

JULY/AUGUST 2022 | VOL.22:06

Citrus from the Ridge to the Valley

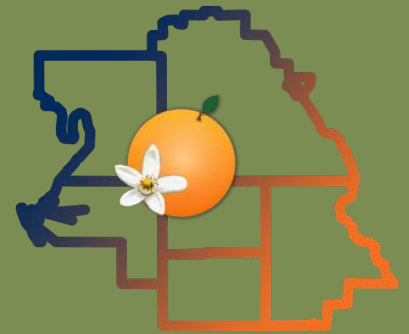
CENTRAL FLORIDA CITRUS EXTENSION

July/August 2022

We are in mid-August already and the year is flying by. We are gearing up for some events that we hope you will take part in. This week is Citrus Expo in Ft. Myers on August 17th & 18th. The 2022 Citrus Packinghouse Day will be held at the Citrus Research and Education Center on August 25th. Our Grower Forums have been successful and we have two taking place this month. The topic will be on the use of Citrus Fix in the grove. Growers are encouraged to bring their questions and experiences on this product. The Highlands County Ag Safety Morning will be held on October 6th in Sebring. You can find more information on all of these events inside this newsletter.

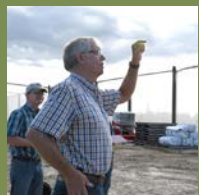


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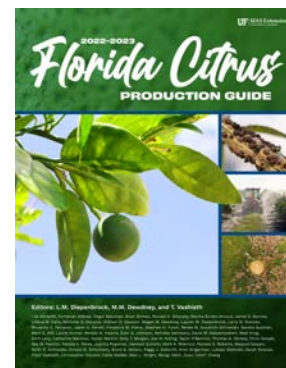
Citrus Expo is Just a Day Away!

BY AJIA PAOLILLO

The annual Citrus and Specialty Crop Expo will be taking place in Ft. Myers, at the Lee County Civic center August 17-18, 2022. This event includes a trade show with industry vendors and educational seminars. If you are in need of CEU's, you can earn them by attending the seminars. Come visit the UF/IFAS booth for the latest information on citrus pest management and other production practices. Our booth will offer educational materials that you can pick up along with the new 2022-23 Florida Citrus Production Guide. Pre-registration is now closed, however, you may still register on-site the day of the event.

For more information, please visit their website <https://citrusexpo.net/>.

We hope to see you in Ft. Myers!



2022 Citrus Packinghouse Day

Currently in its 61st year, Citrus Packinghouse Day provides information on all matters of interest concerning the harvesting, packing, and shipping of fresh citrus fruit. Shared subject matter from leading members of industry and scientists from Universities and Government Organizations, includes emerging information of critical relevance to industry and topics of general interest.

Date: Thursday August 25, 2022 Time: 8:30am-2:00pm

Location: UF/IFAS Citrus Research and Education Center
700 Experiment Station Rd.
Lake Alfred FL, 33850

Cost: Free for attendees, lunch is included. Click [here](#) to register





Citrus Fix Citrus Grower Forums

Mike Herrington of AMVAC the manufacture of Citrus Fix a 2,4-D product labeled for use in Florida citrus is coordinating an informational meeting on Citrus Fix. The meetings will be held in-person at two locations Immokalee and Bartow, FL and by Zoom. Information will be provided on a wide range considerations with using Citrus Fix.

Featured speakers: Dr. Tripti Vashisth UF/IFAS CREC & Dr. Fernando Alferez UF/IFAS SWFREC

CEU's will be available for both Restricted Use Pesticide license and Certified Crop Advisors.

Lunch will be provided at the conclusion of the meeting and per-registration is required. Registration details and links are available below for each location.

Zoom also available contact Mongi Zekri

The information shared during this program is not an endorsement or recommendation from UF/IFAS for specific products or methods.

Date and Time: Tuesday Aug 30, 2022 11am - 12pm

Location: UF/IFAS Southwest Florida Research and Education Center
2685 SR 29 North Immokalee, FL

To register and attend in-person, use the following Eventbrite link:

<https://Immokaleecitrusfix.eventbrite.com>

Or contact Dr. Mongi Zekri

For more information contact:

Mongi Zekri
maz@ufl.edu

Date and Time: Wednesday Aug 31, 2022 11am - 12pm

Location: UF/IFAS Polk County Extension,
Stuart Conference Center
1710 US Hwy 17 S, Bartow

To register and attend in-person, use the following Eventbrite link:

<https://Bartowcitrusfix.eventbrite.com>

Or contact Chris Oswalt

For more information contact:

Chris Oswalt
863-519-1052
wcoswalt@ufl.edu

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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 Hendry County & Polk County no later than 5 days prior to the meeting at 863-674-4092 (Hendry) or 863-510-1041 (Polk).

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 required.
- Simultaneous sessions in English and Spanish
- Lunch will be provided

Registration

- **Eventbrite:**
<https://highlandsagsafety2022.eventbrite.com>
- **Phone:** 863-402-6540
- **E-mail:** gwyche@ufl.edu

2022 Summer/Fall Weather Outlook

BY CHRIS OSWALT

The latest NOAA 2022 end of summer early 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 above normal rainfall. The El Nino Southern Oscillation (ENSO) forecast is for La Nina conditions (around 60% chance) for the balance of the summer of 2022 (July-September). The forecast for after September is to have increasing chance of La Nina conditions (about 62-66% chance) going into this fall and early winter. La Niña forecast in the August to October period calls for above normal chance for rainfall during this period.

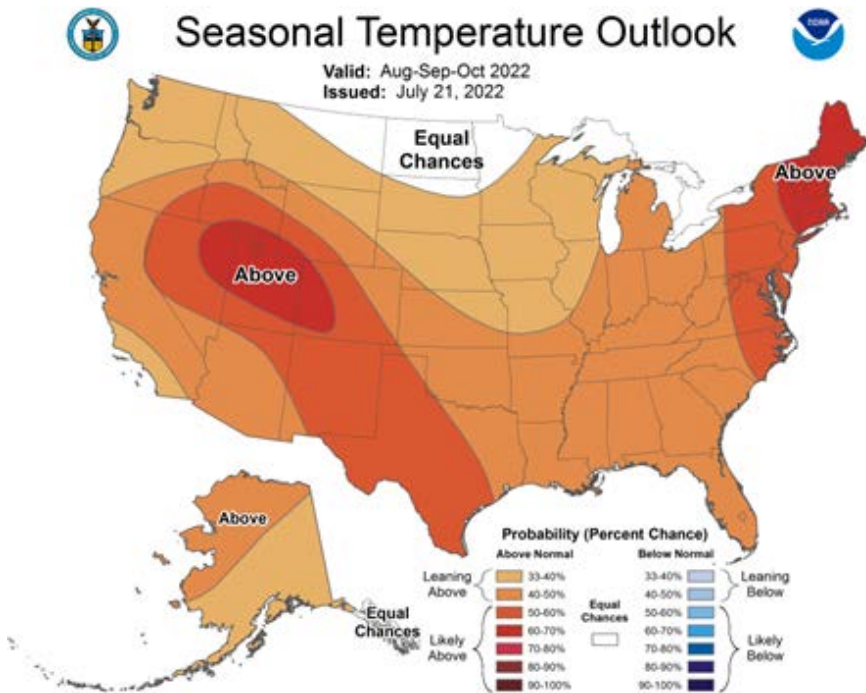


Figure 1 Summer/Fall 2022 temperature outlook

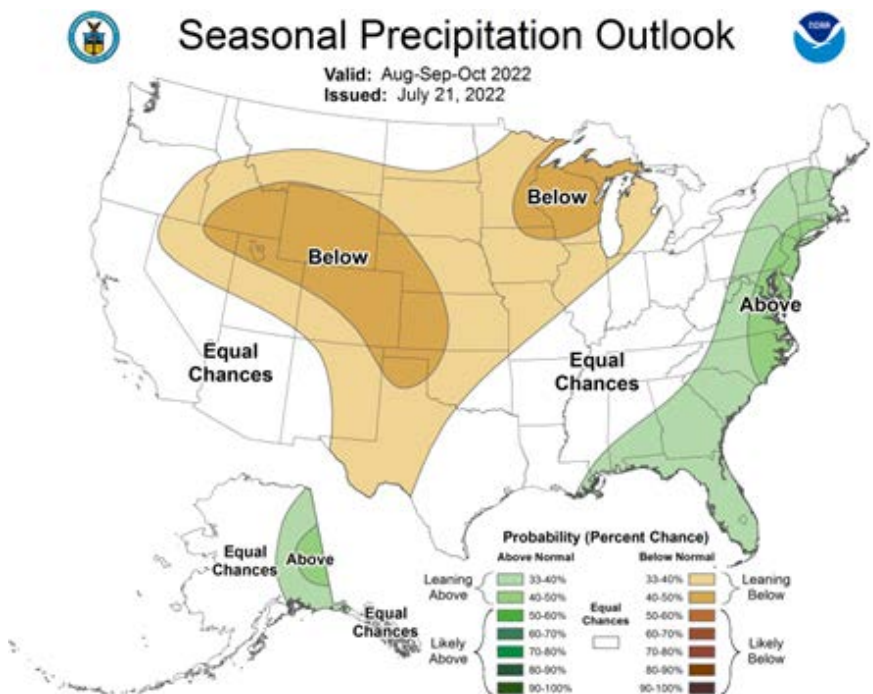


Figure 2 Summer/Fall 2022 precipitation outlook

2022 Summer/Fall Weather Outlook, cntd.

BY CHRIS OSWALT

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

Valid for August 1 - October 31, 2022
Released July 31, 2022

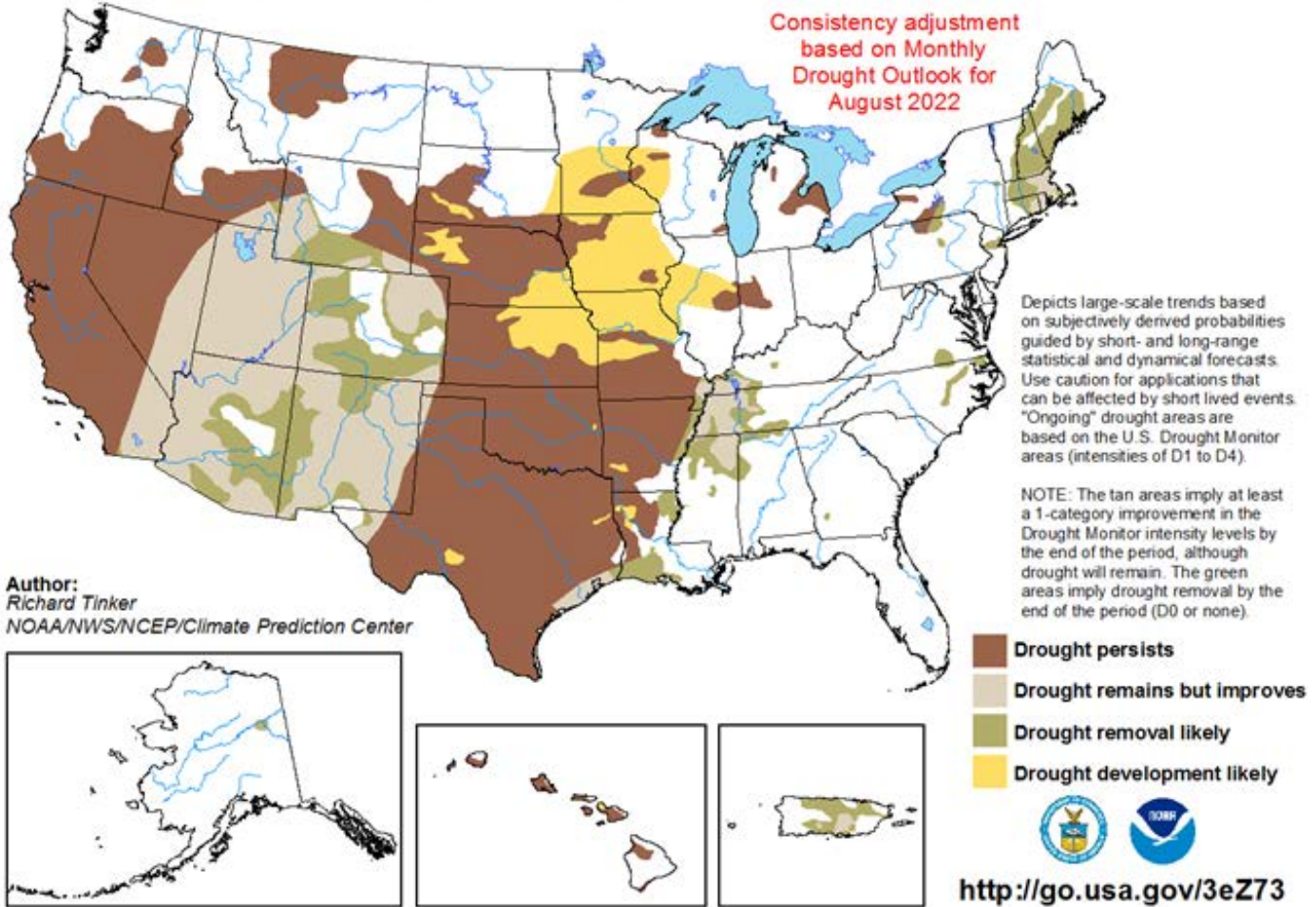


Figure 3 Summer/Fall 2022 drought outlook



2022 Hurricane Outlook Update

BY CHRIS OSWALT



The 2022 hurricane forecasts from Dr. Phillip Klotzbach, Colorado State University, Tropical Weather & Climate Research was updated in early August. Based on the prediction it still 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. Having said all this the following table looks at CSU's updated forecast and the past 30 year or so average. The forecast numbers include Alex, Bonnie and Colin which to date have occurred in the Atlantic basin.

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

2022 Hurricane Outlook, contd.

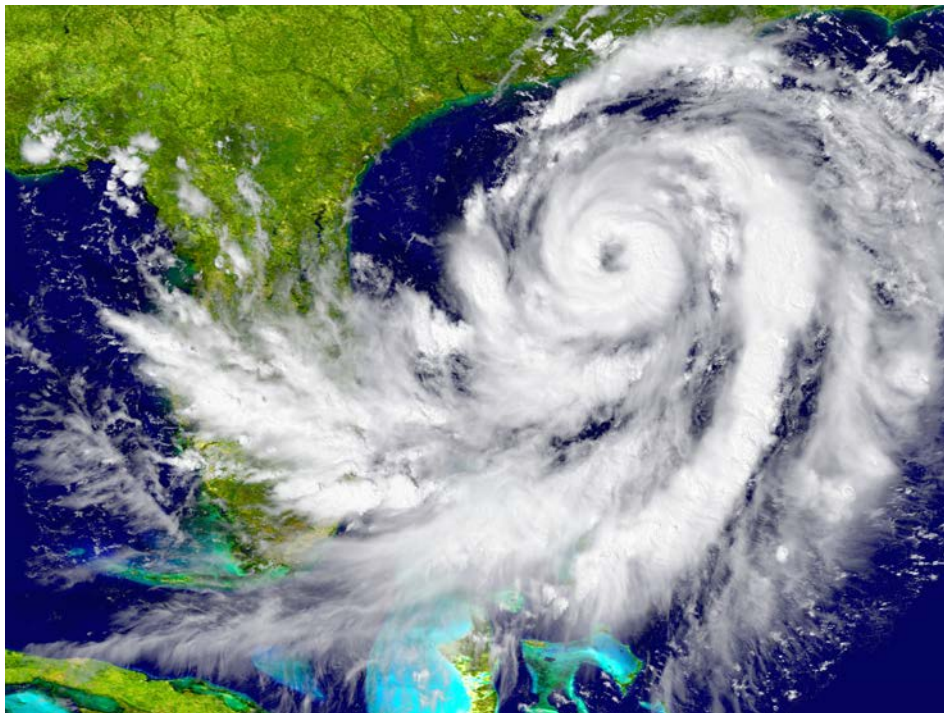
BY CHRIS OSWALT

So in an effort to bring the probabilities a little closer to our geographical area CSU provided the following information for the state of Florida. For one of 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:

County	2022 Forecast Probabilities (%)			Climatic Average 1880-2020 (%)		
	2022 Named Storm	2022 Hurricane	2022 Major Hurricane	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

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.



Citrus Trunk Injections Update

BY LOURDES PÉREZ CORDERO

As the race against citrus greening continues, so does the development of alternative tools. In a recent virtual seminar, Dr. Ute Albrecht, plant physiologist from the UF/IFAS Southwest Florida Research and Education Center, explained the preliminary findings of her research regarding citrus trunk injections and their use as a delivery method of Oxytetracycline.

Application Process

Trunk injections can be used to directly deliver treatments into the trunk of a woody plant, such as citrus trees. This entire treatment application process was shown to be relatively quick in the virtual seminar. In fact, Dr. Albrecht expressed that “you can do a few trees in less than a minute” and that tree skirting and weed management may be helpful practices to make injection applications easier to perform.

Even though several methods of injection are available in the market, the most commonly used is drill-based. After the initial hole is opened in the trunk by using a drill on a slight angle, the treatments are injected into the xylem of the tree. High pressure injections, although effective, may require plastic plugs to be inserted in the wound, which could cause further injury to the tree. On the other hand, the medium pressure injections do not require the application of plugs. Low pressure and no pressure infusions can also be performed; however, these were not found to be effective delivery methods in citrus trees. After application, the materials are then distributed by the plant through the process of transpiration. According to Dr. Albrecht, factors such as the weather, seasonality, physiology of the tree, and varieties of rootstock and scion can affect the speed of uptake and distribution of the materials.

The use of this technology may help deliver the materials in a more precise fashion, eliminating the potential for spray drift, which can dramatically reduce the exposure of workers and non-target organisms to harmful materials.



Figure 1: Trunk injury of a high-pressure injection (right) versus a medium-pressure injection (left). Credit: Leigh Archer, UF/IFAS



Figure 2: Medium-pressure injection syringes on citrus. Credit: Leigh Archer, UF/IFAS

Citrus Trunk Injections Update, ctnd.

BY LOURDES PÉREZ CORDERO

Observed Benefits

During her research trials, Dr. Albrecht observed a dramatic reduction in fruit drop and increase in yields on trees that were infected with HLB and that had been treated with Oxytetracycline versus trees without injections and trees treated with Imidacloprid or water. She also observed significant improvements in fruit quality and tree health. Fruits harvested during the Spring were significantly larger than the ones harvested in the Summer. Mature fruits exhibited significantly low residues of Oxytetracycline after 30 - 60 days of treatment injections.

The beneficial effects of the Oxytetracycline in these trials were observed for a long period of time without a second application of the treatment, suggesting that “injections may not need to be performed every year”; however, Dr. Albrecht emphasized that psyllid control remains important due to the constant risk of pathogen re-inoculation.

EPA Approval

Rick Dantzler, CRDF Executive Director, informed the attending public of the most recent efforts to obtain emergency labeling approval from EPA for the Oxytetracycline trunk injections as a method to combat citrus greening. He hopes EPA has obtained all the information needed to make a decision by early Fall of this year. FDACS, the EPA, and TJ Biotech continue working together to expedite the process.

Further Information:

To watch the full video of Dr. Albrecht’s Virtual Seminar Research Update please visit the link below:

<https://crec.ifas.ufl.edu/citrus-research/presentations/citrus-trunk-injection/>

For further information on Trunk Injections please visit the following publications:

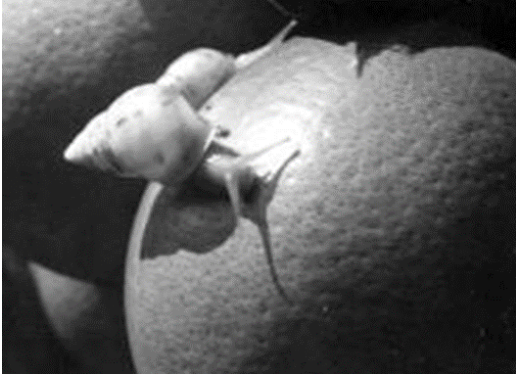
- EDIS: Trunk Injection to deliver crop protection materials: an overview of basic principles and practical considerations. <https://edis.ifas.ufl.edu/publication/HS1426>
- Principles and risks of Trunk Injection for Delivery of Crop Protection Materials.

https://crec.ifas.ufl.edu/media/crecifasufledu/extension/extension-publications/2021/2021_may_principles.pdf

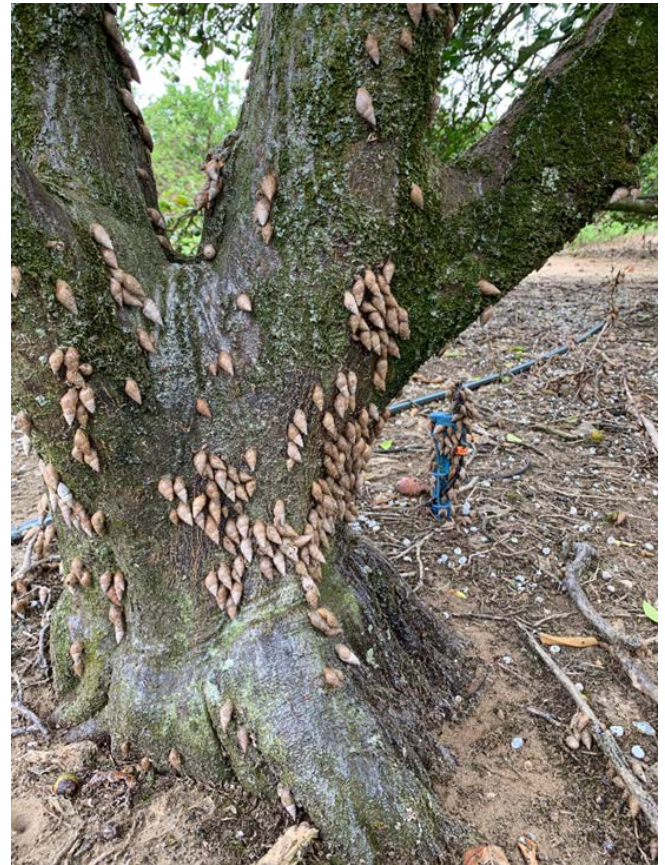
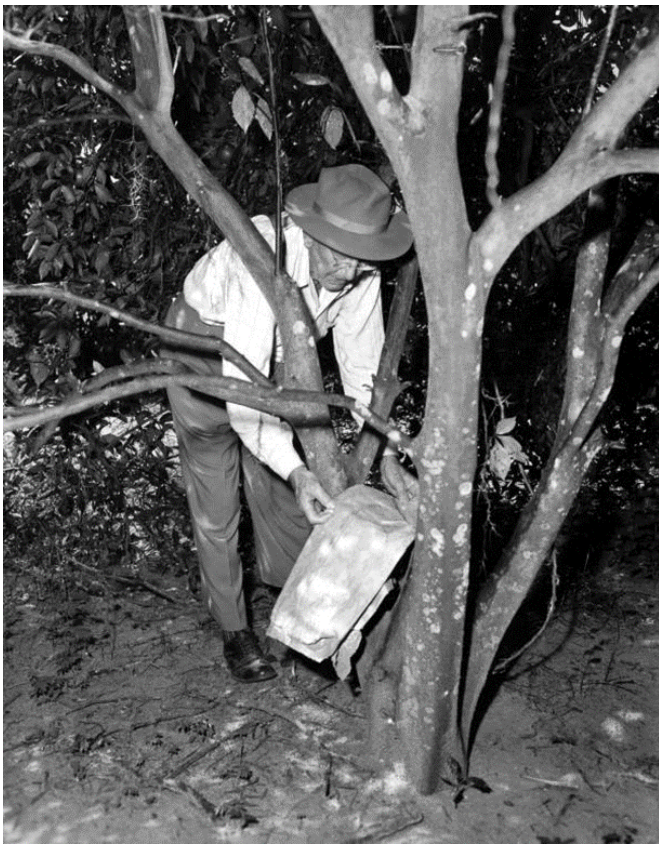


Snails and Citrus Trees

BY CHRIS OSWALT AND AJIA PAOLILLO



Appears some specific species of snails have decided to move off the irrigation emitters and tree trunks where we have normally see them to take up residency in young citrus trees. This is not to say that all snail are problems, far from it, but I'll leave it to you to look over the following photos of an issue we ran across a few months back. Again not trying to scare anybody, just want you to be aware of potential issues when scouting out in the grove. The collection I like to call a history of citrus snails in Florida. Snails are not new to Florida Citrus. It thought years ago that these tree snails provided a service. It was believed that they cleaned the surface of fruit and leaves. Reducing the surface damage of fruit caused by citrus rust mites and foliar fungal disease damage of leaves.



At one time we even encouraged and protected these mollusks. Due to their perceived benefit. We put old sack/sbags in trees to protect the snails from ground fertilizer applications. They began to climb tree trunks, seeming to be rather benign at least initially.

Snails and Citrus Trees, cntd.

BY CHRIS OSWALT AND AJIA PAOLILLO



They even appeared to be providing a cleaning service by removing moss and lichens from the trunks of citrus trees. They must have got thirsty and started to colonized irrigation emitters this started to get our attention.



They eventually found some young citrus trees to climb. Once on these young citrus trees in this particular case they began to feed on the bark causing significant damage. Eventually on some trees it became significant to the point of tree death. Not all of snails will be a problem and even the problem snails may not cause consistent damage to young or mature citrus trees. It is something I think we should all be know about so when can address any snail issues before they become significant.

Snails and Citrus Trees, cntd.

BY CHRIS OSWALT AND AJIA PAOLILLO

Snails have also been found in the individual plant covers (IPC's). If you have a snail issue in your grove and utilize IPC's, monitor them for increasing snail populations. In some field observations, problematic snails have been found on weakened, dying, or dead wood, along with foliage that is infected with Citrus Canker lesions. This could beg the question of do these snails have some attraction to weakened plant material and that is what draws them to a particular location? Then once the snails start feeding on wood and foliage the wounds become more and more on the tree.

We also know that snails are great hitch hikers and can catch a ride to a new location in the block or to another block on vehicles, tractors, mowers, herbicide booms, etc, thus enhancing their rate of spread. Check vehicles and equipment for snails and remove before moving between blocks to limit movement of these pests.

If chemical treatment is needed, there are some products that have been found to be effective in decreasing the snail populations. Dr. Lauren Diepenbrock has released data from her trials regarding these products to control *Bulimulus sporadicus*, a problematic snail that has been found in groves in the past few years, and they are listed in the table below. Her findings show that metaldehyde or iron bait products were the most effective in reducing populations. Remember to always follow the product label instructions accordingly for rate and application information. Metaldehyde baits are highly toxic and should be used with caution around wildlife, animals, and children.

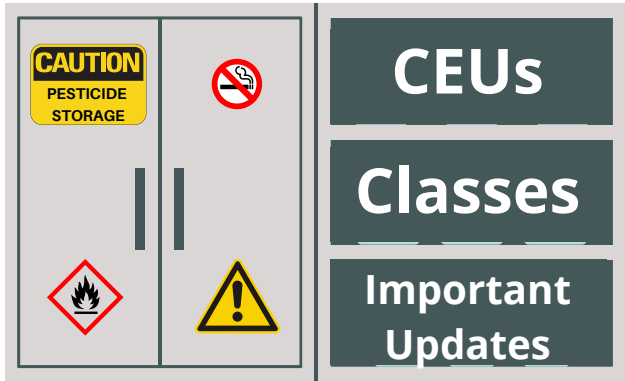
Material and Rate	Active Ingredient	Percent mortality at seven days after treatment
Control	N/A	0%
Celite 610 10%	Diatomaceous earth	0%
Imidan, 1 pound/acre	Phosmet	0%
Carbaryl, 5 quarts/acre	Carbaryl	0%
Bifenthrin, 32 fluid ounces/acre	Bifenthrin	0%
Deadline GT (100x*)	Metaldehyde	90%
Deadline M-Ps (100x*)	Metaldehyde	96%
Ironfist	Sodium ferric EDTA	92%
Ferroxx (100x*)	Iron chelate	100%
Sluggo (100x*)	Iron phosphate	92%

*100x rate was used when labelled rate was too low volume to capture data in testing arenas



Source: L. Diepenbrock, *Tip of the Week* 8-3-2021

<https://citrusindustry.net/2021/08/03/snail-management-what-works/>



The Pesticide Cabinet

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

General Standards Core Exam Review Class

Date: Thursday August 25, 2022 **Time:** 8:30am-12:30pm

Location: UF/IFAS Extension DeSoto County

2150 NE Roan St.

Arcadia, FL 34266

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

Instructors: Ajia Paolillo

Registration: <https://corereviewclass08252022.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

Need CEU's

CEU's including Ag Row, Ag Tree, Private, and Right-of-Way are being offered during the Citrus and Specialty Crop Expo and the Citrus Fix Grower Forums
See program information in this newsletter

CEU Reminder!

Core CEU's are always available online through Citrus Industry magazine

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

Food Safety Event Calendar

Fall/Winter 2022

UF | IFAS Extension
UNIVERSITY OF FLORIDA



Produce Safety
ALLIANCE

Produce Safety Alliance Grower Training

A one-day course for produce growers and packers who fall under FSMA's 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 FSMA's 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

FSPCA
FOOD SAFETY PREVENTIVE CONTROLS ALLIANCE

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

This three-day course for those covered under FSMA's 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 PCQI or PSA Grower Training for FSMA.

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

OFRR

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.

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

Qualifications

- 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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