

September 2022

The first official day of fall is September 22. Not too sure it will feel like that for us though! Hopefully we will start to at least get some cooler temperatures at night. Fall starts a busy season for all of us and we have programs and events coming up that we hope you will take part in. Registration information and more details for these programs can be found inside this newsletter. We try to provide timely information for you in our newsletter content. However, we are always open to suggestions. If there is a topic you would like to hear more about, please let us know. Your input is greatly appreciated!



The Foundation for the Gator Nation

An Equal Opportunity Institution



Chris Oswalt UF/IFAS Extension Polk and Hillsborough counties (863) 519-1052 wcoswalt@ufl.edu



Ajia Paolillo UF/IFAS Extension DeSoto, Hardee, Manatee counties (863) 251-4763 ajiacunningham@ufl.edu



Lourdes Pérez Cordero UF/IFAS Extension Highlands County (863) 402-6540 lperezcordero@ufl.edu



Polk County Citrus Grower OJ BREAK

BY CHRIS OSWALT

I wanted to reach out and invite area citrus growers to the September 2022 OJ Break Grower Meeting to be held on Wednesday, September 21, 2022. It will begin at 11:00 a.m. at UF/IFAS Citrus Research and Education Center at 700 Experiment Station Rd. in Lake Alfred. Dr. Nian Wang, Professor of Microbiology and Cell Science will be presenting on "Citrus Huanglongbing is a pathogen-triggered immune disease and its implications in HLB management". A more detailed explanation and registration information is included in the OJ Break flyer on the next page. CEU's will be available for your RUP and CCA licenses.



Citrus Employee Safety Training & Tractor Rodeo

BY CHRIS OSWALT

Just a reminder that we will be holding our Annual Citrus Employee Safety Training and Tractor Rodeo program on Thursday, November 3, 2022. Look for additional information and registration in the near future.



POLK COUNTY OJ BREAK



Citrus HLB is a Pathogen-Triggered Immune Disease and Its Implications in HLB Management

Dr. Nian Wang, UF/IFAS CREC

LUNCH
SPONSORED
BY
SYNGENTA

SEPTEMBER 21, 2022 (11AM-12PM



UF/IFAS CREC 700 Experiment Station Rd Lake Alfred, FL 33850



Pre-registration required using Eventbrite by Friday 9/16/22 REGISTER NOW >

RUP CEUs available in Private, Ag Row, Ag Tree, and Demo & Res. Certified Crop Advisor CEUs available

You may also register by contacting: Chris Oswalt, Multi-County Citrus Agent UF/IFAS Extension Polk County 863-519-1052 wcoswalt@ufl.edu Dr. Wang's recent study demonstrates that Huanglongbing (HLB) is a pathogen-triggered immune disease.

He discovered the *Clas* infection of citrus stimulates systemic and chronic immune response in phloem tissues, including reactive oxygen species (ROS) production. Cell death of phloem tissues resulting from excessive ROS causes HLB symptoms.

Dr. Wang will discuss:

- Horticultural approaches growers can utilize in the field now
- Research on new practices and current progress on genetic breeding of non-transgenic HLB resistant/tolerant citrus varieties
- Other recent experiments conducted including trunk injection with oxytetracycline and streptomycin.



The University of Florida is an Equal Opportunity Institution.
In accordance with the Americans with Disabilities Act and Section 296.26, F.S. persons needing accommodations or an interpreter to participate in the proceeding should notify University of Florida/IFAS Polk County no later than 5 days prior to the meeting at 863-510-1041.

Highlands County AG. SAFETY MORNING

Date: October 6th, 2022 Time: 7:45 AM - 1:00 PM

Location: Bert J. Harris Jr. Agricultural Center 4509 George Blvd, Sebring, FL 33875

Topics Include

- Worker Protection Standards
- Pesticide Labels
- Personal Protective Equipment
- Pesticide Exposure
- Tractor Safety
- First Aid & Heat Stress
- Environmental Hazards
- Storage & Transportation

CEU's Offered

- 482/487 General Standards CORE
- Private Applicator Ag Pest Control
- Ag Row Crop Pest Control
- · Ag Tree Crop Pest Control

About

- Registration cost: \$15
- Pre-registration is <u>required</u>.
- Simultaneous sessions in English and Spanish
- Lunch will be provided

Registration

Eventbrite:

https://highlandsagsafety2022.eventbrite.com

Phone: 863-402-6540

E-mail: gwycheaufl.edu







Citrus Grower Forum

Thursday October 13, 2022 10am-12pm

Turner Agri-Civic Center Exhibit Hall 2260 NE Roan St Arcadia, FL 34266

You are invited to attend our second open forum to share ideas and experiences with other area growers. As we head into the fall, many growers are applying gibberellic acid. This is an opportunity to hear about applications of this product and current observations from the field. Let's also discuss fruit quality, insect and disease management, along with other important topics.

The event is free to attend, and lunch will be provided. Please pre-register on Eventbrite using the link below by Tuesday October 11, 2022

Register at: https://growerforum101322.eventbrite.com

The information shared during this program recommendation from UF/IFAS for specific AUU 88 aj

For more information contact:
Ajia Paolillo
UF/IFAS Multi-County Citrus Agent
863-251-4763
ajiacunningham@ufl.edu

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2022 Fall Weather Outlook

BY CHRIS OSWALT

The latest NOAA 2022 fall 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 an above normal chance of rainfall. The El Niño Southern Oscillation (ENSO) forecast is for La Niña conditions (around 91% chance) for the fall of 2022 (September-November). The forecast for after January is to have decreasing La Niña conditions (about 54% chance) towards late winter. There is a 56% chance that La Niña will transition into ENSO neutral conditions during February to April.

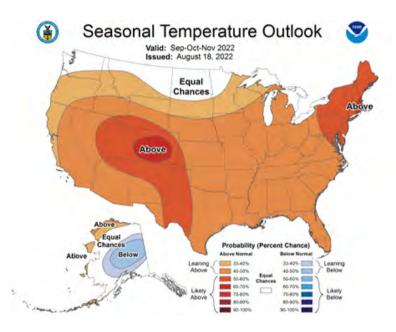


Figure 1 Fall 2022 temperature outlook

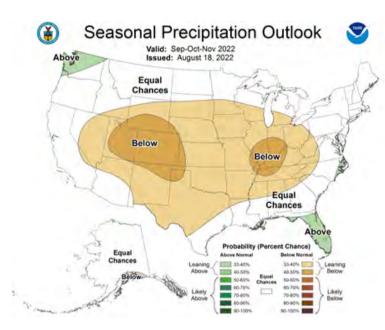


Figure 2 Fall 2022 precipitation outlook

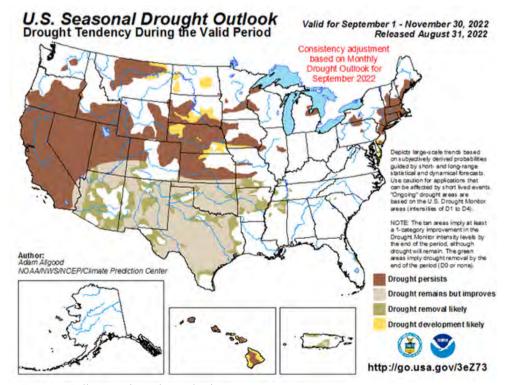


Figure 3 Fall 2022 drought outlook

2022 Hurricane Outlook Update



BY CHRIS OSWALT

One of the first 2022 hurricane forecasts from Dr. Phillip Klotzbach, Colorado State University, Tropical Weather & Climate Research was updated in early August. Based on the prediction it looks to be an active hurricane season. This would not seem out of the ordinary since the El Niño forecast for the summer is for La Niña conditions to continue. In El Niño years you get the typical zonal flow of air aloft causing to some degree issues for hurricane formation and intensification. El Niño doesn't look to be happening this summer. With having said all this, the following table looks at CSU's forecast and the past 30 year or so average.

Forecast Parameters	CSU Forecast	Average for 1991-2020	
Named Storms	18	14.4	
Named Storm Days	85	69.4	
Hurricanes	8	7.2	
Hurricane Days	30	27.0	
Major Hurricanes (3,4,5)	4	3.2	
Major Hurricane Days	8	7.4	

So in an effort to bring the probabilities a little closer to our geographical area, CSU provided the following updated information for the state of Florida. For one or more storms, there is a 95% probability of at least one named storm coming within 50 miles of Florida, a 72% probability of a hurricane, and a 41% probability of a major hurricane. This compares to the climatological average (1880-2020) of at least one named storm at 86%, 56% for a hurricane and 29% probability of a major hurricane.

Getting further specific we can look at the probabilities at the coastal counties nearest to our area:

	2022 Forecast Probabilities (%)			Climatic Average 1880-2020 (%)		
County	2022 Named Storm	2022 Hurricane	2022 Major Huricane	Named Storm	Hurricane	Major Hurricane
Pasco	50	25	7	36	17	5
Hillsborough	50	26	10	36	17	7
Manatee	51	26	11	37	18	8
Indian River	51	25	9	37	17	6
St. Lucie	50	22	8	36	15	6

2022 Hurricane Outlook, contd.

BY CHRIS OSWALT

Now to go even further into the numbers, if the forecast is right then there would be 18 storms and a little over 50% are forecasted to pass within 50 miles of the above listed counties so that would mean in numeric terms about 9 storms, then about 25% would be hurricanes which would be about say 4 to 5 and 10% for a major hurricane which would be numerically 0.9. This is typically the time of peak hurricane season which occurs about the first week or two of September (Fig 4). Good news is that we are at the peak and it trends down from here on out.

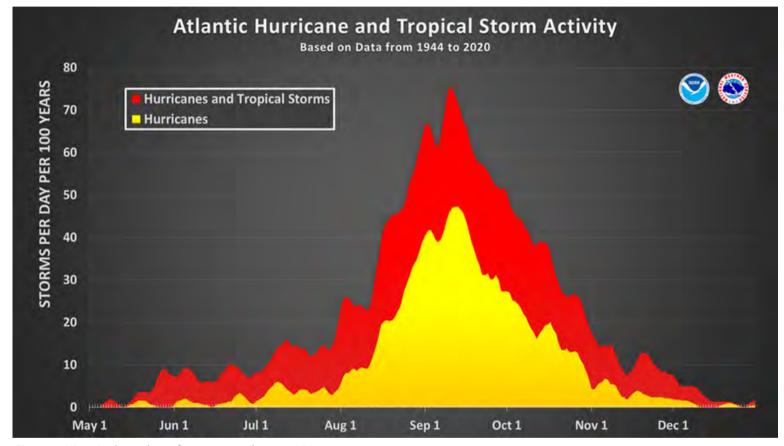


Figure 4 Historical number of storms per day per 100 years.



Plant Growth Regulators: What do they do?

BY AJIA PAOLILLO

No one can argue the fact that our trees are under a lot of stress these days from HLB. We are all looking at any angle and under every rock for an answer. Although we don't have one single answer, we are starting to have a collection of approaches that when tied together are showing some promise. This article will focus on plant growth regulators (PGR), what they do, and how we have can use them in the grove. Some plant growth regulators are sourced naturally while others are synthetic analogues of plant hormones. Which means they are chemical products made to mimic those hormones that occur naturally in the plant.

Recently there have been several events providing growers with the opportunity to hear research data updates from UF/IFAS specialists Dr. Tripti Vashisth and Dr. Fernando Alferez. They have reported on the use of PGR's and how they can improve the health of the tree, reduce fruit drop, and improve yields. It is important to keep in mind that PGR's do not work independently, and their success or failure is influenced by many factors including environmental conditions, other plant hormone levels and stress. In HLB affected trees, these hormone levels are low and in turn metabolic functions are affected. Let's review some of the PGR's used in citrus and what their function is in the plant.

Gibberellic acid (GA) promotes growth and development in plants including shoot elongation, vegetative growth, seed germination, and fruit set. GA is also involved in the timing of fruit and leaf senescence and can be used to delay this in citrus. GA has been used in citrus for a long time. However, recent studies by Dr. Vashisth, UF/IFAS CREC, have shown that repeated monthly applications during the months of September-January have a positive effect on Valencia oranges. The rate in which GA is metabolized by the plant has indicated that the effects from a single application are not long lasting. Therefore, repeated monthly applications are needed to achieve positive results.

Her study has shown that trees sprayed with GA have a denser canopy than untreated trees due to an increase in vegetative growth. Denser canopies contribute to the health of the tree by providing more leaf surface for photosynthesis. Also, GA reduces the number of flowers thus conserving resources and the flowers that are produced are generally 'leafy'. Flowers that are produced on leafy shoots, known as leafy inflorescences, are more likely to set and hold fruit until maturity. GA can also reduce pre-harvest fruit drop by delaying fruit senescence or aging. In GA treated trees, the fruit peel stays greener longer, indicating reduced ethylene levels. We know that ethylene, another plant hormone, is responsible for fruit ripening and abscission. This delay in ethylene production allows the peel integrity to stay stronger and the fruit to hold at the abscission zone tighter. Another result of her study showed that fruit size increased with GA applications. This is important because she has reported fruit that were most likely to drop pre-harvest were small. So, the larger the fruit, the less likely it is to drop.



Plant Growth Regulators: What do they do?

BY AJIA PAOLILLO

How does GA applications affect flowering and yield? Well, it starts in winter, particularly around December, when bud differentiation occurs. This process is when the tree decides if the spring buds will be vegetative (leafy) or floral. You can see this is already decided by the tree long before we encounter the first flower or indication of flush in the spring. Later GA applications in the fall, reduces flowering in the spring and induces vegetative growth. Remember, only about 2% of flowers produced in the spring will actually set fruit that makes it to maturity. When the tree produces too many flowers, it is wasting valuable resources that can be utilized to develop fruit that does set or for increased vegetative growth. So, by limiting the number of flowers produced, the tree is more likely to retain the fruit it does set. Late summer, early fall GA applications can affect fruit currently on the tree by delaying peel senescence.

Let's discuss a couple of other PGRs you have been hearing about and have maybe applied in your grove. Auxins are another hormone needed for plant growth including cell elongation and root growth. Auxins can also be used suppress abscission. In citrus we use the auxin called 2,4-D, typically as a herbicide. However, some formulations of 2,4-D can be applied to the tree to achieve larger fruit sizes and reduce preharvest fruit drop. Brassinosteroids are another type of PGR that has shown some promise in current trials to prolong tree health after IPC removal and improve fruit quality. Research studies are being conducted now to determine proper timing, concentrations, and other factors to maximize these positive effects when using these different types of PGRs. More data is to come as these trials progress. Growers should be cautious when applying PGRs, as results can vary depending on time of year, environmental conditions, tank mix partners, tree health, and other factors. The label is the law, be sure to always follow the pesticide label instructions accordingly.

For more information on plant growth regulators please refer to the <u>2022-23 Florida Citrus Production Guide</u> and visit the <u>CREC Research Website</u> for recorded presentations.



Citrus Fruit Displays and Tastings

BY AJIA PAOLILLO

It is almost that time again! Come out and taste varieties showcased by UF/IFAS, the USDA, and the New Varieties and Development Foundation. Researchers are interested in your opinion of how these new varieties taste. As we know consumer acceptance and preference drive sales. These are the dates and locations of citrus fruit display and tasting event coming soon. For more information on each of these events please visit this link to the New Varieties Development & Management Corporation https://nvdmc.org/upcoming-events/ or contact Peter Chaires at pchaires@nvdmc.org



- October 19, 2022, 1:00 3:00 PM
- UF/IFAS CREC, Lake Alfred (immediately after the OJ Break)
- November 14, 2022, 9:00 11:00 AM UF/IFAS CREC CREC, Lake Alfred







CRAFT Cycle 4 Approved for Funding

BY AJIA PAOLILLO

Many growers participate in the Citrus Research and Field Trial program, otherwise known as CRAFT. This program was started in 2019 and is a collaborative effort with growers to plant new trees and implement various production and cultural practices in the field trials. Growers apply to be part of the program which now has a total of 3 cycles, with funding for the 4th cycle having been recently approved. Projects for both Cycles 1 and 2 have been planted and growers are supplying data to the CRAFT Foundation on these trials. Projects involved in Cycle 3 are currently being planted and must be completely planted by June 2023. As growers begin to collect data on cycle 3 planting, they will also provide this data to the CRAFT Foundation.

The various project topics include:

- ·Individual Plant Covers (IPCs)
- ·Rootstock and scion combinations
- ·Plant and soil nutrition
- ·Biostimulants

Growers interested in applying for Cycle 4 will be able to do so in early October. The application window will stay open for 60 days. If selected, growers will need to plan on having their trees fully planted by June 2024. Please check the CRAFT Foundation's website for more updates https://craftfdn.org/ or contact Tamara Wood at tamara@craftfdn.org

Citrus Expo 2022

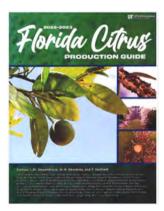
BY LOURDES PÉREZ CORDERO

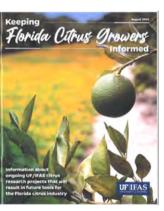
The Citrus & Specialty Crop Expo was held at the Lee Civic Center in Fort Myers on August 17th and 18th. The yearly tradeshow housed more than 200 exhibitors and hosted seminars dedicated to updated research in citrus and vegetable production.

Topics presented by researchers during the 2022 Citrus Expo can be found online in the link below. In addition, the information published in the "2022-2023 Florida Citrus Production Guide" and the "Keeping Florida Citrus Growers Informed" booklets are also available at the following webpage:

- Citrus Expo research presentations: https://crec.ifas.ufl.edu/citrus-research/presentations/citrus-expo-2022/
- 2022-2023 Florida Citrus Production Guide: https://crec.ifas.ufl.edu/resources/production-guide/
- Keeping Florida Citrus Growers Informed: https://crec.ifas.ufl.edu/citrus-research/presentations/citrus-expo-2022/booklets/citrus-growers-informed/

Make sure to contact you local Extension Office if interested in obtaining the hard-copy of the "2022-2023 Florida Citrus Production Guide" or the "Keeping Florida Citrus Growers Informed" booklet.





Upcoming In-person and Online Seminar

Coordinator: Dr. Mongi Zekri, Multi-County Citrus Extension Agent, UF-IFAS, SW Florida

Date & time: Thursday, 29 September 2022, 11:00 AM - 12:00 Noon

Location: Immokalee IFAS Center

Title: New exotic viral diseases of citrus: Citrus yellow vein clearing virus and Leprosis

Speaker: Dr. Ozgur Batuman, Assistant Professor in Citrus Pathology, UF-IFAS Southwest Research & Education

Center, Immokalee

Dr. Batuman will introduce two viruses that cause disease symptoms in citrus plants worldwide.

More recently, one of them has been found in dooryard citrus in California. Fortunately, we do not have them in Florida. However, getting familiar with their disease symptoms and vigilance can help avoid introducing these exotic pests to Florida.

To register and attend via Zoom, click here:

https://ufl.zoom.us/j/92882525640?pwd=bjlONURsV2xBMVVtcHk0cVFzVIZkUT09

After registering, you will receive a confirmation email containing information about joining the Zoom meeting.

To register and attend in-person, and get a free lunch, send me an e-mail (maz@ufl.edu).

1 CEU for pesticide license renewal

1 CEU for certified crop advisors





The Pesticide Cabinet

Your central location for upcoming CEU workshops, pesticide license exam review classes, and more.

<u>Private Applicator and Core Pesticide Training</u>

Date: Friday September 30, 2022 Time: 8am-1:30pm

Location: UF/IFAS Extension Polk County

1702 South Holland Parkway

Bartow, FL 33830

Cost: \$15/class

Instructor: Luis O. Rodriguez

Registration: Online using Eventbrite - Click here to register

This class will review the required information for the Private Applicator and General Standards Core exams to obtain restricted use pesticide licenses in Florida

2 CEUs available in:

Core, Private, Ag Row Crop
(Max of 4 CEUs)

General Standards Core Exam Review Class

Date: Thursday November 10, 2022 Time: 8:30am-12:30pm

Location: UF/IFAS Extension DeSoto County

507 Civic Center Dr. Wauchula, FL 33873

Cost: \$15/class \$26/study guide

Instructor: Ajia Paolillo

Registration: https://corereviewclass111022.eventbrite.com

This class will review the required information for the General Standards Core exam to obtain restricted use pesticide licenses in Florida

4 CEUs available in:

Core

Ag Tree Crop CEUs and Training

Date: Wednesday November 30, 2022 Time: 8am-12pm

Location: UF/IFAS Extension Polk County

1702 South Holland Parkway

Bartow, FL 33830

Cost: \$15/class

Instructors: Luis O. Rodriguez, Chris Oswalt, Ajia Paolillo

Registration: Online using Eventbrite - Click here to register

This class will review the required information for the Ag Tree Crop exam to obtain restricted use pesticide licenses in Florida

4 CEUs available in:

Private, Ag Row Crop, or Ag Tree Crop
(Max of 4 CEUs)

CEU Reminder!

Core CEU's are always available online through
Citrus Industry magazine https://citrusindustry.net/ceu

Most of our events, both in-person and online also offer CEUs

Food Safety Event Calendar



Fall/Winter 2022



Produce Safety Alliance Grower Training

A one-day course for produce growers and packers who fall under FSMAs Produce Safety Rule.

- October 26th Live Oak https://psa102622.eventbrite.com
- November 1st Dover (Strawberry Grower's Assoc.) https://psa110122.eventbrite.com
- November 15th Homestead https://psa111522.eventbrite.com
- November 16th Homestead (Spanish) Email: taylorlangford@ufl.edu
- November 17th Immokalee (Spanish) Email: taylorlangford@ufl.edu
- November 18th Immokalee https://psa111822.eventbrite.com

Remote- Produce Safety Alliance Grower Training

A three-day, three-hour virtual course for fruit and vegetable growers and packers who fall under FSMAs Produce Safety Rule.

- August 22nd-24th Remote PSA Training https://psa082222.eventbrite.com
- December 6th-8th Remote PSA Training https://psa120622.eventbrite.com

Remote-HACCP for Florida Fresh Fruit and Vegetable Packinghouses

This four-day virtual course focuses on HACCP principles for fruit and vegetable packinghouses.

November 29-December 2nd

Email: taylorlangford@ufl.edu



Preventive Controls for Human Food-Preventive Controls Qualified Individual (PCQI) Training

This three-day course for those covered under FSMAs Preventive Controls for Human Food Rule

· TBA

Email: taylorlangford@ufl.edu

Beyond the Basics: A Hands-on Food Safety Analysis

This one-day course is targeted at those who have already attended a food safety training and are looking for a more in-depth and hands-on experience. It is not a substitute for a PCOI or PSA Grower Training for FSMA.

October 27th-Live Oak Email: taylorlangford@ufl.edu



Sign up for an On-Farm Readiness Review

A free educational opportunity intended to prepare growers for FSMA Produce Safety Rule inspection. Participants must have taken a Produce Safety Alliance Grower Training, To sign up for an On-Farm Readiness Review, visit: www.fdacs.gov/ofrr.

For registration questions, contact sarahmccoy@ufl.edu. For general food safety questions, contact UFFoodsafety@ifas.ufl.edu.



Syngenta Citrus Internships Summer 2023



Program Overview

When you are a citrus intern with Syngenta, you will gain hands-on experience in the ag industry. This is a paid internship that also provides a vehicle for work use. You will be assigned to a mentor and a territory for your summer project. You will gain experience with territory management along with pest and disease identification. The internship presents opportunities to gain sales and marketing experience, exposure to the citrus industry, as well as opportunities within Syngenta Crop Protection.

Intern Focus

- Pest scouting support (miticides/insecticides) Minecto Pro, Voliam Flexi, Agri-Flex, & Agri-Mek
- Soil sampling support (fungicides) Ridomil & Orondis

Qualifications

- Seeking future employment in the Florida Agriculture Industry.
- Basic familiarity with production agriculture.
- Basic familiarity with pest, disease, and weed control.
- Basic computer skills.
- Willingness to work outdoors.
- Self motivated, detail oriented, honest, and personable.
- Ability to relocate to or originally from one of the following counties; Polk, Highlands, Hardee, Desoto, Hendry, Collier, Lee, Okeechobee, Martin, Osceola, St. Lucie, or Indian River.
- Sophomore or Junior level (Seniors will be considered).
- Satisfactory results of a pre-employment background check, drug test, and driving record evaluation.

Zach Langford Florida Citrus Internship Coordinator Syngenta Retail Rep 407-212-5631 zach.langford@syngenta.com

Chad Warrick Syngenta Retail Rep 830-832-5269 chad.warrick@syngenta.com Please submit your application and resume by Nov 4th 2022

Follow QR Code or link to apply:

https://www.surveymonkey.com/r/SyngentaCitrusIntern





Alico Citrus Internship- Summer 2023

Program Overview

As an intern with Alico Citrus, you will receive an opportunity to see all components of the citrus caretaking business. This is a paid internship. You will have a designated mentor and assigned rotation throughout the organization for the summer. You will get the chance to see all aspects of our business from production to the corporation side. This internship will give you the potential to gain a diverse training along with contact to the citrus industry as well as prospective employment opportunities after college.



Intern Focus

- Production
- Human Resources
- Accounting
- Business Administration



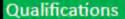


Contact Info:

Carisa Keller

Internship Coordinator

941-268-7495



- Seeking future in employment in the Florida Citrus Industry.
- · Basic familiarity with agriculture.
- · Basic computer skills.
- Pertaining to the internship, willingness to work outside.
- Self-motivated, detail oriented, honest, and a good personality.
- Ability to relocate to or originally from one of the following counties: Polk, Highlands, Hardee, Desoto, Hendry, Collier, or Lee.
- Freshman through Senior level
- Satisfactory results of a pre-employment background check, drug test, and driving record



Alico Citrus Internship Program

Apply Here!



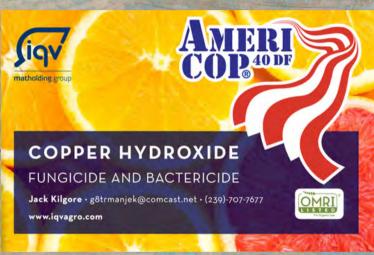




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