



Upcoming Educational & Industry Events

May 23 - Research Update & Field Day / 7:45am-4:30pm / Mid-Florida Research & Education Center / 3 CEUs available
Registration and Agenda: <http://mrec.ifas.ufl.edu/FieldDay/default.asp>

July 27-29 - Florida Small Farms and Alternative Enterprises Conference / Osceola Heritage Park /
Registration: www.conference.ifas.ufl.edu/smallfarms

September 9-11 - Florida Agriculture Financial Management Conference / Gaylord Palms Hotel, Orlando /
Registration: www.FAFMC.org

Pesticide Applicator Training

May 6-9 - Southeast Pest Management Conference 'Ultimate Pest Fighting' / University of Florida Physics Building (NPG 1001) / CEUs Available
Registration: <http://entnemdept.ifas.ufl.edu/sepmc/SEPMC>

May 8 - Ornamental/Turf & Private Ag Applicator Licenses Review & Exams / 8:00am-4:00pm / Orange County Extension Education Center / 6 CEUs available
Registration: <http://otandprivateag.eventbrite.com>

May 16 - CEU Day / 8:00am-4:00pm / Lake County Extension Center / Contact 352-343-4101 for registration information
Registration: <http://lakecountyceuday.eventbrite.com/>

May 22 - Right-of-Way Pesticide Applicator License Review & Exams / 8:00am-4:00pm / Orange County Extension Education Center / 4 CEUs available
Registration: <http://rightofway.eventbrite.com>

June 5 - Aquatic Pesticide Applicator License Review & Exams / 8:00am-4:30pm / Orange County Extension Education Center / 4 CEUs available
Registration: <http://aquaticreview.eventbrite.com>

For more information and links to other programs go to any of the following links:

<http://lake.ifas.ufl.edu/calendar.shtml>

<http://orange.ifas.ufl.edu/cfnurseries/>

<http://www.seminolecountyfl.gov/extensionservices/commercial/commercial.aspx>

<http://calendar.ifas.ufl.edu/calendar/index.htm>

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This material is provided as one of the many services relating to the educational programs offered to you by this agency. Our statewide network of specialists is prepared to provide current information on agriculture, marketing, family and consumer sciences, 4-H, marine science, and related fields. We will be happy to help you with additional information upon request.

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Update on Department of Labor H-2B Program Rule from the American Nursery & Landscape Association (ANLA)

By Liz Felter

Background on the Rules

As you know, DOL issued a final rule on January 19, 2011 that will artificially increase H-2B hourly wages by more than 50%. On February 21, 2012, DOL issued a final rule that would make the program even more expensive and complicated to use. The rule requires employers to hire any qualified U.S. worker up to 21 days before the H-2B worker is scheduled to begin. The proposed rule would also involve labor unions in the hiring process and require employers to pay transportation and subsistence costs for potential U.S. workers who work for at least 50% of the season. In addition, the rule includes provisions requiring employers to pay workers with "corresponding employment" duties similar wages. Many of these new requirements are adopted from the H-2A program. Through our experience with the H-2A program, we know that many of these new requirements will make the H-2B virtually impossible to use.

Take Action!

The H-2B Program Rule is slated to go into effect in one week - on April 23 - unless a Federal Court or Congress intervenes. ANLA and many state partner associations support litigation being filed this week in the Northern District of Florida. We hope the court will issue a temporary restraining order blocking the Dept. of Labor (DOL) from implementing the program rule. ANLA is

also working with Congress to fight these two rules. We are encouraging Congress to pass legislation that would block DOL from implementing both the H-2B program rule and the wage rule.

Please contact your two Senators and your Representative in Congress today to stress the importance of the H-2B program to the green industry and to your business. Please tell them that the H-2B program rule that goes into effect next week and the H-2B wage rule that will take effect in October will make it very difficult for you and others to use the H-2B program, which is the only legal labor safety net for many green industry businesses. Ask them to support and work to pass a resolution (H.R. RES 104, S.J. RES 38) which would prohibit DOL from implementing these rules.

You can reach your two Senators and Member of Congress through the U.S. Capitol switchboard at (202) 225-3121. Once connected to the office, please ask for the staff person who handles immigration issues and tell them you need their help to save the H-2B Program. If you have not already done so, please also send a letter to your elected officials through the ANLA website (<http://www.capwiz.com/anla/home>). It only takes a few moments and a few clicks to personalize and send your letter.



Research Roundup

By Juanita Popenoe



How Many Soil Moisture Sensors do you Need?

This study was to determine the optimum number of substrate moisture sensors needed to accurately determine substrate water content for 10 tree species in containers. Based on the results, they recommend species-specific sensor deployment. They concluded that nursery managers can maintain optimal substrate moisture with minimal sensor deployment.

Spray with higher pressure or bigger boom?

Research was conducted comparing spray gun and

spray boom applications in two ivy crops with different crop densities. Using spray guns at higher pressure did not improve spray penetration in the canopy or deposition on the underside of leaves. The spray boom applications resulted in a more uniform spray distribution, but also did not get to the underside of leaves. Of the different nozzle types tested on the spray boom, the extended range flat fan gave the best results. To get good spray penetration and coverage, you need to have enough space between the plants.





Research Roundup - Continued

By Juanita Popenoe

Nitrogen Effects on Stock Plants?

This research studied the quantity and quality of cuttings as influenced by stock plant nutrition of several herbaceous perennials (gaura, dianthus, perovskia, and salvia). They tested the effects of a range of N rates from 0 – 300 mg/L N applied to stock plants on the number of cuttings, rooting percentage and subsequent root development of cuttings. They found 100-150 mg/L N to be the best rates for producing quality rooted cuttings. Little benefit was obtained from the higher rates, and the 0-50 mg/L N treatments produced the lowest number of potential cuttings across all species.

Ozone to Clean Irrigation System and Kill Liverwort?

Researchers in Ontario are looking at the use of ozone to not only clean up irrigation water (current practice) but also to clean out the irrigation system and kill the liverwort in the pots. Liverwort has proven very difficult to control and there are practically no listed chemical controls. Ozone is considered an organic pesticide and worked well to control the liverwort. It was only tested on a few woody pot plants, which it did not hurt, but ozone is well documented to cause damage to some plants. This option shows promise, but will need a lot more work and monitoring to become a commercially viable practice.



Iron Chelates Are Not All the Same

Biodegradable iron chelate EDDS was compared to other chelating agents, EDTA, DPTA, and EDDHA, which are not biodegradable and may cause problems in the environment by making heavy metals more soluble. The results indicate that there were no negative effects on iron availability for horticultural crop production from EDDS with peat based media. Iron solubility was the same as for FeEDTA.

How much water do woody plants need?

Our own Dr. Beeson worked with rooted cuttings of Indian hawthorn to determine how much water is needed to grow the plants in containers without wasting any. For the first 127 days after transplanting, substrate evaporation was the main source of water loss. Actual evapotranspiration water use doubled with spring growth flush and water use

increased with growth flushes. Indian hawthorn used about 38% less water than viburnum. He modeled water demand and found that the greatest predictor of water use in our humid climate was the solar radiation and percent plant canopy closure. With this model he can provide equations for a computer to tell you when and how much water you need to apply.

Irrigation Frequency and Fertilizer Use

Rhododendron plants were grown by Oregon researchers with the same amount of irrigation water provided at different times of day and with different rates of nitrogen fertilizer. Researchers felt that leaching of nutrients by large volumes of irrigation at one time could be avoided by more frequent smaller amounts of water. Increased N rate increased nutrient uptake and plant dry biomass. Irrigation frequency did not affect plant dry biomass, but more frequent irrigation decreased uptake of phosphorus, boron and manganese and increased calcium uptake in all cultivars. Their results indicated that irrigating plants once per day to container capacity (all the water a container can hold without any coming out the bottom) early in the growing season may allow better nutrient uptake than more frequent irrigations. Later in the growing season when larger plants experience more water stress, more frequent irrigation improved uptake of certain nutrients. Nitrogen availability influences the uptake and demand of other nutrients especially when combined with drought stress. Fertilizer formulations need to be adjusted with altered irrigation or nitrogen rates to optimize efficiency.

Low P Causes Compact Growth in Bedding Plants

Growers usually use fertilizer with a high proportion of nitrate nitrogen to promote compact growth in bedding plants. It was thought that it was the nitrate that caused compact growth, but these fertilizer formulations also have low phosphate levels that may also cause compact growth. These researchers compared various fertilizers controlling phosphate and nitrate vs ammonium nitrogen on plant growth. They found that phosphate levels had a much greater effect on compact growth than nitrate nitrogen.





IR-4 Scale and Mealybug Efficacy Update

By Matt Lollar

Timing is everything when it comes to managing scale and mealybug insects. Contact products must be applied to inhibit the crawler stages of these insects and systemic



Photo by Lance S. Osborne

products are variable as to if they are taken up by the xylem or the phloem. The results of over six years of scale and mealybug chemical trials, spanning from 2004 to 2009, were recently revealed. Twelve products were tested overall, including neonicotinoids and insect growth regulators along with several others at varying rates. The products tested were Celero 16WSG/Aloft SC, Flagship 0.22G/20SG, Safari 2G/20SG, TriStar 30SG/70WSP, Distance, and Talus 40SC. Aria 50SG, BotaniGard ES, Kontos, NNI-0101 20SC (Pyrifluquinazon), A16901B (unknown), and QRD 452

(unknown) were included in some of the studies.

The IR-4 scale and mealybug efficacy studies were conducted throughout the United States. That being said, many of the treatments were applied to plant material that would struggle in Central Florida and the products applied may be phytotoxic to plant material not tested. Also, studies did not include all scale and mealybug pests found in Central Florida. Always read the label before application. The following table is a summary of the results from all studies reported in the update.

For complete results, please refer to the complete publication at: http://ir4.rutgers.edu/ir4_pdf/default.aspx?pdf=http%3A%2F%2Fir4.rutgers.edu%2FOrnamental%2FSummaryReports%2FScaleMealyBugDataSummary2012.pdf

Results	
Elongate Hemlock Scale and Cryptomeria Scale	Flagship 25WP (2 & 4 oz/100 gal), Safari 20SG (4 & 8 oz/100 gal or drench), Talus 40SC (21.5 oz/100 gal), and TriStar 70WSP (1.7 & 3.4 oz/100 gal) provided excellent control.
Calico Scale	Trunk sprayed Safari 20SG (13 oz/1.1 gal) provided good control when mixed with Pentra-Bark surfactant.
False Oleander Scale and Fletcher Scale	All products tested provided mediocre to good control.
Armored Scale	All products tested provided poor control.
Florida Wax Scale	Flagship (2, 4, & 8 oz/100 gal), Safari (24 & 48 oz/100 gal), and TriStar 70WSP (1.13, 2.26, & 4.52 oz/100 gal) provided excellent control and Talus provided good control.
Oystershell Scale	Talus 40SC (21.5 oz/100 gal) provided excellent control as a foliar spray. Safari 20SG provided excellent control as a drench.
Cottony Maple Scale	Flagship 25WP (2 & 4 oz per 100 gal) provided mediocre to good control.
Cottony Cushion Scale	Distance, Flagship, Kontos, NNI-0101, Safari, Talus, and TriStar provided good to excellent control.
Euonymus Scale	Aloft, Distance 0.86E (32 oz/100 gal), and Talus 40SC (21.5, 43 & 86 oz/100 gal) provided excellent control.
False Florida Red Scale	Flagship 25WG and Safari 20SG as drench applications provided good control and mediocre control was observed with Distance.
Tea Scale	Safari as a drench or soil treatment and Kontos (3.4 oz/100 gal) provided good to excellent control.
Holly Pit Scale	Aloft SC (10 oz/100 gal) provided good control.
Pine Needle Scale	Aloft SC (10 oz/100 gal), Distance (12 oz/100 gal), Kontos (3.4 oz/100 gal), NNI-0101 (18 oz/100 gal), Safari 20SG as a drench, Talus 70 DF (14 oz/100 gal), and Tristar 30SG (8 oz/100 gal) provided excellent control.
Citrus Mealybug and Mexican Mealybug	All products tested provided good to excellent control. Results were not observed until 6 weeks after treatment in some trials.
Madeira Mealybug	TriStar provided excellent control when mixed with Capsil surfactant. NNI-0101, Safari, and Talus provided good to excellent control. Excellent control continued 38 days after treatment.
Phormium Mealybug	Flagship, Safari, and Tristar provided good to excellent control.