow immediately into the landscape.

University of Florida research on laurel oak and holly (Gilman and Beeson, 1996) compared growth

field-grown trees had more root area and root number than container-grown trees (Marshall and Gilman, 1997)[see photos below].  
References

Gilman, E. F. and R. C. Beeson, Jr. 1996. Nursery production method affects root growth. *Journal of Environmental Horticulture*. 14:81-87.

Marshall, M. D. and E. F. Gilman. 1997. Production method and irrigation affect root morphology of live oak. *Journal of Environmental*

# Transplanting Tips - Irrigation

Two surveys done in the United States and Northern England both showed that the most common cause of poor urban tree growth and mortality of newly planted trees involves Water!

Water is probably the most important factor in the health and survival of a newly transplanted plant. Research done in Florida has given us some guidelines to follow regarding the amount and the frequency with which newly transplanted trees should be irrigated.

Where:

Water should be applied so that it penetrates the rootball and doesn't run off the sides.

How much:

1.5 to 3.0 gallons of water per inch of trunk diameter per irrigation.

How often:

Every day for the first 2 weeks, then every other day for 2 months, then 1-2 times per week for 1 year.

## Nursery Spotlight

### Stewart's Tree Service

Stewart's Tree Service, owned and operated by Jimmy Stewart, has been supplying quality trees to the landscape industry since 1974. Jimmy started his business by digging queen palms and selling them to local retail nurseries. His nursery has grown to have 300 acres in production and 12 full time employees. From his early days Jimmy has always been committed to increasing the quality and livability of trees. This commitment to quality is one of the many reasons Stewart's Tree Service won the 1997 FNGA Grower of the Year Award.

**Stewart's  
Tree Service**  
1997 FNGA  
Grower of the Year

One way Jimmy is increasing quality is by planting cultivars such as 'D. D. Blanchard' Magnolias and even a new cultivar of Live oak. Stewart's Tree Service was one of the founding members of the Roots Plus Growers Association of Florida. His concern for selling the consumer the best quality tree possible was the main reason for helping start RPG. Stewart's Tree Service, along with all RPG members, is constantly

working on improving the quality  
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of trees on landscapes.

In the 24 years Jimmy has been in business he has had the opportunity to put trees on many high profile jobs. One such job is the Arbor Greene development in Tampa. The development is known as a Florida Quality Development and is one of only two such developments in Hillsborough County. Arbor Greene was named a Florida

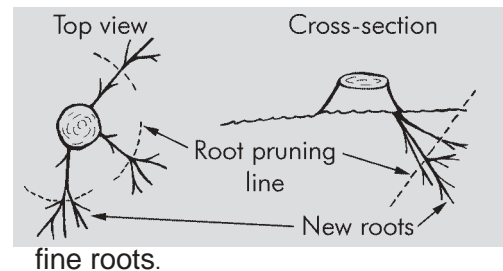
Quality Development for its commitment to habitat preservation, water management, and environmental education. The development and Stewart's Tree Service were

praised in a St. Petersburg Times article for the quality of the landscape and materials. Jimmy has had the opportunity to send trees to other high profile jobs such as Hulk Hogan's home in Clearwater, Disney World, and he supplies many of the trees to Seaworld.

Stewart's Tree Service is a family run business, with 8 of the 12 full time employees being family members. Jimmy's daughter Stacey works in the business and his sons Jamie, Randy, and Rusty all started working for their dad after high school.

## Nursery Notes Root Pruning

Root pruning is an important horticultural technique practiced in quality field-grown nurseries. It is the cutting of roots during production to increase root density in the harvested root ball. When a root is pruned or cut, new roots develop from the cut end. The result is an increase in the number of



fine roots. The importance of root pruning, a process that has been in existence for many years, has long been debated. There has not been a tremendous amount of research done on this topic; however, what has been done shows a substantial benefit to root pruning. Research on live oak found that root pruning causes a 6-fold increase in the density of fine roots in the root ball (Gilman and Yeager, 1987).

### References

Gilman, E. F. and T. H. Yeager. 1987. Root pruning *Quercus virginiana* to promote a compact root system. Proceedings of the SNA Research Conference. 32:339-341.



# Roots Plus Growers Availability

## Winter – Spring 1998

*Acer rubrum*  
Red Maple

Marshall Tree Farm 2" 8-10'  
Marshall Tree Farm 2 ½" 10-12'

*Cornus florida*  
Dogwood

Marshall Tree Farm 2" 8-10'

*Cycas revoluta*  
King Sago

Arborgate Farms 30x30"

*Ilex x attenuata* 'East Palatka'  
East Palatka Holly

Marshall Tree Farm 8-10'  
Marshall Tree Farm 10-12'  
Marshall Tree Farm 12-14'  
W.E. Jones Tree Farm 8-10'  
W.E. Jones Tree Farm 10-12'  
W.E. Jones Tree Farm 12-14'

*Juniperus silicicola*  
Southern Red Cedar

Stewart's Tree Service 10-25'  
Tree Control 10'  
Tree Control 12'

*Lagerstroemia indica*  
Crape Myrtles

Marshall Tree Farm 8-10'  
'Muskogee', 'Sioux', 'Tuscarora'  
Marshall Tree Farm 10-12'  
'Muskogee'

*Magnolia grandiflora*  
Southern Magnolia

Marshall Tree Farm 10-12'  
Marshall Tree Farm 12-14'  
Marshall Tree Farm 14-16'  
Marshall Tree Farm 16-28'  
Stewart's Tree Service 10-16'  
Tree Control 10'  
Tree Control 12'  
W.E. Jones Tree Farm 10-12'  
W.E. Jones Tree Farm 12-14'  
W.E. Jones Tree Farm 14-16'

*Myrica cerifera*  
Wax Myrtle

Arborgate Farms 6-8'

*Pinus elliottii*  
Slash Pine

Marshall Tree Farm 8-10'

*Taxodium distichum*  
Bald Cypress

Arborgate Farms 8-10'  
Tree Control 10'  
Tree Control 12'

*Quercus hemisphaerica*  
Laurel Oak

Marshall Tree Farm 2 ½" 10-12'  
Marshall Tree Farm 3" 12-14'  
Marshall Tree Farm 3 ½" 14-16'  
Tree Control 3"  
Tree Control 3 ½"  
Tree Control 4"  
Tree Control 4 ½"  
Tree Control 5"  
Tree Control 6"  
W.E. Jones Tree Farm 2"  
W.E. Jones Tree Farm 2 ½"  
W.E. Jones Tree Farm 3"  
W.E. Jones Tree Farm 3 ½"  
W.E. Jones Tree Farm 4"

*Quercus virginiana*  
Live Oak

Arborgate Farms 3"  
Arborgate Farms 3 ½"  
Champions Tree Farm 12'  
Champions Tree Farm 13'  
Champions Tree Farm 14'  
Champions Tree Farm 15'  
Champions Tree Farm 16'  
Champions Tree Farm 18'  
Champions Tree Farm 20' +  
Marshall Tree Farm 2" 8-10'  
Marshall Tree Farm 2 ½" 10-12'  
Marshall Tree Farm 3" 12-14'  
Marshall Tree Farm 3 ½" 14-16'  
Stewart's Tree Service 2 ½"  
Stewart's Tree Service 3"  
Stewart's Tree Service 3 ½"  
Stewart's Tree Service 4"  
Stewart's Tree Service 4 ½"  
Stewart's Tree Service 5"  
Stewart's Tree Service 5 ½"  
Stewart's Tree Service 6-12"  
Tree Control 3"  
Tree Control 3 ½"  
Tree Control 4"  
Tree Control 4 ½"  
Tree Control 5"  
Tree Control 5 ½"  
Tree Control 6-10"  
W.E. Jones Tree Farm 2"  
W.E. Jones Tree Farm 2 ½"  
W.E. Jones Tree Farm 3"  
W.E. Jones Tree Farm 3 ½"  
W.E. Jones Tree Farm 4"

Specifications expressed as inches, for example 2", refers to trunk diameter.  
Those expressed as feet, for example 8-10', apply to overall height.  
Specifications for King Sago apply to overall size in inches.

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## MEMBERS

### Arborgate Farms

Odessa - 813-920-8325

### Champions Tree Farm

Gainesville - 352-375-6001

### Marshall Tree Farm

Morrison - 800-786-1422

### Stewart's Tree Service

Brooksville - 352-796-3426

### Tiger Lake Nursery

Lake Wales - 941-692-1009

### Tree Control

Brooksville - 352-796-5898

### W.E. Jones Tree Farm

Land O' Lakes - 813-996-2177

## ASSOCIATE MEMBERS

### Arbor Greene Land Development

### Braun Horticulture

### Caretree Systems

### Jack Siebenthaler

### Jenkins Landscape

### Ricketts Bag and Nursery Supply

### Seaworld

### Treemart

The Roots Plus Field Growers Association of Florida is a member of the following professional organizations



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## 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 \_\_\_\_\_

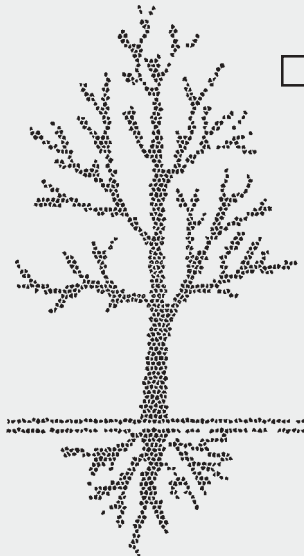
Name \_\_\_\_\_

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Address \_\_\_\_\_

City / State / Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_



# RPG *TIMES*line



March 6 & 7th  
Tampa Spring Expo  
Florida State Fairgrounds, Tampa

Come visit us at the Roots Plus  
Growers booth #423

The next RPG meeting will be  
held in conjunction with the Tampa  
Spring Expo if you are interested  
in attending please call for details.

The RPG Times is written  
and  
edited by Michael Marshall.

If you have any input,  
questions, or comments  
~~please feel free to call~~  
him at 352-528-3880.

March 19th

Florida Chapter International Society of Arboriculture, Tree Grades and Standards Seminar, Broward County Extension Office, Davie

April 2nd

Florida Chapter ISA, Tree Grades and Standards Seminar, Manatee County Extension Office, Sarasota

April 19-21st

Southern Chapter ISA Conference & Trade Show, Tradewinds Resort, St. Pete Beach

This Summer

Florida Chapter ASLA Conference, Palm Beach

August 7-9th

Southern Nurserymen's Association Trade Show, World Congress Center, Atlanta

August 19-21st

Florida Urban Forestry Council Conference, Sundial Resort, Sanibel

September 10-12th

FNATS, Orange County Convention Center, Orlando



17350 SE 65th Street  
Morriston, FL 32668

