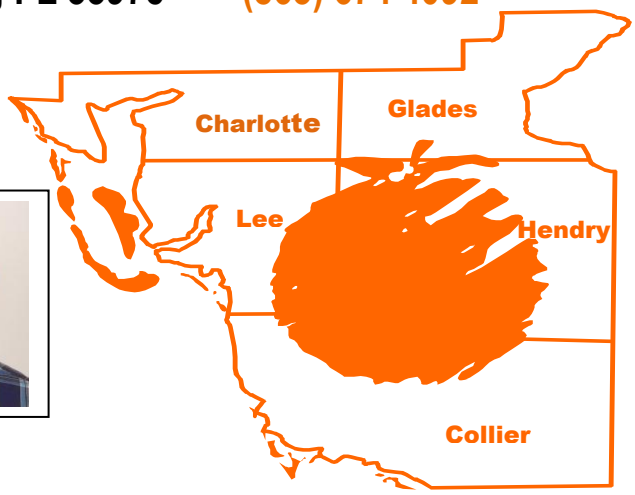
UF UNIVERSITY of FLORIDA
IFAS Extension

EXTENSION

Institute of Food and Agricultural Sciences

Hendry County Extension, P.O. Box 68, LaBelle, FL 33975 (863) 674 4092

Flatwoods Citrus



Vol. 12, No. 6 June 2009

Dr. Mongi Zekri
Multi-County Citrus Agent, SW Florida

Flatwoods Citrus. In order to save papers and postage, we would like to send you the "Flatwoods Citrus" newsletter electronically. Please provide us with your e-mail address if you have not done so.
Send it to maz@ifas.ufl.edu

U P C O M I N G E V E N T S

- Update on low volume spray application to manage the citrus psyllid
- Aspects of citrus tree decline from HLB and detection and management of infected trees

Date: Tuesday, June 23, 2009, Time: 10:00 AM – 12:00 Noon
Location: Southwest Florida REC (Immokalee)
Speakers: Drs. Lukasz Stelinski and Gene Albrigo
2 CEUs for Pesticide License Renewal, 2 CEUs for Certified Crop Advisors (CCAs)
Program Sponsors: Chemical containers, Syngenta & Valent
Attendance & Lunch are free, but **RSVP is required** for planning purposes. To RSVP, call 863 674 4092 or send an e-mail to maz@ifas.ufl.edu

CERTIFIED PILE BURNER Training, 21 July 2009, Immokalee IFAS Center (see enclosed details).

Class size is limited to the first 50 people.

Special Thanks to the following sponsors (on pages on pages 3, 4, and 5) of the Flatwoods Citrus Newsletter for their generous contribution and support. If you would like to be among them, please contact me at 863 674 4092 or maz@ifas.ufl.edu

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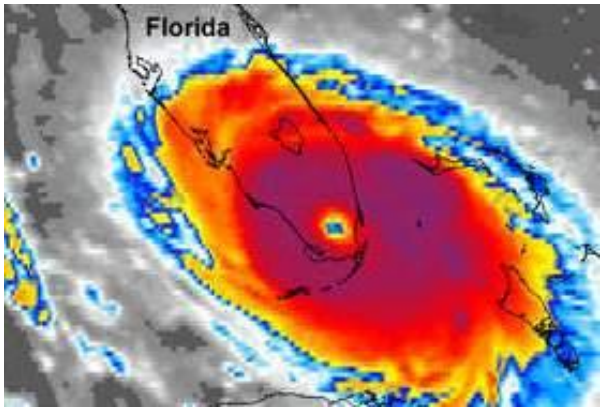
PREPARE AND STAY AWARE!

When is Hurricane Season?

June 1 - November 30



What Is A Hurricane?
A hurricane is a tropical cyclone, which generally forms in the tropics and is accompanied by thunderstorms and a counterclockwise circulation of winds. Tropical cyclones are classified as follows:

TROPICAL DEPRESSION
An organized system of clouds and thunderstorms with a defined surface circulation and maximum sustained winds* of 38 mph or less

TROPICAL STORM
An organized system of strong thunderstorms with a defined surface circulation and maximum sustained winds of 39-73 mph

HURRICANE
An intense tropical weather system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 74 mph or higher

STORM SURGE - is water that is pushed toward the shore by the force of the winds swirling around the storm. This advancing surge combines with the normal tides to create the hurricane storm tide, which can increase the mean water level 15 feet or more.

INLAND FLOODING - In the last 30 years, inland flooding has been responsible for more than half the deaths associated with tropical cyclones in the United States.

HIGH WINDS - Hurricane-force winds can destroy poorly constructed buildings and mobile homes. Debris such as signs, roofing material, and small items left outside become flying missiles in hurricanes.

TORNADOES - Hurricanes can produce tornadoes that add to the storm's destructive power. Tornadoes are most likely to occur in the right-front quadrant of the hurricane.

Hurricanes and tropical storms can be very devastating to agriculture including the Florida citrus industry. In 2004 and 2005, growers and farmers have seen their groves, barns, equipment and homes destroyed. If a hurricane hit our state this year, damage to trees would be of varying degrees. Some trees would be uprooted. Others would have major limbs split off or would have major defoliation. Fruit would litter the ground and grapefruit trees would suffer the most loss because of the larger size and heavier weight fruit.

PLAN AND PREPARE
Hurricanes can strike at any time during June through October. It is best to devise a hurricane plan and use it to make preparations far before the hurricane season. The hurricane plan should provide protection from a storm and recovery after the storm.
For more details, go to "Hurricane Preparedness For Citrus Groves"
by **Dr. Bob Rouse**
at **http://edis.ifas.ufl.edu/CH178**

PRE-STORM PREPARATION

By Bob Rouse

Personnel assignments - A major part of the hurricane plan is ensuring that all managers know their responsibilities prior to, during, and after a hurricane. Make a list of all tasks that will need to be performed so there are no last-minute, unanticipated gaps to plug. Identify and maintain a updated list of the members of a damage inspection team which will determine where storm damage occurred and how extensive it is. Make sure each team member knows his or her responsibilities. Specific workers should be assigned to fix ditches, prop up trees, fix roadways and perform other tasks after the storm. Make sure you know how to contact workers at their place of safety, and that they have a way to call in after the storm.

Safety training - Workers should be trained in the safe operation of unfamiliar equipment they may have to use if a hurricane hits. For instance, drivers may wind up using chain saws to remove a downed tree that is blocking a road.

Liquid tanks - Tanks containing fuel, fertilizer and other materials should be kept full so they don't move in the wind and rain, and to ensure that sufficient fuel is available for machinery used in recovery efforts after the storm.

Ditches - Ditches should be kept clean and pumped down to help maximize water removal efforts after the storm.

Emergency equipment - Make sure that all emergency equipment - including generators, chain saws, torches, and air compressors - is on hand and in good repair. Emergency generators should be available for use in headquarters and equipment maintenance shops. Large diesel powered generators with 25 to 60 kilowatt capacity can be rented or leased by the month during the hurricane season.

Communications equipment - Ensure that radios are in good working order. Have hand-held portable radios with extra charged battery packs available for workers who will need them in the field after the storm. Direct truck-to-truck radio communication is most reliable when phone lines are down, but cellular phones with radio capabilities, and standard cellular phones can help workers save valuable time during the recovery process, as opposed to communication systems that require messages to be relayed through a base unit.

Hazardous materials - Hazardous materials should be secured prior to a storm, and gasoline pumps should be shut down.

Emergency contacts - Have a list of phone numbers you might need in an emergency, including numbers for the phone and electric companies.

SOME STRATEGIES FOR PSYLLID MANAGEMENT

Timing of psyllid control measures

Psyllid populations increase in response to the presence of new leaf growth (flush) for egg laying and development of psyllid nymphs. Populations begin building on the early season flushes and reach their highest levels on flushes present during the late spring or early summer. Psyllid populations decline (but are not absent) during the mid-summer months when climatic conditions are not the most favorable for psyllid population increases. Psyllid populations increase again in the fall when new flush is present and climatic conditions favor increased psyllid reproduction rates. During the winter months, psyllids are found mostly as adults but occasional new flush growth can support psyllid reproduction.

Commercial citrus groves

1. *Planned Coordinated Applications* – Two area-wide applications are proposed for each year. The first area-wide application should be made in January or February prior to the initiation of new flush and bloom. The second area-wide application should be made post-fall flush in October or November once all flush has hardened off and no new flush is present. Locally, these two applications should be coordinated to ensure proper area-wide implementation. The result of proper implementation will be a reduction in the overall psyllid population in an area which will facilitate the success of continued psyllid suppression programs conducted by individual citrus growers.

Application Methods

Success of an area-wide program for psyllid control requires that the applications be completed as quickly as possible to minimize psyllid re-colonization from untreated to recently treated areas. Use of aerial applications is the most realistic and effective manner for achieving this goal in commercial groves.

In some situations, aerial applications cannot be used due to flight path obstructions including electrical lines or proximity to restricted areas such as bodies of water or urban areas. In these cases, ground sprays should be used, concurrent with the aerial applications, to treat these localized targets. Achieving synchronized area-wide psyllid control using ground sprays is logistically difficult due to limited equipment availability and time required to complete these applications. It is suggested that in a given area, applications be initiated at one end of a defined area and progress in a given direction (e.g., North-to-South) ensuring that all citrus and host plants of the psyllid are treated in a progressive and coordinated manner. The goal for these coordinated ground applications is to have treatments in a defined area completed within a period of 7 days or as quickly as resources allow.

Product Choice

Broad-spectrum insecticides with an extended period of residual contact activity are the primary products recommended for psyllid control in area-wide control programs since it is the adult stage of the psyllid targeted by these sprays. Choice of which product will be used will need to be determined on a region by region basis. Due to the effect of temperature on pesticide effectiveness, it is recommended that pyrethroid insecticides be used primarily in the early season area-wide applications

(January-February) when temperatures are cooler and an organophosphate or carbamate insecticide be used during the second proposed area-wide application occurring during the late summer/early fall (October-November) when temperatures are warmer. Additional factors that must be considered include the Restricted Entry Interval (REI's) and Preharvest Intervals (PHI's) that could interfere with grove production practices. Because all of these products have negative effects on pollinators, area-wide applications should be coordinated such that no applications are made when citrus trees are in bloom. More information on psyllid management and chemicals for psyllid control can be found at **http://edis.ifas.ufl.edu/document_in686**

2. ***Additional applications*** **–** Citrus growers should use the two area-wide psyllid applications as a basis on which to build their psyllid management programs. Between the scheduled area-wide applications, growers should incorporate psyllid control into their ongoing grove management practices to maintain psyllid populations at low levels. This will include addition of products for psyllid control with regularly scheduled programs such as foliar nutritional sprays and oil sprays for disease control. Routine applications of systemic insecticides should be made to young trees which produce new flush throughout the year to prevent buildup of psyllid populations. Additionally, citrus growers should make supplemental sprays for psyllid control based on their independent monitoring when psyllid populations are observed to be increasing. Growers may need to make repeated applications to portions of their grove that border abandoned citrus groves which may harbor psyllids. In addition to foliar sprays, growers may chose to use systemic soil-applied insecticides that may in most cases provide long term residual control.

Organic Citrus Groves

1. ***Planned Coordinated Applications*** **–** Products used for psyllid control in conventional commercial citrus operations cannot be applied to organically grown citrus. Currently, the best option for psyllid control in organic groves is the use of petroleum oil applications. Oils provide control of the immature stages of the psyllid but usually fail to control the majority of adult psyllids since oils provide no residual activity. Based on the limitations of petroleum oils for psyllid control, the timing of applications in organic groves will differ. Organic growers should begin their petroleum oil applications within 1-2 days prior to the application of conventional insecticides in surrounding groves. The rationale for this earlier timing is that psyllids show some avoidance and dispersal behavior in response to oil sprays. In cases where organic groves are small, the psyllids may move in response to oil applications to adjacent groves where they will then be controlled by the insecticide applications. A second oil application should be made 10-12 days after the initial application to provide additional control of the remaining adult psyllids.

2. ***Additional applications*** **–** In addition to applications made for psyllid control during the periods when area-wide applications are being made, organic growers should use petroleum oil applications to reduce psyllid development on new flush. During each flushing event, petroleum oils should be applied every 10-12 days when new flush is present in an organic grove.

GREENING COSTS

By Kevin Bouffard
THE LEDGER [Kevin Bouffard can be reached at kevin.bouffard@theledger.com or at 863-422-6800.]

Central Florida growers who took steps to control greening and canker in the 2007-08 season paid $1,784 per acre in caretaking costs for a mature orange grove, or 39 percent more than growers who did not take those measures, according to a report from Ron Muraro, an economist at the Citrus Research and Education Center in Lake Alfred who does an annual survey of caretaking costs. That includes the cost of scouting, additional pesticide applications and removing infected trees. Those greening costs often made the difference between profitability and red ink, Muraro reported.

For a late-season Valencia orange grove in Central Florida, including Polk, greening and canker controls pushed the grower's break-even point from 94 cents to $1.48 per pound solids, depending upon the number of boxes picked per acre, the survey shows. That compares to a break-even point of 80 cents to $1.19 per pound solids for growers taking no greening measures.

A look at farm prices this season and in 2007-08 illustrates how those numbers affect a grower's profit. Juice processors, who buy 95 percent of Florida oranges, pay based on pound solids, a measure of the amount of juice squeezed from the fruit. They paid growers an average price of $1.39 per pound solids for Valencias in 2007-08.

LOSING BATTLE

Based on Muraro's numbers, growers with a low-production Valencia groves, 300 boxes or fewer per acre, lost money if they took the recommended greening protections. Caretaking cost them $1.48 per pound solids. Valencia growers who did not control for greening paid at most $1.25 per pound solids for greening, thus making a profit at last season's $1.39 per pound solids average. The profit picture changes radically this season because of lower farm prices. Assuming Muraro's caretaking numbers hold, growers controlling for greening will struggle to break even. Through May 4, processors had paid Valencia growers an average of just $1.07 per pound solids, according to Florida Citrus Mutual, the state's largest growers' representative. Muraro's figures show only Valencia groves with harvests of 500 boxes or more per acre will make money this season. Their caretaking costs total $1.05 per pound solids.

Even a solidly producing Valencia grove yielding 450 boxes per acre will lose money because caretaking will cost $1.12 or more. That raises the fear some growers are cutting back on greening control measures because they can't afford it. That would inevitably lead to more infected trees and more psyllids spreading the greening bacteria, causing higher infection

rates in the future even for growers who do take precautions.

"This in my mind is going to separate growers," said Larry Black, production manager at Peace River in Fort Meade, who acknowledged this season's economics make it tough on marginally profitable citrus groves to combat greening aggressively.

"We've seen ups and downs before. This is just a bump in the road in pricing," he said. "We're optimistic that if we take the aggressive approach against greening, citrus will be a profitable venture in the long run."

BRAZILIAN SUGGESTIONS

Still, the Brazilian scientist expressed optimism about controlling greening even with existing technology if growers follow eight points that Brazilian research shows to be effective. They are:

1. **Start now**. The lower the incidence of infection in any grove, the easier greening is to control. Brazilian growers who started anti-greening measures in 2004 have a much better control record than those who started later.

2. **Age matters**. The younger the tree, particularly those 5 years old or less, the more susceptible it is to the bacteria. Act more aggressively in young groves.

3. **Strength in numbers**. Large growers better manage greening control measure than small growers, largely because of economies of scale. Ayres recommends small growers form local partnerships to share anti-greening costs.

4. **Good neighbor policy**. Even pro-active growers will get greening if they're surrounded by neighbors who do nothing. The threat is greatest within two miles. Work with those neighbors instead of ignoring them.

5. **Regional strategies**. Growers also need to work in county or regional groups because the infection rate also rises when greening prevails over wide areas.

6. **Scouting**. Inspectors trained in spotting greening symptoms should walk through a grove at least six times a year, more than the four times annually recommended in Florida. In high-infection areas in Brazil, scouts inspect as many as 20 times a year.

7. **Insect control**. Tiny insects called psyllids are the main carriers of the disease. Brazilian growers spray insecticides at least six times a year, a dozen or more in high infection areas. The minimum recommendation in Florida is four times a year.

8. **Eliminate sources of infection**. Remove infected trees immediately.

"If you follow this profile, chances are high you can control greening," Ayres said. "In the long run, you can control the disease and make money."

MICRONUTRIENTS IN CITRUS PRODUCTION

Iron (Fe): One of the functions of Fe is to act as a catalyst in the production of chlorophyll. Iron deficiency has been of importance on calcareous soils in certain areas of Florida where the soil contains high amount of calcium carbonate and has a pH of 8.0. Iron deficiency is attributed to low Fe content in white sandy areas near lakes and places known locally as "sand soaked areas". Iron deficiency can be induced by high levels of P and accumulations of heavy metals, primarily Cu, in the soil. In Florida, Fe deficiency is commonly associated with Zn and Mn deficiencies.

The symptoms of Fe deficiency are also known as "iron chlorosis". They occur on new growing leaves which are very light in color and sometimes almost white but with the veins greener than the remainder of the leaf. In acute cases, the leaves are reduced in size, very thin, and shed early. The trees die back severely on the periphery and especially in the top. Fruit set, yield, and fruit size will be reduced.

Iron deficiency is usually associated with high soil alkalinity, but it is also associated with over irrigation, prolonged spells of wet soil conditions or poor drainage and low soil temperature. Several areas affected with Fe chlorosis in south Florida have been materially helped or completely cured by careful control of irrigation and drainage. Iron deficiency sometimes occurs where excess salts are present in the soil.

Iron deficiency has been found to be one of the most difficult deficiencies to correct especially on calcareous soils. Foliar applications of Fe are not recommended because of their lack of effectiveness and risk of leaf and fruit burn. At their best, foliar sprays of Fe produce a spotted greening of the leaves rather than an overall greening. Soil applications of Fe chelates still offer the most effective and reliable means of correcting Fe deficiency. However, Fe chelates are not equally effective. See the Table below.

Iron Chelates	***Effective pH Range***
Fe-EDTA	4 to 6.5
Fe-HEDTA	4 to 6.5
Fe-DTPA	4 to 7.5
Fe-EDDHA	4 to 9.0

Iron sulfate has not given satisfactory control on either acid or alkaline soils. Citrus rootstocks vary in their ability to absorb Fe. Trifoliate orange and its hybrids (Swingle citrumelo and Carrizo citrange) are the least able to do so. Depending on soil pH (see Table above) and tree size, it is recommended to soil apply 1/4 to 1/2 of an ounce of metallic Fe/tree using a chelated compound. These amounts are equivalent to 4 to 8 ounces of Fe-EDDHA (Sequestrene 138 Fe, 6% Fe). Chelated materials should be incorporated into the soil because most of them are subject to photo-decomposition. Chelated materials are much less effective when applied in the winter (cool weather) than when applied during the rest of the year

Zinc (Zn): Zinc is essential for the formation of chlorophyll and function of normal photosynthesis. Zinc is also needed for the formation of auxins, which

are growth-promoting substances in plants.

Zinc deficiency symptoms are characterized by irregular green bands along the midrib and main veins on a background of light yellow to almost white. The relative amounts of green and yellow tissue vary from a condition of mild Zn deficiency in which there are only small yellow splotches between the larger lateral veins to a condition in which only a basal portion of the midrib is green and the remainder of the leaf is light yellow.

In less acute stages, the leaves are almost normal in size, while in very acute cases the leaves are pointed, abnormally narrow with the tendency to stand upright, and extremely reduced in size. In mild cases, Zn deficiency symptoms appear on occasional weak twigs. Fruit formed on these weak twigs are drastically reduced in size and have an unusually smooth light-colored thin skin and very low juice content.

Zinc deficiency symptoms can be so severe that they may mask or noticeably alter the symptoms of other deficiencies or disorders. Deficiency in Zn can develop due to soil depletion or formation of insoluble compounds. Excessive P or N has also been found to induce or aggravate Zn deficiency.

A single spray of a solution containing 2 to 3 lbs of elemental Zn per acre from Zn sulfate, oxide, nitrate, or other forms at their recommended rates can correct Zn deficiency. Under severe deficiency conditions however, application of Zn sprays may be necessary on each major flush of growth to keep the trees free of deficiency symptoms because Zn does not translocate readily to successive growth flushes. Foliage injury can be reduced by adding 2 to 3 lbs of hydrated lime to the spray. Maximum benefit is obtained if spray is applied to the young growth when it is two-thirds to nearly fully expanded and before it hardens off. Treatment on the spring flush is preferable. Soil application of Zn in the fertilizer is neither an economical nor an effective way to correct Zn deficiency. One of the early diagnostic symptoms of a disorder known as young tree decline or "blight" is a Zn deficiency pattern in the leaves. Correction of the symptoms will not alleviate the disorder, and trees will never recover form the disease.

Manganese (Mn): Manganese is involved in the production of amino acids and proteins. It plays a role in photosynthesis and in the formation of chlorophyll.

Manganese deficiency occurs commonly in Florida. It is particularly evident in the spring after a cold winter. Manganese deficiency leads to a chlorosis in the interveinal tissue of leaves but the veins remain dark green. Young leaves commonly show a fine pattern or network of green veins on a lighter green background but the pattern is not so distinct as in Zn or Fe deficiencies because the leaf is greener. By the time the leaves reach full size, the pattern becomes more distinct as a band of green along the midrib and principal lateral veins with light green areas between the veins.

In more severe cases, the color of the leaf becomes dull-green. Interveinal leaf areas may develop many whitish opaque spots, which give the leaf a

whitish or gray appearance. The leaves are not reduced in size or changed in shape by Mn deficiency, but affected leaves prematurely fall from the tree. No particular twig symptoms have been related to Mn deficiency. In cases of acute Mn deficiency, the growth is reduced giving the tree a weak appearance.

Manganese deficiency may greatly reduce the crop and the color of the fruit. Manganese deficiency is frequently associated with Zn deficiency. This combination of the two deficiency symptoms on leaves is characterized by dark green veins with dull whitish green areas between the veins. In such combinations, the Mn deficiency is acute and the Zn deficiency is relatively mild.

In Florida, Mn deficiency occurs on both acid and alkaline soils. It is probably due to leaching in the acid soils and to insolubility in the alkaline soils. For deficient trees on alkaline soils, treatments by sprays of Mn compounds are recommended. On acid soils, Mn can be included in the fertilizer. Foliar spray application quickly clears up the pattern on young leaves but older leaves respond less rapidly and less completely. When Mn sprays are given to Mn-deficient orange trees, fruit yield, total soluble solids in the juice and pounds solids per box of fruit increase. Foliar spray of a solution containing 2 to 3 lbs of elemental Mn on two-third to fully expanded spring or summer flush leaves is recommended. If N is needed, adding 7 to 10 lbs of low biuret urea will increase Mn uptake.

Boron (B): Boron is particularly necessary where active cell division is taking place. Boron plays an important role in flowering. Florida sandy soils are low in B, and a deficiency of this element in citrus occasionally occurs under field conditions. The deficiency may be aggravated by severe drought conditions, heavy lime applications, or irrigation with alkaline water. Boron is very mobile in the soil profile of sandy soils and readily leaches by rainfall or excess irrigation.

Boron deficiency is known as “hard fruit” because the fruit is hard and dry due to lumps in the rind caused by gum impregnation. The chief fruit symptoms include premature shedding of young fruits. Such fruit have brownish discoloration in the white portion of the rind (albedo), described as gum pockets or impregnations of the tissue with gum and unusually thick albedo. Older fruit are undersized, lumpy, misshapen with an unusually thick albedo containing gum deposits. Seed fails to develop and gum deposits are common around the axis of the fruit.

The first visual symptoms of B deficiency are generally the death of the terminal growing point of the main stem. Further symptoms are a slight thickening of the leaves, a tendency for the leaves to curl downward at right angles to the midrib, and sometimes chlorosis.

Young leaves show small water soaked spots or flecks becoming translucent as the leaves mature. Associated with this is a premature shedding of leaves starting in the tops of the trees and soon leaving the tops almost completely defoliated. Fruit symptoms

appear to be the most constant and reliable tool for diagnostic purposes.

Borax and other B compounds are generally used in treating citrus affected with B deficiency. They can be applied either foliarly or in the fertilizer. As a maintenance program, apply B in the fertilizer at an annual rate equivalent to 1/300 of the N rate. In Florida, foliar spray applications have been found much safer and more efficient than soil application. Soil applications frequently fail to give satisfactory results during dry falls and springs and may result in toxicity problems if made during the summer rainy season. Boron solubility in the soil is reduced at soil pHs below 5 and above 7. Foliar spray may be applied during the dormant period through post bloom, but preferably during early flower development. Treating at this growth stage is important because boron does not move very readily from other parts of the tree to the buds. Applying boron at this time will assist in flower initiation and pollen production, satisfy the needs for pollen tube growth, and enhance fruit set. For maintenance spray application, 0.25 lb/acre of B (1.25 lbs of soluble borate containing 20% B) may be used. Boron levels in the leaf tissue should not drop below 40 ppm or exceed 120 ppm (dry wt basis). Where deficiency symptoms are present, double the amount suggested. Use care not to apply more than the recommended amount because it is easy to go from deficiency to excess.

Copper (Cu): Copper also has a role in photosynthesis and chlorophyll formation. The functions of Cu in the mineral nutrition of plants are numerous. Heavy fertilization with N tends to increase the severity of Cu deficiency.

If Cu in citrus leaves falls below 4 ppm in dry matter, severe Cu deficiency will develop. In the range of 4 to 5 ppm, mild to moderate deficiency symptoms may occur. Copper deficiency rarely occurs when the Cu concentration in leaves is 6 ppm or above. Excessive applications of nitrogenous fertilizers have been considered for years a contributing cause for this trouble giving rise to the term “ammoniation”. The cause might be an unbalanced N/Cu ratio.

The first symptom is the formation of unusually vigorous large dark green foliage with a “bowing up” of the midrib. The twigs are also unusually vigorous, long, soft, angular, frequently “S” shaped and more or less drooping.

Fruit symptoms are most pronounced on oranges. Brown stained areas of hardened gum on the rind of the fruit may precede the appearance of leaf and twig symptoms. In severe cases, dieback of young twigs will occur and the twigs will be covered by reddish brown droplets of gums.

Insufficient available Cu in the soil is believed to be the primary cause of the symptoms described. Copper deficiency is more of a problem on newly planted flatwoods land than the ridge. Prevention or cure of Cu deficiency is accomplished by either foliar sprays or soil applications of Cu compounds. A Cu spray of solution containing 2 to 3 lbs of elemental Cu applied during bloom time commonly causes an almost immediate recovery and results in a good setting of normal fruit. Copper deficiency can be a controlling factor in fruit production, and acute Cu deficiency may put trees entirely out of production. Foliage sprays are often valuable emergency treatments when symptoms of Cu deficiency are first observed.

For more information:

http://edis.ifas.ufl.edu/SS422
http://edis.ifas.ufl.edu/SS423

Hendry County Extension Office
Post Office Box 68
LaBelle, FL 33975-0068
Tel. (863) 674-4092
Cell: (239) 595-5494

Information for the next Certified Pile Burners Course:

The Florida Division of Forestry and University of Florida Cooperative Extension Service will be conducting a Certified Pile Burners Course on 21st, July, 2009. This course will show you how to burn piles ***legally, safely and efficiently***. Most importantly, it could save a life. If you burn piles regularly, don't put off registering for this training. When the weather is dry, certified pile burners will receive priority for authorization to burn. Also, certified pile burners are allowed to burn up to two hours longer per day and get multiple day authorizations. Don't wait. The number of trainings offered and attendance at each training is LIMITED. This training will be held from 8:30 am till 4:30 pm at the South West Florida Research and Education Center located in Immokalee, Florida. Included are a registration form and program agenda. See **http://www.imok.ufl.edu/map.htm** for directions to facility.

Registration is required to attend and class size is limited. To attend please send the following information (see form on next page):

1. Your full name (as wanted on your pile burning certificate).
2. Your mailing address (where you want the certificate mailed).
3. Your Division of Forestry Customer Number (It is the number that you are required to give the DOF when you call in for your burn permits. If you do not know it please call the local DOF office and ask them for it).
4. Your email address (if you have one) and/or contact phone number.
5. A check made out to Hendry County 4-H. $50.00.

The first fifty individuals to provide these five requirements will be registered; there will be a 7-day non refundable fee limit. If you do not make the training and did not contact our office at least one week before the class, you will not receive a refund. There will be a test at the end of the session. You must receive a grade of 70% or higher on the exam and demonstrate a proper pile burn with your local DOF office to become certified. Once you are certified it will be noted with your customer number, thus it is important for us to have the proper number. If you do not have a customer number the DOF office will set one up for you. Fill out the registration form on the next page and return as directed.

Sincerely,

Dr. Mongi Zekri
Multi County Citrus Agent
863/ 674-4092
Cell: 239/ 595-5494
maz@ifas.ufl.edu

Florida's Certified Pile Burner Training
July 21st, 2009
UF-IFAS Southwest Florida Research and Education Center
2686 SR 29, Immokalee, FL 34142
See: http://swfrec.ifas.ufl.edu/map.htm for directions

1. Opening Comments and Introduction	08:30 – 09:10
2. Fire Weather	09:10 – 09:50
3. BREAK	09:50 – 10:00
4. Smoke Management	10:00 – 11:20
5. Planning and Implementation	11:20 – 12:15
6. LUNCH (provided)	12:15 – 01:15
7. Open Burning Regulations	01:15 – 02:30
8. Safety	02:30 – 03:10
9. BREAK	03:10 – 03:20
10. Public Relations	03:20 – 04:00
11. Wrap Up & Test	04:00 – 04:30

Please bring a Pencil for the Exam!

Registration Form

Florida's Certified Pile Burner Program

July 21st, 2009

c/o Dr. Mongi Zekri

UF-IFAS Hendry County Extension Office

P.O. Box 68

LaBelle, FL 33975-0068

Please send this form and a check for $50.00, payable to Hendry County 4-H, to:

Dr. Mongi Zekri
University of Florida, IFAS
Hendry County Extension Office
P.O. Box 68
LaBelle, FL 33975-0068

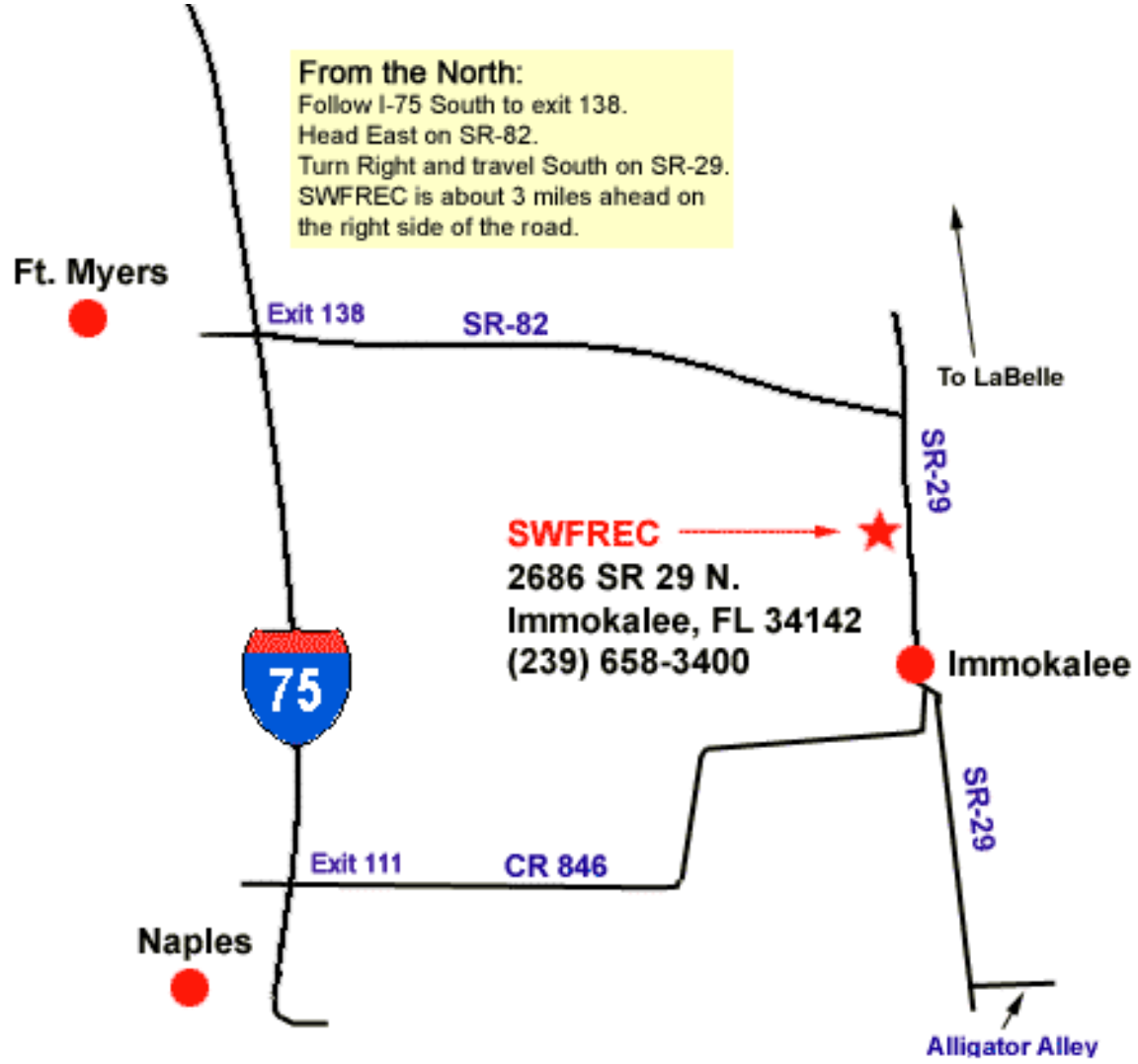
Name

Mailing address

Email address

Phone Number

DOF Customer Number



From Naples:
From I-75, take exit 111 (CR 846) East.
Turn left onto SR-29 and travel through Immokalee, staying on SR-29.
SWFREC is about 2 mile North of Immokalee on the left.

From the East:
Head West on I-75 (Alligator Alley).
Exit on SR-29 (Exit 80) and head North.
Pass through Immokalee, staying on SR-29.
SWFREC is about 2 miles North of Immokalee on the left.

Florida's Certified Pile Burner Training
Frequently Asked Questions

Q: Why should I be a certified pile burner?

A: Certified pile burners are trained to burn piles ***legally, safely and efficiently***. Most importantly, it could save a life. Also, when the weather is dry, certified pile burners will receive priority for authorization to burn by the Florida Division of Forestry (DOF). Also, certified pile burners are allowed to burn up to two hours longer per day and get multiple day authorizations.

Q: What is a Pile Burner Customer Number?

A: When you call the DOF for an authorization to burn, you will be assigned a personal customer number. This number references your information so it doesn't need to be gathered each time you call for an authorization. You must have your individual DOF customer number in order to be certified.

Q: Is there a test?

A: Yes, the test is 20 questions and open-book. You must receive a score of at least 70% to pass.

Q: What if I don't pass?

A: Very few people fail the test but if you do, you will be provided another opportunity to take the test at a later date. If you fail the second time, you must re-register and take the training again.

Q: Why do you ask for my email on the application form?

A: Email is the fastest and most convenient method to inform registrants of their registration status. If no email address is provided then all correspondence will be sent through the federal mail. This can take several days to relay messages and this may not be practical if changes are made to the course schedule or for last minute registrations.

Q: How much does it cost to register for the training?

A: Registration for the training is $50 per person and includes lunch, training materials and testing.

Q: How long does my certification last?

A: As long as the person with the certification uses their number at least 5 times in a period of 5 years their certification will not expire under the current program.

Q: Will certified burners be notified if their certification expires?

A: Yes, notification will be sent out to them to let them know of their upcoming certification expiration date.

Q: Will I be certified at the end of the one day training?

A: No, you will need to follow the written instructions that you will receive from the Division to become certified. You will need to complete a simple burn plan, have it reviewed and approved locally by the DOF and also have the burn itself reviewed and approved by the DOF. From that point, the local DOF office will send the expected documentation to Tallahassee to recommend certification for you.

Q: Is there a minimum age to be a certified pile burner?

A: Yes, you must be at least 18 years old to take the test and be a certified pile burner.

USDA FSA NEWS RELEASE
UNITED STATES DEPARTMENT OF AGRICULTURE - FARM SERVICE AGENCY

Farm Service Agency

Release No. 1439.09

USDA Designates 24 Counties in Florida as Primary Natural Disaster Areas
Decision Allows Farmers and Ranchers to Apply for USDA Assistance
WASHINGTON, The U.S. Department of Agriculture designated 24 counties in Florida as primary natural disaster areas because of losses caused by very cold weather and freezing temperatures that occurred from Jan. 20-23, 2009, and from Feb. 4-6, 2009. President Obama and I understand the very cold weather caused severe damage to the area and serious harm to the farms in Florida, and we want to help, said Secretary Tom Vilsack. This action will provide help to hundreds of farmers who suffered losses to their citrus, winter fruit, vegetable crops and nursery plants.
The designated counties are:

Alachua	De Soto	Indian River	Putman
Brevard	Flagler	Lee	Sarasota
Charlotte	Glades	Manatee	St. Johns
Citrus	Hardee	Martin	St. Lucie
Collier	Hendry	Palm Beach	Sumter
Columbia	Hernando	Pasco	Volusia

All counties listed above were designated natural disaster areas on April 27, 2009, making all qualified farm operators in the designated areas eligible for low interest emergency (EM) loans from USDAs Farm Service Agency (FSA), provided eligibility requirements are met.
Farmers in eligible counties have eight months from the date of the declaration to apply for loans to help cover part of their actual losses. FSA will consider each loan application on its own merits, taking into account the extent of losses, security available and repayment ability. FSA has a variety of programs, in addition to the EM loan program, to help eligible farmers recover from adversity.
USDA has also made other programs available to assist farmers and ranchers, including the Supplemental Revenue Assistance Program (SURE), which was approved as part of the Food, Conservation, and Energy Act of 2008; the Emergency Conservation Program; Federal Crop Insurance; and the Noninsured Crop Disaster Assistance Program.
Interested farmers may contact their local USDA Service Centers for further information on eligibility requirements and application procedures for these and other programs.
Additional information is also available online at http://disaster.fsa.usda.gov.
FSA news releases are available on FSAs Web site at: http://www.fsa.usda.gov

Flatwoods Citrus

In order to save papers and postage, we would like to send you the "Flatwoods Citrus" newsletter electronically as an e-mail attachment or you can download it by yourself from several websites.

□ If you would like to receive the ***Flatwoods Citrus*** newsletter electronically, please check this box and provide us with your e-mail address. Send it to **maz@ifas.ufl.edu**

□ If you do not have an e-mail address and wish to keep receiving a hard copy of the newsletter, please check this box and complete the information requested below.

Please send: Dr. Mongi Zekri
Multi-County Citrus Agent
Hendry County Extension Office
P.O. Box 68
LaBelle, FL 33975
E-mail: maz@ifas.ufl.edu

Subscriber's Name:_____

Company:_____

Address:_____

City:_____State:_____Zip:_____

Phone:_____

Fax:_____

E-mail:_____

Racial-Ethnic Background

__American Indian or native Alaskan
__Asian American
__Hispanic
__White, non-Hispanic
__Black, non-Hispanic

Gender

__Female
__Male