

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

# Flatwoods Citrus



**Vol. 21, No. 11**      **November 2018**

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



## *Table of Contents*

Upcoming Event	2
Flatwoods Citrus Newsletter Sponsors – Thank you!	3-5
El Niño/Southern Oscillation (ENSO) Diagnostic Discussion	6
Winter Weather Watch	7-9
Hedging, Topping, and Skirting Citrus Trees	10-11
Drought	12
Saline Irrigation Water: Impacts on Citrus Production	13-15
Microsprinkler Irrigation & Fertigation	16
Mobile Irrigation Lab	17
Certified Pile Burners Course	18-22
<b>FLATWOODS CITRUS NEWSLETTER EVALUATION FORM</b>	23

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## Seminar

**Pre-registration is required.** No registration fee and lunch is free Thanks to Matt Shook with Harrells. To reserve a seat, call 863 674 4092 or send an e-mail to Dr. Mongi Zekri at [maz@ufl.edu](mailto:maz@ufl.edu)

\*\*\*Progress in Developing Improved Rootstocks for the HLB Era

\*\*\*Update on UF-CREC Scions for New Plantings

Location: Southwest Florida Research and Education Center, Immokalee

Date & time: Thursday, 8 November 2018, **10:00 AM – 12:00 Noon**

Speakers: **Dr. Jude Grosser** and **Dr. Fred Gmitter**, UF-IFAS

Coordinator: Dr. Mongi Zekri, UF-IFAS

Program Sponsor: Matt Shook with Harrells

**2 CEUs for Certified Crop Advisers (CCAs)**

**2 CEUs for Pesticide License Renewal**

## Seminar

### **WEATHER**

Date: Tuesday, December 4, 2018

Time: **10:00 AM – 12:00 Noon**

Location: Immokalee IFAS Center

Program Coordinator: Dr. Mongi Zekri, UF-IFAS

Program Sponsor: Sam Thayer with **Maxijet**

#### Agenda

10:00 AM – 10:55 AM, **Chris Oswalt**, UF-IFAS

Winter weather watch, Ag weather forecasts, Freeze protection, Citrus leaf freezing information

**10:55 AM – 11:05 AM Break**

11:05 AM – 12:00 Noon, **Rick Lusher**, UF-IFAS

Florida Automated Weather Network (FAWN), Management tools, Cold protection tools  
Irrigation scheduling tools

**2 CEUs for Certified Crop Advisers (CCAs)**

**12:00 Noon, Sponsored Lunch**

**No registration and lunch is free Thanks to Sam Thayer with Maxijet, but**

**Pre-registration is required.** To reserve a seat, call 863 674 4092 or send an e-mail to Dr. Mongi Zekri at: [maz@ufl.edu](mailto:maz@ufl.edu)

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## EL NIÑO/SOUTHERN OSCILLATION (ENSO) DIAGNOSTIC DISCUSSION

issued by

**CLIMATE PREDICTION CENTER/NCEP/NWS**  
**and the International Research Institute for Climate and Society**  
**11 October 2018**

**ENSO Alert System Status: El Niño Watch**

**Synopsis: El Niño is favored to form in the next couple of months and continue through the Northern Hemisphere winter 2018-19 (70-75% chance).**

ENSO-neutral continued during September, but with increasingly more widespread regions of above-average sea surface temperatures (SSTs) across the equatorial Pacific Ocean (Fig. 1). Over the last month, all four Niño index values increased, with the latest weekly values in each region near +0.7°C (Fig. 2). Positive subsurface temperature anomalies (averaged across 180°-100°W) also increased during the last month (Fig. 3), due to the expansion and strengthening of above-average temperatures at depth across the equatorial Pacific (Fig. 4). Convection was increasingly suppressed over Indonesia and around the Date Line (Fig. 5). Low-level westerly wind anomalies were evident over the western and east-central Pacific, with some of the strongest anomalies occurring over the eastern Pacific during the past week. Upper-level wind anomalies were easterly over the east-central Pacific. Overall, the oceanic and atmospheric conditions reflected ENSO-neutral, but with recent trends indicative of a developing El Niño.

The majority of models in the IRI/CPC plume predict El Niño to form during the fall and continue through the winter (Fig. 6). The official forecast favors the formation of a weak El Niño, consistent with the recent strengthening of westerly wind anomalies and positive temperature trends in the surface and subsurface ocean. In summary, El Niño is favored to form in the next couple of months and continue through the Northern Hemisphere winter 2018-19 (70-75% chance; click [CPC/IRI consensus forecast](#) for the chance of each outcome for each 3-month period).

This discussion is a consolidated effort of the National Oceanic and Atmospheric Administration (NOAA), NOAA's National Weather Service, and their funded institutions. Oceanic and atmospheric conditions are updated weekly on the Climate Prediction Center web site ([El Niño/La Niña Current Conditions and Expert Discussions](#)). Forecasts are also updated monthly in the [Forecast Forum](#) of CPC's Climate Diagnostics Bulletin. Additional perspectives and analysis are also available in an [ENSO blog](#). The next ENSO Diagnostics Discussion is scheduled for 8 November 2018. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: [ncep.list.enso-update@noaa.gov](mailto:ncep.list.enso-update@noaa.gov).

**Climate Prediction Center**  
**National Centers for Environmental Prediction**  
**NOAA/National Weather Service**  
**College Park, MD 20740**

# Winter Weather Watch



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IFAS Extension  
Polk County Extension

Polk County Cooperative Extension Service  
Phone: 863-519-1052  
Email: [wcoswalt@ufl.edu](mailto:wcoswalt@ufl.edu)

**POLK COUNTY**  
FLORIDA

## UF/IFAS Polk County Cooperative Extension Service

The 2018 - 19 version of the Winter Weather Watch will begin on November 15, 2018. Time is short so send in your subscription form to receive timely agricultural winter weather forecasts and information.



The 2018-19 edition of the Polk County Winter Weather Watch program will begin on November 15, 2018. The program provides growers with winter weather forecast

information specifically geared toward agricultural interests in West Central and Southwest Florida. The program provides subscribers with an unlisted phone number for (24 hour/7 days a week) access to daily weather forecasts. The zone forecasts are from the National Weather Service (NWS) and are listed on the automated phone menu, so you can select the products you are interested in. Forecasts include the zone forecasts, 6-10 and 8-14 day outlook forecasts. In addition to the forecasts we have special weather narratives provided as needed in the event of freezing temperatures and a weekly outlook provided by our own meteorologist Fred Crosby. When freezing temperatures are predicted in our area additional updates will include the afternoon zone forecast and the modified sunset brunt minimum temperature equation. If this is not enough we will also provide the weekly citrus leaf freezing

temperatures and the 2018-19 Winter Weather Watch manual. You will also have access to weather data from seven Polk County Citrus Extension Weather Stations.

Subscriptions for the Winter Weather Watch program are only \$100.00 for the entire 4 month period (Nov 15 to Mar 15). The cost is about the same as one tank of gas for your pickup truck. You can subscribe to the Winter Weather Watch by completing and returning the enclosed "subscription form".

## Forecast Schedule



The following schedule lists the products available from the Winter Weather Watch. The times and specific days of week and the forecasted minimum temperature dictate

when these forecasts products will be updated. Our Winter Weather Watch area includes the following areas by county: Pasco, Hillsborough, Polk, Highlands, Hardee, Manatee, Sarasota, DeSoto, Charlotte, Lee, Glades, Hendry and Inland Collier.

# FORECAST SCHEDULE

Forecast Product	Above 32 ° F	32°-29°F	Below 28° F
<i>Zone</i>	<i>Daily 8:30 a.m.</i>	<i>Daily 8:30 a.m.</i>	<i>Daily 8:30 a.m.</i>
<i>6-10 &amp; 8-14 Day Outlooks</i>	<i>Mon/Wed/Fri 8:30 a.m.</i>	<i>Mon/Wed/Fri 8:30 a.m.</i>	<i>Mon/Wed/Fri 8:30 a.m.</i>
<i>Weekly Outlook</i>	<i>Friday 5:00 p.m.</i>	<i>Friday 5:00 p.m.</i>	<i>Friday 5:00 p.m.</i>
<i>Leaf Freezing Temperatures</i>	<i>Friday 5:00 p.m.</i>	<i>Friday 5:00 p.m.</i>	<i>Friday 5:00 p.m.</i>
<i>Special Weather Narratives</i>	<i>As Needed</i>	<i>Daily 4:00 p.m.</i>	<i>Daily 4:00 p.m.</i>
<i>Afternoon Zone</i>	<i>None</i>	<i>Daily 5:30 p.m.</i>	<i>Daily 5:30 p.m.</i>
<i>Sunset/Brunt</i>	<i>As Needed</i>	<i>As Needed</i>	<i>Daily 7:00 p.m.</i>



# 2018 - 2019 WINTER WEATHER WATCH PROGRAM

NOVEMBER 15, 2018 TO MARCH 15, 2019  
REGISTRATION FEE: \$100.00



It's once again time to register for the upcoming 2018 - 2019 Winter Weather Watch Program. Upon receiving your \$100.00 registration payment, you will be sent an unlisted telephone

number with which you can retrieve the latest **Ag Forecasts**, 24 hours a day. **Please do not give this number to others.** The *Winter Weather Watch Program* is funded by the registration fees to pay for telephone equipment rentals, long distance calls, repairs and our meteorologist.



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## 2018 - 2019 Winter Weather Watch Program

NAME: \_\_\_\_\_ PHONE NUMBER: \_\_\_\_\_

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### REGISTRATION FEE \$100.00

PLEASE RETURN THIS REGISTRATION FORM AND YOUR CHECK PAYABLE TO:

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## HEDGING, TOPPING, AND SKIRTING CITRUS TREES

The interception and utilization of sunlight should be an important consideration in citrus grove design. The effect of insufficient light is frequently observed in mature citrus groves that are not pruned (hedged, topped) regularly. Shading reduces yield and foliage on the lower parts of the trees. Sunlight not only influences flowering and fruit set but also enhances fruit quality and color development. Increased sunlight penetration within the tree canopy might also allow foliage to dry quicker after a rain shower and could help reduce establishment of fungal pathogens. Therefore, adjustments must be made in tree height and hedging angle to maximize sunlight interception.

Hedging and topping are important cultural grove practices. Severe hedging or topping of citrus trees during the winter can reduce cold hardiness. Trees with exposed internal scaffold wood and new tender growth are susceptible to cold injury.



In general, tree response to hedging and topping depends on several factors including variety, rootstock, tree age, growing conditions, time of pruning, and production practices. No one system or set of rules is adequate for the numerous situations encountered in the field. Growers are encouraged to gain a clear understanding of the principles involved in hedging and topping, and to take advantage of research results as well as consulting knowledgeable colleagues and custom operators for their observations.

Hedging should be started before canopy crowding becomes a problem. Developing a pro-active pruning program should assist managers in removing the right-sized branches. Removal of a significant portion of the tree will result in excessive vegetative growth and a drastic reduction in subsequent yield. Hedging is usually done at an angle, with the boom tilted inward toward the treetops so that the hedged row middles are wider at the top than at the bottom. This angled hedging allows more light to reach the lower skirts of the tree. Hedging angles being commonly used vary from 10 to 15 degrees from vertical.

Topping should be done before trees have become excessively tall and should be an integral part of a tree size maintenance program. Long intervals between topplings increase the cost of the operation due to heavy cutting and more brush disposal. Furthermore, excessively tall trees are more difficult and expensive to harvest and spray. Topping trees will improve fruit quality and increase size. Some common topping heights are 10 to 12 ft at the shoulder and 13 to 14 ft at the peak. As a general rule, topping heights should be two times the row middle width.



After severe hedging or topping, heavy nitrogen applications will produce vigorous vegetative regrowth at the expense of fruit production. Therefore, nitrogen applications should be adjusted to the severity of hedging and/or topping. Reducing or omitting a nitrogen application before and possibly after heavy hedging will reduce both costs and excessive vegetative regrowth. Light maintenance hedging should not affect fertilizer requirements.

Large crops tend to deplete carbohydrates and results in a reduced fruit yield and increased vegetative growth the following year. Pruning after a heavy crop additionally stimulates vegetative growth and reduces fruit yield the following year. Pruning after a light crop and before an expected heavy crop is recommended because it can help reduce alternate bearing which can be a significant problem in Valencia and Murcott production.

Severe hedging may create problems of brush disposal and stimulates vigorous new vegetative growth, especially when done before a major growth flush. This happens because an undisturbed root system is providing water and nutrients to a reduced canopy area. The larger the wood that is cut, the larger is the subsequent shoot growth. Severe pruning reduces fruiting and increases fruit size.



The best time of year to hedge and/or top depends on variety, location, severity of pruning, and availability of equipment. Since pruning is usually done after removal of the crop, early maturing varieties are generally hedged before late maturing varieties. Most growers prefer to hedge before bloom, but trees will get more vegetative regrowth, which may not be desirable. Pruning could begin as early as November prior to harvesting in warmer areas. During this period, conducted pruning operations should only cut minimal foliage and fruit from the trees.

Valencia trees may be hedged in late fall with only minimal crop reduction

when the hedging process removes only a small amount of vegetative growth. In cases where excessive growth is to be removed, the trees are usually harvested before hedging is conducted. Light maintenance pruning can be done throughout the summer and until early fall with little or no loss in fruit production. Moderate to severe pruning should not continue into the winter in freeze-prone areas, as trees with tender regrowth are susceptible to cold injury.

With citrus canker and greening diseases, selecting the best time for hedging and topping is becoming more complicated. New growth flushes promoted by hedging and topping in late spring, during the summer, and early fall can increase the population of leafminers and psyllids and aggravate the spread of citrus canker and greening. Declining trees with defoliated tops, dieback, reduced cropping, and severe root loss due to citrus greening are being hedged and topped to help balance the shoot to root ratio to improve tree performance and extend tree longevity.



Skirting is the pruning to raise tree skirts. Without skirting, the movement of herbicide booms is impeded. Fruit and limbs near the ground are often damaged by the passage of such equipment and by herbicide spray and fertilizer contact. Skirting allows uniform distribution of granular fertilizers and good water coverage of microsprinkler irrigation systems under tree canopies. Skirting facilitates the inspection of microirrigation systems and reduces the incidence of Phytophthora foot rot and brown rot because it allows good air circulation.

## DROUGHT

Water stress is the physiological condition to which a plant is subjected whenever the rate of water loss from the leaves by transpiration exceeds the rate at which water is absorbed by the root system. Water stress can be the result of excessive transpiration due to hot weather or slow absorption from a dry soil, flooded soil or saline conditions. Any degree of water imbalance can produce a deleterious change in physiological activity of growth and reproduction. Short-term drought often reduces production and prolonged drought can cause total crop failure. Severe drought between February and June can reduce fruit set, fruit development and fruit growth. The number of fruit, fruit size, and tree canopy are reduced with water stress. Extension growth in shoots and roots, and leaf expansion are all negatively correlated with water stress. Trees subjected to water stress are generally reduced in size. Vegetative growth is particularly sensitive to water deficit. Growth is closely related to turgor and the loss of turgidity reduces photosynthesis, leaf and fruit enlargement, juice content and yield, and increases wilting and leaf and premature fruit drop. Growers cannot afford water stress or water restrictions during critical periods. Irrigation is not only essential during the springtime, but it is also important during dry falls to minimize premature fruit drop.



## Saline Irrigation Water: Impacts on Citrus Production

### ***What conditions lead to irrigation water becoming salinized?***

Irrigation of Florida citrus can be challenging due to the variety of ways that salts can be introduced into the agricultural water supply. For example, the use of Floridan aquifer water containing high salt levels, leaking artesian wells that have contaminated surficial aquifer wells, saltwater intrusion into groundwater aquifers, and the salt index of fertilizers are all factors that should be taken into consideration when developing a citrus irrigation management plan. In general, all irrigation water has at least some dissolved salt. The degree to which irrigation water is salinized can be measured through monitoring the Total Dissolved Solids (TDS). Typically, irrigation water intended for citrus production is usually considered “adequate” if the TDS (measured in parts per million, ppm) is less than 1,000 ppm – 1,200 ppm. In irrigation water with TDS values greater than 1,000 ppm, the potential for developing toxic conditions for plant growth arises from high levels of sodium and chloride ions. High concentrations of these ions, even when the total volume of irrigation water applied is adequate for tree growth and fruit production, can make it more difficult for a tree to take up water from the soil due to increased osmotic stress of the plant’s root cells.

### ***Why is monitoring irrigation water salinity important?***

If irrigation water salinity is not managed (for example, if the TDS value chronically exceeds 1,200 ppm), there is an increased risk of toxicity to the citrus tree. Highly salinized water negatively affects all biological stages of citrus, including root, leaf, and fruit development (**Figure 1**). Citrus is considered to be a salt-sensitive crop because important plant physiological processes (including leaf photosynthesis and flower induction) are negatively impacted with even moderately salinized irrigation water.

### ***How can irrigation water salinity be managed?***

Throughout the growing season, water content within the soil fluctuates. During the rainy months of summer, water content is higher, and in the drier months of winter, it is lower. Salt ions become concentrated within the soil when water contents are relatively low. This is due to the inability of salts to be leached below the citrus tree’s root zone. Thus, periodic leaching may be required to help flush salts from the root zone. This flushing is accomplished by frequent irrigation cycles during the dry months of the year.

If groves are located in a region where it is known that TDS values regularly exceed 1,200 ppm, or in areas where soil is poorly drained or where there is a perched water table, there is an increased risk of salinity-associated plant toxicity. In these situations, frequent irrigation cycles are also used to help flush excess salts beyond the citrus tree’s root zone. However, salt concentrations also fluctuate throughout the year, and it is important to regularly monitor the TDS value of irrigation water. A County Extension Agent can assist in developing a salinity monitoring program, including providing instructions on how to take water samples and interpreting the results. Regular maintenance of any water furrows, ditches, and canals will also reduce the risk of developing salinity-associated toxicity by ensuring that the soil in the grove is drained properly.

The salt index (**Table 1**) and fertilizer source materials should be taken into consideration when developing a citrus irrigation management plan. As values of the salt index increase, the osmotic stress (the stress placed on citrus roots' ability to absorb water from the soil) also increases. Thus, selecting fertilizers with low salt indexes, particularly in situations where TDS values exceed 1,200 ppm, should be part of the management program. Specifically, replacing sodium nitrate and potassium chloride N and K sources with lower salt index N and K materials should result in lowered salinity-associated stress and reduce exposure to toxic Na and Cl in the soil solution. Frequent irrigation cycles aimed at leaching salts below the root zone (mentioned above) can also flush essential plant nutrients away from roots. Therefore, using split-applications of dry, water-soluble fertilizers several times during the year, or low-volume, low-concentration with high-frequency liquid fertigation cycles, may be preferred to fewer fertilizer applications at higher rates.

Citrus scion cultivar and rootstock also have known interactions with salinized irrigation water. Generally, grapefruit cultivars are more sensitive to high salt levels than orange cultivars; although both grapefruit and orange cannot tolerate salinized irrigation water for long periods of time. Through both anecdotal and formal research observations, it has been noted that some rootstocks are more forgiving of saline irrigation water than others. The following rootstock varieties are generally viewed as being relatively less-to-more sensitive to salinity: 'Cleopatra' mandarin, sour orange, sweet orange, 'Swingle' citrumelo, 'Carrizo' citrange, and rough lemon.

### ***In summary***

The salinity of irrigation water can have far-reaching effects on citrus production. Chronically high levels of salt (when TDS values exceed 1,200 ppm) can severely damage citrus tree growth and fruit production. Under these conditions, it is important to regularly provide a flushing irrigation that will be successful in leaching potentially toxic salt ions past the root zone. Even when water sources typically have TDS values below 1,200 ppm, periods of little rainfall can lead to high concentrations of salt ions in the soil. Thus, a leaching irrigation is often also required in times of little or no rainfall. The following are basic guidelines that might form the basis for successful citrus irrigation management.

- Regular flushing irrigations to achieve root zone leaching (duration of at least 6 hours every 7-10 days) when TDS values regularly exceed 1,200 ppm or during periods of little or no rainfall.
- Maintenance of any water furrows, ditches, or canals to ensure that the grove space is drained properly.
- Avoid using fertilizers whose components have high salt indexes. If using dry fertilizer, rely upon split-applications as frequently as possible. If fertigating, rely on low-volume, low-concentration applications with frequent cycles.
- Rootstock selection can have significant implications regarding salinity management: 'Swingle,' 'Carrizo,' and rough lemon are relatively more sensitive to salt; although all citrus is susceptible to salinity-associated toxicity.



**Figure 1. Symptoms of salt damage (yellowing and desiccation) to citrus foliage.**

Table 1. Salt index of some fertilizer sources

<b><u>Material and Analysis</u></b>	<b>Salt Index per unit (20 lb) of plant nutrient</b>
<b>Nitrogen</b>	
Ammonia, 82.2% N	0.572
Ammonium nitrate, 33.5% N	2.990
Ammonium sulfate, 21.2% N	3.253
Ammonium nitrate, 20.5% N	2.982
Calcium nitrate, 15.5%	4.194
Sodium nitrate, 16.5% N	6.060
Urea, 46.6% N	1.618
<b><u>Phosphorus</u></b>	
Normal superphosphate, 20% P <sub>2</sub> O <sub>5</sub>	0.390
Concentrated superphosphate, 45% P <sub>2</sub> O <sub>5</sub>	0.224
Concentrated superphosphate, 48% P <sub>2</sub> O <sub>5</sub>	0.210
Monoammonium phosphate, 12.2% N, 61.7% P <sub>2</sub> O <sub>5</sub>	0.405
Diammonium phosphate, 18% N, 46% P <sub>2</sub> O <sub>5</sub>	0.456
<b><u>Potassium</u></b>	
Potassium chloride, 60% K <sub>2</sub> O	1.936
Potassium nitrate, 13.8% N, 46.6% K <sub>2</sub> O	1.219
Potassium sulfate, 46% K <sub>2</sub> O	0.853
Monopotassium phosphate, 52.2% P <sub>2</sub> O <sub>5</sub> , 34.6% K <sub>2</sub> O	0.097
Sulfate of potash-magnesia, 21.9% K <sub>2</sub> O, 10.8% Mg	1.971

## MICROSPRINKLER IRRIGATION & FERTIGATION

Microsprinkler irrigation is an important component of citrus production systems in Florida. Microirrigation is more desirable than other irrigation methods for several reasons. Three important advantages are: water conservation, the potential for significantly improving fertilizer management and for cold protection.

Research has shown that when properly managed (no overirrigation), water savings with microirrigation systems can amount to as much as 80% compared with subirrigation and 50% compared with overhead sprinkler irrigation.



Microirrigation provides for precise timing and application of fertilizer nutrients in citrus production. Fertilizer can be prescription-applied during the season in amounts that the tree needs and at particular times when those nutrients are needed. This capability helps growers increase the efficiency of fertilizer application and should result in reduced fertilizer applications for citrus production. Research has also shown the important advantage of microsprinklers for freeze protection of citrus.

Fertigation is the timely application of small amounts of fertilizer through irrigation systems directly to the root zone.

Some advantages of fertigation:

- ◆ Fertilizer is placed in the wetted area where feeder roots are extensive,
  - ◆ Fertilizer may be applied more frequently in small amounts so that it is available when the tree needs it,
  - ◆ Increased fertilizer application frequency can increase fertilizer efficiency and reduce leaching,
  - ◆ Application cost is much lower than that of dry or foliar fertilizer application.
- Through fertigation, comparable or better yields and quality can be produced with less fertilizer. Microirrigation systems must properly maintain to apply water and fertilizer uniformly. Growers must determine:
- (1) which fertilizer formulations are most suitable for injection,
  - (2) the most appropriate fertilizer analysis for different age trees and specific stages of growth,
  - (3) the amount to apply during a given fertigation event, and
  - (4) the timing and frequency of applications.
- Properly managed applications of plant nutrients through irrigation systems significantly enhance fertilizer efficiency while maintaining or increasing yield. On the other hand, poorly managed fertigation may result in substantial yield losses. Fertigation involves deciding which and how much nutrients to apply, selecting the most effective formulations and scheduling injections to ensure that essential nutrients are available as needed.

### Injection Duration

A minimum injection time of 45 to 60 minutes is recommended. This time is sufficient for uniform distribution of nutrients throughout the fertigation zone. Limit injection time to prevent the application of too much water, because excessive water leaches plant nutrients below the root zone.



## MOBILE IRRIGATION LAB

The Agricultural MIL is a FREE service that serves Florida. For an Agricultural MIL evaluation in Southwest Florida call **(239) 455-4100**

**Assisting the agricultural community by improving irrigation efficiency and conserving water.**



The Mobile Irrigation Lab program is an ongoing joint effort between the District, the U.S. Department of Agriculture–Natural Resources Conservation Service (USDA–NRCS) and the agricultural community. The program began in 1987 to assist the District in meeting its statutory responsibilities and to assist growers with water conservation.

The Mobile Irrigation Lab is a free volunteer service to the agricultural community. Any grower can contact the District to arrange a free evaluation. It was expanded to help growers meet water use permit conditions. District staff has used high pumpage reports to identify users who might wish to voluntarily reduce water use before a resource problem or permit violation occurs.

A trained technician is invited to a grower's field and collects irrigation system and specific field data.

System pressure and irrigation uniformity data are then reviewed and computer-analyzed. A report provides recommendations for improvements and irrigation schedules. If needed, the technician assists the local NRCS office in the redesign of the system.

An irrigation schedule offers a general guide to determine when and how much to irrigate based on system efficiency, crop requirements and soil characteristics.

In addition to the benefits of free irrigation evaluations, water conservation and water quality improvements, the program shares valuable technology and information with growers.

Mobile Irrigation Lab data suggests that most evaluated systems are already at or above permitted efficiency standards. With only minor improvements, about half the sites below these standards could easily meet them. Typically, if all recommendations are implemented, overall system irrigation efficiency can improve by an estimated 17 percent — helpful to any grower's bottom line, as well as the region's water resources.





Information for the next Certified Pile Burners Course:

The Florida Forest Service and University of Florida Cooperative Extension Service will be conducting a Certified Pile Burners Course on **Wednesday, February 6, 2019**. 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 **Southwest Florida Research and Education Center, Immokalee, Florida**. Included are a registration form and program agenda.

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 Florida Forest Service Customer Number (It is the number that you are required to give the FFS when you call in for your burn permits. If you do not know it please call the local FFS office and ask them to create one for you).
4. Your email address (if you have one) and/or contact phone number.
5. A check made out to: Hendry County 4-H for \$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 FFS 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 FFS office will set one up for you. Fill out the registration form on the next page and return as directed.

Sincerely,

**Mongi Zekri**

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**For Questions Contact: Dr. Mongi Zekri at [maz@ufl.edu](mailto:maz@ufl.edu) or 239-595-5494**

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# Registration Form

Florida's Certified Pile Burner Program

*Wednesday, February 6, 2019*

Hendry County Extension Office

P.O. Box 68, LaBelle, FL 33975

(863) 674-4092

**Please send this form and a check for \$50.00 made payable to:**

**Hendry County 4-H**

**Mail to: Dr. Mongi Zekri  
Hendry County Extension Office  
P. O. Box 68  
LaBelle, FL 33975**

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Name

---

Mailing address

---

Email address

---

Phone Number

---

Florida Forest Service Customer Number, <https://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Our-Forests/Field-Operations/County-Foresters/Find-a-County-Forester>



**Florida's Certified Pile Burner Training  
Wednesday, February 6, 2019**

**Location: Southwest Florida Research and Education Center  
2685 State Road 29 North, Immokalee, FL 34142  
(239) 658-3400**

**All Times Are Local**

- |                                      |               |
|--------------------------------------|---------------|
| 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. Open Burning Regulations          | 11:20 – 12:15 |
| 6. LUNCH (provided)                  | 12:15 – 01:15 |
| 7. Planning and Implementation       | 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!**



# Location & Contact Information

**Location: Southwest Florida Research and Education Center  
(Immokalee IFAS Center)**

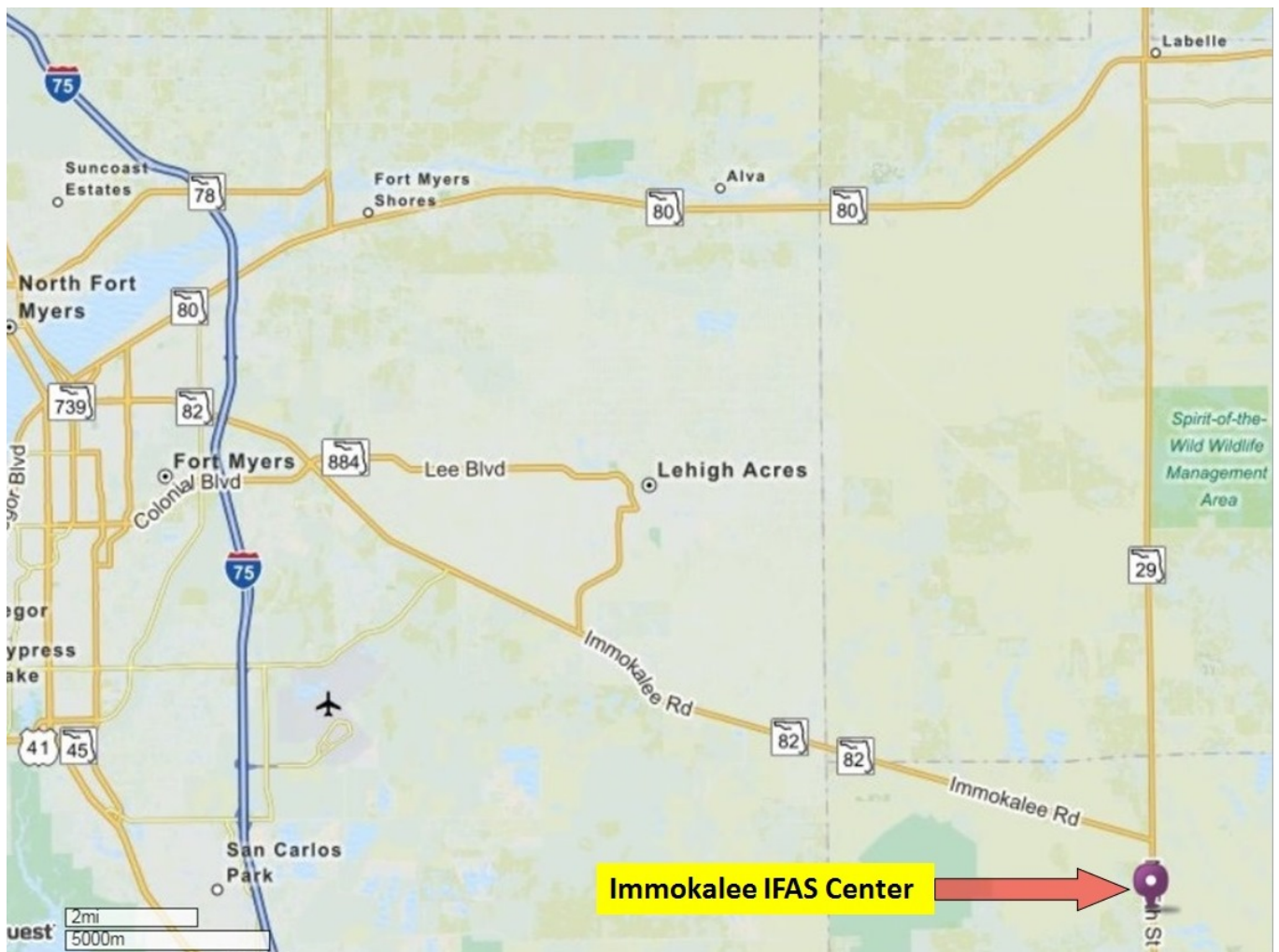
2685 State Road 29 North, Immokalee, FL 34142 (239) 658-3400

**Contact: Dr. Mongi Zekri, Multi-County Citrus Extension Agent  
Hendry County Extension Office, P.O. Box 68, LaBelle, FL 33975**

**Office Phone: 863 674 4092**

**Cell: 239 595 5494**

**E-mail: maz@ufl.edu**



## 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 Forest Service (FFS). 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 FFS 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 FFS 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, and how long do I have to complete the certification from the time I finish the class?**

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. You **MUST** complete the certification burn within a year of taking the class.

**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 FFS to become certified. You will need to complete a simple burn plan, have it reviewed and approved locally by the FFS and also have the burn itself reviewed and approved by the FFS.

**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.

## FLATWOODS CITRUS NEWSLETTER EVALUATION FORM

Please take a moment to rate the quality and usefulness of the information presented in the Flatwoods Citrus newsletter. Please send back the form to:

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

or Fax to 863 674 4636 or E-mail to [maz@ufl.edu](mailto:maz@ufl.edu) Thank you for your input!!!

Please circle or bold your answer

- |   |                                    |    |              |
|---|------------------------------------|----|--------------|
| 1 Was the information up to date and accurate?                    | Yes                                | No | Uncertain    |
| 2 Was the information delivered on time to be useful?             | Yes                                | No | Uncertain    |
| 3 Was the information relevant to your situation?                 | Yes                                | No | Uncertain    |
| 4 Was the information easy to understand?                         | Yes                                | No | Uncertain    |
| 5 Have you had an opportunity to use the information?             | Yes                                | No | Uncertain    |
| 6 Have you shared the information with someone else?              | Yes                                | No | Uncertain    |
| 7 Overall, how do you feel about the Flatwoods Citrus Newsletter? |                                    |    |              |
| Satisfied   | Neither Satisfied Nor Dissatisfied |    | Dissatisfied |

8 Do you have any suggestions that might improve the newsletter?

(Please write in any comments)

9. How many years have you been using the Extension Service? \_\_\_\_\_ Years

10. What is your employment status?

- |                          |                         |                        |
|--------------------------|-------------------------|------------------------|
| _____ Grower             | _____ Chemical Industry | _____ Service Provider |
| _____ Production Manager | _____ Regulator         | _____ University       |
| _____ Consultant         | _____ Association       | Other _____            |

We appreciate your reactions and the time you have given us. Thank you, and please contact us when we may be of service to you.

# Flatwoods Citrus

If you did not receive the *Flatwoods Citrus* newsletter and would like to be on our mailing list, please check this box and complete the information requested below.

If you wish to be removed from our mailing list, 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

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Subscriber's Name: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_

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**Racial-Ethnic Background**

- American Indian or native Alaskan
- Asian American
- Hispanic
- White, non-Hispanic
- Black, non-Hispanic

**Gender**

- Female
- Male