

MARCH 2022 | VOL.22:03

Citrus from the Ridge to the Valley

CENTRAL FLORIDA CITRUS EXTENSION

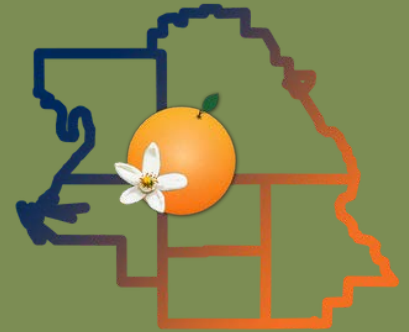
March 2022

2022 Florida Citrus Growers' Institute



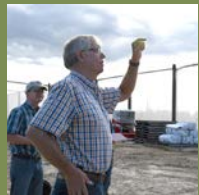
Once again, we are going to get back together in-person for the 2022 version of the Florida Citrus Growers' Institute. The program will be held on April 5, 2022, on the campus of South Florida State College's Jay Wildstein Center for the Performing Arts in Avon Park. Make plans now to join us for the all-day educational event complete with CEU's for Certified Crop Advisors and Restricted Use Pesticide license holders and lunch. We have included the program brochure with information on the program and registration.

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PURPOSE OF THE INSTITUTE

Citrus Greening or Huanglongbing (HLB) continues to impact all citrus production areas of Florida. The 2022 Florida Citrus Growers' Institute is an opportunity for Florida citrus growers to come together to learn about effective management of HLB and other challenging diseases affecting the industry. Topics this year include horticultural management of HLB, citrus pest management and citrus irrigation and nutrition.

CONTINUING EDUCATION UNITS

Continuing Education Units (CEU's) will be offered for holders of restricted use pesticide licenses (RUP) and certified crop advisors (CCA). CEU's have been requested in the following categories: private applicator, agricultural tree crop and demonstration & research for RUP holders. CEU's have been requested for CCAs in the appropriate CEU categories.

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DIRECTIONS

The South Florida State College is located at 600 West College Drive in Avon Park.

From the South: Take U.S. Hwy. 27/98 north towards Avon Park, turn east onto W. College Drive and follow the signs to the Theatre.

From the North: Take U.S. Hwy. 27/98 south to Avon Park, continue south to W. College Drive, turn east onto W. College Drive and follow the signs to the Theatre.

From the East: Take U.S. Hwy. 98 north to where U.S. Hwy. 27/98 merge south of Sebring. Proceed on U.S. Hwy. 27/98 north towards Avon Park, turn east onto W. College Drive and follow the signs to the Theatre.

From the West: Take S.R. 64 east to Avon Park, turn south on U.S. Highway 27/98 to W. College Drive, turn east onto W. College Drive and follow the signs to the Theatre.

SOUTH FLORIDA STATE COLLEGE

ALAN JAY WILDSTEIN

CENTER FOR THE PERFORMING ARTS

600 W. COLLEGE DRIVE

AVON PARK, FL

FLORIDA CITRUS GROWERS' INSTITUTE



Conducted by
University of Florida, IFAS Extension,
Citrus Research and Development
Foundation

South Florida State College
Alan Jay Wildstein
Center for Performing Arts
Avon Park, Florida
April 5, 2022

2022 Florida Citrus Growers' Institute

PROGRAM AGENDA TUESDAY, APRIL 5, 2022

8:30 AM - Registration

9:00 AM - Welcome and Introductions

Mr. Chris Oswald, CES, Bartow, FL

9:05 AM - CRDF Program Update - *Mr. Richard Dantzer, COO, CRDF*

9:20 AM - CREC Update - *Dr. Michael Rogers, Center Director, UF/IFAS CREC*

CITRUS PEST MANAGEMENT

Moderator: Ms. Ajia Paolino, CES, Arcadia, FL

9:30 AM - Citrus Black Spot (CBS) Management Update - *Dr. Megan Dewdney, UF/IFAS CREC*

10:00 AM - Can Chemical Weed Control Affect Tree Health and Fruit Drop in Citrus? - *Dr. Ramdas Kaniseriy, UF/IFAS SWFRECC*

10:30 AM - Break

CITRUS HORTICULTURE

Moderator: Ms. Lourdes Cordova, CES, Sebring, FL

10:45 AM - Lessons from Below - Citrus Root Structures and What They Mean? - *Dr. Ute Albrecht, UF/IFAS SWFRECC*

11:15 AM - Foliar Applications of Zinc and Potassium to Increase Yield by Reducing Fruit Drop in Hamlin Oranges - *Dr. Fernando Alferez, UF/IFAS SWFRECC*

11:45 AM - Update on Gibberellin Acid Studies - *Dr. Tripti Vashishth, UF/IFAS CREC*
12:15 PM - Lunch

CITRUS IRRIGATION & NUTRITION

Moderator: Dr. Mongi Zekri, CES, LaBelle, FL

1:15 PM - Monitoring and Managing Seasonal Demand for Plant Nutrients with Smartphone Apps - *Dr. Arnold Schumann, UF/IFAS CREC*

1:45 PM - Irrigation Scheduling for Improved Tree Performance of HLB-Affected Trees - *Dr. Davit Kadyanpakenti, UF/IFAS CREC*

2:15 PM - Nitrogen and Phosphorus Recommendations for HLB Affected Citrus - *Dr. Kelly Morgan, UF/IFAS Gainesville, FL*

3:00 PM - Adjourn

CEs: Cooperative Extension Service

COO: Chief Operating Officer

CRDF: Citrus Research and Development Foundation

CREC: Citrus Research & Education Center, Lake Alfred, FL

SWFRECC: Southwest Florida Research & Education Center, Immokalee, FL

UF/IFAS: University of Florida, Institute of Food and Agricultural Sciences

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution.

PREREGISTRATION IS REQUIRED

FLORIDA CITRUS GROWERS' INSTITUTE

April 5, 2022



Name: _____
Company: _____
Address: _____
City/State/Zip: _____
Phone: _____ Email: _____

Please send registration by April 1, 2022 to:

Gail Crawford, Polk County Extension Service, P.O. Box 9005, Drawer HS03, Bartow, FL 33831

By phone: 863-519-1042, Fax: 863-534-0001, email: dorothy@cifl.edu or

online at: <https://2022floridacitrusgrowersinstitute.eventbrite.com/>

2022 Spring Weather Outlook

BY CHRIS OSWALT

The latest NOAA 2022 spring weather outlook for temperature and rainfall has us looking at an increased probability of likely above-normal temperatures (fig 1). The rainfall outlook (fig 2) has us looking at likely below-normal chance for rainfall. The El Nino Southern Oscillation (ENSO) forecast is for La Nina conditions (around 77% chance) for the balance of the spring of 2022 (Mar-May). The forecast for the balance spring (May-Jul) is to transition into ENSO-neutral conditions (about 56% chance). If the dry conditions hold steady (fig 3) for the forecasted period, we would be looking at potentially a reduction in fruit fungal disease severity this spring.

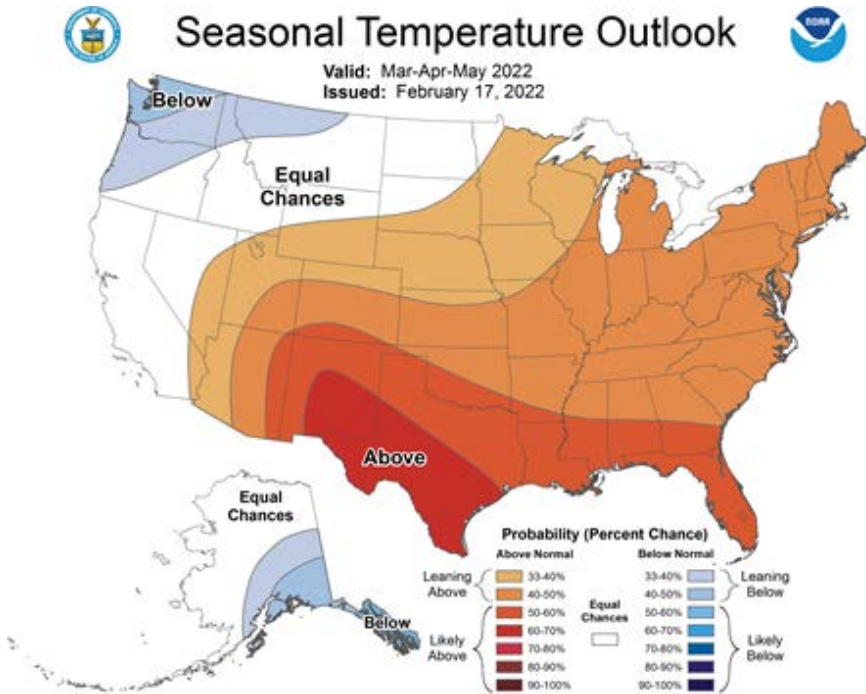


Figure 1 Spring 2022 temperature outlook

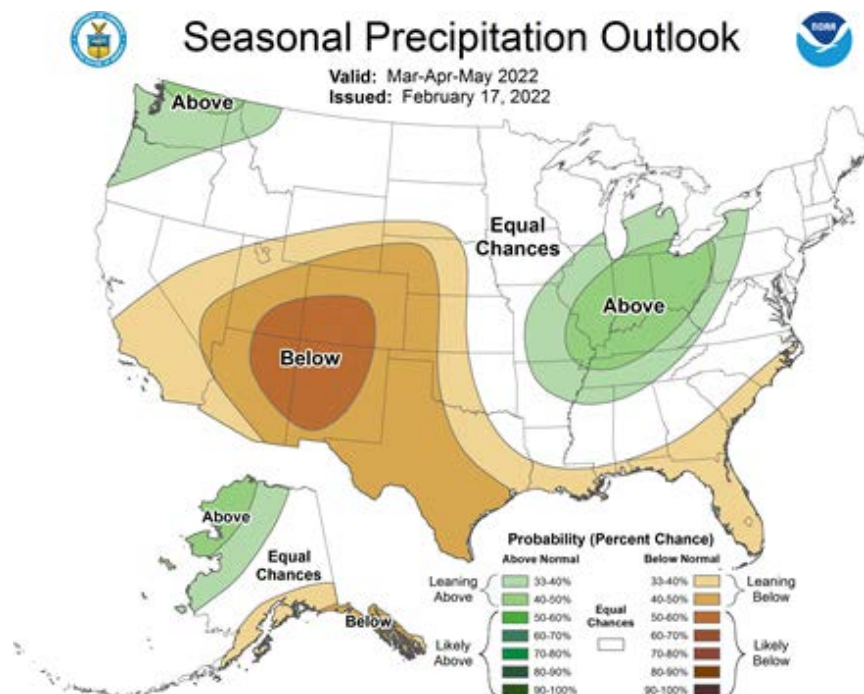


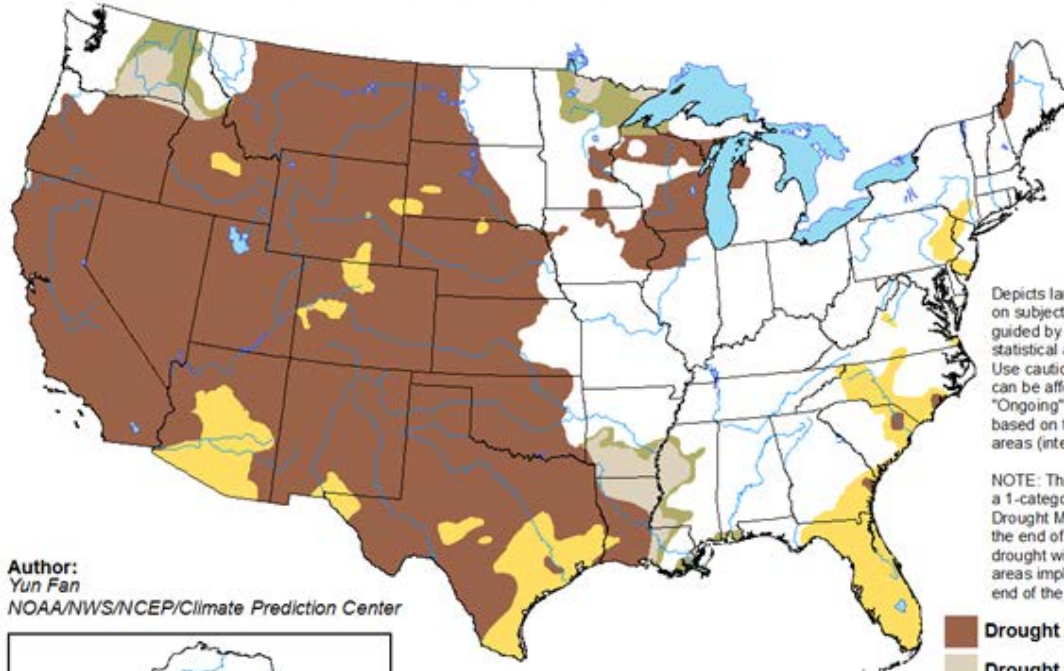
Figure 2 Spring 2022 precipitation outlook

2022 Spring Weather Outlook, ctd.

BY CHRIS OSWALT

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

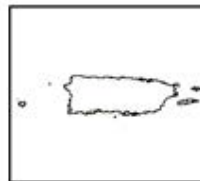
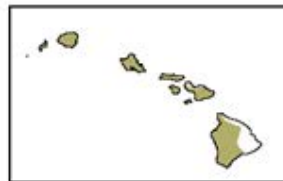
Valid for February 17 - May 31, 2022
Released February 17



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:
Yun Fan
NOAA/NWS/NCEP/Climate Prediction Center



- Drought persists**
- Drought remains but improves**
- Drought removal likely**
- Drought development likely**



<http://go.usa.gov/3eZ73>

Figure 3 Spring 2022 drought outlook

FAWN Website for Post Bloom Fruit Drop

BY CHRIS OSWALT

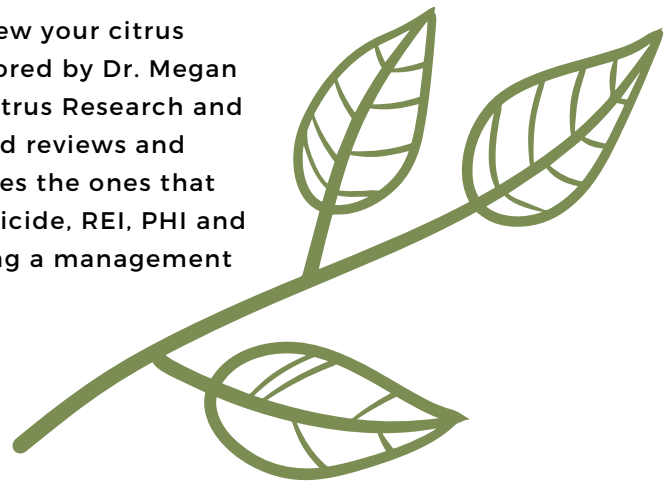
As we enter bloom, under the right conditions post bloom fruit drop (PFD) can become a real big problem. What conditions you ask? Well rainfall followed by extended periods of leaf wetness. You may now ask where can we get this kind of management information? The Florida Automated Weather Network or FAWN has the necessary information to help you make PFD management and spray application decisions. On the main FAWN webpage <https://fawn.ifas.ufl.edu/> select "tools" then choose "Climate" under "Climate" choose "Citrus Advisory System". There you will see a map of the FAWN stations and the risk for PFD infection. Once you select a FAWN station click on the icon and it takes to a series of questions that will provide you with a recommendation.









Quick Reference Guide for Foliar Fungicides

BY CHRIS OSWALT

Spring is right around the corner, and now is a good time to review your citrus fungicide management program. We have included a table authored by Dr. Megan Dewdney, UF/IFAS Citrus Extension Plant Pathologist from the Citrus Research and Education Center. It lists some of the common citrus diseases and reviews and recommends fungicides for their control. The information includes the ones that work well or not so well. It lists the modes of action of each fungicide, REI, PHI and maximum rates per season. I found this quite handy in developing a management plan for citrus diseases.



Products recommended in the Florida Citrus Production Guide and their effects on foliar fungal diseases.

Pesticide ^a	Mode of Action ^b (FRAC code)	REI ^c Hours	PHI ^d Days	Target Disease							Maximum Rate per Acre per Season
											
Abound 2.08F	11	4	0	+++ ^e , R	+++ ^e , R ⁺	+++ ^e , R ⁺	+++ ^e , R	+++ ^e , R	+++ ^e , R	+++ ^e , R	90 fl oz 1.5 lb a.i.
Abound + Ferbam	11, M 03	24	0	+++	NT	-	-	+++ ^e , R	+++ ^e	+++ ^e	92.3 fl oz (Abound) 1.5 lb a.i. (Abound) 23.7 lb (Ferbam) 6 lb a.i. (Ferbam)
Amistar Top	11 + 3	12	0	+++ ^e , R	+++ ^e , R	+++ ^e , R	+++ ^e , R	++ ^e , R	+++ ^e	+++ ^e	61.5 fl oz (Amistar Top) 0.5 lb (difenoconazole) 1.5 lb (azoxystrobin)
Copper fungicide	M 01	See label	See label	+++ ^e , R, NR	+++ ^e , R, NR	+++ ^e , R, NR	+++ ^e , R, NR	-	+++ ^e , R, NR	+++ ^e , R, NR	See label
Copper fungicide + petroleum oil 97%	M 01, NR	See label	See label	+++ ^e , NR	NT	+++ ^e , R, NR	+++ ^e , NR	-	+++ ^e , R, NR	-	See label
Enable 2F	3	12	0	-	+++ ^e , R	+++ ^e , R	-	-	+++ ^e , R	+++ ^e , R	24 fl oz 0.38 lb a.i.
Ferbam Granuflor	M 03	24	0	+++ ^e , R, NR	NT	-	-	+ ^e , NR	+++ ^e , R, NR	+++ ^e , R, NR	23.7 lb 6 lb a.i.
Gem 500 SC	11	12	7	+++ ^e , R	+++ ^e , R ⁺	+++ ^e , R ⁺	+++ ^e , R	+++ ^e , R	+++ ^e , R	+++ ^e , R	15.2 fl oz
Headline SC	11	12	0	+++ ^e , R	+++ ^e , R ⁺	+++ ^e , R ⁺	+++ ^e , R	+++ ^e , R	+++ ^e , R	+++ ^e , R	54 fl oz 0.88 lb a.i.
Gem + Ferbam	11, M 03	24	7	+++ ^e	NT	-	-	+++ ^e , R	+++ ^e	+++ ^e	15.2 fl oz (Gem) 23.7 lb (Ferbam) 6 lb a.i. (Ferbam)
Headline + Ferbam	11, M 03	24	0	+++ ^e	NT	-	-	+++ ^e , R	+++ ^e	+++ ^e	54 fl oz (Headline) 0.88 lb a.i. (Headline) 23.7 (Ferbam) 6 lb a.i. (Ferbam)
Petroleum oil 97%	NR	12	0	-	NT	++ ^e , R, NR	-	-	-	-	see label
Priaxor Xenium	11 + 7	12	0	NT	NT	+++ ^e	+++ ^e , R, NR	+++ ^e , R	+++ ^e , R	NT	44 fl oz (Priaxor) 0.88 lb a.i. (pyradostrobin)
Pristine	11 + 7	12	0	+++ ^e , R	+++ ^e , R	+++ ^e , R	+++ ^e , R	+++ ^e , R	+++ ^e	+++ ^e	74 oz (Pristine) 0.88 lb a.i. add 1.17 lb boscalid (pyraclostrobin)

^aAll listed pesticides are registered and trademarked products

^bMode of action class for citrus pesticides from the Fungicide Resistance Action Committee (FRAC)

^cRestricted Entry Interval

^dPreharvest Interval

^e(R) = Product recommended for control of pathogen in Florida Citrus Production Guide
(NR) = Minimal resistance potential
(NT) = Not tested
(*) = Best applied with petroleum oil

(+++^e) = good control of pathogen (++) = moderate control of pathogen (+) = low levels of pathogen suppression (-) = no observed control of pathogen

Fungicide Resistance Management

Fungicide resistance is now problematic in Florida citrus groves, with documented strobilurin resistance causing control failure of *Alternaria brown spot*. These guidelines apply to all fungicide applications within a season and all fungal diseases.

- Make no more than the recommended number of sequential applications of any fungicide without alternating to another fungicide with a different mode of action (FRAC codes). To conserve fungicide efficacy, it is recommended to rotate modes of action with each application.
- Do not make more than the maximum number of applications of any fungicide class combined in a year for all diseases, and never exceed maximum label rates per acre per year.
- Control measures should begin before disease development and continue as indicated by recommended disease management practices. For guidance, consult the *Florida Citrus Production Guide* (<https://crec.ifas.ufl.edu/resources/production-guide>).

1. This document is PP275, one of a series of the Plant Pathology Department, UF/IFAS Extension. Original publication date May 2010. Revised July 2019 and August 2021. Visit the EDIS website at <https://edis.ifas.ufl.edu> for the currently supported version of this publication.

2. Megan M. Dewdney, associate professor, Plant Pathology Department; UF/IFAS Citrus Research and Education Center, Lake Alfred, FL 33850.

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Worker Protection Standard Requirements – Central Location Posting

BY AJIA PAOLILLO

The Worker Protection Standard (WPS) is a federal regulation that all agricultural workers and pesticide handlers must follow when working with and around pesticides. The WPS has guidelines to train workers and handlers on pesticide use and exposure. Employers must also follow the WPS by providing workers and handlers with personal protective equipment, decontamination supplies, and information about pesticides used at the establishment. One of the requirements employers must follow is posting pesticide and safety information in a central location to which all employees have access. This can be where employees gather to begin work, take breaks, etc. Figure 1 depicts an example of what information a central location should contain.

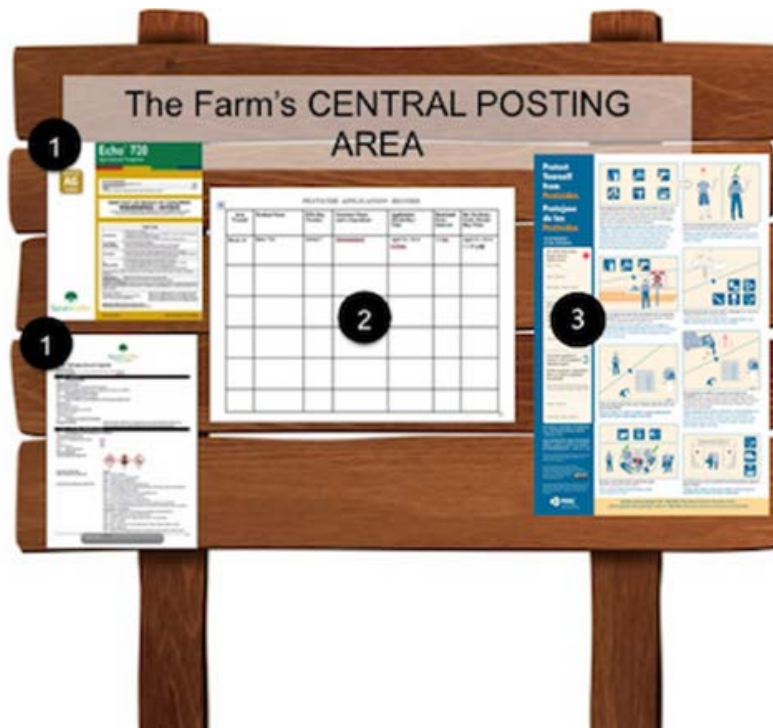


Figure 1 Example of a Central Posting
Image credit: Garnet Cooke, Oregon OSHA, modified by PERC

- 1. Pesticide Hazard Information:** This information should include the Safety Data Sheet (SDS) for all pesticides applied to the location in the last 30 days. The SDS contains pesticide exposure and first aid procedures, chemical information, and details about the pesticide useful in case of an emergency. The employer must post the SDS of pesticides within 24 hours of the end of the application. Employers may also have the SDS available for employees in a hardcopy form, such as a binder or electronic format, such as on a computer. If either of these methods is used for displaying SDS, all employees must have access to these methods during regular working hours.

Worker Protection Standard Requirements – Central Location Posting, continued.

BY AJIA PAOLILLO

3. Pesticide Application Information: This information must also be available within 24 hours of the pesticide application. Employers can create a chart that has the following information:

- Pesticide name
- Active ingredients
- EPA registration number
- Restricted Entry Interval (REI)
- Date and time of application (beginning and ending time)
- Location of application (ex: block #)
- Crops treated

This information must be displayed when there are workers or handlers on the property. The information must also be displayed for 30 days after the REI has expired or 30 days after the application if no REI is specified on the label.

2. Pesticide Safety Information: The example shown in Figure 1 is a safety poster displayed at the central location. This poster has information on reducing pesticide exposure, decontamination instructions, and avoid treated areas. The poster also has an area where employers must provide critical information for use during an emergency. Here the employer must provide the name, location, and phone number of the nearest medical facility and the name and location of your establishment if emergency personnel must come out to your farm. Also, contact information for the state or tribal regulatory agency must be listed; in most cases, that would be the Florida Department of Agriculture and Consumer Services (FDACS). If the medical facility or state regulatory agency information changes, employers must update the information at the central location within 24 hours. Pesticide safety information must also be displayed in decontamination areas. This refers to either a permanent decontamination location or where supplies are located for 11 or more employees.

Important things to remember: All workers and handlers must have access to these materials at all times during their working hours. All employees must understand the information provided at the central location. Images and translated materials can be used if the information can be easily conveyed and understood by workers and handlers. Employers should ensure that all postings provided at the central location are legible and replaced as needed. For more information or WPS training and safety materials, you can contact your local UF/IFAS Extension agent or visit the Pesticide Educational Resources Collaborative (PERC) website <http://pesticideresources.org//index.html>.



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Aquatic Pest Control Training

The Aquatic Pesticide License is required by any person who applies or supervises the application of RUP in any standing or running body of water

Date and time:

March 22, 2022, from 8:00 am – 3:00 pm

(Testing from 1:00 pm – 3:00 pm)

Location:

UF/IFAS Polk County, 1702 S Holland Pkwy, Bartow, FL 33830

Cost:

\$15.00

Phone:

(863)-519-1049 or (863)-519-1041

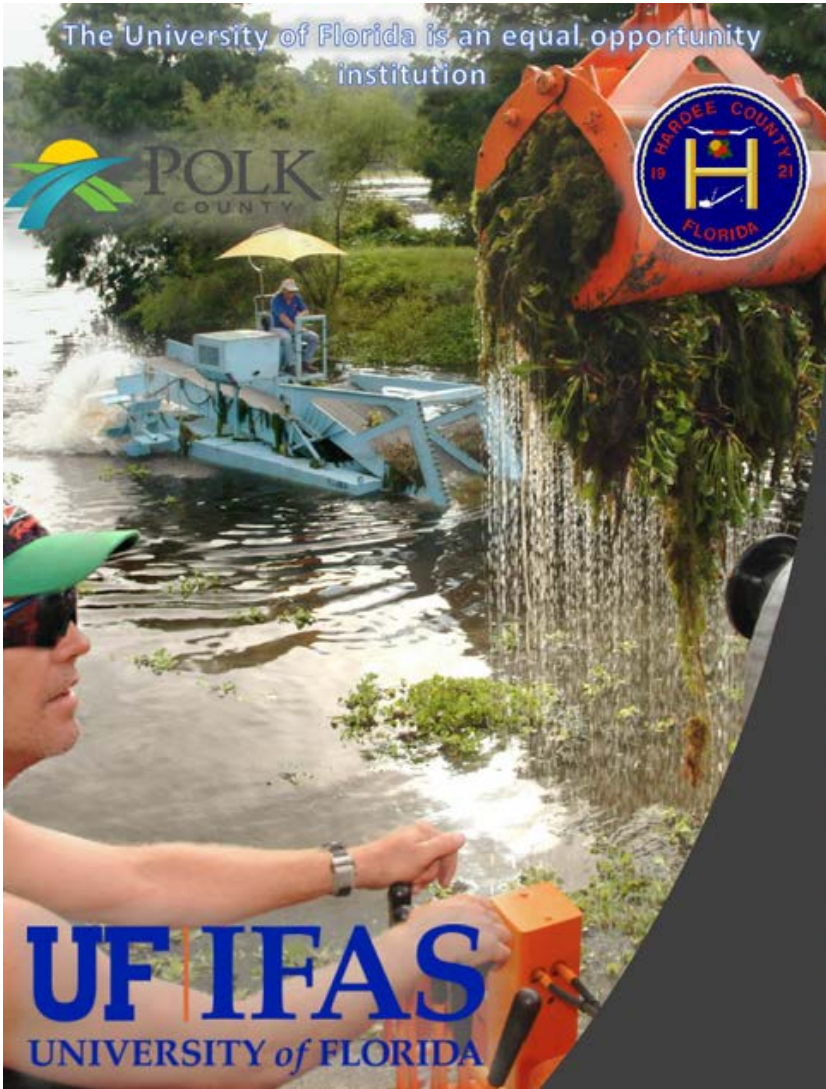
Instructors:

Luis O. Rodriguez, Small Farms and Pesticide Education Extension Agent, Polk County

Ajia Paolillo, Multi-County Citrus Extension Agent, DeSoto, Hardee, and Manatee Counties

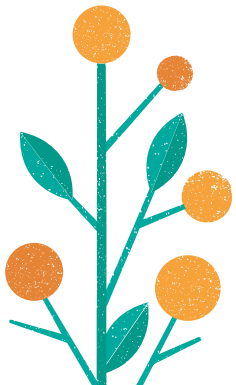
Pre-registration is required:

<https://www.eventbrite.com/e/aquatic-pest-control-training-tickets-265126018057>



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Need Core CEUs?



Core CEUs for restricted use pesticide license holders can be earned by reading articles published in Citrus Industry magazine.

Current articles can be found on their website

<https://citrusindustry.net/ceu/>

Read the article, then submit the online quiz. Passing scores of 70% or higher receive 1 Core CEU.

Articles and quizzes can also be found in the hardcopies of the magazine - **be sure to check the expiration date before submitting - articles are only valid for credit one year from publication date.**

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2022

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