June 2013

- Upcoming Events
- Opportunities to Participate in the “Fast Track Program” for New Citrus Varieties
- UF Researcher Studies Technique to Disrupt Adult Wing Development on Asian Citrus Psyllid
- Citrus Irrigation Scheduling Revisited
- Postemergence Grass Management in Blueberry Fields
- “HLB Escape Trees” Program Under Way
- Fruit Drop Survey
- New Canker ID Sheet
- Citrus Expo
- CHMA Map of the Month

********************************************************************************

**Upcoming Events**

**July 22-23** HACCP for Florida Fresh Fruit and Vegetable Packinghouses at the Citrus Research and Education Center in Lake Alfred

**July 31** New Varieties Development and Management Corporation—New Citrus Variety Options for Florida Growers at the Lake County Ag Center in Tavares

**August 2-4** 5th Annual UF/IFAS Extension Florida Small Farms and Alternative Enterprises Conference at the Osceola Heritage Park in Kissimmee

**August 14-15** Citrus Expo at the Lee County Civic Center in North Fort Myers

**August 29** Packinghouse Day at the Citrus Research and Education Center in Lake Alfred

**September 19** Florida Blueberry Growers Association Fall Seminar at the Trinkle Center in Plant City

**September 26** Fruit Production Workshop at the Osceola County Extension Office in Kissimmee

**October 2-4** US Highbush Blueberry Council Fall Meeting in Wilmington, NC

**October 4** Commercial Shade Houses, Greenhouses, High Tunnels and Hydroponics at the Volusia County Extension Office in DeLand, FL

**October 10** Building Your Own Farm’s Food Safety Manual at the Lake County Agricultural Center in Tavares

**October 25** Farm Safety Day at the Lake County Agricultural Center in Tavares
Opportunities to Participate in the “Fast Track Program” for New Citrus Varieties

Florida citrus growers now have an opportunity to obtain and evaluate promising new advanced citrus selections not yet released to the industry thanks to the “Fast Track Program” recently initiated by the New Varieties Development and Management Corporation. Selections that are chosen for this program have demonstrated good fruit qualities but other horticultural aspects need to be determined. Participation in this program will give growers an opportunity to gain experience with these advanced selections and have input on whether they should become commercial cultivars. Growers participating in the program will have the opportunity to purchase the new cultivars at reduced cost, plus they will have a significant head start over those not in the program.

The “Fast Track Program” is divided into tiers. In Tier 1, growers pay a $50 participation fee per selection they choose to evaluate and they can purchase 5-30 trees of each selection in which they have interest. Growers, UF/IFAS Researchers/Staff and the managing partner will be involved in the evaluation process and the fruit in this phase will not be able to be sold.

Should the evaluations of growers, researchers and others determine that a particular advanced selection meets the criteria of advancing in the program, tier 2 will begin. In Tier 2, participating Tier 1 growers will be able to begin producing the cultivar commercially at reduced royalty rates and up to a five year head start over those not participating in the program.

In Tier 3 of the program, anyone can purchase the new cultivars but other growers participating in “Fast Track” will have a significant “Head Start”.

In the near future, New Varieties Development and Management Corporation will be holding a series of Grower Meetings around the state to launch the new “Fast Track Program”. In our area, the meeting will be held on Wednesday, July 31, 2013 at the UF/IFAS Extension, Lake County Office in Tavares starting at 9:30 AM. I have placed a link to the program announcement detailing the other meetings around the state below; http://lake.ifas.ufl.edu/agriculture/citrus/documents/FASTTRACKPressRelease.pdf

Additional information about the “Fast Track Program” is linked below: http://lake.ifas.ufl.edu/agriculture/citrus/documents/the_new_age_of_variety_evaluation_may_29_2013.pdf
I realize that some of the “basic science” research being conducted on the management of citrus greening and its vector, the Asian citrus psyllid, seem difficult to understand and seemingly not applicable to current citrus production practices but I happened to stumble upon an interesting article from this genre that I would like to mention. The article entitled “Silencing Abnormal Wing Disc Gene of the Asian Citrus Psyllid, Diaphorina citri Disrupts Adult Wing Development and Increases Nymph Mortality” by UF/IFAS CREC Researchers, Dr. Ibrahim El-Shesheny and Dr. Subhas Hajeri, plus additional authors describe how utilizing RNAi (use of RNA to disrupt gene expression) to disrupt the gene governing adult wing development in Asian citrus psyllid.

Their work demonstrated that topical applications (applied directly to the insect) of dsRNA (double stranded RNA) designed to alter the activity of the gene governing adult wing development proved efficacious in causing mortality of psyllid nymphs and surviving adults often emerged with wing defects.

Most agree that psyllid management is crucial to citrus production programs in the citrus greening era. Even though technology of this type seems quite complex and foreign to many of us in the field, it could prove to be a potential management tool, if future work demonstrates a way to transfer it to the field.

For those interested in further information on this work, I have placed a link below:

http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0065392
Citrus Irrigation Scheduling Revisited

Discussions with local citrus producers indicates that there are varied approaches among growers to determining when to irrigate and how much to apply. Is this important and if so why? Various UF/IFAS researchers have conducted numerous trials, many of which took place at our own Mid Florida Citrus Foundation—Krezdorn Research Grove in Avalon, to determine the most efficient use of a very limited resource; water for citrus irrigation.

The basic goal of irrigation scheduling is to efficiently apply irrigation water to the soil reservoir (the root zone) in a manner to replace the amount of taken up by the tree. This does not mean keeping the soil at field capacity or completely saturated all the time. Studies have shown that depleting the soil water reserve before rainfall or applying supplemental irrigation results in a deep and vigorous root zone. Promoting a deep and vigorous root zone is critical in times of stress, such as those observed in the falls of 2011 and 2012 with extremely low rainfall and significant crop loads on most trees.

The first consideration in irrigation scheduling is determine the field capacity (FC) of your grove soil or the amount of water a given volume of soil can hold without loss to leaching. Using the diameter (actually radius = 1/2 diameter) of the spray pattern of your irrigation jet (assuming a circular pattern) and the approximate depth of your root zone, the volume of soil to schedule irrigation is now known. The field capacity of most soil types are known and can be expressed as % of volume, typically 10% for sands but will vary somewhat.

The permanent wilting point (PWP; typically 5% in sands) is the percentage of water unavailable to plants and the difference between FC and PWP is plant available water. Earlier we mentioned that deficit irrigation results in a deep and vigorous root system and typically the percentage of plant available water depleted before applying supplemental irrigation to citrus varies from 25% to 50%, depending on time of year.

Fortunately, UF/IFAS researchers, Drs. Parsons and Morgan have compiled the results of citrus irrigation scheduling work and developed two irrigation scheduling tools on the Florida Automated Weather Network (FAWN) under citrus irrigation tools (link below). The Microsprinkler Irrigation Tables tool is categorized by young trees, mature ridge and mature flatwoods, while the Citrus Micro Irrigation Scheduler Tool allows the user to set variables such as soil type, microsprinkler output, etc. to do a custom schedule.

http://fawn.ifas.ufl.edu/tools/irrigation/citrus/ (Continued)
**Irrigation Scheduling Continued**

Many growers ask what affect does HLB have on scheduling irrigation in the grove. At this time, we do not have any research data but Dr. Kelly Morgan has begun evaluations funded by DOACS-Ag Water Policy and SWFWMD on both flat woods and ridge sites comparing daily, FAWN calculated and in between timings to apply equal amounts of irrigation water. Typically, daily irrigation promotes shallower and less vigorous root systems, so it will be interesting to observe how these treatments compare.

For now, utilizing FAWN irrigation tools and making adjustments in either direction in response to tree condition/symptoms is probably the best approach to irrigation scheduling for HLB affected trees. With or without HLB, applying more water than trees take up can enhance the environment in the soil rhizosphere for the development of Phytophthora and also result in the leaching of water and plant nutrients out of the root zone.

**“HLB Escape Trees” Program Under Way**

The survey to identify “HLB Escape Trees” is now under way. The focus of this survey is to identify trees in HLB infested groves that stand out from the majority and appear to suffering little to no affects from the disease. This program is a partnership of citrus growers, Extension agents and UF/IFAS CREC researchers to study these escapes and determine what factor(s) make them stand out among the other affected trees.

UF/IFAS CREC Researcher, Dr. Fred Gmitter has obtained funding from the CRDF for Project# 724 “Accelerating Citrus Gene Discovery for HLB Tolerance/Resistance” to identify citrus genetics that could be helpful as part of the battle against HLB. On a recent interview on Southeast Ag Net, Dr. Gmitter described factors such as mutation in the scion, zygotic plants from seedling rootstock or soil microbes. He mentioned that the odds of finding tolerant or resistant scion mutations are low, while the chance of identifying zygotic rootstock exhibiting characteristics of HLB tolerance/resistance is possible.

The way the program is set up, growers who feel they may have an escape in their grove should contact their Extension Agent. Go to the Florida Citrus Agents Website [http://citrusagents.ifas.ufl.edu/Citrus_Agents_Home_Page/Citrus_Agents_Home.html](http://citrusagents.ifas.ufl.edu/Citrus_Agents_Home_Page/Citrus_Agents_Home.html) to find contact information. Agents will visit and determine if the tree warrants further investigation by Dr. Gmitter’s staff.

If you have any trees in your grove that you think may be an “HLB Outlier” please contact me at (352) 343-4101 Ext. 2729 or gke@ufl.edu. We can evaluate and notify Dr. Gmitter, if your trees may fit his research criteria.
Postemergence Grass Management in Blueberry Fields

As warmer weather and occasional rains become the norm in the central Florida blueberry production region this time of year, maintaining a good weed management program becomes a priority. This is the time of year when grassy weeds, both annual and perennial, can be a problem.

If blueberry growers utilize recommended preemergence herbicides after harvest, annual grasses such as crabgrass, goosegrass and others should not be a problem. Perennial grasses such as Bermuda and bahia are not managed by preemergence herbicides and may require an application of a postemergence product.

Grassy weeds may be managed utilizing non-selective herbicides containing the active ingredient glyphosate or paraquat. Often growers want to reduce the potential crop damage associated non-selective herbicides by utilizing postemergence grass herbicides, of which a number are registered for use in blueberry. Postemergence grass herbicides only have activity on grasses, with no affect on blueberry and other broadleaf plants or sedges.

In the UF/IFAS Extension Publication HS 90 entitled Weed Management in Blueberries, Dr. Peter Dittmar, Extension weed Management Specialist, lists three postemergence grass herbicides recommended for use in Florida blueberry crops. One of these herbicides, Fusilade DX, is only registered for non-bearing plantings or those that will have no harvest for at least a 12 month period. The other two herbicides, Select Max and Poast, are registered for use in bearing and non-bearing blueberry plantings.

HS 90 is linked below. Please remember that it is necessary to read and follow all product label instructions when using these and all other pesticides.

http://edis.ifas.ufl.edu/wg016

Some tips in using postemergence grass herbicides:

- These herbicides are typically slow acting and may take several weeks to kill grassy weeds
- Typically applications to grassy weeds before they reach 6 inches in height are the most successful; applications to larger plants may require sequential applications
- Since these are systemic products, apply to vigorously growing weeds for the best result
Fruit Drop Survey

Earlier this year, I sent a notice out about a survey looking at the factors associated with fruit drop being conducted by UF/IFAS Researcher, Dr. Gene Albrigo. In a conversation with Dr. Albrigo at the Florida State Horticultural Society Meeting earlier this month, he explained that the response to the survey has been very poor to date.

Most people in the citrus industry realize the extreme economic loss associated with abnormal fruit drop over the past two seasons. For this reason, it is extremely important to have as much participation as possible to determine if there are any common factors related to fruit drop that can be identified. For more information on the survey, please follow the link below:


Those needing assistance completing the survey, please contact me at gke@ufl.edu or (352) 343-4101 Ext. 2729.

New Canker ID Sheet

There is a new Canker ID sheet that has just been released. It is called “Citrus Canker Symptoms on Nursery Trees” PP 304 in the UF/IFAS Extension EDIS publication system. You can directly access this document by following the link below:

http://edis.ifas.ufl.edu/pdffiles/PP/PP30400.pdf

Citrus Expo

The 2013 Citrus Expo will Occur on August 14-15 at the Lee Civic Center in North Ft. Myers, FL. Some of the topics interest in the educational sessions this year are:

Current and Future Production Systems in the Era of HLB
Statewide BMPs Have Arrived—How They Will Affect You
The Future with Florida Citrus Good Agricultural Practices (GAPs) for Processing Fruit
Cooperative Well Managed Spray Programs
Practical Disease Management

For more information: http://www.citrusexpo.net/index.html
CHMA Map of the Month

The map below is for the South Lake/West Orange CHMA from March 29. The red arrows represent increasing psyllid populations in that area. In depth interpretation of these results can be obtained by logging in to the CHMA Sectional Mapping Program on the CHMA Website Main Page:

http://www.crec.ifas.ufl.edu/extension/chmas/index.shtml

Looking better but still room for improvement

Interested in Sponsoring Central Florida Citruslines and Fruit Crops Update?

- Space available
- Minimum 6 issues per year

Information
Gary England
gke@ufl.edu
(352) 392-4101
Ext. 2729