



Green-Up News

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



Dear Agriculturist:

Dr. Larry Arrington, our Dean for Extension would like for me to convey many thanks to all of you who are helping the Institute of Food and Agricultural Sciences (IFAS) survive the budget crisis. The budget cuts could have been much worse if not for thousands of letters and telephone calls made by 4-Hers, Master Gardeners, volunteers and agriculturists like you.

Special thanks go to the Florida Farm Bureau, led by our own John Hoblick of DeLeon Springs, President of Farm Bureau and Pat Cockrell, Assistant to the President. They proved strong leadership and formed a team that worked very well with the Ag Coalition: Mike Stuart, President of the Florida Fruit and Vegetable Association, Jim Handley, Executive Vice President of the Florida Cattlemen's Association, Ben Bolusky, Executive Vice President of FNGLA, and Mike Spark, Executive Vice President/CEO Florida Citrus Mutual.

And thanks to all of you for your support of IFAS. It is an inspiration to know that you value and appreciate the programs, research, and educational efforts of IFAS.

Sincerely,



Dana Venrick, Extension Agent II
Commercial Horticulture

CEU DAY

Earn 3.0 CEUs

Tuesday, June 17, 2008
Pierson Lions Club
143 W. First Ave, Pierson
9:00 a.m.—Noon

- | | |
|--------------|--|
| 9:00 - 9:30 | Dr. Lance Osborne - What's New - mites & thrips and their control. 0.5 CEU category |
| 9:30-10:00 | Dr. Gary Leibee - Detection and new control products for caterpillars. 0.5 CEU category |
| 10:10 -10:40 | Dr. David Norman - Update on diseases and new bactericides and fungicides 0.5 CEU category |
| 10:40-11:10 | Dr. Bob Stamps - New weeds and weed control products. 0.5 CEU category |
| 11:10-12:00 | Dana Venrick - Laws and Regulations & Pesticide Labeling. 1.0 CEU Core |

**Refreshments and Snacks Compliments of
John Hewitt, Central Florida Fern Co-op**

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DOWN CITRUS LANE

Citrus Greening and Tree Removal

Greening in Florida is here to stay and it is only a matter of time before greening will reach commercial groves in Volusia County. Growers need to be proactive and plan ahead to prevent and/or delay infection of their groves.

What can you do to help prevent the arrival of greening? Because greening is vectored by psyllids, a psyllid control program should be implemented in your grove. All replacement trees should be purchased from a certified nursery that grows trees in an approved screened structure.

Scouting should be implemented with large trees being inspected from a raised platform. Scouting should be done four or more times per year. Trees should be checked at least twice during the fall and winter seasons when symptoms are easiest to see.

What should you do if you find a greening infected tree? First of all, call FDACS and verify that the tree(s) do in fact have greening. Symptoms can easily be confused with micronutrient deficiencies, except that leaves with greening chlorosis typically have an asymmetrical pat-

tern and are usually located inside the tree canopy behind the most current flush of growth.

Verified greening in your grove means that infected trees should be removed immediately to keep the source of inoculum low in the grove. During the initial stages of greening infection, this is a wise strategy along with control measures to keep the psyllid population as low as possible. If infection levels have become high in a grove, tree removal may do little to prevent the further spread of greening.

How should trees be removed? Trees should be clipped off above the soil line. The cut stump should be treated immediately with a herbicide to kill the entire base and roots. Otherwise, infected sprouts, carrying inoculum, will be sprouting everywhere.

If the grove becomes highly infected, replanting an entire block may be the most effective strategy. Then the entire block can be managed as a uniform block to effectively control psyllids and their vectoring on the frequent flushes of growth on new trees.

What else can be done? It is always advisable to keep your grove as healthy and vigorous as possible. There is anecdotal evidence that tree vigor and systemic acquired resistance (SAR) to bacterial diseases can be induced with certain nutritional practices (elevated potassium, etc.), organic inputs, phosphorus acid, hydrogen peroxide, acetic acid, salicylic acid, etc.

Arnold Shumann, Tim Spann, and Jim Syvertsen, with UF/IFAS Citrus Research and Education Center in Lake Alfred, plan to test various materials to see if they induce SAR in citrus trees. Products planned for testing (and labeled for citrus) include: Oxidate (hydrogen peroxide), Serenade fungicide, K-phite and Saver (nutritional and phosphorus acid products), potassium nitrate, and a micronutrient mix.

Growers who may want to experiment on their own should always be mindful of the label. **Remember, the label is the law.** Chemical residues of unlabeled products could make the fruit unmarketable. Remember, keeping your grove as healthy as possible is likely to increase the trees' natural defenses against diseases.

Federal Domestic Quarantine

In response to the threat of citrus greening, the Administrator of the Animal and Plant Health Inspection Service (APHIS), has imposed a quarantine against the Citrus Greening Disease and the Asian Citrus Psyllid.

A total of 30 Florida Counties are quarantined because they have Greening. The latest two counties to be added are Lake and Hernando. Because of this, APHIS has now quarantined the entire state.

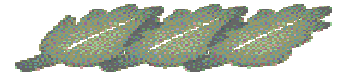
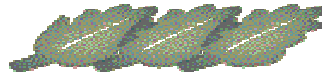
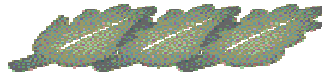
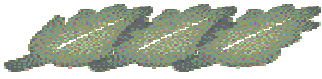
Quarantine for Citrus Greening (CG)

The entire state of Florida is quarantined. Plant and plant parts (but excluding fruit) that are prohibited from being moved interstate from Florida are: *Aeglopsis chevalieri*, *Balsamocitrus dawei*, *Bergera (Murraya) Koenigii*, *Calodendrum capense*, *Citrofortunella microcarpa*, *X Citron-citrus webberi*, *Citrus* spp., *Clausena indica*, *C. lansium*, *Fortunella* spp., *Limonis acidissima*, *Microcitrus australasica*, *Murraya* spp., *Poncirus trifoliata*, *Serverinia buxifolia*, *Swinglea glutinosa*,

Toddalia lanceolata, and *Triphasia trifolia*.

The APHIS Administrator may allow the interstate movement of restricted plants and/or nursery stock if it has been grown, produced, handled, treated, and transported in a manner that prevents the restricted part from presenting a risk of spreading CG.

For complete details about the Quarantine of Citrus Greening and the Asian Citrus Psyllid go to: <http://www.aphis.usda.gov> or check with your FDACS inspector.



GREEN TURF

WEED CONTROL IN TURF

The best defense against weeds is to discourage their growth in the first place with good cultural practices. This includes regular mowing at proper height with sharp blades, pH control, good nutrition and soil fertility, proper watering, aerating when necessary, and scouting and treating for insects and diseases. These practices help prevent weeds from becoming established.

When necessary, many chemical control options are available. What are some of the newer and or re-labeled herbicides on the market?

- Syngenta's Tenacity (a.i.: mesotrione)
 - * A synthetic version of natural plant secretions.
 - * Has pre-emergent and post-emergent activity.
 - * Inhibits pigments in weeds—turns them white.
 - * Controls annual weeds such as crabgrass and goosegrass and perennials such as orchardgrass.
 - * Pre-emergent on newly seeded areas before grass begins to grow.
- Bayer's Ronstar
 - * Residential landscapes to provide pre-emergent control of annual broadleaf and grassy weeds.
- Bayer's Revolver
 - * Controls cool-season grasses such as Poa annua and ryegrass that can be found in Bermuda and zoysia.
- PBI Gordon Corp.'s Q₄ turf herbicide
 - * Combination of active ingredients
 - * Controls grassy and broadleaf weeds
 - * Suppresses yellow nutsedge, crabgrass, and other broadleaf weeds within 24 to 48 hours.
 - * Contact and systemic activity.
 - * For use on cool-season turfgrasses.
- Monsanto's Certainty (sulfosulfuron)
 - * Controls yellow nutsedge and several broadleaf weeds.
 - * For use on several warm-season turfgrasses to include Bermuda and zoysia.
 - * Broadcast or spot applications.
- FMC Professional Solutions Echelon
 - * Pre-emergent and early post-emergent control of many annual grasses, broadleaf weeds and annual sedges.
 - * Long-lasting control of Poa annua.
 - * Control of crabgrass.
 - * Two active ingredients: sulfentrazone and prodiamine.

ALTERNATIVE CONTROLS

- Corn gluten
 - * Controls crabgrass, dandelions, pigweed, purslane, lambsquarter, foxtail, barnyardgrass, and bermudagrass.
 - * Weakens newly sprouted weeds.
 - * Fertility value with 10% nitrogen.
 - 12 to 20 lbs. of corn gluten per 1,000 sq. ft. of turf.
 - Fatty acids
 - Cinnamon Bark
 - Vinegar (see Weed Pharm under "New Products" in the newsletter)
 - Weed Flamers from Red Dragon®
 - * Selectively kills weeds by scorching them.
 - * Portable propane tanks power the burners.
- *M-tyrosine (a weed inhibitor secreted by fescue grasses now being research.

A number of options now exist. Harsh herbicides such as MSMA (monosodium methanearsonate) should not be necessary. Word is that EPA will proceed with plans to cancel registration of MSMA because of the risks of organic arsenic products to transform to a more toxic inorganic form of arsenic in soil and leaching to contaminate drinking water.

Always use the least harmful methods of weed control first, because they are more effective in the long run.

Thanks to Turf South Magazine Feb. 2008

CONTROLLING LOROPETALUM DECLINE



Loropetalum chinensis 'Ruby' has been a popular landscape plant because of its attractive bur-

gundy and pink appearance and because of its small size compared to other cultivars.

Recently, there have been problems of unexplained decline to include stunted new growth, curling of leaves, defoliation, and sometimes death. The cause was thought to be

eriophyid mites, but now the cause has been linked to micronutrient deficiency. In research by Dr. Amy Shoher and Dr. Gary Leiber, there was a significant quality improvement of declining plants when treated with micronutrients, particularly copper.

A suggested treatment is foliar nutritional sprays containing copper or common fungicides containing copper hydroxide as the active ingredient.

This study is another indication of the importance of balanced nutrition to

plant health. Remember that chelated trace elements are available to plants within 24 hours and organic trace elements are available to plants almost instantly. Carbon based (organic) supplements have contributed to improved crops in a number of situations and it can be an important part of a balanced fertilizer program.

The complete research regarding copper sprays of Loropetalum 'Ruby' is available at: <http://edis.ifas.ufl.edu/SS447>.

NEW PRODUCTS

FDACS has registered PQ Corporation's Sil Matrix® fungicide/miticide/insecticide (Potassium silicate) for use on turf and ornamental plants.

Potassium silicate is available in Volusia County and is sold under the trade name Tropical Mountain Imports Stimp-Up® and is available through the Central Florida Fern Co-op.

The EPA has registered Pharm Solutions Weed Pharm, an organic weed and grass killer made from food-grade vinegar.

FDACS has registered Dow AgroSciences Sapphire® (penoxsulam) herbicide for control of broadleaf weeds in turf.

FDACS has conditionally approved syngenta's Flagship® 0.22G (thiamethoxam) for control of aphids, whiteflies, and other pests on ornamentals and other crops.

FDACS has approved a polyphosphate Pesticide spray additive by Watershed Laboratories, Inc. in DeLand. Used in conjunction with a pesticide and oil, it is for control of Cycad Scale.

Sunniland has a new palm special fertilizer now available through Pierson Supply. The fertilizer has an ideal 4-1-6 analysis with a good balance of magnesium, iron, manganese, and boron as recommended by Dr. Tim Broschat of the Ft. Lauderdale REC.

ROOT PRUNING TRANSPLANTED SHRUBS

A study in the July 2007 Journal of Horticultural Science & Biotechnology reported that root growth of transplanted shrubs can be stimulated by light pruning (cutting off less than 1/2 inch of the small roots at the surface of the root ball). In some cases, light root pruning doubled the root weight compared to unpruned plants.

Heavy pruning or spreading the roots outward from their original locations in the containers did not have a positive effect on new growth during the same period of time (two months) after transplanting.

The study suggests that heavy pruning and pulling the roots apart may cause mechanical damage, while light pruning may stimulate production of growth regulating compounds. Certainly this suggests a closer look at practices involving the transplanting of shrubs and trees.

Q & A

Can you name four publications that list a wide variety of plants grown throughout the state of Florida?

Answer on page 7

FERNS & FLORA

Managing Soil pH and Fertilizer Cations

The importance of soil pH to the health of plant crops is well known. But of more importance than the actual pH is having appropriate levels of the cations calcium, magnesium, and potassium in the soil colloidal complex. For example, three different fields with the same pH growing the same crop may have very different levels of calcium (Ca), magnesium (Mg), and potassium (K). One field might have optimum levels of Ca and Mg. The second field might have an excess of Ca and a deficiency of Mg. The third field might have an excess of Mg and a deficiency of Ca. Any number of combinations of Ca, Mg, K, sodium (Na), and aluminum (Al) compounds may contribute to any given soil acidity or alkalinity (pH) level. The amount needed to change the pH value varies by compound. For example, magnesium carbonate, pound for pound, raises pH 1.7 times as much as calcium carbonate.

Plants are tolerant of a fairly wide range of Ca, Mg, and K in the soil, if sufficient levels of each are present. However, if soil Mg tests excessive and pH needs to be raised, use high calcium (calcitic) limestone. Conversely, use dolomitic limestone (calcium magnesium carbonate) for raising pH if soil Mg tests low or deficient. Do not use liming material on high pH or nearly neutral pH soil as over liming can tie up micronutrients and possibly inhibit the activity of soil micro-organisms that help make soil minerals available (mineralization). Be careful to avoid over liming. Too much limestone can make manganese (Mn) and other trace elements unavailable to crops.

Liming Guidelines

- Lime only when pH drops to 5.5 or less. Apply only 500 to 1,000 lb./acre (12 to 23 lb./1,000 sq. ft. or 1 to 2 lb./100 sq. ft.). Test every year and only apply when pH is 5.5 or less.
- Use high calcium (calcitic) limestone if Mg in the soil tests above optimum.
- Use dolomitic limestone (calcium magnesium carbonate) if Mg in the soil tests below optimum.
- If the soil Mg tests close to optimum, use a mixture of dolomitic and calcitic limestone, or alternate between the two in successive applications.
- Lime in conjunction with carbon based organic inputs for maximum benefits. Organic matter holds minerals and makes them more available to plants. Organic matter is the only part of the soil colloidal complex that holds fertilizer anions as well as cations. Organic matter is the best soil component to prevent leaching, but at the same time, minerals are readily released to plant roots as needed by the plants.
- Blueberries take up nitrogen in the form of ammonium and need an acid soil with a pH about 5.0. A pH of 5.5 or higher will readily induce iron deficiency.
- Re-test the soil every crop season to determine whether more limestone is needed and, if so, what type.

Watch for Excessive Potassium

Potassium (K) is held at lower levels in the soil base saturation compared to Ca

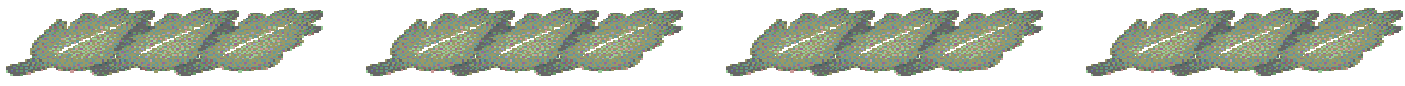
and Mg, even though plants generally require more K than any other mineral. A certain level of soil K is necessary, but excessive soil K blocks plant uptake of Ca and Mg. Higher levels of Ca in plant tissues help protect plant crops against fungal and bacterial diseases, but excessive tissue levels of K cancel this effect. Balance is the key because K also protects against fungal and bacterial diseases when present at optimal levels.

If the soil pH is too high (testing at 7.0 or higher), use sulfur at low rates of 50 to 75 pounds per acre (1 to 2 pounds per 1,000 sq. ft. or 2 to 3 oz./100 sq. ft.) and immediately water in. Sulfur will temporarily lower pH and tie up the cation most responsible for the high pH.

Low inputs of limestone and sulfur on a regular basis as needed are better than large quantities every two or three years to try to instantly adjust soil acidity or alkalinity. You want slow steady soil adjustments, not extreme pH swings like a roller coaster.

Slow, steady corrections will provide the activity needed in the soil matrix and protect the microbial life in the soil.

In summary, perform a complete soil test for pH and minerals at least once per season. Use low, regular inputs of dolomitic and/or calcitic limestone to raise pH and sulfur to counteract high pH. For the most beneficial soil response, use carbon based organic inputs in conjunction with liming and fertilization.



Leatherleaf “Bronzing”

Rik Davis of the Central Florida Fern Co-op has reported that “bronzing” seems to occur primarily in higher pH soils, particularly if magnesium levels are low. Work on reducing pH to a better level and supplementing, with magnesium on a regular basis. Remember to have the soil tested on a regular basis and use the appropriate type of limestone to keep favorable calcium and magnesium levels in the soil.

Mites and Disease of Pittosporum

Tumid mites and two-spotted mites have been reported as being a serious problem on some fields of pittosporum. Angular leaf spot and alternaria also maybe a problem.

Use Abamectin and Tetrasan for Tumid mites and use fungicides as appropriate.

You may want to consider the use of potassium silicate as well. Note that under the “New Products” section of the newsletter, potassium silicate has been registered by FDACS as a fungicide, miticide, and insecticide. UF/IFAS studies have shown other benefits of potassium silicate as well, to include improved resistance to stress and freezing weather.

PUBLIC NOTICE PLANT VENDORS

Pursuant to Florida Statutes 581.121, 581.131 and 581.141

It is unlawful for any person to sell, give away, transfer, move or cause to be moved, carry, ship or deliver any nursery stock without first obtaining a Florida Certificate of Nursery Stock Registration.

This certificate must be on hand at the time and place of sale or movement and must be presented to an authorized representative of the Division of Plant Industry upon request.

Temporary certificates are available for one-time sale or movement.

The Department of Agriculture may, after notice and hearing, impose a fine, not exceeding \$5,000 for the violation of any of the provisions of this chapter or the rules adopted hereunder.

To apply for certification or obtain further information, contact the nearest office of the Division of Plant Industry, or nearest Regional Office listed below:

Gainesville	(904) 372-3505
Apopka	(407) 884-2030
Miami	(305) 251-9540

AVISO PUBLICO

De acuerdo a los estatutos de la Florida 581.121, 581.131 y 581.141

Es ilegal vender, regalar, transferir, mover, transportar, despachar o entregar productos de vivero sin antes obtener un certificado de registro de la Florida como vivero, agente o corredor.

Este certificado debe estar siempre disponible en el lugar de venta o traslado del producto y debe ser presentado cuando lo requiera un representante autorizado de Division of Plant Industry del Departamento de Agricultura de la Florida.

Para casos de una sola venta o traslado hay disponibles certificados provisionarios.

El Departamento de Agricultura puede imponer, previo aviso, una multa de no mas de \$5,000 por la violacion de las disposiciones en este capitulo o de las reglas adoptadas en adelante.

Para solicitar el certificado, contacte la oficina mas cercana de Division of Plant Industry, o la Oficina Regional mas cercana abajo indicadas:

Gainesville	(904) 372-3505
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Alternative Cut Foliage Crops for Florida's Unique Climate

By Dana Venrick

Volusia County Extension Agent - Commercial Horticulture

Special thanks to research information from Dr. Robert Stamps, Professor, Mid-Florida Research and Education Center, on which much of this report is based.

Florida's unique climate opens opportunities for growing many plants which cannot be grown economically in latitudes to our north. Most of the plants listed in this fact sheet grow well in warm, humid conditions and do not tolerate freezing temperatures, giving Florida growers a competitive edge when growing these plants. Some of these plants are grown in colder climates but require the protection of expensive greenhouses and extensive heating during the winter. In Florida, they can either be grown without freeze protection or protected within shade-houses with irrigation systems designed for watering as well as for freeze protection.

The more sensitive plants in the "Fern Capital" around the Pierson area can be protected from occasional freezes by a system that sprays water over the top of the saran covering the structure until a thin sheet of ice is formed. After the solid sheet of ice is formed the overhead water is turned off but water continues to run within the "house". Much of the warmth produced by the running water is retained within the "igloo" of ice around the plants keeping temperatures at a safe level.

Diversification and value added products are keys to continued profitability among Florida's cut foliage growers.

Growing desirable alternative crops that are not widely available will help ensure continued profitability for Florida growers.

A large variety of plants are worthy of consideration for growing in Florida's unique climate. It should be noted that about 80% of the cut foliage grown in the United States is grown within Volusia, Putnam and Lake counties. This area of Florida is within zone 9 of the USDA Plant Hardiness Zone Map.

For a listing of more than 50 plants suitable for cut foliage in Central Florida, go to the complete article: Alternative Cut Foliage Crops for Florida's Unique Climate on line at: www.volusia.org/extension/horticulture.htm.

For further information go to the following webpages:

<http://edis.ifas.ufl.edu>

<http://mrec.ifas.ufl.edu/cutfol/cut-foliage-production.asp>

<http://www.ascfg.org> (cut flower growers)

<http://smallfarms.ifas.ufl.edu> (Crops/Flowers & Foliage/Cut Foliage)

Answers to Q & A

1. **The FNGLA Locator**
www.fn gla.org /1-866-307-TREE
2. **Betrock's Plant Finder**
plantfinder.com /1-800-627-3819
3. **The Plant List**
www.plantlist.com/1-800-226-4834
4. **Native Plant & Service Directory**
www.afnn.org/321-917-1960

ROSEMARY WARNER NEW FNGLA PRESIDENT

Rosemary Warner of Native Southeastern Trees in Osteen will advance to President of Florida Nursery, Growers and Landscape Association (FNGLA) at the FNGLA's Annual Meeting .

FNGLA's 2008 Annual Convention will take place at the Breakers-Palm Beach June 12-15. Rosemary will be inducted at the meeting on Saturday, June 14, 2008. Congratulations Rosemary!

DATES TO REMEMBER

- May 23** **Integrated Pest Management Update, (IPMU)** Mid-Florida REC, 2725 Binion Rd, Apopka, 8-a.m.—Noon Nursery Workshops
1-5p.m. Landscape workshops (CEUs awarded)
- June 12-15** **FNGLA 2008 Annual Convention**, The Breakers at Palm Beach, for more information, contact Jessi Schaaf at 800-375-3642 or e-mail jschaaf@fn gla.org
- June 17** **UF/IFAS CEU Day**, Pierson Lions Club, 9 a.m.—Noon. See front cover for details
- June 24** **CEU Day**, Lake County Extension Office, Tavares, 8:20 a.m.—3 p.m. Call Ryan Atwood 352-343-3401 or Dana Venrick 386-822-5778
- July 26** **Limited Certification Review and Exam**, (6 CEUs available), Tavares, 8:30 a.m.—Call Juanita Popenoe 352-343-4101
- September 4** **Grades and Standards for Growers**, Volusia County Agricultural Center Auditorium, DeLand, 8:30 a.m.—3 p.m.. CEUs to be awarded. Training by Dr. Ed Gilman, Professor, Environmental Horticulture Department. This is a cooperative program between UF/IFAS and the Central East Coast Chapter of FNGLA. For more information call Kurt Davis at 407-322-5133 or Dana Venrick at 386-822-5778. CEUs available.
- September 25-27** **FNGLA's The Landscape Show**, Orange County Convention Center, Orlando. For more information, call 407-295-7994 or go to <http://www.fn gla.org/fnats/>
- November 18** **Limited Commercial Landscape Maintenance and Lawn and Ornamental Training and Testing for Certification**, (3.0 core and 2.0 category CEUs available).

The use of trade names in this publication does not constitute a guarantee or warrant of products named and does not signify approval to the exclusion of similar products.