



Green-Up News

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



Vol. 7, Issue 1
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GROWER FORUM

2 CEUs

Tuesday, February 20, 2007
9:00 a.m. – Noon
Pierson Lions Club
143 W. First Ave., Pierson

2 CEUs

WEED CONTROL

- 9:00-9:40 Weed Management Update by Dr. Robert Stamps, UF/IFAS MREC
- 10:00-10:40 How New Products Can Help You Control Weeds, Raymond Miller and Patrick Bell, Dow Agro Sciences
- 11:00-11:30 Tri-County Foliage Advisory Meeting

You are invited to come and enjoy coffee and snacks
compliments of Volusia County Extension.

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John Hoblick Elected New State Farm Bureau President

John Hoblick, Volusia County fern grower, was elected the new Florida Farm Bureau President at its 65th Annual Meeting held October 11-13 in Daytona Beach. John replaces Carl B. Loop, Jr., who is retiring after 23 years. John is a third-generation foliage grower and has been a member of the Florida Farm Bureau state board of directors since 1994.

Hoblick has been involved in a wide variety of local issues including storm water runoff assessments impacting farmers, agriculture structures, and fire services. John is dedicated to reducing assessments on agriculture that make operating less and less profitable. He is optimistic that agriculture has a bright future in Florida.

Hoblick is a Gator, having been graduated from the University of Florida with a degree in ornamental horticulture and lives and grows foliage in northwest Volusia County.

John and his wife Kara, have three children, John, Kyla and Jack.



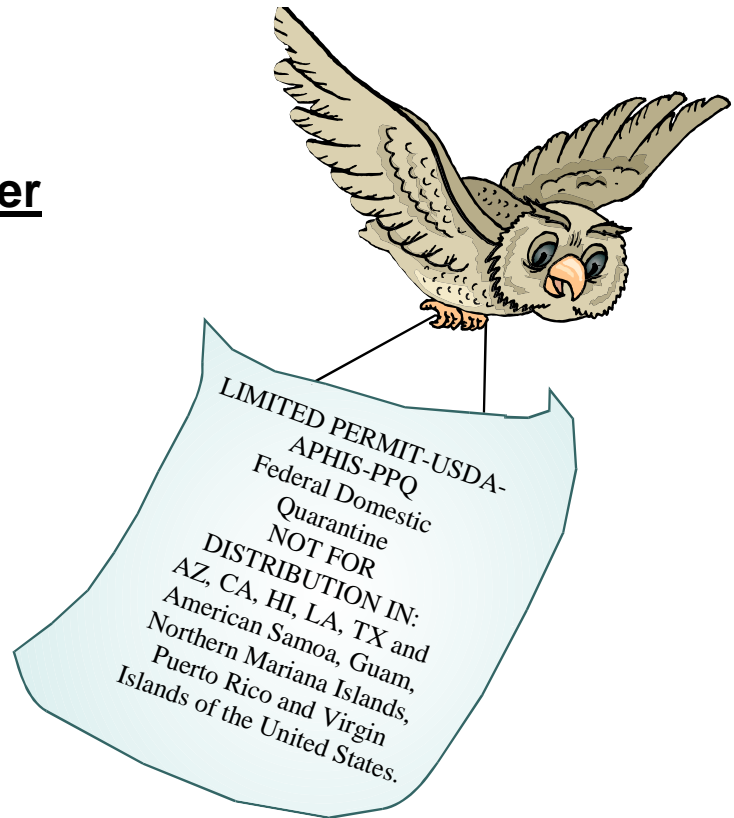
DOWN CITRUS LANE

Don't Spread Citrus Canker

It is illegal to move or mail citrus to addresses outside the State of Florida without proper documentation.

Only citrus originating in groves found free of citrus canker and accompanied by a limited permit (see sample wording) can be shipped outside of Florida.

For further information, please call 1-800-282-5153 toll free or visit this web site:
<http://www.aphis.usda.gov/ppq/ep/citruscanker>

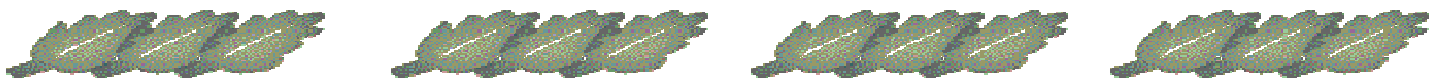


GUAVAS COULD PREVENT CITRUS GREENING!

Could Guava trees planted in a citrus grove protect trees from Citrus Greening Disease? Based on 15 years of experience in Vietnam, USDA scientists think it may be possible. Small plantings of citrus with guavas in Vietnam have survived despite the presence of greening. Scientists say that preliminary research indicated that protective “volatile compounds” are given off by guava plants.

The USDA has launched a crash program to test the protective effects of guava for Florida oranges and grapefruit. Calvin Arnold, director of the USDA Horticulture Research Lab in Ft. Pierce, said that the USDA has secured some 20,000 guava plants for field testing in South Florida. Part of the USDA research will be to determine if fewer than one guava plant per citrus tree will achieve the desired protection.

Growers, if you can find guava trees, planting some guava trees on the perimeter or in vacant spaces in your grove might be something you should consider. Small fields in Vietnam that had one guava planted for every citrus tree seemed to have complete protection from greening and the psyllid insect that spreads the disease. If nothing else, guava fruit makes delicious jelly or jam!



"GREEN TURF"

SOD BMP'S FORTHCOMING

The Sod Best Management Practices committee met on November 17 in Apopka. Based on recent suggestions and comments, members updated the text of the best Management Practices document. The manual now moves into the rulemaking process.

A series of public meetings will be held in 2007 to get feedback from growers. During this time, you will have an opportunity to become familiar with the new BMP document and the process for signing-up.

"FERNS AND FLORA"

COOL WEATHER IS HERE!

Now is the time to take it easy on fertilizer. Plants need minimal fertilizer this time of year. Excess fertilizer may cause root burn and be leached to ground water. If you have to give your crops some extra fertilizer, use low rates of a balanced fertilizer with a little more potassium than nitrogen or use a foliar fertilizer. There is no need to spend much money on fertilizer this time of year. Calcium nitrate sulfate of potash, sulfate of potash magnesia, IBDU (IB nitrogen), methylene urea (urea-formaldehyde or ureaform), potassium nitrate, and ammonium nitrate are good (low rate) nitrogen and potassium sources. Remember that plants only take up nitrogen in nitrate form and cool weather inhibits soil microbes that convert other forms of nitrogen to nitrate (NO₃). For fertigation, a non-coated, readily soluble greenhouse grade calcium nitrate is a good choice. The material is available in Pierson at Pierson Supply and Central Florida Fern Co-op. Calcium nitrate will absorb moisture over time, so buy only as much as you can use at this time. Potassium nitrate is another good source of potassium and nitrogen for use in your fertigation program. Call your supplier for these readily available products.

NURSERY/FERN/CITRUS/TURF



WILD POINSETTIA DEMONSTRATES GLYPHOSATE RESISTANCE

Wild poinsettia, also known as painted leaf (*Euphorbia heterophylla*), has become resistant to glyphosate in certain areas of Brazil. Farmers growing soybeans in South Brazil are complaining that even high rates of the broad spectrum herbicide are not controlling the weed. Painted leaf resistance to glyphosate also has been reported in Florida.

In addition to such glyphosate products as Roundup and Touchdown, wild poinsettia is resistant to B2 herbicides such as ALS inhibitors such as Pursuit and E14 herbicides such as PPO inhibitors such as Cobra.

As with other pesticides, rotate products with different modes of action to minimize the chance of weeds, such as painted leaf, from developing herbicide resistance. Also remember to keep weeds from seeding in or near your crops. Reducing the seed bank population is very important in keeping genetic variation low, which in turn, reduces the chance of resistance developing.

NURSERY/FERN/CITRUS/TURF (cont.)

DORMANT LEAF TISSUE SAMPLING

Scientists in California are studying nutrient tissue sampling techniques and nutrient deficiency levels of fruit trees during the winter dormancy season. Evaluating tissue nutrient status in the winter gives a “snapshot” of tree nutrient status, so that a potential deficiency can be corrected before fruit set and growth make demands on the trees.

Scott Johnson, with the University of California Extension (Kearney Agricultural Center in Parlier, CA), says that sampling during dormancy determines what nutrients the tree is storing and what will be available for the spring. He stresses that dormant sampling isn’t intended to replace summer leaf sampling, but to provide growers with an alternative, particularly when they are struggling with deficiencies.

So far Johnson and his extension team have developed threshold levels for nitrogen, phosphorus, boron, and zinc. They continue to work on thresholds for other key elements. Based on current testing procedures, I have included four tables in this article listing optimum levels for tissue mineral content of citrus, woody ornamentals, fern, and turf grass.

Table 1 illustrates guidelines for interpretation of citrus leaf analysis based on 4 to 6 month old spring flush leaves from non-fruiting terminals.

Element	Optimum
N (%)	2.5-2.7
P (%)	0.12-0.16
K (%)	1.2-1.7
Ca (%)	3.0-4.9
Mg (%)	0.30-0.49
Cl (%)	<0.2
Na (%)	-
Mn (ppm)	25-100
Zn (ppm)	25-100
Cu (ppm)	5-16
Fe (ppm)	60-120
B (ppm)	36-100
Mo (ppm)	0.10-1.0

¹ Percent concentration x 10,000=ppm

² Leaf burn and defoliation can occur at Cl concentration of >1.0%
Table from Citrus Grove Leaf Tissue and Soil Testing: Sampling, Analysis, and Interpretation by T.A. Obreza, A.K. Alva, E.A. Hanlon, and R.E. Rouse UF/IFAS Extension

Table 2 lists guidelines for optimum ranges for minerals in the uppermost mature leaves of woody ornamentals. Remove leaves after elongation. Remove leaves of the most recently matured leaves because as new elongation occurs nutrients are mobilized (calcium, iron, and boron are only very weakly mobilized) from mature to immature leaves. If leaves are not sampled as buds begin to swell prior to elongation, the elemental content of the leaves will vary due to maturity of tissue or sampling time.

Element	Percent*
Nitrogen	2.0-2.5
Phosphorus	0.2-0.4
Potassium	1.5-2.0
Calcium	0.5-1.0
Magnesium	0.3-0.8
<i>Parts Per Million</i>	
Iron	100-200
Manganese	50-100
Zinc	20-75
Copper	5-10
Boron	20-30
Molybdenum	0.1-1.0

*Percent of leaf dry weight

From: Use of Tissue Analysis in Woody Ornamental Nurseries by Thomas H. Yeager and Dwayne L. Ingram UF/IFAS

Table 3 lists the desirable leaf tissue content (on a dry weight basis) of ten elements found in **mature** leatherleaf fronds.

Element	Frond Content (%)
Primary Nutrients	
N	2.0-3.0
P	0.22-0.40
K	2.3-3.4
Secondary Nutrients (%)	
Ca	0.3-0.7
Mg	0.2-0.4
Micronutrients (ppm {mg-kg⁻¹})	
B	25-75
Cu	10-30
Fe	110-400
Mn	40-150
Zn	30-150

Table 3 From: Irrigation and Nutrient Management Practices for Commercial Leatherleaf Fern Production in Florida by Robert H. Stamps Ph.D UF/IFAS Mid Florida Research and Education Center

Table 4 lists the desirable leaf tissue content of fresh clippings of ‘Tifgreen’, Tifton-328 turfgrass. Collect a double handful of clippings after routine mowing. Take samples from normal and problem areas to quantify differences between the two areas.

Macronutrients

N	P	K	Ca	Mg	S
3.0-4.0%	0.2-0.4%	1.8-2.25%	0.25-0.5%	0.15-0.3%	0.15-0.65%

Micronutrients

Fe	Mn	Zn	Cu	B	Mo
50-250 ppm	20-300 ppm	15-70 ppm	5-20 ppm	5-60 ppm	0.1-2.0 ppm

Important Ratios

The N:S ratio should be between 10:1 and 15:1 for best growth and quality. Sulfur is deficient when the ratio is greater than or equal to 18:1.

Table From: Agronomic Division of the North Carolina Department of Agriculture and Consumer Services. June 7, 2002.

Testing of dormant plant tissue may be a way to improve early spring nutritional inputs to plants. Having the optimum balance of nutrients within and available to the plant is critically important for sustaining strong spring growth and/or good bloom and fruit set. A recent soil test is of upmost importance to make leaf tissue testing valuable. It is particularly important to know that calcium, iron, and boron are available in the right balance (and in an available form) when growth begins. These elements essentially can't move from stores in other parts of the plant and growth will not be sustained if any essential element is not present at the growing tip. If these immobile elements are not available from the soil solution or provided through early spring fertilization, growth may be stunted even though leaf tissue analysis shows them to be present at optimal levels within the plant.

Remember, Volusia County Extension and UF/IFAS Soil Testing Laboratory can be of great help in monitoring the nutritional status of your crops. We offer a soil test for pH and soluble salts at the agricultural Center (performed by the Volusia County Master Gardeners for only one dollar). UF/IFAS does a complete soil test for \$14.00 (\$24.00 if you need to know the percent organic matter) and a Container Media Test which is \$10.00. I can assist you with performing both of these tests, plus I can take a plant tissue analysis for free (there is a \$10.00

cost for blueberry or pecan samples). The tissue analysis report includes Nitrogen (N), Phosphorus (P), Potassium (K), Calcium (Ca), Magnesium (Mg), Iron (Fe), Manganese (mn), Zinc (Zn), Copper (Cu), and Boron (B).

Extension also will test your water for pH and soluble salts for \$1.00. We can assist you with a complete water test by UF/IFAS Soil Testing Lab. For a cost of \$10.00 (\$9.00 for household water) Extension will test for levels of Ca, Mg, Fe, Mn, Sodium (Na), and Chlorine (Cl). Also included are tests for hardness, suspended solids, pH, electrical conductivity (a measure of soluble salts) and total carbonates.

All the above tests are important to your cultural program. Let extension be of help for improving your cultural programs in 2007.

FNGLA MEETING

Wednesday, February 7, 2007
Pierson Lions Club
143 W. First Avenue, Pierson

Meet & Greet 6:00 pm
Meeting 7:00 p.m.

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

WILDFLOWER FESTIVAL

Plan now to attend the First Annual Volusia County Wildflower Festival to be held on Saturday, March 31, 2007. Wildflower programs will be presented and a vendor trade show will be held in the Hester and Daughtery buildings along with children's activities at the Volusia County Fairgrounds from 8:00 a.m. to noon. In the afternoon, field trips will be available for participants who sign up.

Wildflower speakers include Dr. Walter Taylor of UCF, Dave Rigsby of Stetson University, Dr. Jeff Norcini of UF/IFAS North Florida Research and Education Center, and Dana Venrick. Field trips include a visit to a production wildflower seed facility, the Longleaf Preserve, and Lyonia Preserve.

If you would like to be a vendor or participate in a field trip, you must register. For further information call me at the Agricultural Center.

Dates To Remember

February

20
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Grower Forum, Pierson - See front for details

Tree and Landscape Short Course - FL State Fairgrounds, (Special Events Bldg.) Tampa.
8 a.m. - 5 p.m. Call Mary Beth Henry, Hillsborough Extension, (813) 774-5519, ext. 103 or
e-mail mbhenry@ufl.edu

March

23

Limited Pesticide License Certification Review and Exam - 8:00 a.m. to 3 p.m., \$30 per
person. Volusia County Agricultural Center. Call Jeanne Blanchard or Dana Venrick at (386)
822-5778.

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First Annual Volusia County Wildflower Festival - See page 5 for more details.

April

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Review and Exam for Right of Way (ROW) Aquatic and Natural Areas - Extension train-
ing at the Annual FVMA Conference. Daytona Beach Hilton, 8:00 a.m. – 3:00 p.m.
Go to <http://fvma.info/conference.html> or call Paul Hurysz at 863-678-4584 or 407-474-7912.

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Core, Private Applicator Ag, and Ornamental & Turf Training & Testing - 9:00 a.m.
to 3 p.m. \$20 per person, Volusia County Agricultural Center. Call Jeanne Blanchard or
Dana Venrick at (386) 822-5778.

Sincerely,



Dana Venrick

Extension Agent II – Commercial Horticulture