



Green-Up News

For The Commercial Grower
By Dana Venrick, Commercial Horticulture Agent II



Vol. 7, Issue 5
Fall 2007

GROWER FORUM

2 Core CEUs

Wednesday, December 12, 2007

Pierson Lions Club
143 W. First Ave, Pierson
9:00 a.m.—Noon

New AGR—Lite Growers Insurance,
EQIP and Safety Training

- 9:00 -9:30 Adjusted Gross Revenue (AGR-Lite) Growers Insurance Safeguards More Than Just Your Crops by Ray Thigpen, Agent, Ray Thigpen Insurance, DeLand
- 9:30-9:55 Environmental Quality Incentives Program (EQIP) for Funding Irrigation Improvement and much more by George Johnson, District Conservationist
- 10:05-11:45 Pesticide Applicator Safety Training (Labels, Formulations, Harmful Effects, Emergency Response, Personal Protective Equipment, Pest, Pest Control and IPM by Dana Venrick
- 11:45 Foliage Advisory Meeting - Planning for 2009

Thanks to Farm Credit of Central Florida -
Lindsay Harnish and Regina Thomas

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FNGLA Meeting
Central East Coast
Chapter
Tuesday, October 16,
2007

Program: Immigration reform and "No Match"
Speaker: James Spratt,
FNGLA Director of Government Affairs
Meet & Greet 6:00
Dinner 7:00

R.S.V.P.
Curtis Davis
(407) 322-5133



DOWN CITRUS LANE

IODINE STARCH TEST ASSISTS IN SELECTING CITRUS LEAVES FOR HLB TESTING

Besides showing typical blotchy mottle greening symptoms, citrus leaves on HLB (Greening) infected trees (or branches) tend to accumulate more starch than normal. Iodine can easily indicate high levels of starch in leaves and may assist in the selection of leaves for further HLB testing.

To use iodine as an indicator:

- Select leaves with suspicious greening symptoms
- Cut off the leaf tip with a sharp blade
- Cut off a longitudinal section from the cut tip down the leaf along the edge and near the mid-rib.
- Immerse both sections in a 1.2—2.0% iodine solution for 2 minutes.
- Rinse leaf segments in water and observe using a magnifying glass.

A healthy leaf edge will have a light normal appearance, while leaves with greening symptoms will have a very darkly stained cut edge.

Remember, this is only an indication and should not be substituted for an HLB diagnostic test. Some normal leaves will have high starch accumulation leaves. “False positives” may be shown in normal potted trees, certain cultivars such as Murcott, Phytophythora infection, and branch damage.

Thanks to: Ed Etxberria, Pedro Gonzalez, William Dawson and Timothy Spann, UF/IFAS

CITRUS GREENING I.D. AND WORKER TRAINING OCT. 24

Citrus Greening Disease is popping up all over the state of Florida, including three homeowner sites in the Daytona Beach area. This disease is deadly serious. Fruit on diseased trees become bitter and inedible. Affected trees decline and die. Citrus growers are facing the greatest challenge in the history of the citrus industry in Florida. To meet grower demands for more knowledge about how to deal with this serious disease, there will be a citrus greening identification and worker survey training class held in Tavares on October 24th from 1:30 p.m. to 4:00 p.m. Topics Include:

- Citrus Greening & Citrus Psyllid Management
- Scouting Recommendations & Employee Safety
- Citrus Greening Symptom Identification
- Hands-On Citrus Greening I.D. training

Lunch Available from 12:30 p.m.—1:30 p.m. for a \$15.00 charge. Please call Maggie Jarrell or Ryan Atwood at 352-343-4101 to register. Be sure to mention if you are planning to attend the Safely day 8:45 a.m. to 12:30 p.m. or the greening program or both programs. Be sure to mention if you will be having lunch. Pesticide applicator CEUs will be awarded for the afternoon greening program.



FAWN Update & Winter Weather Prediction December 11th

This important OJ meeting will be held on December 11th from 9:30 to 11:30 a.m. Rick Lusher, the new coordinator of FAWN will be giving an update on Florida's Automated Weather Network. Clyde Frassie with UF will be telling what type of winter weather we can expect.



GREEN TURF

TURF PRODUCT REVIEW

Trinity is a new fungicide from BASF that offers broad spectrum disease control in golf course, sports turf, sod farms, and commercial and residential lawn care.

Trinity fungicide offers excellent preventative and curative control of patch diseases (brown patch, take all and summer) anthracnose, and dollar spot.

Trinity is a good rotation partner for disease control on turf, including fairways.

Tank mixing Trinity with Insignia fungicide gives an economical broad-spectrum combination to anthracnose dollar spot, brown patch and other diseases. For effective dollar spot control and resistance management, Trinity can be rotated with non-Group 3 DMI fungicides such as Emerald fungicide.

From Athletic Turf News

February 27, 2007

With droughts, increasing urban water usage, and

being wasted.

- Maintain equipment to prevent and correct leaks, faulty valves, and malfunctioning fertilizer and pesticide injectors.

If we all do our part to conserve water, there is less chance of overly strict water and regulations and restrictions in the future. In addition you will be growing better crops with less water, and improving your nursery bottom line with greater profitability.

Thanks for information from UF/IFAS Paul Fisher, Tom Yeager and Richard Beeson.

GROWER'S FACE DILEMMA WITH "NO-MATCH RULE"

The U.S. Department of Homeland Security has issued its ruling on procedures for employers who receive a No-Match letter from the Social Security Administration. Apparently this puts employers in the position of having to help enforce legal social security documentation of employees.

How do employers comply with the federal law not to discriminate against individuals because of citizenship status and national origin, while not being allowed (knowingly) to employ unauthorized workers. Where does this leave growers who depend on a large number of immigrants to stay in business? What do you do when you receive a "No Match" letter?

Jim Spratt will be speaking about this very issue at the October 16th Central East Coast Chapter FNGLA meeting (see details on front cover). Jim will be clarifying what you can do to comply with "No Match" while being fair to your employees (prospective employees). RSVP to Curtis Davis and attend the meeting if possible.

The October 16th OJ meeting at the Agricultural Center in Tavares (Lake County) will also be discussing this important labor issue to include ornamental plant growers. This meeting regarding "No Match", agricultural labor issues and H2A will be held from 9:00 a.m. to 11:00 a.m. And will feature speakers from Florida Fruit and Vegetable Association and Immigration and Customs Enforcement. Call Maggie Jarrell at 352-345-4101 for more information.

If you can not attend either meeting please call me after the meetings for the latest information.

WATER WISELY

impending water shortages (and water restrictions), grower water conservation is more important than ever. Training employees is essential and should be an on-going process. Some of the important things to consider are:

- Determine if a plant needs water based on weather, container weight (or loss of weight as the plant uses soil water), and plant appearance. Water based on need, not a time clock.
- Group plants by container size, drought tolerance, and rate of water uptake—water those plants with the greatest need first.
- Distribution uniformity (DU) is very important. Strive for 80% or better DU for the entire block or water zone.
- Water in early morning when there is less surface evaporation.
- Make sure the water reaches the soil or container substrate. Thorough wetting of the substrate ensures that quick drying does not occur by late morning.

Minimize leaching. Place collection trays beneath containers to see how much water and nutrients are

INNOVATIONS IN COLD PROTECTION

Adapted from a talk by Dr. Bob Stamps, ASCFG National Conference, Orlando, FL November 4, 2004

Written by Dana Venrick- Volusia County Extension Commercial Horticultural Agent II

DeLand (386) 822-5778

Daytona Beach (386) 257-6012

New Smyrna Beach (386) 423-3368

Convective heat loss (air flow heat loss) can be reduced with windbreaks, shelter belts and crop covers. Windbreaks are structures that reduce wind speed such as fences and walls. Solid walls are not effective and actually increase wind speed as air flows up and over the structure. Walls with openings are more effective. Shelter belts are plants (usually trees) used to reduce wind flow and usually are multiple rows of vegetation. Windbreaks and shelter belts are most effective if the porosity is between 48 and 55%. Less density is not effective and greater density protects less area. They should be 30-50 feet longer than the width of the area being protected. A proper windbreak/shelter belt will reduce wind speed by 50-60% over a distance four to seven times the height on the lee side.

Windbreaks – Advantages & Disadvantages

- **Advantages**

- o Reduced wind speeds
- o Effective during advective freezes
- o Little loss of space
- o Rapid implementation

- o **Disadvantages**

- o Ineffective (or harmful) during radiational freezes
- o Difficulty disposing of materials
- o Reduced longevity compared to most shelter belts
- o Cost of materials and construction

Shelter belts – Advantages & Disadvantages

- **Advantages**

- o Reduced wind speeds
 - o Effective during advective freezes
 - o Ability to serve as a source of cuts
 - o Good longevity
- o **Disadvantages**
 - o Ineffective (or harmful) during radiational freeze events
 - o Loss of growing space (not a factor if used for cuts)
- Length

Crop Cover/Frost Blankets

Frost blankets may be fabricated from woven polypropylene or spun-bonded polyester, which blocks wind and reduces heat loss. Frost blankets are relatively inexpensive but are time consuming to deploy. Their effectiveness depends on the thickness, porosity and composition. Heat builds up under the fabric and care must be taken so that plants are not injured from the heat or are forced to pre-maturely break dormancy.

Water for Cold Protection

Water applied using overhead irrigation has been used since the 1960's to protect crops from cold damage (Harrison et al., 1974). Research on reducing water application rates needed to cold protect crops in shade fabric covered shade houses was started in the early 1980's (Stamps and Chase, 1981; Stamps and Mathur, 1982).

Using Water for Cold Protection

Disadvantages

- o Requires large amounts of water
 - o Leaching of nutrients and pesticides
 - o Can cause large, temporary declines in water levels
 - o May cause saturation of soil in crop root zone that leads to root death and disease development
 - o Not always effective, especially for protecting immature foliage
 - o Weight of ice formed may damage plants
- If not continuous, may increase damage

Why Use Water for Cold Protection?

Water is frequently used because it is inexpensive, easy to implement and is effective in some situations. It can be problematic in a low humidity and windy situation because the latent heat of sublimation (the heat lost by air when ice changes to vapor) and the latent heat of vaporization (heat lost by the air when liquid water changes into vapor) are both much greater than the latent heat of fusion (the heat gained by air as liquid water changes to ice). If the water is turned off in a freezing situation where ice has already formed, it is worse than not turning on the water. The heat of fusion of water is 1,200 BTUs/gallon while the heat of sublimation of water is 9,300 BTUs/gallon.

Continued on page 5

It is important that sufficient quantities of water are being applied during a freeze event. When freezing and evaporation are occurring at the same time, for every gallon of water that evaporates, seven and one-half gallons of water need to be frozen to release net heat. With very low temperatures, low humidity or high winds, 0.35 inches or more of water per hour may be needed for adequate crop protection. An important note is that when enough water is being applied for freeze protection, the ice that forms will be clear. Cloudy ice indicates not enough water is being applied.

When Is Irrigation Turned On?

Irrigation should be turned on when the wet-bulb temperature approaches the critical temperature for the crop being protected.

Remember that plant roots are not as hardy as shoots and will be killed at much higher freezing temperatures than above-ground plant parts. Soil provides insulation for plants in the landscape during freezing weather; however, roots in unprotected containers are much more susceptible to freezing.

What Is the Wet Bulb Temperature?

Wet bulb temperature is the lowest temperature to which air can be cooled by the addition of water. The wet bulb temperature is between the dew point and dry bulb temperatures (usually closer to the dry bulb temperature). If air is at 100% humidity, all three temperatures are the same.

Therefore, the purchase and use of a wet-bulb thermometer is important. Use of the wet-bulb temperature for freeze protection conserves water, saves fuel and reduces equipment wear and tear.

When is Irrigation Turned Off?

Irrigation should be turned off when the wet-bulb temperature exceeds the critical temperature of the crop being protected. This conserves water, saves fuel, reduces equipment wear and tear and allows one to get to bed sooner! It is not necessary to delay turning off the water until all the ice has melted.

Where Should the Temperatures Be Measured?

The sensors should be in the same location and at the same height as the crop canopy. Cooling occurs by radiational and convective heat transfer. Therefore, the thermometer should have exposure to the night sky and wind movement. From the crop canopy to 10 feet above the crop, the temperature may be up to eight degrees Fahrenheit warmer.

What are the Rewetting Intervals?

Sprinklers should rewet foliage about once every 20 seconds (three rpm). This allows the use of reduced water application rates or, alternatively, maintains higher temperatures using the same amount of water.

What About Combining Crop Covers with Sprinkler Irrigation?

Using crop covers with sprinkler irrigation significantly improves cold protection as contrasted to either method by itself. In one study, with the use of irrigation only, the temperature at the plants was about 30°F while at the same time; the temperature at the plants was about 35°F with the combination of a crop cover and irrigation.

What About Dual Irrigation Systems (under and over) for Shade Houses?

Water can be run over the top of a shade house until a thin, solid sheet of ice forms that greatly slows radiation heat loss. "Insect-proof" Senninger 3023 5/32" nozzle impact sprinklers are often used. They are used on a maximum spacing of 30 x 60 foot rectangular pattern 1.5 feet above the top of the shade house and run at a pressure of 40 psi. This system gives good cold protection with the use of much less water.

Benefits of Dual Irrigation Systems For Shade House Cold Protection

- It may not be necessary to put up, take down and dispose of plastic sheeting.
- It only shades the crop temporarily.
- Allows equal cold protection using less water.
- Enables the maintenance of higher temperatures using the same amount of water.
- Facilitates the use of intermittent applications.
- Reduces irrigation run-times and water volumes applied by about 80% compared to conventional systems (continuous water application).

DISCLAIMER

The use of trade names in this publication is solely for the purpose of providing specific information. UF/IFAS does not guarantee or warranty products named, and references to them in this publication does not signify our approval to the exclusion of other products of suitable composition.

Need Help Managing Your Natural Resources

The Environmental Quality Incentives Program (EQIP) is a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality. EQIP offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land.

It is extremely important to note:

Application Deadline for 2008 funds is November 13, 2007

“EQIP” will assist you to:

Improve Irrigation Systems

Implement a Grazing Management Plan

Develop Wildlife Habitat

Reduce Soil Erosion

And much more....

Don't delay, you must have your application in no later than November 13,
For property in Volusia and Flagler Counties, contact your NRCS staff in the

DeLand USDA Service Center at (352) 538-3909

SAVE OUR HOMES AND AG ON CONTIGUOUS PARCELS CAN SAVE YOU MONEY

According to Morgan Gilreath, Property Appraiser, a 2003 Florida Attorney General's opinion (AGO) stated that parcels contiguous to their homesteaded parcel were also eligible for the homestead, without being combined into one parcel. If you have such a contiguous parcel and it is not part of your homestead, call the property appraiser's office at (386) 736-5901 (DeLand), (386) 524-4601 (Daytona Beach), or (386) 775-5257 (Orange City) to have this corrected.

Also based on the AGO, if someone loses their ag classification on property contiguous to their homestead, the appraiser's office will remove the ag-rate and take the Just Value back to the 1994 rates (if homesteaded that long). Then the 3% per year increase in appraised "cap forward" will be made to this year. This means that homestead exemption is protected while qualifying for ag-status.


This is good news for those risking an ag venture by protecting against a large increase in homestead value if the ag enterprise must be discontinued for some reason.

If you have questions about this, contact Lester Price or John Hawkins at (386) 775-5257.

Dates To Remember



- Oct. 16** **Agricultural Issues and H₂A**, Lake County Ag Center. Call Ryan Atwood at (352) 343-4101
- Oct. 24** **Citrus Greening Identification and Worker Survey Training**, Tavares (see details on page 2)
- Nov. 8** **CEU Day and Worker Protection Standards Train the Trainer**, Osceola County Extension, Kissimmee. Multiple CEI's for multiple pesticide license categories. Contact Jennifer Welshans at (321) 697-3000
- Nov. 13** **Fall & Winter Production Practices for Greening Management**, 9:30 - 11:00, Lake County Ag Center, Tavares. Call Ryan Atwood at (352) 343-4101
- Nov. 29-30** **Great Southern tree Conference**, Hilton Hotel and Conference Center, University of Florida and the GSTC Demonstration site in Gainesville. Contact www.fn gla.org
- Dec. 6-7** **2nd Annual Florida Ag. Expo**, Gulf Coast Research and Education Center, Balm. Contact Marc Stockwell or Nancy Howard at 407-539-6552.
- Dec. 11** **O.J. Meeting - Fawn Update & Winter Weather Prediction**, 9:30 - 11:30 a.m., Lake County Ag Center, Tavares. Call Ryan Atwood at (352) 343-4101
- Dec. 12** **Growers Forum** (See Front cover for details) 2.0 CEUs available
- Jan. 11** **Florida Sod Growers Cooperative Annual Meeting**. Shades of Green at Walt Disney World Resort, Orlando. For more information contact Betsy McGill, at 863-675-2144 or go to the web at www.floridasodgrowers.com
- Jan. 17 - 19** **TPIE** Broward County Convention Center, Ft. Lauderdale. Contact <http://www.fn gla.org/tpie/>

Sincerely,

Dana Venrick
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