ISA FLORIDA CHAPTER

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Florida Arborist

A Publication of the Florida Chapter ISA

Volume 12, Number 2, Summer 2009

Summer 2009 In This Issue:

Work Day, Central

by Lee Mackin

"WOW…….What a Great Day! Dirty and tired …… You bet! Great Lunch …….. Oh yaaa!
Knowing we gave them a superior day that was genuinely appreciated ……. Priceless!"

This is a direct quote from Chuck Daum with Davey Tree describing his experience at the Florida Chapter ISA Central Florida Volunteer Work Day. This year's event was one of three volunteer workdays hosted by the Florida Chapter. The first two were held at Girl Scouts camps in Fort Lauderdale and Tallahassee in February and the Central Florida event was held April 11th, 2009 at the Girl Scouts of America's Mah Kaw Wee Program Center in Chuluota, Florida. Chuck's comments are a good representation of the comments received from the eleven local tree services that showed up early on a beautiful spring morning the day before Easter. The companies who volunteered were: A Cut Above Tree Service, Arboricultural Services Inc., Arbor Vision Tree Service LLC, Burford's Tree Inc., CGD Enterprises, Davey Tree Experts Inc., ENVIRO Tree Service, Professional Tree Care Inc., The Tree Lady Co., Valley Crest Tree Co., and Vermeer Southeast Sales & Service Inc.

After introductions were made over a great continental breakfast supplied by the Girl Scouts, some pictures were taken and work assignments were handed out and safety

Work Day continued on page 10

A Message From the President

Good Day to You All!

Well, here it is time for the Summer issue already; it seems like I just wrote for the Spring issue. Oh well, you know what they say: "Time flies when you're having fun"! I can truthfully say this first quarter has been fun. Things within our Chapter are happening quickly and we are making some great progress. Only when I stop for a minute do I realize just how much is happening and how much effort is put forth by so many people.

Thanks to Bill Slaymaker, Perry Odom and Lee Mackin for their work in coordinating the Work Days this past spring. I understand there was great turnout by our member companies and lots of good things were accomplished. One comment I heard a lot was: "It's neat to see the men who in a normal setting are competitors, are working together as one unit." Let me say now through this venue that I appreciate the efforts made by all who worked at our three Work Day events. You were great representatives of the Chapter and I thank you!! From what I have heard, they were such a positive events that folks are lining up for next year's Work Days. Great work all!!!

By the time this goes to print we'll know about your Chapter's efforts toward state licensure. It's hard to believe this has been a four year project but it seems we are getting there. This has been a monumental effort by many on the Board and the staff. I can't list all who have been involved but do want to extend my thanks to them as well.

On the educational front, the Education Committee has brought to our Chapter more programs then ever before!!! A normal year would have around 13 programs presented around the state whereas this year they have put together a whopping 22!! Nearly double that of normal!! My thanks to them for these efforts.

In addition to the single-day seminars, we've got to recognize the work done to bring us Trees Florida 2009. This is the Florida Chapter's first year of hosting the conference by ourselves. The Florida Urban Forestry Council, our former partner in the conference, elected to put their efforts to other targeted audiences. I wish them well and know they will do exemplary. Many of you are also members of FUFC and we do share many common goals and interests. I am all for anything that can move our profession forward.

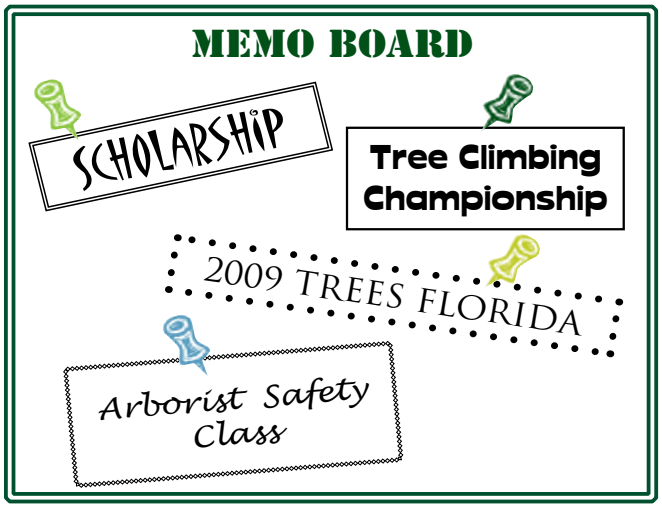
Speaking of Trees Florida, I hope to see you there!! Even in our slower economy we still need to keep up to date with the latest information in our field and a stay at the Ritz-Carlton can't be beat!!! The Staff negotiated us one heck of a great room rate for this 5 star hotel. The beach club is "Florida Fancy #1" grade!!

Since I am starting to use what might be considered some poor puns, I shall close now.

Sincerely,

Mike Robinson

President, Florida Chapter ISA



In the News

New Pest on Eucalyptus Causes Galls

The Florida Department of Agriculture and Consumer Services announced that a eucalyptus pest, Leptocybe invasa (Hymenoptera: Eulophidae), of a genus and species new to Florida and North America was recently discovered in Broward County, Florida. "The blue gum chalcid, as it is known, produces galls in the form of distinct swellings on the petioles, leaf midribs and stems on new foliage of both young and mature trees. Galling causes the leaves to curl and may stunt the growth and weaken the trees; thus L. invasa can cause substantial damage or death to young trees. The impact on adult trees is not known." A link to the announcement is available on the UF/IFAS Pest Alert site. The UF/IFAS Pest Alert WWW site is available at http://pestalert.ifas.ufl.edu/ .

Green Industry Could Benefit From Parts of Stimulus Package

The final stimulus package signed into law in February allows funds to be used for community parks and highway beautification projects. That clause was almost stricken from the package. Oklahoma Sen. Tom Coburn offered an amendment that specifically precluded spending of infrastructure dollars for several purposes, including highway beautification, said Craig Regelbrugge, vice pres. of govt. relations at ANLA. "Many long-timers in the industry remember what an economic engine the highway planting efforts, champi-

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ATTENTION FLORIDA CHAPTER ISA MEMBERS

The Florida Chapter is Going Green!

After this issue, all quarterly newsletters will be sent electronically. It's true! In an effort to save trees and remain environmentally conscious, we are cutting back on all of our printing. Yes, the Florida Arborist is still being produced and published. But now the best part is that you can have an **electronic version** right at your fingertips; you can forward it to a friend or save it to your computer for future reference. It will be there whenever and wherever you need it! The color photos, graphics, and ads will be more appealing and once we get up and running, the newsletter will feature clickable links to the advertisers and to further information from any of the articles. A great convenience just a click away!

DON'T BE LEFT OUT! Make sure your current contact information is on file with the International office in Champaign, IL! We will send out our electronic version of the Florida Arborist to the current email address on file at the International office so call today if you need to update your information 888-472-8733.

You will not be able to receive the newsletter by both mediums.

You will automatically be sent the electronic version unless you fill out this form and return it via mail or fax to:

Mail: FLORIDA CHAPTER ISA
7853 S Leewynn Court
Sarasota, FL 34240
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In the News, continued

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oned by Lady Bird Johnson, were in their day;" he said. "Nowadays, the reasons for such plantings go way beyond 'beautification' to issues like urban cooling, filtering runoff and sequestering carbon." The stimulus bill also offers a technical fix that removes a legal obstacle to the implementation of key 2007 Farm Bill provisions. Funding for specialty crop provisions in the Farm Bill strengthening USDA cooperative programs to prevent the introduction of harmful plant pests, to better assess foreign pest threats, and to rapidly detect and respond to new invasions, had been blocked by a legal opinion issued by the outgoing Bush Administration. Language is now in place fixing the problem and allowing funds to flow to these important programs, Regelbrugge said. NMPRO

Crown Gall Can Infect Perennial Plants

Crown gall, caused by the bacterial pathogen Agrobacterium tumefaciens, is a disease known to infect woody

ornamentals and tree fruits. Jan Byrne with Mich. St. Univ. Diagnostic Services said growers of herbaceous perennials, especially those propagated by cuttings, should be aware of the disease and its symptoms. Infected plants produce an abnormally large number of cells that form the gall. Galls can appear on the roots, stems and foliage and range from pea-size to more than 1 ft. in diameter. The bacterium enters plants through wounds, often those made by cultural practices such as grafting, pruning or cutting propagation. Larger galls may destroy plant vascular tissue causing dieback or death. With time gall tissue breaks down, releasing the bacterium back into the soil or onto other host material. Good sanitation is an important component of control. There are several control products that contain a strain of Agrobacterium that is antagonistic toward the gall causing pathogen. Product efficacy varies with the type of plant material being treated. These products are meant to protect healthy plants and do not eradicate current infections. Copper-based fungicides can be used to help limit spread, but do not eradicate current infections.

Non-native Plants Become Invasives Through Naturalization

Naturalization rates of non-native hort. plants increase the longer a plant is grown and sold. A new USDA-Ag. Research Service study has found the plants that are mainstays of horticulture carry a lot of risk. These plants, including most edible and landscape plants, are the main source of invasive plants that harm natural environments. ARS scientists analyzed a unique set of data from the detailed sales catalogs of an early Fla. plant nursery to detect naturalization patterns of hort. plants in the state. Unlike previous studies on the invasiveness of hort. plants, the research team found that the marketing period--the number of years a plant is sold--has profound influence on naturalization and invasion. 70% of plants sold in Florida for 30 years or longer have naturalized, indicating that length of time sold is the most important factor contributing to naturalization. Non-native plants will continue to naturalize and invade as long as they are sold. The researchers recommended that risk assessments be developed for screening non-native hort. plants to identify non-invasive forms and less-invasive alternatives. NMPRO

Honeybees Fend Off Caterpillars With a Buzz

Honeybees are important to plants for reasons that go beyond pollination, according to German researchers. The insects' buzz also defends plants against the caterpillars that would otherwise munch on them undisturbed. The researchers, led by Jürgen Tautz of Biozentrum Universität Würzburg, Germany, found that many caterpillars possess fine sensory hairs on the front portions of their bodies that enable them to detect air vibrations, such as the sound of an approaching predatory wasp or honeybee. The findings highlight the importance of indirect effects between apparently unrelated members of food webs in nature, Tautz said. This discovery may be the start of a totally new biological control method, he said.

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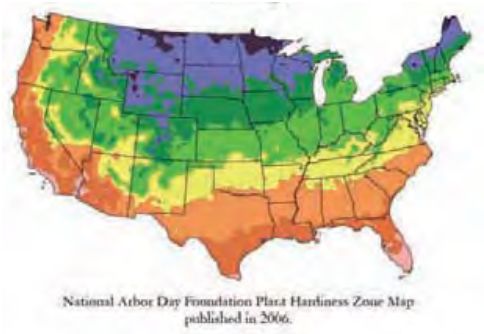
Citrus Greening Confirmed in South Carolina

Earlier this month, USDA's Animal and Plant Health Inspection Service (APHIS) confirmed citrus greening (spread by the Asian citrus psyllid) in a leaf sample from a residential property in the city of Charleston, S.C. The samples were from a mature citrus tree on a residential property. This is the first confirmation of CG in South Carolina. APHIS is now in the process of amending its regulations to establish Charleston County, S.C. as a citrus greening and Asian citrus psyllid quarantine area. NMPRO

Citrus Greening

Updated Hardiness Map Will Reflect Warming Trend

A revised USDA Hardiness Zone map will be released this year, Scientific American reported. Horticulturalists and experts who have helped with the revision expect the new map to extend plants' northern ranges and clearly show the extent of gradual warming over the past few decades. USDA commissioned the revised map after a flap in 2003, when the American Horticultural Society released a draft update based on 16 years of temperature data. USDA had funded the project but rejected the update, which was configured differently and showed significant warming over the 1990 version, with many parts of the nation shifted into warmer climate zones. NMPRO



National Arbor Day Foundation Plant Hardiness Zone Map published in 2006.

Predatory Mites Show Promise Against Chilli Thrips

Researchers at USDA's Ag. Research Service and the University of Florida found 2 mites, Neoseiulus cucumeris and Amblyseius swirskii, provide effective control for chilli thrips, an invasive pest that attacks some 150 crops. The 2 predatory mites have been used commercially to combat other pests. Researchers put 30 adult chilli thrips on ornamental peppers in greenhouse and outdoor settings, waited a week for thrips larvae to hatch and, in separate treatments, released 30 mites of each species on the plants. The mites significantly reduced the number of thrips. A. swirskii left no more than 1 thrips insect per leaf, compared with up to 60 thrips larvae found on leaves of untreated pepper plants. The work was funded in part by the American Floral Endowment and the Floriculture and Nursery Research Initiative. Researchers are worried about chilli thrips developing a resistance to pesticides.

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Forest Service Offers Tree Owner's Manual

One common issue facing urban forests: trees are dying prematurely. Most are planted improperly, many do not receive regular maintenance, and few are adequately protected during construction projects. To help remedy these issues, the U.S. Forest Service has created the Tree Owner's Manual. Just like the owner's manual that comes with cars and appliances, this booklet includes a parts list, instructions for installation, tips for troubleshooting common issues, recommended service and more. It's inexpensive to reproduce and can be made widely available to garden centers, nurseries, landscapers and arborists to hand out to customers.

Texas Revises Date Palm Lethal Decline Quarantine

The Texas Department of Agriculture has revised the date palm lethal decline quarantine to include silver date palm, queen palm, and cabbage palm or sabal palm to the list of quarantined articles; added Nueces County, Texas and the State of Florida to the quarantined areas; and prescribed entry requirements for movement of the quarantined articles from Florida into Texas. The revised amendments also established a regulatory practice utilizing an immediate buffer area and an extended buffer area surrounding any infected trees in Texas. No trees within the immediate buffer area will be allowed to move outside the area for at least six months following the removal of the infected tree unless a three-month treatment regiment is enacted. Plants shipped from the extended buffer area to outside the quarantine zone must be accompanied by a phytosanitary certificate. ■

Membership Committee Report

by Don Winsett, Vice President

With this being my inaugural article, I would like to present a summary of membership numbers on National and International levels as recently reviewed by the ISA Board at our recent Board Meeting on April 16th in Orlando.

The numbers are a comparison from April 2008 membership to April 2009. To begin on the national level, the Florida membership is down 12%. To put this average in perspective nationally, the states of Illinois and Ohio have suffered the least membership losses at 3.5%. The national average however is up by 3.1%. Internationally, membership losses have been felt most prominently in Europe with Italy down 47.4% and Norway as much as 96.9% with an average for Europe membership down 10.6%.

Although these averages are a sign of the times, I enlist all of you to 'wave the ISA flag' at every event, meeting, and even in your local nursery. Let us all act on behalf of our fellow members and communicate to our community the benefits of making educated, responsible arboriculture a prominent part of Florida's landscape. ■

New Member Benefit Announced

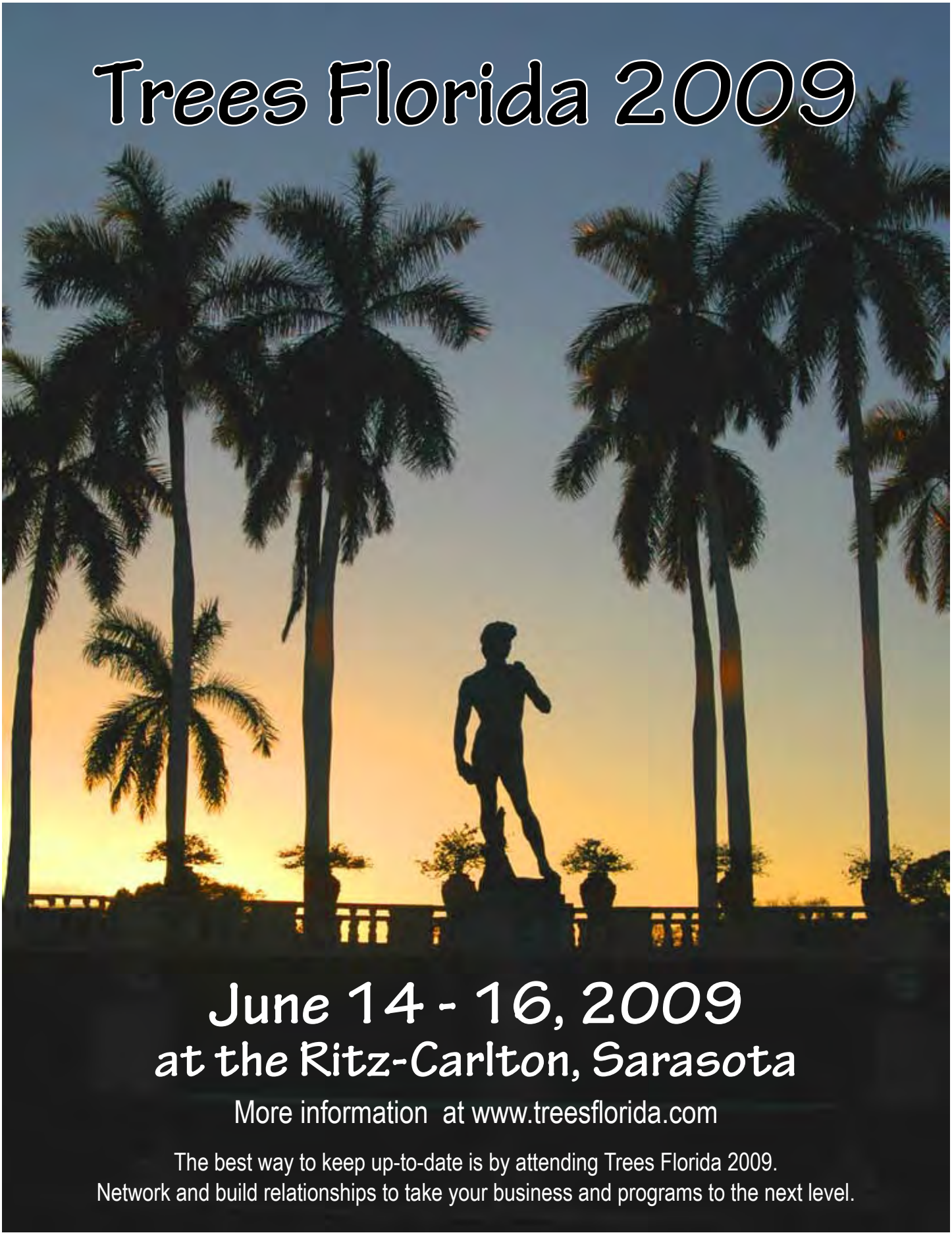
The Florida Chapter has partnered with First National Merchant Solutions (FNMS) to provide an additional benefit to Florida Chapter members. If your business currently accepts credit cards for payment of your services, consider what FNMS can offer. FNMS will provide a free assessment of the fees that your business is currently paying for taking credit cards, and will then devise a merchant program that will save you money on credit card processing fees. The Florida Chapter will benefit by receiving a fee for each Chapter member that joins FNMS.

First National Merchant Solutions®

Members save money and the Chapter benefits.

First National Merchant Solutions® is a top-10 payment processor with more than 50 years of experience providing first-rate service and solutions to businesses across North America. With the combined resources of parent company First National Bank of Omaha and a dedicated, experienced team of industry professionals, First National Merchant Solutions provides complete in-house processing with unparalleled customer service to meet the long-term needs of its customers.

For more information, visit www.fnms.com or visit their booth at the 2009 Trees Florida Conference and Trade Show. ■


Trees Florida 2009
June 14 - 16, 2009
at the Ritz-Carlton, Sarasota
More information at www.treesflorida.com
The best way to keep up-to-date is by attending Trees Florida 2009.
Network and build relationships to take your business and programs to the next level.

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Central Florida Work Day

roadways and structures, grinding stumps, hauling away tons of debris and dumping tons of mulch.

ISA Board members, Lee Mackin and Kim Paulson, aka The Tree Lady, tried to keep up with the crews, offering technical service and answering questions as they arose. This turned out to be quite the task considering the work was spread out over eight identified work areas within the 250 acre camp.

By day's end over 200 trees were trimmed, 70 trees removed, 60 stumps ground, 150 cyd's of mulch dumped, 100 cyd's of mulch spread, over ½ mile of roadway clearance completed and countless tons of debris were relocated to the camps burn pile. The total dollar value was estimated to be $20,125. Not bad for a day's (6 hours) work. Needless to say the Girl Scout organization was thrilled to have all this work done that otherwise would not have been possible without the generous efforts of all the volunteer companies. They showed their appreciation by providing a hearty lunch for all on hand with a barbecue catered by Dickey's Barbecue Pit. Of course everyone got all the Girl Scout cookies they could eat and there were even some "to go" bags.

Overall the event was very successful with a lot of work accomplished and a lot of camaraderie between companies that are normally competing against each other for business, a sign of true professionalism. Another testimony to the professionalism of this group is the only accident was someone coming in contact poison ivy, but thanks to the quick response of nurse Kim (Paulson) and her pharmaceutical assistant Hank (Stansell), the patient was treated, released and fully recovered.

The success of these three events encourages the Florida Chapter all the more to pursue three more volunteer work days in February 2010. Applicants from nonprofit organizations that would like to host a volunteer workday are being accepted through August 2009. For more information about becoming involved or for workday recipient applications please visit www.floridaisa.org . ■

Up-to-the-Minute Research

Dr. Ed Gilman shares the results of two of his recent studies performed at the University of Florida in Gainesville.

Effects of Irrigation Volume and Frequency on Shrub Establishment in Florida

E.F. Gilman, C.L. Wiese, M. Paz, A.L. Shober, S.M. Scheiber, K.A. Moore, M. Brennan
Environmental Horticulture Department
University of Florida, Gainesville, Florida

Abstract

The effects of irrigation frequency and irrigation volume were evaluated on recently installed #3 container grown shrubs of three taxa, Ilex cornuta Lindl. & Paxt. 'Burfordii Nana', Pittosporum tobira Thunb. 'Variegata', and Viburnum odorotissimum Ker Gawl.

Irrigation frequency and volume had no effect on Pittosporum at any time for any measured root or shoot parameter. Irrigation frequency and volume had no effect on Ilex and Viburnum canopy biomass, root biomass, root dry weight:canopy dry weight ratio, and stem water potential at any time after planting. Canopy growth was affected by irrigation treatment only for Viburnum plants installed in May 2004, and growth response to more frequent irrigation only occurred while plants were irrigated, with no lasting impact on growth once irrigation ceased. Root spread and the ratio of root spread:canopy spread for only one shrub, Ilex, were influenced by irrigation treatment. Applying excessive irrigation volume (in this case 9L) reduced root dry weight:shoot dry weight ratio for Ilex and could increase the time needed for plants to grow enough roots to survive without irrigation.

Our study found only slight influences on shrub growth from the tested values of irrigation frequency and volume regardless of the time of year when data was collected. This indicates that these shrubs can be established with 3L irrigation applied every 4 days until roots reach the edge of the canopy under the mostly above normal rainfall conditions of this study. Applying more volume or more frequently did not increase survival or growth. Canopy growth and plant quality data combined with past research suggest that establishment of these shrub species may be more influenced by environmental conditions such as rainfall than by the irrigation frequency and volume used in this test. ■

Root Ball Shaving Improves Root Systems on Seven Tree Species in Containers

Edward F. Gilman, Maria Paz, and Chris Harchick
Environmental Horticulture Department,
University of Florida, Gainesville, Florida

Abstract

Forest trees are less stable at the point where roots fork, bend or branch, but less is known about the impact of defects resulting from growing trees in large containers.

We either root pruned by shaving off the periphery of the #3 container root ball as it was planted into the #15 container or did not root prune on 5 tropical and 2 temperate species. Shaving removed the entire outer and bottom 2.5 cm (1 in) of the root ball and reduced or eliminated culls on all seven species. Shaving did not affect tree caliper or height on the seven species tested under the conditions of this study.

The largest diameter roots on trees in #15 containers that were not root pruned when shifted from #3 containers were kinked, descended down the container wall, or circled at the position of the #3 container. These root defects were largely missing on trees with root balls that were shaved of peripheral roots when shifted into #15 containers.

Root ball not shaved results in circling or kinked rooots

Shaved root ball results in generally straight roots.

The largest roots on shaved trees grew more-or-less straight radially from the trunk. Shaving the root ball periphery and bottom is recommended to improve root ball quality by reducing root ball defects. ■

Review of Urban Tree Fertilization Research and Recommendations

Roger C. Funk, Ph.D., The Davey Tree Expert Company

Varying recommendations from research and in the practice of fertilization is apparent in the literature, symposiums and discussions within our industry. Generalizations about fertilization imply that all fertilizers elicit the same response when, in fact, fertilizers come in many different formulations – complete or incomplete, organic or inorganic, natural or synthetic, soluble or insoluble, and with or without fillers and amending agents. The results are also highly dependent upon the plant species, age and condition; timing and rate of treatment; application techniques; and site conditions including soil, climate and competing vegetation.

Struve (2002) reviewed the major urban tree fertilization research in the United States beginning in the 1920's, which has led to our current recommendations. He also discussed confounding factors that were likely to contribute to the variability in results. A number of other studies have added to our understanding and, although there are many interesting and conflicting aspects of urban tree fertilization, the following discussion is limited to five major categories: 1) Application methods; 2) Timing; 3) Type; 4) Rates of application; and 5) Effects of fertilization on newly transplanted trees.

Based on the myriad of fertilizers, methods, timing, rates of application and plant species and soils, we need to be more specific in regards to the type and conditions of fertilization when wediscuss the effects of fertilization.

Effect of Application Method

The most common commercial application methods for fertilizing urban trees are surface broadcasting, vertical holes and liquid soil injection. The vertical hole technique is described either as drilled with an auger or punched with a bar. The depth typically varies from 4 to 24 inches and the type of fertilizer includes either soluble or insoluble nitrogen, or combinations – with and without phosphorus and potassium - with various fillers. The spacing between holes normally varies from 12 to 36 inches. Liquid injection often applies soluble nitrogen alone, but slowly soluble nitrogen sources - with and without phosphorus and potassium- are sometimes used. The depth of application varies from 4 to 24 inches and the amount of water in the mixture varies considerably as does the application probe, pressure and spacing. Surface applications also vary, not only in the fertilizers and rates of application, but also in the area treated and considerations for turfgrass or other ground covers within the treatment area.

According to Mader and Cook (1982), one of the main benefits of subsurface techniques is encouragement of deeper rooting by improving subsoil aeration, water penetration and fertility. Smith (1978) reported that the drill hole technique is especially beneficial for improving tree growth in compacted soil. Smith and Reisch (1975) found a 20% increased caliper growth following either drill-holes or drill holes with 6# /1,000 sq.ft. each of N, P, K. Although it was implied that tree health and growth could be improved by simply modifying the soil structure, fertilizer placed in vertical holes that are 15 to 18 inches deep (Smith, E.M. and C.H. Gillaim 1979) may be below the concentration of tree roots and not available for effective absorption.

Harris (1992) commented that subsurface methods are useful only in soil where tree roots are not near the surface. However, Davies (1987) reported in experiments with four different broadleaved tree species that surface fertilizing can increase the vigor of weeds and cause harm to trees due to competition for water and nutrients. Research by Himelick et. al. (1965) and Neely et. al. (1970) on 10 different soil types found that all three methods appeared to be equally effective, with minor variations among tree species. Perry (1982) concluded that the reason they were unable to show differences in response of trees to fertilizer placed in holes or broadcast on the surface is that, contrary to popular belief, surface-applied phosphorus is immediately available for tree root uptake. Again, it is equally as plausible that fertilizer placed in vertical holes is below the concentration of tree roots and, therefore, not effectively utilized.

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Fertilizer continued from page 12

One perceived disadvantage of soil injections is that the fertilizer must be soluble in this method (Harris 1992, Pirone et. al. 1988), which increases the possibility of runoff and leaching (Ferrandiz, 1988 and Swanson and Rosen 1990). However, suspension fertilizers that are considered non-leaching have been available for the tree care industry since the late 1970's. Also, as noted with vertical- hole fertilization, fertilizer solutions or suspensions injected into the soil at a depth of approximately 18 inches (Neely and Himelick 1996) may be below the effective root system of trees.

Effect of Fertilizer Timing

Most of the current literature recommends application of nutrients in either spring or fall (Mader and Cook 1982, Pirone et. al. 1988, Harris 1992). Early research by Smith (1978) found fall applications of nitrogen in October to December to provide better growth response than spring, but Neely et. al. (1970) found spring applications to be the most effective. Kuhns (1987) reports that fall applications of nitrogen provide a greater increase in spring growth than spring applications because of the lag time between fertilizer applications and plant response. In a study by Weinbaum et. al. (1984), N-labeled fertilizer applied in spring accounted for 25% of the total foliage N. The other 75% of the total N was absorbed during the previous growing season, stored and then translocated in spring to the new growth. In a later study with containerized trees the lowest N absorbed (4.5%) was with dormant applications and the highest (30-39%) when trees had foliage (Weinbaum 1988).

Shigo (1989) recommended timing nitrogen applications to coincide with phonological events such as wood formation or shoot growth. However, Harris (1992) commented that our current level of knowledge regarding species, soils, fertilizers, weather and their interactions is not sufficient to accurately time nitrogen applications for specific phenological periods. It should be noted that most of these results or recommendations were for soluble nitrogen applications alone and that response from slowly soluble and/or complete formulations may differ.

Most authorities are in agreement that late summer application of fertilizers in temperate climates may prevent proper hardening off of tree tissues (Homes and Mosher 1975, Pirone et. al. 1988). Although I have never observed this effect in the field, based on cellular response in turfgrass (Beard, J.B. 1973), the potential for winter injury from late summer fertilization is probably greatest with soluble nitrogen applications, and can be mitigated with the addition of potassium.

Effect of Fertilizer Type

Fertilizers are either organic (carbon-based) or inorganic (non-carbon based), and either type may be natural or synthetic. Organic fertilizers typically have lower solubility and salt index than inorganic fertilizers, although exceptions do occur. In addition, soluble fertilizers may be coated to reduce their solubility. Although urea contains a single carbon atom and may be natural or synthetic, it is not considered organic because the carbon is not linked to hydrogen and the nutrients ions are released rapidly in water.

Urea and other fertilizers such as ammonium nitrate and ammonium sulfate that contain only nitrogen are called Incomplete, and fertilizers that also contain sources of

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both phosphorus and potassium are called Complete. It is important to recognize that each type of fertilizer may have a different effect on plants.

May and Posey (1956) reported equivalent growth of pine seedlings either from a single application of 248 lbs of N/acre from ureaform (slowly soluble synthetic organic nitrogen) or 376#N/.acre from ammonium nitrate (soluble inorganic nitrogen) distributed over eight applications. Bengtson and Voigt (1962) found N from ureaform to leach to a lesser extent than from ammonium nitrate. Whitcomb (1987) maintains that, given all other factors are equal, a slow-release fertilizer, such as ureaform, will provide nutrients for plants more efficiently than dry, chemical (inorganic) fertilizers.

Perhaps the most extensive study of the effect of fertilizer type was conducted by Neely, et. al. (1970). Four nitrogen fertilizer types were used: ammonium nitrate, ammonium sulfate, urea, (all soluble, inorganic); and ureaform (synthetic organic). All fertilizers were applied to the soil surface in the spring and, although the authors concluded that there was no difference in fertilizer types, Struve (2000) later graphed the data and determined that the optimum rate for urea was 1/3 higher than for ureaform.

Effect of Fertilizer Rate

Although some authorities relate the amount of fertilizer to be applied as a function of trunk diameter, fertilizer rates based on root zone are considered a better practice. Pirone et. al. (1988) recommend 2 to 4 pounds of 10-6-4 per inch DBH which equates to 0.2 to 0.4 #N per inch. In general, recommendations for most soils range from 2 to 6#N/1000 sq. ft although rates as high as 12#N/1000 have been applied for established trees (Struve 2002). ANSI A300 Fertilizer Standards recommend between 2 and 4 pounds of actual nitrogen per 1,000 sq. ft. for slowrelease fertilizers and between 1 and 2 pounds N / 1,000sq. ft for quick-release fertilizers Warren (1993) fertilized flowering dogwood (Cornus florida) seedlings at 3 levels of nitrogen and found that top dry weight increased with increasing N but that dry root weight decreased with increasing N. Yeager and Wright (1981) found that lower rates of N stimulated root growth while higher rates (6x) caused the root:shoot ratio to decrease. Although root:shoot ratios are typically given in dry weights, root weight is less important than root surface because most absorption occurs through fine roots, which contribute little to dry weight. (Kozlowski, et al 1991). According to Pregitzer, et. al. (1993), production of fine roots of broadleaved trees was much greater in response to added water plus N when compared with water alone. The fine roots produced in response to added water plus N also lived longer. Another obvious disadvantage of a coarse textured root system is the large amount of photosynthate used in maintenance respiration at the expense of shoot growth (Kozlowki, et.al. 1991). Perhaps the ratio of root surface to leaf surface would be a more meaningful measurement.

Fertilized (left photo) and unfertilized white ash (Fraxinus americana). Seedling trees were grown in sandy loam topsoil with 6.7 pH and low to moderate fertility in 15 gallon containers. Trees weighing an average 45 grams were planted 05/21/07 and fertilized with 5.1 grams of 30-10-7 slowly soluble fertilize. The shoot system was evaluated 09/20/07 and the root system evaluated after leaf drop in the fall. Although the average tree weight was essentially the same (287 grams for unfertilized and 289 grams for fertilized), the root system of fertilized trees was noticeably finer textured and more dense, and the overall quality was rated significantly higher. Root surface area will be quantified as the study continues.

Effect of Fertilizer on Newly Transplanted Trees

Unfortunately, much of what has been written about the detrimental effect of adding fertilizers at the time of transplanting is a holdover from earlier fertilizers such as sodium nitrate, which, although allowed in USDA's National Organic Program, is rarely used today. Sodium nitrate has a salt index of 100, and sodium is not only toxic to plants but also causes soil to lose aggregation and compact. In addition, the variable results of past studies had led many authorities to recommend no fertilization at the time of planting. As a result there is much controversy about fertilization during establishment and many arborists and urban foresters are hesi-

Fertilizer continued on page 16

Fertilizer continued from page 15

tant to fertilize at this time.

The practice of using rooting area to determine fertilizer rate can lead to significant under applications for recently transplanted trees when compared to the rate recommended by trunk diameter.

In a study by Day and Harris (2007), fertilization at a rate of 3#N / 1,000 sq. ft. did not speed establishment and did not affect trunk growth, shoot extension or leaf nitrogen content of red maple (Acer rubrum) and littleaf linden (Tilia cordata). They also did not find a difference between spring and fall applications. The authors noted that, based on ground surface area, a tree that was not transplanted would receive 20 to 40 time as much fertilizer as the same tree after transplanting because of the reduction in root area. Additional research is in progress, which will examine higher rates of fertilization.

Fertilized (left photo) and unfertilized black gum (Nyssa sylvatica) street trees in Aurora, Ohio under the supervision of City Forester Courtney Schumn. Tree DBH was 2 inches, root ball diameter was 2 foot, and soil was clay loam with a 7.05 pH. Trees planted April 25, 2007, fertilized August 22, 2007 and evaluated June 20, 2008. Fertilized tree received 0.09 pounds N per inch DBH of 30-10-7 slowly soluble N fertilizer injected into the root ball, which is 10x the amount recommended by root area. In addition to greater overall quality ratings, SPAD 502 readings of the relative amount of chlorophyll of fertilized tree was significantly higher. Nutrient analysis and growth parameters will be evaluated as the study continues.

Ferrini, et.al. (2005) reported that shoot growth, leaf gas exchange leaf area and chlorophyll content on English Oak (Quercus robur L) were all higher in fertilized plants, especially in the second and third years after planting. However, in a later study (Ferrini and Baietto 2006) with sweet gum (Liquidambar stryaciflua L.), Japanese pagoda tree (Styphnolobium japonicum Schott) and European ash (Fraxinus excelsior L.), fertilizer had limited positive effects in the first year following transplanting and failed to provide better results in the following years. According to the authors, the difference in results between the two studies could be caused by site differences including soil structure, presence/absence of turfgrass and climate. It is also possible that the rate and distribution of fertilizer in the second study was a factor. As the authors pointed out, the application rate was higher than generally recommended by the root area method. However, based on rate by DBH, the trees received about ¼ to ½ the recommended amount. In addition, the fertilizer was distributed over a much larger area than the root balls, which averaged 1.4 to 1.7 sq. ft. The area fertilized was 27 sq. ft. and it is possible that at least a portion of the fertilizer (⅓ slow release N) was not available to the root system during the three year study.

In Summary

Although current fertilizer recommendations conclude that nitrogen fertilizer type doesn't appear to be important, very little research has been published with coated or slowly soluble sources of nitrogen. For example, timing of application may not be as critical

Fertilizer continued on page 17

Fertilizer continued from page 16

with slowrelease nitrogen fertilizers and the lower salt index and release rate may affect rate recommendations. Likewise, although little difference has been reported among fertilizer application methods, fertilizers placed in holes or injected more than a 12 inch depth in the soil may have little impact on tree nutrition, and results from surface applications to trees in nursery or other situations without competing vegetation may not be comparable to trees growing in turfgrass. And finally rate recommendations based on root surface area may be adequate for established trees but inadequate for recently transplanted or other trees with limited root area.

Based on the myriad of fertilizers, methods, timing, rates of application and plant species and soils, we need to be more specific in regards to the type and conditions of fertilization when we discuss the effects of fertilization. ■

TREE Fund Update

The John Wright Memorial Scholarship Fund was established in 2008 to create a substantial scholarship fund to help college students interested in commercial arboriculture achieve high academic goals and support the arboriculture industry. The intent of this award is to enable students to attend college without accumulating burdensome dept. The $2,000 John Wright Memorial Scholarship will be awarded at the TREE Fund's summer Board of Trustees meeting. The scholarship recipient will be notified by e-mail and letter. The award is non-renewable, but can be applied for annually. All awards will be paid directly to the recipient's educational institution, in two equal payments. Proof of attendance and minimum GPA will be required prior to second payment.

High school seniors entering college or community college, and returning college students attending accredited U.S. colleges or universities are eligible to apply. Awards may only be used for undergraduate study and are limited to those seeking a first bachelor's degree or associate's degree and plan to enter the arboriculture industry.

You can apply online at the TREE Fund website. Applications are due by June 16th.
More information: http://www.treefund.org/jwmscholarhistory.htm
Application: http://fs2.formsite.com/TREEFund/jwm-scholarship/index.html ■

STIHL Tour des Trees
To Benefit the TREE Fund

The Tree Research and Education Endowment Fund (TREE Fund) is pleased to welcome STIHL Inc. as title sponsor of the 2009 Tour des Trees. A cross-country cycling tour now in its 17th year, the Tour des Trees has become the signature fundraising event of the TREE Fund, and America's largest fundraising event for tree research.

We proudly announce the Florida Chapter members who are training for the 2009 Stihl Tour des Trees in New England this year. From the starting line in Central Park in New York City on July 19th to the finish line in Providence Rhode Island on July 25, join us in cheering on ***Andy Kittsley, Tammy Kovar,*** and ***Laura Sanagorski*** during their journey to raise money for the TREE Fund. The cyclists will traverse beautiful, historic New England, planting trees, making friends and working to educate the public about the importance of providing proper care for urban trees. In the process they hope to raise half a million dollars for the TREE Fund's scholarship, research grant and education programs.

You can be a part of the excitement without even leaving your chair - supporting our riders is just a click away. Support your favorite rider on http://stihltourdestrees.org/event/riders.html ■

Consultant's Corner

by Joe Samnik, Consulting Arborist

Appraising Convenience and Comfort

Appraising the loss of a casualty tree as it relates to the loss of convenience and comfort to the property owner is a problematic task even for the most seasoned plant appraiser. Few, if any, articles have been written about this matter. The plant appraiser typically focuses on tree or plant values, and leaves the matter of the loss of recompense for creature comforts to others.

Enter some assistance in the form of Elowsky v. Gulf Power Company. The subject tree was located directly on the plaintiff's residence property line with that of their neighbors, at whose insistence defendant Gulf Power Company hires the services of defendant Matthews Tree Surgery Company to remove the tree.

At the trial it was established that Mr. Elowsky was a city policeman who at regular intervals worked the night shift necessitating that he sleep during daylight hours; that the tree shaded and cooled his bedroom during the afternoon of such sleep and that since its severance he has had difficulty in sleeping due to the increased heat. It was also established that the removal of the tree reduced the property value by approximately $200.

The jury returned a verdict for the plaintiff. The defendants moved for a new trial which was granted. The court gave the following instruction: in considering the question of damages, the court instructs the jury that the owner of the property has the right to enjoy it according to his own tastes and wishes, so that the taking of a tree may deprive him of convenience and comfort in the use of his land, for which he is entitled to be compensated, although the felling of the tree might not generally diminish the market value of the property. If you find from the evidence that the plaintiffs were deprived of the convenience and comfort of the tree in the use of their property, you should take such factors into consideration in fixing the amount of damages to which they are entitled, and allow a reasonable amount for such inconvenience or discomfort.

Also, in Gilman v. Brown, the court held that it must not be forgotten that recovery and trespass is always based upon a wrongful invasion of the plaintiff's rights, and that the rule of damages adopted should be such as to more carefully guard against failure of compensation to the injured party that against possible over charge upon the wrongdoer. An owner of real estate has a right to enjoy it according to his own taste and wishes, and the arrangement of shade trees, fruit trees and the like may be very important to him, and the modification thereof may be an injury to his convenience and comfort in the use of his land. Hence it is apparent that while the owner may be deprived of something valuable to him for which he would be willing to pay substantial sums of money or which might have cost him substantial sums, yet he might be wholly unable to prove any considerable damages merely in the form of depreciation of the market value of the land. The owner of property has a right to hold it for his own use as well as to hold it for sale and if he has elected the former he should be compensated for an injury wrongfully done him in that respect, although that injury might be unappreciable to one holding the same premises for purposes of sale.

Appraising trees and plants is an art and a science, both of which must be approved by the attorney with whom you are working; you now have an insight into appraising the loss of creature comforts as they relate to trees and plants.

The material which appears in this article is not meant to provide legal guidance or advice in plant or tree appraisals. If you need legal guidance or advice seek the counsel of an attorney. This article is for educational purposes only. ■

News From International

Certification Eliminates Domains

ISA Certification started the year with many changes! We are in the process of becoming
ISO Accredited, offering Computer-Based Testing for certification exams and recently eliminating domains from our Certified Arborist exam.

The Test Committee has applied the same passing score to its exams since the early 1990's. These exams were based on an overall and a domain passing percentage score. In order to maintain best practices for certification testing, and in order to meet standards as set by the ISO 17024 Accreditation of Personnel Certification Programs, the committee needed to change the exam format. The change will require an overall passing percentage score increase, and the elimination of retaking domains.

Why is ISA eliminating domains?
In order to maintain best practices for certification testing, and in order to meet standards as set by the ISO 17024 Accreditation of Personnel Certification Programs, the Test Committee has determined to change the format of the exams. The change will require an overall passing percentage score increase, and the elimination of retaking domains.

Why is the passing score changing from 70 to 72 percent?
Based on the Angoff Technique, widely used in many certification programs in North America, the committee needed to set the passing score 2 percentage points higher than the 70 percent set more than 15 years ago. The Test Committee, made up of a diverse group of professionals from all segments of the arborist community, justified the slight incremental change in the passing score as consistent with the increase in training and educational materials now available as well the increased expectations of employers of Certified Arborists.

When will the new passing score take effect?
July 1, 2009

What does this mean to the candidate?
He or she will be required to obtain a 72 percent overall on the exam in order to have a passing score. If a passing score of 72 percent is not achieved, the candidate will have to retake the entire exam until a passing score is obtained to gain certification.

What if the candidate is retaking domains?
He or she must complete the exam under the existing requirements and will have until September 30, 2009 to retake domains before having to retake the entire exam.

For additional questions, please contact Erin Anderson at 888-472-8733 ext. 237 or Derek Vannice at ext. 234.

Continuously Improving our Profession

ISA Certification is in the process of developing a Code of Ethics policy for Certified Arborists to serve as a central guide and reference for arborist's in support of their day-to-day decision making. It is meant to define our organization's mission, values, and principles linking them with standards of professional conduct and industry standards. This document will be an important communication tool to help sustain consistency around the world and create an even playing field for all Certified Arborists.

The Code of Ethics policy will be sent to all current ISA Certified Arborists to sign in the next few months and will become part of the application process for all new incoming applicants. We anticipate that implementing this policy will help to reduce poor professional conduct and practices. ISA Certified Arborists will be held accountable for their actions and in turn improve their business relations within their community and among their peers.

This Code of Ethics will offer an invaluable opportunity for ISA to continue building a positive industry image which will increase confidence and trust in our Certification program. ■

The following article is provided in English and Spanish

Storm Damage Assessment Protocol for Florida Hurricanes

Dr. Francisco Escobedo, School of Forest Resources and Conservation, University of Florida, Gainesville
and
Henry Mayer, Miami Dade IFAS Extension Agent and ISA Hispanic Committee

Past hurricane seasons in Florida demonstrated the need for information and tools for effective pre-hurricane planning and post-hurricane assessment and response. Following the 2004–05 hurricanes, street trees were severely damaged and downed trees and branches accounted for a substantial part of post-hurricane debris. Other Gulf Coast communities are still trying to assess damage, account for debris removal costs, and initiate street tree restoration activities.

The Storm Damage Assessment Protocol (SDAP) from the i-Tree suite of software was developed for communities as a low-cost and easily accessible tool for managing damage to the urban forest following ice storms (http://www.itreetools.org/applications/sdap.shtm). This program establishes a standard method to plan for and assess widespread damage before and after an ice storm in a simple and efficient manner providing information on storm impacts, time, resources, and funds needed to mitigate storm damage.

The SDAP application and field methods were designed to be used for pre–and post–storm estimates from ice damage events in the northeastern United States. Unfortunately the protocol is not applicable for assessing hurricane wind effects in coastal communities in the southeast US. To address this need, the University of Florida, School of Forest Resources and Conservation through a grant from the Florida Division of Forestry worked with Christopher Luley and Jerry Bond from Urban Forestry LLC to develop a Florida Hurricane Adaptation of the SDAP.

The new SDAP Florida Hurricane Adaptation will allow hurricane-prone communities in Florida to plan for, assess, and respond to hurricanes and their effects on urban forests. The protocol was developed based on existing hurricane related woody debris, tree cover and density, wind speeds, and right-of-way debris data. This data was then used to develop statistical relationships to Federal Emergency Management Agency (FEMA) debris data, street segment information, and disposal costs from communities throughout Florida that experienced the 2004-2005 Florida Hurricane seasons. Post-hurricane tree removal and pruning rate and cost data were also collected and integrated into the protocol. Methods for the protocol have been published in Arboriculture and Urban Forestry, a peer-reviewed journal. Some of the results for the 2004-2005 hurricane seasons in Florida show that average tree debris generation per mile of street was 488 cubic yards and cost of removal and disposal averaged $21.50 per cubic yard.

This application should have the potential to facilitate the planning and assessment of hurricane tree debris and cost estimates and provide information useful for possible FEMA reimbursement requirements. The project will also increase the use of SDAP and i-Tree in Florida and in doing so promote and advocate proactive management of the urban forest resource. The protocol will be released in the following months in the most recent version of i-Tree as part of its Storms package: http://www.itreetools.org/whats_new/index.shtm. ■

El siguiente articulo esta escrito en Ingles y en Español.

Protocolo Para Valorar Los Daños de Tormenta en la Florida

Dr. Francisco Escobedo, Escuela de Recursos Naturales y de la Conservación de la Universidad de la Florida, Gainesville
y
Henry Mayer, Miami Dade IFAS Agente de Extension y ISA Comité Hispano. Revisión: Rubén Regalado. Miami-Dade Extension Service

Las temporadas de huracanes del 2004-2005 en la Florida demostraron la necesidad de tener a la mano información y herramientas eficaces para planificar actividades eficaces después del huracán. En la temporada 2004-05, los árboles sembrados en la calle fueron dañados seriamente, muchos árboles caídos y ramas quebradas dan cuenta de una parte substancial de los desechos arbóreos encontrados después del paso del huracán. Comunidades en la costa del golfo todavía están intentando determinar el daño, explicar el costo del retiro de desechos e iniciar actividades de restauración del arbolado urbano.

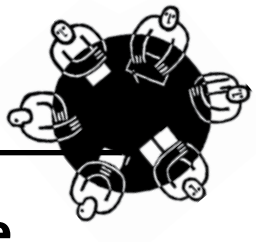
El protocolo de asesoramiento de daños de tormentas (SDAP) por sus siglas en Inglés, del programa i-Tree fue desarrollado para las comunidades como una herramienta barata y fácilmente accesible para manejar el daño al bosque urbano después de las tormentas de hielo (http://www.itreetools.org/applications/sdap.shtm). Este programa establece un método estándar para planificar y determinar el daño antes y después de una tormenta de hielo de una manera simple y eficiente proporcionando información sobre impactos de la tormenta, estima los recursos, y financiamiento necesario para atenuar el daño causado.

Los métodos de uso y de campo del SDAP fueron diseñados para ser utilizados para estimar los daños antes y después de las tormentas de los hielo acontecidas en los Estados Unidos. Desafortunadamente el protocolo no es aplicable para determinar efectos de vientos huracanados en comunidades costeras en el sureste de los E.E.U.U, como Florida. Para solucionar esta necesidad, la universidad de la Florida, Escuela de los Recursos Forestales y de la Conservación con financiamiento de la División Forestal de la Florida, y con la colaboración de Christopher Luley y Jerry Bond de la compañía LLC, desarrollaron una adaptación del programa del SDAP para la Florida.

La nueva adaptación de SDAP para la Florida permitirá que las comunidades propensas a huracanes puedan planificar, estimar, y responder a los efectos de huracanes al arbolado urbano. El protocolo fue desarrollado basado en datos actuales sobre desechos, cobertura arbórea y densidad de los árboles, y velocidades del viento. Estos datos fueron utilizados para desarrollar relaciones estadísticas con los datos que suministra la agencia Federal Emergency Management Agency (FEMA) sobre costos federales de recolección de deshechos en varias comunidades en la Florida que fueron afectadas durante la temporada 2004-2005. La remoción del árbol después del huracán, y los costos de poda también fueron registrados e integrados en el protocolo. Los métodos del protocolo se han publicado en la revista del ISA Arboriculture and Urban Forestry. Algunos de los resultados para la temporada 2004-2005 reflejan que en promedio los desechos provenientes del arbolado urbao generados por milla son de 488 yardas cúbicas y el costo de remoción fue de $21.50 por yarda cúbica.

Esta aplicación tiene el potencial para facilitar el planeamiento y asesoramiento de los daños ocasionados por huracanes y potencialmente estimar el costo del reembolso de FEMA. El proyecto también aumentará el uso de SDAP y de i-Tree en la Florida y al hacer eso promoverá y abogará por una gerencia dinámica del bosque urbano. El protocolo será lanzado en los meses siguientes en la versión más reciente del i-Tree como parte de su paquete para el uso en las tormentas. Esta disponible en, http://www.itreetools.org/whats_new/index.shtm ■

Florida Chapter Board Updates



Arborist Licensure

As you are well aware, the Florida Chapter made another attempt at getting Florida Arborist Licensure passed during the most recent legislative session this spring. Despite the best efforts of our lobbyists in the Special Session, our bill did not get passed. The lobbying firm has taken this turn of events very seriously (and quite personally as the Arborist Licensure Bill is the first bill that our lobbyist has failed to get passed) and has offered to champion our cause in the next legislative session at no cost to the Chapter. We will keep you posted in 2010. We may have lost the battle, but not the war. ■

With Florida's unique environment, extra attention must be paid to preserving our natural resources, especially our trees. By purchasing a TreesAreCool license plate you help underwrite programs that directly benefit trees of Florida which help keep our state the uniquely beautiful place we all call home.

Healthy trees benefit wildlife, increase property values and help cool and clean the air. The Florida Chapter of the International Society of Arboriculture, a non-profit organization, is committed to serving the needs of Florida's professional arborists and tree-care consumers. The TreesAreCool license plate revenues benefit our urban environment of Florida through tree research, the on-going education of tree-care practitioners, and by providing public education programs about tree care and preservation.

You do not need to wait for your current plate to expire.
Do your part and order your TreesAreCool plate today!

ISA
FLORIDA CHAPTER

How to Order Your TreesAreCool Specialty Plate

In person: You can select and pay for your TreesAreCool specialty license plate in person at your county tax collector office.

By mail: Complete and return this form with your vehicle registration renewal notice and a check for an additional $39 ($25 annual donation, $2 annual state fee and a one-time new plate fee of $12). If your renewal notice indicates that it is time to replace your license plate, do not include the $12 new plate fee.

Name: _____
Address: _____
_____
City: _____ Zip Code: _____

The TreesAreCool program is administered by the Florida Chapter of the International Society of Arboriculture (ISA).

Letters to the Editor

We welcome your thoughts about Florida Arborist articles, about your Florida Chapter, or about tree issues in general.

Email your letters to:
floridaisa@comcast.net

or mail to:
Florida Chapter - ISA
7853 S. Leewynn Court
Sarasota, FL 34240

Please remember:
Letters should be no longer than 300 words.
We reserve th right to condense letters, or to edit as necessary.

Rainbow Treecare Scientific's Solution Center covers you from A to Z

Rainbow Treecare Scientific is designed to serve arborists. Our new **Solution Center** is staffed with specialists who provide training and sales support for tree health care products. Our company was founded in arboriculture, so we can also help with your questions about adding services, profitability, and marketing to clients.

A — Aphids — 1 **2** 3 — Xytect®
Fall application provides control next season.

B — Bronze Birch Borer — 1 **2** 3 — Xytect® and/or Bifenthrin
Attacks weak, stressed trees. Mulch, irrigate, and promote health to prevent this pest.

C — Chlorosis — 3 — VERDUR®
Macro-infuse in fall for multi-year green up. Combine with soil decompaction, fertilization.

D — Dutch Elm Disease — 3 — Arbotect® 20-S
Macro-infuse to protect for 2 to 3 seasons. Does not stop root graft infection.

E — Emerald Ash Borer — 1 **2** 3 — Xytect® and/or Bifenthrin
Annual preventive applications work best. Highly infested trees may be difficult to save.

F — Fireblight — 1 — Copper hydroxide
Prune below infected tissue in winter. Spray in dormant season and at full bloom.

G — Gypsy Moth — **1** 3 — Spinosad Acephate
Spray at early instar stage. Broad programs often use *Bacillus thuringiensis*.

H — Hemlock Woolly Adelgid — 1 **2** 3 — Xytect®
Apply soil applications >60 days prior to fall feeding. Re-treat when suppression falters.

I — Injured Roots — 2 — Cambistat® Prevention Air Tools
Air tools decompact soil. Blend in organic matter and mulch over the top.

J — Japanese Beetle — 1 **2** 3 — Xytect® and/or Bifenthrin
Adults feed midsummer, grubs feed on roots until October.

K — K Deficiency — 2 — Fertilizer
Essential element and macronutrient.

L — Lepidoptera — **1** 3 — Spinosad Acephate
Foliar spray works best for early instar caterpillar stages.

M — Mites — **1** 3 — Aracinate® LUCID™
Micro-infusion with M3 Infuser, or foliar applications combined with horticultural oil.

N — Needlecast — 1 — Chlorothalonil
Requires two applications; one at 1/2 candle extension and one at full extension.

O — Oak Wilt — 3 — Alamo®
Protect healthy oaks within root graft distance of infected trees. Save infected white and bur oaks.

P — Pine Wilt Nematode — 3 — Pinetect®
Treat preventively every other year prior to May 1.

Q — Quercus Decline — Cultural Practices
Caused by a complex interaction of biotic and abiotic stresses.

R — Rhizosphaera — 1 — Chlorothalonil
Requires multiple years of treatment and cultural practices.

S — Sycamore Anthracnose — 3 — Arbotect® 20-S
Macro-infusion suppresses symptoms for 3 seasons.

T — Two-Lined Chestnut Borer — 1 **2** 3 — Xytect® and/or Bifenthrin
Attacks weak, stressed trees. Mulch, irrigate, and promote health to prevent this pest.

U — Urban Stress — 2 — Cambistat® ISA Arborist
Everyone should call an arborist to care for their ailing urban trees.

V — Verticillium Wilt — No Known Cure
Delay symptoms by proper pruning, watering, and fertilization. Rainbow is testing treatments.

W — Weevils — 1 **2** 3 — Xytect®
Fall application provides control next season.

X — *Xylella fastidiosa* — 3 — BACASTAT®
Annual application of Bacastat suppresses symptoms of bacterial leaf scorch.

Y — Yellows — No Known Cure
Difficult to identify. Set low expectations with homeowner.

Z — Zimmerman Pine Moth — 1 — Bifenthrin
Apply to trunk and main branches in spring and again midsummer.

Application Method
1 Foliar Spray
2 Soil Applied
3 Tree Injection

highlighted number represents recommended method

Pest / Tree Health Problem

Product Solution

Additional Information

Welcome!

New Florida Chapter Members

Here are the individuals that joined the Florida Chapter during the first and second quarter of 2009. If you see a name from your area of the state, look up their phone number online* and give them a call. Introduce yourself and find out what aspect of arboriculture the new member is involved in. Let's make the Florida Chapter friendlier. We're all working in different ways for the same goals. Get to know other chapter members. You might make some helpful connections for the future.

First Name	Last Name	City	State
Misty	Hensley	FORT MYERS	FL
John	Whittle	CORAL SPRINGS	FL
Andres	Cabale	MIAMI	FL
Diane	Finney	CELEBRATION	FL
Raphael	Gonzalez	MIAMI	FL
Robert	Korynas	LAND O'LAKES	FL
Yancey	Peterson	CLERMONT	FL
Peter	vanderWesthuizen	ROSWELL	GA
Bryan	Wilson	TALLAHASSEE	FL
Christofer	King	JACKSONVILLE	FL
Kathryn	Brewer	PALM BAY	FL
Michael	Newton	TALLAHASSEE	FL
Staci	DeBolt	YANKEETOWN	FL
Matthew	Marzano	POMPANO BEACH	FL

**Go to http://www.isa-arbor.com, then go to "Members Only" and log in. Then go to ISA membership directory. If you do not know your log in for members only, contact ISA headquarters at (888) 472-8733. Once you log in, you can update your address, check your CEU's, edit or verify Certified Arborist information and search the membership list.*

2009 Certification Exam Schedule

The **FLORIDA CHAPTER of ISA** is pleased to announce our revised 2009 schedule of Certification exams. See the chart below for the site nearest you.

Date	Exam/ Class	Location	Time	Proctor or Instructors	Last Date to Register	Cost Member/ Nonmem
Sunday June 14 2009	Certified Arborist **Exam**	Trees Florida Ritz-Carlton 1111 Ritz Drive Sarasota, FL 34236	7:30 AM to Noon	Norm Easey Patty Morrison	See ISA Website	$150/ $250
Saturday Oct. 10, 2009	Certified Arborist **Exam**	Hillsborough IFAS 5339 CR579 Seffner FL 33584	7:30 AM to Noon	Rob Northrup Richard Bailey	See ISA Website	$150/ $250

This schedule is subject to change as additional tests and review sessions may be added.

For an application form to register for an Exam call the ISA Office in Champaign, IL at 888-472-8733
To purchase an ISA Certification Study Guide, call the Florida Chapter ISA at 941-342-0153 or order online.

The ISA Illinois must receive your application & exam fees **A MINIMUM OF TWELVE BUSINESS DAYS** prior to the exam date. NO EXCEPTIONS! (ISA Illinois is closed New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the day after, and Christmas Day)
*****PREPAYMENT IS REQUIRED***** VISA/MC/AMEX accepted. US FUNDS ONLY

Trees4Florida Public Service Announcements Available at www.treesarecool.com

With the devastation to trees in Florida by hurricanes, storms and fires, millions of dollars in valuable tree resources have been lost, particularly within the past several years. Jointly, the Florida Urban Forestry Council (FUFC) and the Florida Chapter of the International Society of Arboriculture (FC-ISA) developed the Trees-4Florida program which focuses on making the public more aware of the need to be vigilant in safeguarding our trees and preserving Florida's greatest green resource.

The Trees 4 Florida program has produced a variety of Public Service Announcements (PSAs) available for anyone to free of charge. Included in the campaign are English and Spanish print-quality and broadcast-quality PSA ads and spots. Include them on your website, flyers or any promotional material.

Access these FREE PSAs by visiting www.treesarecool.com; click on Trees4Florida in the menu box to the left.

Up-coming 2009
Board Meeting
Dates & Locations

July 17, 2009 - IFAS - Orlando

September 11, 2009 - TBA

Come see what your Chapter is up to by attending a

Board of Directors Meeting!

This invitation is open to all members.

Please call

941-342-0153

for specific times and locations

Florida Chapter ISA - 2009 Education Schedule

Date	Seminar/Class	Location (s)
June 14-16, 2009	Trees Florida 2009 (Ritz-Carlton Hotel)	Sarasota
July 8, 2009	Arborist Safety and Climbing	Orlando
July 10, 2009	Arborist Safety and Climbing	Tampa
August, 2009	Appraisal	Ft. Lauderdale
August, 2009	Appraisal	Tampa
September, 2009	Grades and Standards	West Palm Beach
September, 2009	Grades and Standards	Orlando
October, 2009	Tree Planting and Establishment	Miami
October, 2009	Tree Planting and Establishment	Orlando
October, 2009	Arborist Safety and Climbing	Jacksonville
October, 2009	Arborist Safety and Climbing	Ocala

Arborist Certification Committee Report

By Norm Easey, Florida Certification Liaison

Arborist Certification is still moving ahead worldwide; there are now 23,733 ISA Certified Arborists, 900 ISA Certified Tree Workers, 1458 Utility Specialists, 302 Municipal Specialists and 275 Board Certified Master Arborists. The Florida Chapter currently has 1733 Certified Arborists.

The Florida Chapter would like to congratulate the following 39 Florida individuals for earning their Arborist Certification during the first quarter of 2009:

Certified Arborist

Jehiel Benavides, Pembroke Pines, FL
Rob Calley, Mary Esther, FL
Robert Castleberry, Naples, FL
Chad Cepuran, Osteen, FL
Craig Conway, Deerfield Beach, FL
Robert Crider, Key West, FL
Teri Davis, Jupiter, FL
Gilberto Diaz, Miami, FL
Miguel Estevill, Miami, FL
Gary Gorecki, Hollywood, FL
Susan Groce, Riverview, FL
Steve Hanas, Clearwater, FL
Michael Hanson, Palm Springs, FL
John Harbord, Clearwater, FL
Edward Harnett, Tampa, FL
Francisco Hernandez, Davie, FL
Joshua Hill, Ft. Myers, FL
Harold Hoyte, Deerfield Beach, FL
April Hurst, Sumterville, FL
Curtis Korabek, Land O'Lakes, FL
December Lauretano-Haines, Southwest Ranches, FL
Ryan Lawhead, Odessa, FL
Thomas Luke, Belleair Bluffs, FL
Martin Lawler, St. Petersburg, FL
Brandon McMullen, Port St. Lucie, FL
Jacob Miller, Okeechobee, FL
Michael Mittiga, Winter Park, FL
Scott Montgomery, Key West, FL
Oddy Msimbe, Hollywood, FL
Peter Mitchell, Bradenton, FL
Filiberto Obregon, Miami, FL
Augusto Odio, Miami, FL
Terrance Payne, Riverview, FL
Kendly Pierre, Naples, FL
Robert Planthaber, Tierra Verde, FL
Richard Sampson, Port St. Lucie, FL
Anthony Smith, Merritt Island, FL
Arnaldo Vega, Pinellas Park, FL
Randy Willich, Ft. Lauderdale, FL

International Society of Arboriculture
Florida Chapter

Our Mission: "To Promote and Improve the Scientifically Based Practice of Professional Arboriculture"

Arborist Code of Ethics

Strive for continuous self-development by increasing their qualifications and technical proficiency by staying abreast of technological and scientific developments affecting the profession.

Not misuse or omit material facts in promoting technical information, products or services if the effect would be to mislead or misrepresent.

Hold paramount the safety and health of all people, and endeavor to protect property and the environment in the performances of professional responsibilities.

Accurately and fairly represent their capabilities, qualifications and experience and those of their employees and/or agents.

Subscribe to fair and honest business practices in dealing with clients, suppliers, employees and other professionals.

Support the improvement of professional services and products through encouraging research and development.

Observe the standards and promote adherence to the ethics embodied in this code.

Florida Arborist
Florida Chapter ISA
7853 South Leewynn Court
Sarasota, FL 34240

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