

**135<sup>th</sup> Annual Meeting of the**

**FLORIDA STATE  
HORTICULTURAL SOCIETY**

**June 5 - 7, 2022**

**Hyatt Regency Sarasota, FL**



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# Program Overview

## Registration Desk Hours – Convention Center Registration

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Sunday June 5 12:00PM—6:00 PM

Monday June 6 7:30 AM—5:00 PM

Tuesday June 7 7:00 AM—12:00 PM

### Sunday —June 5

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10:00—2:00	<a href="#">Marie Selby Botanical Garden</a> . Coordinated by John Griffis Jr. (Discounted tickets need to be purchased in advance)	1534 Mound St, Sarasota, FL 34236
1:00—3:00	<a href="#">Poster Session Set up</a> , Lisa Hickey	Sarasota PreFunction North & South
5:00—5:15	<a href="#">Opening Ceremony</a> , John Griffis Jr.	Sarasota E/F Ballroom
5:15—5:45	<a href="#">Plenary Speaker</a> : Ed Etxeberria. Professor Emeritus UF/IFAS. Former FSHS President. “FSHS, the First Twenty Five Years (1888 – 1913)”	Sarasota E/F Ballroom
5:45—6:00	<a href="#">Awards Ceremony</a> , John Griffis Jr. (Including Student Travel Awards)	Sarasota E/F Ballroom
6:00—7:00	<a href="#">Welcome Reception</a> : Must wear your badge or purchase a guest ticket to attend	Boathouse

### Monday Morning—June 6

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8:00—8:30	<a href="#">Coffee &amp; Tea</a>	Sarasota PreFunction North & South
8:30—9:45	<a href="#">General Session</a>	Sarasota E/F Ballroom
8:30	<a href="#">Welcome &amp; Presidential Address</a> : John Griffis Jr., FSHS President	Sarasota E/F Ballroom
9:00	<a href="#">Plenary Speaker</a> : Jason Downing. Fairchild Botanical Garden “The Million Orchid Project”	Sarasota E/F Ballroom
9:45	End of General Session	

### Concurrent Monday Morning Sessions:

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9:50—12:00	<a href="#">Agroecology &amp; Natural Resources</a>	Ringling
9:50—12:00	<a href="#">Citrus</a>	Sarasota G - Ballroom
9:50—12:00	<a href="#">Handing &amp; Processing</a>	Tropics
10:00—12:00	<a href="#">Krome Memorial Institute</a>	Sarasota C/D - Ballroom
9:50—12:00	<a href="#">Ornamental, Garden, &amp; Landscaping</a>	The Keys
9:50—12:00	<a href="#">Vegetable</a>	Sarasota E/F - Ballroom
12:00—1:20	Lunch (on your own)	

### Monday Afternoon

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#### Concurrent Monday Afternoon Sessions:

1:20—4:30	<a href="#">Agroecology &amp; Natural Resources</a>	Tour
1:20—4:15	<a href="#">Citrus</a>	Sarasota G - Ballroom
1:20—4:00	<a href="#">Handing &amp; Processing</a>	Tropics
1:20—4:45	<a href="#">Krome Memorial Institute</a>	Sarasota C/D - Ballroom
1:20—5:00	<a href="#">Vegetable</a>	Sarasota E/F - Ballroom

### Monday Evening

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5:00—6:00	<a href="#">Reception and Poster Session</a> (Included in paid conference registration)	Boathouse
6:00—7:00	<a href="#">Fruit and Vegetable Extension Meeting</a>	Sarasota C/D—Ballroom

### Tuesday Morning —June 7

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7:00—8:15	<a href="#">Horticultural Crops Breakfast</a> (Event ticket required)  <a href="#">Invited Speaker</a> : Marguerite Beckford, UF/IFAS Extension. "Treejuvination— An Urban Street Tree Rejuvenation Program"	Boathouse
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8:30—9:00 [FSHS Annual Business Meeting](#) Sarasota E/F - Ballroom

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9:00—9:30 [Student Competition and Poster Competition Awards](#). Xin Zhao, Lisa Hickey Sarasota E/F - Ballroom

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9:30 Coffee Break Sarasota PreFunction North & South

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### Concurrent Tuesday Morning Sessions:

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9:50—11:30 [Citrus](#) Sarasota G - Ballroom

9:50—11:30 [Handing & Processing](#) Tropics

9:50—11:45 [Vegetable](#) Sarasota E/F - Ballroom

### Tuesday Lunch

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12:00—1:00 [Extension Luncheon](#) Boathouse  
(Event ticket required)  
Invited Speakers: Dr. Andra Johnson. UF/IFAS Extension Dean  
"Key learnings and Future Priorities of UF/IFAS Extension"

### Tuesday Afternoon

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1:00—5:00 [In-Service Training](#) Sarasota E/F - Ballroom  
"Working with Clients to Measure Water Savings and Nutrient Load Reduction Associated with their BMP Implementation"

1:00—3:30 [Mango Summit](#) Sarasota C/D - Ballroom

2:30-5:00 [Gulf Coast Research and Education Center](#) 4625 County Road 672, Wimauma, FL 33598  
Coordinated by Marguerite Bedford

## Florida State Horticultural Society 2021-2022 Board of Directors and

Chair of the Board: Noris Ledesma

President: John Griffis Jr.

President-Elect: Alan Chambers

### Sectional Vice Presidents

Agroecology & Natural Resources: Taylor Clem

Resources:

Citrus: Manjul Dutt

Handling & Processing: Jeffrey Brecht

Krome Memorial Institute: Mark Bailey

Ornamental, Garden and Landscape: Michelle Leonard-  
Mularz

Vegetable: Evelyn "Prissy" Fletcher

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Craig Campbell

Membership Coordinator: Mark Ritenour

Program Coordinator: Germán Sandoya

# Florida State Horticultural Society

## 2022 Meeting Facilitators

Local Arrangements Coordinator: Marguerite Beckford

Sponsorship Coordinator: Gene McAvoy

Student Competitions Coordinator: Xin Zhao

CEU Coordinator: Frank Dowdle/Ron Rice

Poster Session Coordinator: Lisa Hickey

FSHS Newsletter Team: Alicia Lamborn

### Platinum Level Sponsor (\$2,000 and above)

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Anonymous Donor

Citrus Research and Development Foundation, Inc.

National Mango Board

Florida Nursery, Growers and Landscape Association-Manasota Chapter  
(Ornamentals)

### Gold Level Sponsor (\$1,000—\$1,999)

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None

### Silver Level Sponsor (\$500—\$999)

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Love of Mangos

Mary Lamberts and George Fitzpatrick, in memory of Mary's father, Dr. J.J.  
Lamberts, Professor Emeritus of English at Arizona State University

### Bronze Level Sponsor (under \$500)

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Florida Gulf Coast University and Florida Southern College (Ornamentals)

Tomato Committee

Please see the full list of sponsors on the FSHS Website, poster section, and meeting rooms.

## 2022 FSHS Patron Members

Gene McAvoy

Ed Etxeberria

Karen Stauderman

## Presentation, Publication and Submission Guidelines

- Full payment of page charges from past years is required before presentations and submissions can be accepted in current year.
- The SENIOR AUTHOR must be a member of the Society, and the PRESENTING AUTHOR of the paper must be registered at the annual meeting (except for invited papers) for papers to be accepted for the Proceedings. Papers not presented at the meeting will not be published.
- Electronic submissions prior to the meeting are highly encouraged and preferred. Manuscripts should be delivered in FINAL electronic form at the time of the meeting to the FSHS editor, Mary Lamberts (editors@fshs.org) and copy their appropriate sectional VP.
- Authors may also publish their manuscript(s) in any refereed journal FSHS will publish the abstract with a link to the full publication.
- For all submissions, see complete Manuscript Preparation Guide (<http://fshs.org/author-instructions/>) for the Proceedings of the Florida

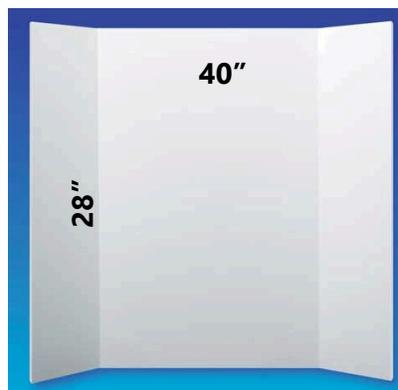
### Attention FSHS Authors

- FSHS welcomes and encourages color pictures and color figures in Proceedings articles.
- Did you know that videos can also be linked to Proceedings articles?
- Color pictures, figures and videos are included FREE of CHARGE in the online Proceedings.

# 2022 FSHS

## Poster Presentation Guidelines

- All posters are set up on Sunday, June 5<sup>th</sup> in the Sarasota Ballroom North and South preconference area.
- The posters will need to be moved on Monday between 4:30 and 5:00 pm to the Boathouse area for the reception. It is strongly suggested that the authors are available from 5:00 – 5:30 to answer questions about their poster and then join the reception in progress.
  - After the reception on Monday, posters need to be moved back to the Sarasota Ballroom North and South Preconference area.
- Please be by your poster during break times, and before or after sessions when feasible to talk about your research/projects.
- Poster will be judged on Monday between 11:00 am and 3:00 pm., and a rubric will be provided to all presenters.
- Posters must be taken down on Tuesday, June 7, 2022 at noon.
- Landscape 40" wide x 28" tall



# Welcome 2022 FSHS Sectional Vice-Presidents!

Agroecology & Natural Resources: **Taylor Clem**, UF/IFAS Extension Nassau County, [taylor-clem87@ufl.edu](mailto:taylor-clem87@ufl.edu)

Citrus: **Manjul Dutt**, UF/IFAS Citrus Research and Education Center, [manjul@ufl.edu](mailto:manjul@ufl.edu)

Handling & Processing: **Jeffrey Brecht**, UF/IFAS Hort Science Department, [jkbrecht@ufl.edu](mailto:jkbrecht@ufl.edu)

Krome Memorial Institute: **Mark Bailey**, UF/IFAS Extension Marion County, [ironhill@ufl.edu](mailto:ironhill@ufl.edu)

Ornamental, Garden, & Landscape: **Michelle Leonard-Mularz**, UF/IFAS Extension Monroe County, [mleonard@ufl.edu](mailto:mleonard@ufl.edu)

Vegetables: **Evelyn "Prissy" Fletcher**, UF/IFAS Extension St. Johns County, [pffletch@ufl.edu](mailto:pffletch@ufl.edu)

# Technical Program Schedule

## Poster Session

Lisa Hickey

Coordinator

[Lisa.Hickey@ufl.edu](mailto:Lisa.Hickey@ufl.edu)

## Monday Evening Session

### Boathouse

(Authors present posters from 5:00pm –5:30pm during Reception at Boathouse on Monday June 6. Posters will be moved from the Sarasota Ballroom North and South preconference area to Boathouse prior to the reception)

- [P-1] **Success Rate of Propagation by Cuttings in American Beautyberry (*Callicarpa americana*).** [Anna Goebel](#)<sup>\*1</sup>, Brian D. Bovard<sup>2</sup>, and Sean Wortman-Goebel<sup>3</sup>. <sup>1</sup>Department of Biological Sciences, Florida Gulf Coast University, Fort Myers, FL. <sup>2</sup>Department of Ecology and Environmental Studies, Florida Gulf Coast University, Fort Myers, FL. <sup>3</sup>Florida State University, Tallahassee, FL. ([agoebel@fgcu.edu](mailto:agoebel@fgcu.edu))
- [P-2] **Toward Developing a Specialty Pepper (*Capsicum annuum*) Breeding Line with Bacterial Spot Resistance and Improved Fruit Quality Traits.** [Lucas Manko](#)<sup>\*1</sup>, Dominick Padilla<sup>1</sup>, Jeff Jones<sup>2</sup>, Bala Rathinasabapathi. <sup>1</sup>Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. <sup>2</sup>Plant Pathology Department, University of Florida/IFAS, Gainesville, FL. ([lucas.manko@ufl.edu](mailto:lucas.manko@ufl.edu))
- [P-3] **Effects of Light Level and Controlled-release Fertilizer Level on Greenhouse Production and Consumer Perception of Philodendron 'Birkin'.** [Mollie Tew](#)<sup>\*1</sup>, Malcolm Manners<sup>1</sup>, John Griffis Jr.<sup>2</sup>, Özlem Tuncay<sup>3</sup>. <sup>1</sup>Florida Southern College, Lakeland, FL; <sup>2</sup>Florida Gulf Coast University, Fort Myers, FL; <sup>3</sup>Ege University, Izmir, Turkey. ([mmanners@flsouthern.edu](mailto:mmanners@flsouthern.edu))
- [P-4] **Student Interests and Perceptions on Vegetables, Fruits, and Herbs.** [Bala Rathinasabapathi](#)<sup>\*1</sup>, Caitlin Clarke<sup>1</sup>, and Michael Harrington<sup>2</sup>. <sup>1</sup>Horticultural Sciences Department, University of

Posters Section

Florida, IFAS, Gainesville, FL. <sup>2</sup>Center for Online Learning and Technology, University of Florida, Gainesville, FL. ([brath@ufl.edu](mailto:brath@ufl.edu))

- [P-5] **Effect of Fabric Mulch Ground Covers on Lemon Trees Rhizosphere Microbiome in Florida Indian River Flatwood Soils.** John M. Santiago<sup>\*1</sup>, John-Paul Fox<sup>1</sup>, Sandra M. Guzman<sup>1</sup>, Lorenzo Rossi<sup>1</sup>. <sup>1</sup>Indian River Research and Education Center, University of Florida/IFAS, Fort Pierce, FL. ([l.rossi@ufl.edu](mailto:l.rossi@ufl.edu))
- [P-6] **Revealing Root and Stem Morphological and Anatomical Traits of Florida Grapefruit Cultivars Grafted on US-942 and US-802.** Neus Alcon Bou<sup>\*1</sup>, Grace John<sup>2</sup>, Sandra Guzman<sup>1</sup>, Ute Albrecht<sup>3</sup>, Lorenzo Rossi<sup>1</sup>. <sup>1</sup>Indian River Research and Education Center, University of Florida/IFAS, Fort Pierce, FL. <sup>2</sup>Biology Department, University of Florida, Gainesville, FL. <sup>3</sup>Southwest Florida Research and Education Center, University of Florida/IFAS, Immokalee, FL. ([l.rossi@ufl.edu](mailto:l.rossi@ufl.edu))
- [P-7] **Vanilla Orchids in the Garden and on the Farm in South Florida.** Jessica Ryals<sup>\*1</sup>, Twyla Leigh<sup>1</sup>, Thomas Becker<sup>1</sup>, Alan Chambers<sup>2</sup>. <sup>1</sup>UF/IFAS Extension Collier County, Naples, FL. <sup>2</sup>Tropical Research and Education Center, University of Florida/IFAS, Homestead, FL. ([Jessicaryals@ufl.edu](mailto:Jessicaryals@ufl.edu))
- [P-8] **Germplasm Genetic Diversity of *Lactuca* spp. in the UF/IFAS Lettuce Breeding Program.** Amanda Carroll<sup>\*1</sup>, Byron Manzanero<sup>1</sup>, Gustavo Kreutz<sup>1</sup>, Lis Rodrigues Porto<sup>1</sup>, Jesse Murray<sup>1</sup>, Hannah Mather<sup>1</sup>, Germán Sandoya<sup>1</sup>. <sup>1</sup>Everglades Research and Education Center, University of Florida/IFAS, Belle Glades, FL. ([gsandoyamiranda@ufl.edu](mailto:gsandoyamiranda@ufl.edu))
- [P-9] **Using a Symbiont Strategy to Produce and Delivery Therapeutic Molecules to Fight *Candidatus Liberibacter asiaticus*.** Guilherme Locatelli<sup>\*1</sup>, Lorenzo Rossi<sup>1</sup>, Marco Pitino<sup>2</sup>, Patrick Zagorski<sup>2,3</sup>, Michelle L. Heck<sup>4,5,6</sup>, Robert G. Shatters, Jr.<sup>3</sup>. <sup>1</sup>Indian River Research and Education Center, University of Florida/IFAS, Fort Pierce, FL. <sup>2</sup>Agrosource, Inc., Tequesta, FL. <sup>3</sup>Agricultural Research Service, USDA, Fort Pierce, FL. <sup>4</sup>School of Integrative Plant Science, Cornell University, Ithaca, NY. <sup>5</sup>Boyce Thompson Institute, Ithaca, NY. <sup>6</sup>Robert W. Holley Center for Agriculture and Health, USDA Agricultural Research Service, Ithaca, NY. ([robert.shatters@usda.gov](mailto:robert.shatters@usda.gov))

- [P-10] **Evaluation of Micro-sprinkler Irrigation for Reducing Water Use During Strawberry Establishment and Frost Protection in Florida.** Josue St Fort<sup>\*1</sup>, Carlene A. Chase<sup>2</sup>, Vivek Sharma<sup>3</sup>.  
<sup>1</sup>School of Natural Resources and Environment, University of Florida/IFAS, Gainesville, FL. <sup>2</sup>Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. <sup>3</sup>Agricultural and Biological Engineering, University of Florida/IFAS, Gainesville, FL. ([cachase@ufl.edu](mailto:cachase@ufl.edu))
- [P-11] **Garden to Table Series.** Ashley Stonecipher<sup>\*1</sup> and Terri Keith<sup>1</sup>.  
<sup>1</sup>University of FL/IFAS Extension Jackson County, Marianna, FL. ([ams2904@ufl.edu](mailto:ams2904@ufl.edu))
- [P-12] **Florida's Green Industries Best Management Practices Training Promotes Sustainable Urban Landscapes.** Tom Wichman<sup>\*1</sup>. Esen Momol<sup>1</sup>, Don Rainey<sup>2</sup>, Bryan Unruh<sup>3</sup>, Lynn Barber<sup>4</sup>, Marc Celestin<sup>1</sup>, Cesar Peralta<sup>1</sup>, C.J. Bain<sup>1</sup>, John Bossart<sup>1</sup>.  
<sup>1</sup>Center for Landscape Use Efficiency, University of Florida/IFAS Extension, Gainesville, FL. <sup>2</sup>Southwest Extension District, University of Florida/ IFAS, Plant City, FL. <sup>3</sup>West Florida Research and Education Center, University of Florida/IFAS, Jay, FL. <sup>4</sup>UF/IFAS Extension Hillsborough County, Seffner, FL. ([twichman@ufl.edu](mailto:twichman@ufl.edu))
- [P-13] **Comparing Two Types of Preplant Granular Organic Fertilizers in Organic Celery Production.** Zachary T. Ray<sup>\*1</sup>, Lincoln Zotarelli<sup>1</sup>, Xin Zhao<sup>1</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. ([zxin@ufl.edu](mailto:zxin@ufl.edu))
- [P-14] **Producing Florida Lettuce on Protected Agriculture Systems.** Jonael Bosques<sup>\*1</sup>, Germán Sandoya<sup>2</sup>, E. Vanessa Vassilaros<sup>3</sup>. <sup>1</sup>University of Florida/IFAS Extension Hardee County, Wauchula, FL. <sup>2</sup>Everglades Research and Education Center, University of Florida/IFAS, Belle Glades, FL. <sup>3</sup>University of Florida/IFAS Extension Miami-Dade County, Homestead, FL. ([gsandoyamiranda@ufl.edu](mailto:gsandoyamiranda@ufl.edu))

# Agroecology & Natural Resources Section

Taylor Clem, Ph.D.

Presiding

[taylorclem87@ufl.edu](mailto:taylorclem87@ufl.edu)

## Monday Morning Session

(9:50 AM – 12:00 PM) Ringling

9:50 **Welcome and Introductions**, Taylor Clem

### A - Florida-Friendly Landscaping Program & Extension

10:00 **Florida-Friendly Edible Landscaping Educational Campaign.**  
Tiara Silvasy\*<sup>1</sup>. <sup>1</sup>Orange County Extension, University of Florida IFAS, Orlando, FL. ([tsilvasy@ufl.edu](mailto:tsilvasy@ufl.edu)). [ANR-1].

10:15 **Protecting the Indian River Lagoon with Florida-Friendly landscaping: A Flip My Florida Yard Production in Brevard County.**  
Bonnie Wells\*<sup>1</sup>, Sally Scalera<sup>1</sup>, Tom Wichman<sup>2</sup>, and Claire Lewis<sup>2</sup>.  
<sup>1</sup>Brevard County Extension, University of Florida IFAS, Cocoa, FL.  
<sup>2</sup>Florida-Friendly Landscaping Program, University of Florida IFAS, Gainesville, FL. ([bcwells@ufl.edu](mailto:bcwells@ufl.edu)). [ANR-2]

### B – Florida Agroecology

10:30 **Walk in the Shoes of a Florida Farmer.** Karen Stauderman\*<sup>1</sup> and Antony Merendino<sup>2</sup>. <sup>1</sup>Volusia County Extension, University of Florida IFAS, DeLand, FL. <sup>2</sup>Division of Foot and Ankle/Orthopedics and Rehabilitation, University of Florida Health Orthopaedics and Sports Medicine Institute, Gainesville, FL. ([kstauderman@ufl.edu](mailto:kstauderman@ufl.edu)). [ANR-3]

- 10:45 **Extension report – Comparing Macadamia Hybrid Selections for Use in Florida.** [Karen Stauderman](mailto:kstauderman@ufl.edu)<sup>\*1</sup>. <sup>1</sup>Volusia County Extension, University of Florida IFAS, DeLand, FL. ([kstauderman@ufl.edu](mailto:kstauderman@ufl.edu)). [ANR-4]
- 11:00 **Overview of Carbon Markets and the Potential for Florida Producers.** [Sawssan Boufous](mailto:boufous.sawssan@ufl.edu)<sup>\*1</sup> and Tara Wade<sup>1</sup>. <sup>1</sup>Southwest Florida Research and Education Center, University of Florida IFAS, Immokalee, FL. ([boufous.sawssan@ufl.edu](mailto:boufous.sawssan@ufl.edu)). [ANR-5]

## C – Student Presentations

- 11:15 **Plant Species Richness and Composition Between Areas with Different Land-Use Histories in Southern Florida.** [Daniel Calzadilla](mailto:brymz@ufl.edu)<sup>1</sup>, Cliff Martin<sup>1</sup>, and Zack Brym<sup>\*1</sup>. <sup>1</sup>Tropical Research and Education Center, University of Florida IFAS, Homestead, FL. ([brymz@ufl.edu](mailto:brymz@ufl.edu)). [ANR-6]
- 11:30 **Agroecology and Natural Resources Section Business Meeting,** Taylor Clem, VP, and Bonnie Wells, VP-Elect
- 11:45 **Lunch**

## Monday Afternoon Session

(1:30 PM – 4:45 PM) – **ANR Field Trip**

- 1:30 **Field trip to Celery Fields** – led by Lynda Becherelli with Sarasota County Parks, Recreation, and Natural Resources Department – 6893 Palmer Blvd, Sarasota, FL 34240

Please meet in the hotel lobby at 1:30pm and plan to drive your own vehicle or carpool to Celery Fields. The drive is approximately 20-25 minutes and we have a tour planned from 2pm – 4pm. We will meet the guide at the restroom building – not the gardens.

Agroecology and Natural Resources Section

Our tour will end at the gardens, so no peeking!

The 400+ acre site is Sarasota County's primary flood mitigation zone, but doubles as a county recreation facility and hotspot of birding. But why is it called "Celery Fields?" Why is Celery Fields so popular? And just what is that mountain made of? Learn the answers to these questions and more on a guided walk through the site. Participants should be prepared to walk approximately two miles along mostly unpaved and often uneven rocky or grassy surfaces, some of which will be uphill. Prepare for lots of sun, so plan accordingly with water and sunscreen.

4:00 **Return to the Hotel**

4:45 **End of sessions.** See you next year for the 136th FSHS annual meeting!

# Citrus Section

Manjul Dutt  
Presiding  
[manjul@ufl.edu](mailto:manjul@ufl.edu)

## Monday Morning Session

(9:50 AM – 12:00 PM) Sarasota G - Ballroom

9:50 **Welcome and Introductions**, Manjul Dutt

### A - Citrus Horticultural Production

- 10:00 **Indian River Grapefruit Production in the Age of Huanglong-bing: Current Status, Challenges and Opportunities.** Lukas M. Hallman<sup>1</sup>, Davie M. Kadyampakeni<sup>2</sup>, Alan L. Wright<sup>1</sup>, Mark A. Ritenour<sup>1</sup>, and [Lorenzo Rossi](mailto:l.rossi@ufl.edu)<sup>1\*</sup>. <sup>1</sup> Indian River Research and Education Center, University of Florida, IFAS, Fort Pierce, FL. <sup>2</sup> Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. ([l.rossi@ufl.edu](mailto:l.rossi@ufl.edu)) [C-1]
- 10:15 **Updates on improved citrus production in Malawi: challenges and opportunities** Andrew Thadzi<sup>1</sup> and [Davie Kadyampakeni](mailto:dkadyampakeni@ufl.edu)<sup>2\*</sup>. <sup>1</sup> Lilongwe University of Agriculture and Natural Resources-Natural Resources College, Lilongwe, Malawi. <sup>2</sup> Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. ([dkadyampakeni@ufl.edu](mailto:dkadyampakeni@ufl.edu)) [C-2]
- 10:30 **Observation on Multiple 30+ Year Old Hamlin Sweet Orange Trees with Apparent HLB Tolerance.** [Gary K. England](mailto:gke@ufl.edu)<sup>1\*</sup>; Manjul Dutt<sup>2</sup> and Brandon White<sup>3</sup>. <sup>1</sup> Extension Agent IV Emeritus, University of Florida, IFAS, Hastings, FL. <sup>2</sup> Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. <sup>3</sup> Lake County Extension, University of Florida, IFAS, Tavares, FL. ([gke@ufl.edu](mailto:gke@ufl.edu)) [C-3]
- 10:45 **Observations and findings from the Water Conserv II 'Valencia' and 'Midsweet' Scion Trial.** [John M. Chater](mailto:jmchater@ufl.edu)<sup>\*</sup>, Fred G. Gmitter, Jude W. Grosser, and William S. Castle. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL.

Citrus Section

([jchater@ufl.edu](mailto:jchater@ufl.edu)) [C-4]

11:00 **Initial observations on finger lime grown at three different locations in Central and South Florida.** [Manjul Dutt](#)<sup>1\*</sup>, Fernando Alferez<sup>2</sup>, Tim Gast<sup>2</sup>, Tripti Vashisth<sup>1</sup>, Alan Chambers<sup>3</sup> and Jonathan Crane<sup>3</sup>. <sup>1</sup> Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. <sup>2</sup> Southwest Florida Research and Education Center, University of Florida, IFAS, Immokalee, FL. <sup>3</sup> Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ([manjul@ufl.edu](mailto:manjul@ufl.edu)) [C-5]

11:15 **Revisiting the Early Maturing Parson Brown Sweet Orange.** [Manjul Dutt](#)<sup>1\*</sup>, Lamiaa Mahmoud<sup>1</sup>, Tony Trama<sup>2</sup> and Gary England<sup>3</sup>. <sup>1</sup> Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. <sup>2</sup> Florida Department of Citrus, Lake Alfred, FL. <sup>3</sup> Extension Agent IV Emeritus, University of Florida, IFAS, Hastings, FL. ([manjul@ufl.edu](mailto:manjul@ufl.edu)) [C-6]

## B - Citrus Horticultural Manipulations I

11:30 **ProGibb® PGR, a commercial formulation of gibberellic acid plant growth regulator, has multiple uses on Florida citrus groves, and a long history in the state** [Craig A. Campbell](#)<sup>\*</sup>. Valent U.S.A. LLC, Winter Garden, FL. ([craig.campbell@valent.com](mailto:craig.campbell@valent.com)) [C-7]

11:45 **Boron, Iron, Manganese and Zinc allocation in above and below ground components on HLB-affected grapefruit trees.** [Lukas M. Hallman](#)<sup>1</sup>, Davie M. Kadyampakeni<sup>2</sup>, Alan L. Wright<sup>1</sup>, and Lorenzo Rossi<sup>1\*</sup>. <sup>1</sup> Indian River Research and Education Center, University of Florida, IFAS, Fort Pierce, FL. <sup>2</sup> Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. ([l.rossi@ufl.edu](mailto:l.rossi@ufl.edu)) [C-8]

12:00 **Lunch**

## Monday Afternoon Session

(1:20 PM – 4:30 PM) Sarasota G – Ballroom

1:20 **Welcome back and Introductions**, Manjul Dutt

## C – Student Presentations

- 1:30 **The UF/IFAS IRREC Millennium Grove: A comprehensive field evaluation of grapefruit cultivars in the Indian River District.** J. Martin Zapien-Macias<sup>1</sup>, William S. Castle<sup>2</sup>, Frederick G. Gmitter Jr<sup>2</sup>, Jude W. Grosser<sup>2</sup>, Rhuanito S. Ferrarezi<sup>3</sup> and Lorenzo Rossi<sup>1\*</sup>. <sup>1</sup> Indian River Research and Education Center, University of Florida, IFAS, Fort Pierce, FL. <sup>2</sup> Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. <sup>3</sup> Department of Horticulture, University of Georgia, Athens, GA. ([l.rossi@ufl.edu](mailto:l.rossi@ufl.edu)) [C-9]
- 1:45 **Large-scale field evaluation of compost applied to sweet orange trees grown on four rootstocks.** Gabriel Pugina, Sarah L. Strauss and Ute Albrecht\*. Southwest Florida Research and Education Center, University of Florida, IFAS, Immokalee, FL. ([ualbrecht@ufl.edu](mailto:ualbrecht@ufl.edu)) [C-10]
- 2:00 **Citrus peel color and brix content are affected by leaf nutrient concentration under CUPS condition.** Shankar Shrestha\*, Arnold Schumann, Laura Waldo, Perseveranca Mungofa, Timothy Ebert and Napoleon Mariner. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. ([shrestha.s@ufl.edu](mailto:shrestha.s@ufl.edu)) [C-11]
- 2:15 **External and Internal Fruit Quality Assessment Using Deep Learning Semantic Image Segmentation.** Perseveranca Mungofa, Arnold Schumann\*, Laura Waldo, Shankar Shrestha, Timothy Ebert and Napoleon Mariner. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. ([schumaw@ufl.edu](mailto:schumaw@ufl.edu)) [C-12]
- 2:30 **Nutrient Differences in Fruiting and Non-Fruiting Leaves.** Jamie D. Burrow and Tripti Vashisth\*. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. ([tvashisth@ufl.edu](mailto:tvashisth@ufl.edu)) [C-13]
- 2:45 **Uptake and accumulation dynamics of Boron (B) and Molybdenum (Mo) on young citrus trees.** Jorge Saiz Martinez<sup>1,2</sup>, Davie M. Kadyampakeni<sup>2\*</sup> and Alberto San Bautista Primo<sup>1</sup>. Escuela Técnica Superior de Ingeniería Agronómica y del Medio Natural, Universidad Politécnica de Valencia, Valencia, Spain. <sup>2</sup> Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. ([dkadyampakeni@ufl.edu](mailto:dkadyampakeni@ufl.edu)) [C-14]

Citrus Section

## D - Citrus Horticultural Manipulations II

3:00 **Shading provides sustainable yield benefits to HLB-affected citrus trees by mitigating disease severity.** [Anirban Guha\\*](#), Myrtho Pierre, Gillian Zeng Michalczyk and Christopher Vincent. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. ([anirbanguha@ufl.edu](mailto:anirbanguha@ufl.edu)) [C-15]

3:15 Break

## E - Abiotic and Biotic Stress management.

3:30 **Response of the Finger Lime (*Citrus australasica*) following cold stress.** [Lamiaa Mahmoud](#) and Manjul Dutt\*. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. ([manjul@ufl.edu](mailto:manjul@ufl.edu)) [C-16]

3:45 **Propagation and transmission efficiency of *Candidatus Liberibacter asiaticus* by graft inoculation in Citrus plants under greenhouse conditions.** [Rayane Barcelos Bisi](#)<sup>1,2\*</sup>, Kim D. Bowman<sup>2</sup> and Ute Albrecht<sup>1</sup>. <sup>1</sup> Southwest Florida Research and Education Center, University of Florida, IFAS, Immokalee, FL. <sup>2</sup> US Horticultural Research Laboratory, USDA, ARS, Fort Pierce, FL. ([rbarcelosbisi@ufl.edu](mailto:rbarcelosbisi@ufl.edu)) [C-17]

4:00 **Methods to inoculate citrus rootstocks with *Beauveria bassiana* as an entomopathogenic fungal endophyte.** [Marco Arnoldi](#), Laura Muschweck, Emily Duren, Pasco B. Avery and Lorenzo Rossi\*. Indian River Research and Education Center, University of Florida, IFAS, Fort Pierce, FL. ([l.rossi@ufl.edu](mailto:l.rossi@ufl.edu)) [C-18]

4:15 **Citrus Section Business Meeting.** Manjul Dutt, VP and Lorenzo Rossi, VP-elect.

4:30 **Adjourn**

## Tuesday Morning Session

(9:50 AM – 11:45 AM) Sarasota G - Ballroom

9:50 **Welcome and Introductions,** Manjul Dutt

## F - Citrus Automation and Under Cover.

- 10:00 **Development of an automated citrus pest scouting module.** Timothy Ebert\*, Arnold Schumann, Perseveranca Mungofa and Laura Waldo. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL ([tebert@ufl.edu](mailto:tebert@ufl.edu)) [C-19]
- 10:15 **Improved yield and quality of citrus fruit under Individual Protective Covers (IPCs).** Fernando Alferéz\*, Susmita Gaire and Ute Albrecht. Southwest Florida Research and Education Center, University of Florida, IFAS, Immokalee, FL. ([alferéz@ufl.edu](mailto:alferéz@ufl.edu)) [C-20]
- 10:30 **Update: Using colored mesh bags to induce early color development in fresh market citrus varieties.** Laura Waldo\*, Arnold Schumann, and Timothy Ebert. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL ([ljwaldo@ufl.edu](mailto:ljwaldo@ufl.edu)) [C-21]
- 10:45 **Individual Protective Covers: Experiences growing high-density ~Jackson™ grapefruit in Lake Alfred, Florida.** Napoleon Mariner\*, Laura Waldo, Timothy Ebert, Arnold Schumann, Lauren Diepenbrock, & Lena Craft. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL ([napoleon.mariner@ufl.edu](mailto:napoleon.mariner@ufl.edu)) [C-22]

## G - Citrus Economics

- 11:00 **Automated Trunk Injection in Citrus A Cost-Benefit Analysis.** Shourish Chakravarty and Tara Wade\*. Southwest Florida Research and Education Center, University of Florida, IFAS, Immokalee, FL. ([tara.wade@ufl.edu](mailto:tara.wade@ufl.edu)) [C-23]
- 11:15 **Economic feasibility of Reintroducing Tahiti Lime Production in South Florida.** Fredy H Ballen\* and Trent Blare. Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ([fredy.ballen@ufl.edu](mailto:fredy.ballen@ufl.edu)) [C-24]
- 11:30 **Assessment of Market Opportunity for Finger Limes.** Fredy H Ballen\* and Trent Blare. Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ([fredy.ballen@ufl.edu](mailto:fredy.ballen@ufl.edu)) [C-25]
- 11:45 **End of sessions.** See you next year for the 136th FSHS annual meeting!

# Handling & Processing Section

Jeffrey K. Brecht

Presiding

[jkbrecht@ufl.edu](mailto:jkbrecht@ufl.edu)

## Monday Morning Session

(9:50 AM – 12:00 PM) Tropics

9:50 **Welcome and Introduction**, Jeff Brecht.

### A – Student Presentations

- 10:00 **Evaluation of Thyme Oil Vapor for Control of Postharvest Anthracnose on Blueberry.** Yuru Chang<sup>1</sup>, Ali Sarkhosh<sup>1</sup>, and Jeffrey K. Brecht<sup>1\*</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. ([jkbrecht@ufl.edu](mailto:jkbrecht@ufl.edu)) [HP-1]
- 10:15 **Investigating the Prevalence of *Salmonella* and *E. coli* in Florida's Soil and Identifying Key Environmental Factors.** Clara Diekman<sup>1</sup> and Michelle Danyluk<sup>1\*</sup>. <sup>1</sup>Food Science and Human Nutrition Department, Citrus Research and Education Center, University of Florida/IFAS, Lake Alfred, FL. ([mddanyluk@ufl.edu](mailto:mddanyluk@ufl.edu)) [HP-2]
- 10:30 **Studying the Impact of Ozonated Water Treatments on the Postharvest Quality of Fresh Peaches.** Orestis Giannopoulos<sup>1\*</sup>, Camille Esmel McAvoy<sup>1</sup>, Ramsey Corn<sup>1</sup>, Dario Chavez<sup>2</sup>, Angelos Deltsidis<sup>2</sup>. <sup>1</sup>Department of Horticulture, University of Georgia, Tifton Campus, Tifton, GA. <sup>2</sup>Department of Horticulture, University of Georgia, Griffin Campus, Griffin, GA ([orestis.g@uga.edu](mailto:orestis.g@uga.edu)) [HP-3]
- 10:45 **Determination of Mango Flavor Formation Through Pathway-based Metabolomics.** Robert Madden<sup>1</sup>, Joonhyuk Suh<sup>1</sup>, Jonathan Crane<sup>2</sup>, Alan Chamber<sup>2</sup>, Yu Wang<sup>1\*</sup>. <sup>1</sup>Citrus Research and Education Center, University of Florida/IFAS, Lake Alfred, FL. <sup>2</sup>Tropical Research and Education Center, University of Florida/IFAS, Home-

stead, FL. ([yu.wang@ufl.edu](mailto:yu.wang@ufl.edu)) [HP-4]

- 11:00 **Effect of Sequential Treatments of an Ethylene Scrubber Followed by 1-MCP on the Shelf life of 'Hass' Avocado.** [Marilia C. S. Bittencourt](#)<sup>1,2\*</sup>, Steven A. Sargent<sup>2</sup>, and Jeffrey K. Brecht<sup>2</sup>. <sup>1</sup>Plant Sciences Department, Federal University of Viçosa UFV, Viçosa, Brazil. <sup>2</sup>Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. ([mc.desouzabitten@ufl.edu](mailto:mc.desouzabitten@ufl.edu)) [HP-5]
- 11:15 **Evaluating the Effects of Controlled Atmosphere Storage on Shelled Pecans.** [Ramsey Corn](#)<sup>1</sup>, Orestis Giannopoulos<sup>1</sup>, Camille E.E. McAvoy<sup>1</sup>, Angelos Deltsidis<sup>1\*</sup>. <sup>1</sup>Department of Horticulture, University of Georgia, Tifton Campus, Tifton, GA. ([adeltsidis@uga.edu](mailto:adeltsidis@uga.edu)) [HP-6]

## B – Cultivar Evaluations

- 11:30 **Cell Wall Polysaccharide Composition in the Peel and Pulp of Blueberry Cultivars Differing in Fruit Texture Quality.** [Marlee Trandel-Hayse](#)<sup>1,2\*</sup>, Heeduk Oh<sup>1</sup>, Suzanne Johanningsmeier<sup>3</sup>, Massimo Iorizzo<sup>1</sup>, Penelope Perkins-Veazie<sup>1</sup>. <sup>1</sup> Postharvest Horticulture Laboratory, North Carolina State University, PHHI, Kannapolis, NC. <sup>2</sup> USDA-ARS, U.S. Horticultural Research Laboratory, Fort Pierce, FL. <sup>3</sup> USDA-ARS, Department of Food, North Carolina State University, Raleigh, NC. ([marlee.trandel@usda.gov](mailto:marlee.trandel@usda.gov)) [HP-7]
- 11:45 **Quality Evaluation of Six Sugar Apple (*Annona squamosa* L.) Selections Grown in East Central Florida.** [Anne Plotto](#)<sup>1\*</sup>, Jinhe Bai<sup>1</sup>, Greg McCollum<sup>1</sup>, and Kim D. Bowman<sup>1</sup>. <sup>1</sup>U.S. Horticultural Research Laboratory, USDA, ARS, Fort Pierce, FL. ([anne.plotto@usda.gov](mailto:anne.plotto@usda.gov)) [HP-8]

12:00 **Lunch**

## Monday Afternoon Session

(1:20 PM– 4:45 PM) Tropics

1:20 **Welcome back and introductions** – Angelos Deltsidis

### B – Cultivar Evaluations (cont'd)

1:30 **Handling & Processing Section Business Meeting**, Jeff Brecht, VP and Angelos Deltsidis VP-elect

## Handling & Processing Section

- 1:45 **Postharvest Performance of Mandarin UF '411'.** Mark A. Ritenour<sup>1\*</sup>, Cuifeng Hu<sup>1</sup>, Jude Grosser<sup>2</sup>, and Fred G. Gmitter<sup>2</sup>. <sup>1</sup>Indian River Research and Education Center, University of Florida, IFAS, Fort Pierce, FL. <sup>2</sup>Citrus Research and Education Center, University of Florida/IFAS, Lake Alfred, FL ([ritenour@ufl.edu](mailto:ritenour@ufl.edu)) [HP -9]
- 2:00 **Postharvest Quality of Orange and Purple-Fleshed Sweetpotato Cultivars Grown in North Florida.** Steven A. Sargent<sup>1\*</sup>, Wendy A. Mussoline<sup>2</sup>, Adrian D. Berry<sup>1</sup>, Merce A. Santana<sup>1</sup>, Robert C. Hochmuth<sup>3</sup>, and David A. Dinkins<sup>4</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. <sup>2</sup>Putnam County Extension Center, University of Florida/IFAS, East Palatka, FL. <sup>3</sup>North Florida REC-Suwannee Valley, University of Florida/IFAS, Live Oak FL. <sup>4</sup>Florida Cooperative Extension Service, University of Florida/IFAS, Gainesville, FL. ([sasa@ufl.edu](mailto:sasa@ufl.edu)) [HP-10]

## C – Postharvest Pathology, Disorders, and Stress

- 2:15 **Identification of Early Biomarkers of Stem End Rot Using Metabolomics Techniques.** Jin-Pyo An<sup>1\*</sup>, Katia Rodrigues-Stuart<sup>2</sup>, Megan M. Dewdney<sup>2</sup>, Mark A. Ritenour<sup>3</sup>, and Yu Wang<sup>1</sup>. <sup>1</sup>Department of Food Science and Human Nutrition, Citrus Research and Education Center, University of Florida/IFAS, Lake Alfred, FL. <sup>2</sup>Department of Plant Pathology, Citrus Research and Education Center, University of Florida/IFAS, Lake Alfred, FL. <sup>3</sup>Horticultural Science Department, Indian River Research and Education Center, University of Florida/IFAS, Fort Pierce, FL. ([yu.wang@ufl.edu](mailto:yu.wang@ufl.edu)) [HP-11]
- 2:30 **Fruit Quality and Mineral Content of Tomato Fruit Exhibiting Blotchy Ripening Disorder.** Tian Gong<sup>1</sup>, Xin Zhao<sup>1\*</sup>, and Jeffrey K. Brecht<sup>1</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. ([zxin@ufl.edu](mailto:zxin@ufl.edu)) [HP-12]
- 2:45 **Lipidomic Profiles of Avocado Fruit Under Chilling Injury.** Yogesh Ahlawat<sup>1</sup>, Utsab Ghimire<sup>1</sup>, and Tie Liu<sup>1\*</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. ([tieliu@ufl.edu](mailto:tieliu@ufl.edu)) [HP-13]
- 3:00 **Postharvest Fungal Diseases and their Prevalence on Florida**

**Produced Strawberries.** Jiuxu Zhang<sup>1</sup>, Jinhe Bai<sup>2</sup>, Anne Plotto<sup>2</sup>, Cuifeng Hu<sup>1</sup>, Lilianna M. Cano<sup>1</sup>, and Mark A. Ritenour<sup>1\*</sup>. <sup>1</sup>Indian River Research and Education Center, University of Florida/IFAS, Fort Pierce, FL. <sup>2</sup>US Horticultural Research Laboratory, USDA, ARS, Fort Pierce, FL ([ritenour@ufl.edu](mailto:ritenour@ufl.edu)) [HP-14]

3:15 **Break**

3:30 **Observation of Ripening of Tropical Fruit Under Extreme High Temperature Conditions.** Sonya Leonore Stahl<sup>1\*</sup> and Steven A. Sargent<sup>1</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. ([cocoplum@ufl.edu](mailto:cocoplum@ufl.edu)) [HP-15]

## D – Postharvest Quality and Quality Retention

3:45 **Determining the Optimum Temperature and Atmosphere Combination for Maximum Quality Retention of Pink Stage Tomatoes in MAP.** Angelos Deltsidis<sup>1</sup>, Eleni Pliakoni<sup>2</sup>, Jeffrey K. Brecht<sup>3</sup>. <sup>1</sup>Department of Horticulture, University of Georgia, Tifton Campus, Tifton, GA. <sup>2</sup>Department of Horticulture and Natural Resources, K-State Olathe, Olathe, KS. <sup>3</sup>Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. ([adeltsidis@uga.edu](mailto:adeltsidis@uga.edu)) [HP-16]

4:00 **Establishing Optimum Atmospheres for Extended Transport of Tree-ripe Mangoes.** Faisal Shahzad<sup>1</sup>, Moshe Doron<sup>1</sup>, and Jeffrey K. Brecht<sup>1\*</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. ([jkbrecht@ufl.edu](mailto:jkbrecht@ufl.edu)) [HP-17]

4:15 **Influence of Temperature During Ethylene Treatment on Ripening and Quality of Mangos.** Jeffrey K. Brecht<sup>1\*</sup>, Moshe Doron<sup>1</sup>, Paul LaFreniere<sup>1</sup>, and Dennis Khilstadius<sup>2</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. <sup>2</sup>Produce Technical Services and National Mango Board, Bemidji, MN. ([jkbrecht@ufl.edu](mailto:jkbrecht@ufl.edu)) [HP-18]

4:30 **Characterization of Senescence-associated Genes in *Lactuca sativa* With Respect to Shelf Life.** Kathryn Chase<sup>1,2\*</sup>, Catherine Belisle<sup>1</sup>, Chiwah Tseung<sup>2</sup>, Steven Sargent<sup>1</sup>, Germán Sandoya<sup>3</sup>, Alfred Huo<sup>1</sup>, Carol Shao-shan Huang<sup>4</sup>, Kevin Begcy<sup>1</sup>, and Tie Liu<sup>2</sup>. <sup>1</sup>Environmental Horticulture Department, University of Florida, Gainesville, FL. <sup>2</sup>Horticultural Sciences Department, University of

Handling & Processing Section

Florida, Gainesville, FL. <sup>3</sup>Everglades Research & Education Center, University of Florida IFAS, Belle Glade, FL. <sup>4</sup>Department of Biology, New York University, New York, NY. ([tieliu@ufl.edu](mailto:tieliu@ufl.edu)) [HP-19]

4:45 **Adjourn**

## Tuesday Morning Session

(9:50 – 11:00) Tropics

9:50 **Welcome and introductions** – Jeff Brecht

### E – New Crops and Products for Florida

- 10:00 **What's the Future of Hemp? Analysis of the Opportunities and Challenges to Strengthen US Hemp Markets.** Trent Blare<sup>1\*</sup>, Martha Rivera<sup>1</sup>, Fredy Ballen<sup>1</sup>, Zachary T. Brym<sup>1</sup>. <sup>1</sup>Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ([tblare@ufl.edu](mailto:tblare@ufl.edu)) [HP-20]
- 10:15 **Postharvest Quality of Elderberry (*Sambucus nigra* ssp. *canadensis*) grown in Florida.** Adrian D. Berry<sup>1\*</sup>, Steven A. Sargent<sup>1</sup>, Merce Santana<sup>1</sup>, and David Jarnagin<sup>2</sup>. Horticultural Sciences Department, University of Florida/IFAS, Gainesville, FL. <sup>2</sup>Hyldemoer + Co., LLC, Chiefland, FL. ([adberry@ufl.edu](mailto:adberry@ufl.edu)) [HP-21]
- 10:30 **Winter Melon Juice: Recent Developments, Challenges, and Prospects.** Jinhe Bai<sup>1\*</sup>, Xiuxiu Sun<sup>1,2</sup>, Elizabeth Baldwin<sup>1</sup>, Anne Plotto<sup>1</sup>, Erin Roskopf<sup>1</sup>, John Manthey<sup>1</sup>, Wei Zhao<sup>1</sup>, Christina Dorado<sup>1</sup>, Randall Cameron<sup>1</sup>. <sup>1</sup>U.S. Horticultural Research Laboratory, USDA, ARS, Fort Pierce, FL. <sup>2</sup>U.S. Pacific Basin Agricultural Research Center, USDA, ARS, Hilo, HI. ([jinhe.bai@usda.gov](mailto:jinhe.bai@usda.gov)) [HP-22]
- 10:45 **Establishing Gene Editing Technology to Generate Seedless Passion Fruit.** Ellen Garcia<sup>1</sup>, Alan Chambers<sup>2</sup>, and Tie Liu<sup>1\*</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida, IFAS, Gainesville, Florida. <sup>2</sup>Tropical Research and Education Center, Horticultural Sciences Department, University of Florida, IFAS, Homestead, FL ([tieliu@ufl.edu](mailto:tieliu@ufl.edu)) [HP-23]
- 11:00 **End of sessions.** See you next year for the 136th FSHS annual meeting!

# Krome Memorial Institute

Mark Bailey

Presiding

[ironhill@ufl.edu](mailto:ironhill@ufl.edu)

## Monday Morning Session

(10:00 AM – 12:00 PM) Sarasota C/D - Ballroom

10:00 **Welcome and Introductions**, Mark Bailey

### A – Tropical and Subtropical Fruit

10:15 **Freeze Damage & Protection of Passion Fruit.** [Mark Bailey](#), UF-IFAS Extension Marion County, Ocala, FL. ([ironhill@ufl.edu](mailto:ironhill@ufl.edu)) [K-1]

10:30 **A Transcriptome of Miracle Fruit Pulp: Important Genomic Resource for Discovery Research and Breeding in Miracle Fruit.** [Vincent Njung'e Michael](#)<sup>1</sup>, Lynhe Demesyieux<sup>1</sup>, Aureliano Bombarely<sup>2</sup>, Alan Chambers<sup>1</sup>, <sup>1</sup>Tropical Research and Education Center, Horticultural Sciences Department, University of Florida, IFAS, Homestead, FL; <sup>2</sup>Instituto de Biología Molecular y Celular de Plantas (IBMCP), (CSIC-UPV), Valencia, Spain. ([ac@ufl.edu](mailto:ac@ufl.edu)) [K-2]

10:45 **Progress Towards Establishing a Domestic Vanilla Industry.** [Alan Chambers](#), Tropical Research and Education Center, Horticultural Sciences Department, University of Florida, IFAS, Homestead, FL ([ac@ufl.edu](mailto:ac@ufl.edu)) [K-3]

11:00 **Achieving Sustainable Anthracnose Management in Organically Grown Avocado and Mango Orchards in South Florida.** [Lederson Gañán Betancur](#)<sup>\*1</sup>, Jonathan H. Crane<sup>1</sup>, Bruce Schaffer<sup>1</sup>, Ali Sarkhosh<sup>2</sup>, Ana I. Vargas<sup>1</sup>, Ray Melcon<sup>1</sup>, and Romina Gazis<sup>1</sup>. <sup>1</sup>Tropical Research and Education Center, University of Florida IFAS, Homestead, FL. <sup>2</sup>Horticultural Sciences Department, Univer-

Krome Memorial Institute

sity of Florida IFAS, Gainesville, FL. ([r.gazisseregina@ufl.edu](mailto:r.gazisseregina@ufl.edu)) [K-4]

- 11:15 **Tilt® Used as a Soil Drench Prevents Laurel Wilt Symptoms in Potted Avocado Plants but has Limited Efficacy in Field Trees.** [Monica Navia-Urrutia](#)<sup>\*1</sup>, Jonathan H. Crane<sup>1</sup>, Romina Gazis<sup>1</sup>. <sup>1</sup>Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ([r.gazisseregina@ufl.edu](mailto:r.gazisseregina@ufl.edu)) [K-5]

## B – Student Presentations

- 11:30 **New Passion Fruit for Florida: Quality Metrics.** [Josh Anderson](#)<sup>\*1</sup>, Alan Chambers<sup>1</sup>, Tropical Research and Education Center, Horticultural Sciences Department, University of Florida, IFAS, Homestead, FL. ([ac@ufl.edu](mailto:ac@ufl.edu)) [K-6]
- 11:45 **Effects of *Vaccinium arboreum* Rootstock on Yield and Fruit Quality of ~Patrecia™ Southern Highbush Blueberry on a Minimum Amended Soil.** [Cecilia Rubert Heller](#), Gerardo H. Nunez, and Jeffrey Williamson, Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL. ([g.nunez@ufl.edu](mailto:g.nunez@ufl.edu)) [K-7]

12:00 **Lunch**

## Monday Afternoon Session

(1:20 PM – 3:15 PM) Sarasota C/D – Ballroom

1:20 **Welcome back and Introduction**, Mark Bailey

## B – Student Presentations (Continued)

- 1:30 **Vanilla *Planifolia* callus Production for Biotechnological Transformation.** [Manuel Gastelbondo](#)<sup>\*1</sup>, Alan Chambers<sup>1</sup>, Tropical Research and Education Center, Horticultural Sciences Department, University of Florida, IFAS, Homestead, FL. ([ac@ufl.edu](mailto:ac@ufl.edu)) [K-8]
- 1:45 **Reclaimed Water as an Alternative Source for Blueberry Irrig-**

**gation in Florida.** Yasmeen Saleem<sup>1</sup>, Shinsuke Agehara<sup>2</sup>, Davie Kadyampakeni<sup>1\*</sup> <sup>1</sup>UF/IFAS Citrus Research and Education Center, Lake Alfred, FL; <sup>2</sup>UF/IFAS Gulf Coast Research and Education Center, Wimauma, FL. ([dkadyampakeni@ufl.edu](mailto:dkadyampakeni@ufl.edu)) [K-9]

## C – Berry Crops

- 2:00 **Market Trends for U.S Berry Crops: Implications for Florida Berry Producers.** Kimberly L Morgan, Southwest Florida Research and Education Center, University of Florida, IFAS, Immokalee, FL. ([kimorgan@ufl.edu](mailto:kimorgan@ufl.edu)) [K-10]
- 2:15 **Interaction of Chill Accumulation and Hydrogen Cyanamide Applications in ~Optimus™ Southern Highbush Blueberry.** Dylan C. Kovach, Marina L. Curtis, Gerardo H. Nunez, Horticultural Sciences Department, University of Florida. ([g.nunez@ufl.edu](mailto:g.nunez@ufl.edu)) [K-11]
- 2:30 **Blueberry Root and Fruit Responses to Humic Acid Application.** Gerardo H. Nunez, Giancarlo Buzzi, and Cecilia R. Heller, Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL. ([g.nunez@ufl.edu](mailto:g.nunez@ufl.edu)) [K-12]

## D – Edible Landscaping

- 2:45 **Florida-Friendly Edible Landscapes: Publishing A UF/IFAS EDIS Series.** Tina L. McIntyre, Rachel Gutner, Tia Silvasy, Hamutahl Cohen UF/IFAS Extension Seminole County, Sanford, FL. ([k.mcintyre@ufl.edu](mailto:k.mcintyre@ufl.edu)) [K-13]
- 3:00 **Krome Memorial Section Business Meeting**, Mark Bailey, VP and Kimberly Morgan, VP-Elect
- 3:15 **End of sessions.** See you next year for the 136th FSHS annual meeting!

**Join us Tuesday afternoon for the Mango Summit (See page 40 for more details)**

Krome Memorial Institute

# Ornamental Garden and Landscape

Michelle Leonard-Mularz

Presiding

[mleonard@ufl.edu](mailto:mleonard@ufl.edu)

## Monday Morning Session

(9:50 AM– 11:45 AM) The Keys

9:50 **Welcome and Introductions**, Michelle Leonard-Mularz

### A- Irrigation Management

10:00 **Small Rain Gauge Method for Monitoring Container Drainage.** Jeff Million and Tom Yeager\*. Environmental Horticulture Department, University of Florida, IFAS, Gainesville, FL ([yeagert@ufl.edu](mailto:yeagert@ufl.edu)). [OGL-1]

### B- Crop Production

10:15 **Commercial Production Recommendations for Philodendron 'Birkin' Grown in a Central Florida Greenhouse.** John L Griffis Jr.\*<sup>1</sup>, Malcolm M. Manners<sup>2</sup>, Mollie M. Tew<sup>2</sup>, Kazana Bennett<sup>1</sup>, Özlem Tuncay<sup>3</sup>. <sup>1</sup>Ecology and Environmental Studies Dept., Florida Gulf Coast University, Ft. Myers, FL; <sup>2</sup>Horticultural Science Dept., Florida Southern College, Lakeland, FL; <sup>3</sup>Dept. of Horticulture, Ege University, Izmir, Turkey ([jgriffis@fgcu.edu](mailto:jgriffis@fgcu.edu)). [OGL-2]

10:30 **Unusual Variegation Pattern in Philodendron 'Birkin' Related to Leaf Chlorophyll Content and Leaf Color.** John L Griffis, Jr.\*<sup>1</sup>, Malcolm M. Manners<sup>2</sup>, Mollie M. Tew<sup>2</sup>, Kazana Bennett<sup>1</sup>, Özlem Tuncay<sup>3</sup>. <sup>1</sup>Ecology and Environmental Studies Dept., Florida Gulf Coast University, Ft. Myers, FL; <sup>2</sup>Horticultural Science Dept., Florida Southern College, Lakeland, FL; <sup>3</sup>Dept. of Horticulture, Ege Univer-

Ornamental, Gardening & Landscape Section

sity, Izmir, Turkey ([jgriffis@fgcu.edu](mailto:jgriffis@fgcu.edu)). [OGL-3]

- 10:45 **New Caladium Cultivars Released Recently (during the Covid-19 Pandemic).** Zhanao Deng<sup>1,\*</sup>, Natalia Peres<sup>1</sup>, Johan Desaegeer<sup>1</sup>. Gulf Coast Research and Education Center. University of Florida, IFAS. Wimauma, FL ([zdeng@ufl.edu](mailto:zdeng@ufl.edu)). [OGL-4]

## C- Environmental Concerns

- 11:00 **Relating Individual Environmental Concerns to Preferences for Low-Input Residential Lawns in Florida.** Xumin Zhang and Hayk Khachatryan\*. Mid-Florida Research and Education Center, University of Florida, IFAS, Apopka, FL ([hayk@ufl.edu](mailto:hayk@ufl.edu)). [OGL-5]

## D- Student Presentations

- 11:15 **Embryo development on seed germination of silver saw palmetto (*Serenoa repens* f. *gluaca*).** Vânia Maria Pereira, Wagner Vendrame, Héctor E. Pérez. Environmental Horticulture Department, IFAS, University of Florida, IFAS, Gainesville, FL ([vania.pereira@ufl.edu](mailto:vania.pereira@ufl.edu)). [OGL-6]
- 11:30 **Ornamental, Gardening and Landscape Section Business Meeting,** Michelle Leonard-Mularz VP and Ashley Kush, VP-elect
- 11:45 **End of sessions.** See you next year for the 136th FSHS annual meeting!

# Vegetable Section

Evelyn "Prissy" Fletcher

Presiding

[pfletch@ufl.edu](mailto:pfletch@ufl.edu)

## Monday Morning Session

(9:50 AM – 12:00 PM) Sarasota E/F – Ballroom

9:50 **Welcome and Introduction**, Prissy Fletcher.

### A - Irrigation and Nutrient Management

- 10:00 **Saving farm water and money, one sensor at a time.** [Lisa Hickey](mailto:lisa.hickey@ufl.edu)<sup>1\*</sup>, Shawn Steed<sup>2</sup>, and Vivek Sharma<sup>3</sup>. <sup>1</sup>UF/IFAS Extension Manatee County, Palmetto, FL, <sup>2</sup>UF/IFAS Extension Hillsborough County, Seffner, FL; and <sup>3</sup>Agricultural and Biological Engineering Department, University of Florida, Gainesville, FL. ([lisa.hickey@ufl.edu](mailto:lisa.hickey@ufl.edu)) [V-1]
- 10:15 **The influence of soil moisture and different irrigation strategies on sweet potato production in Florida.** [Wendy Mussoline](mailto:wmussoli@ufl.edu)<sup>1\*</sup>, Robert Hochmuth<sup>2</sup>, Christian Christensen<sup>3</sup>, Sandra Guzman<sup>4</sup>, and Zane Grabau<sup>5</sup>. <sup>1</sup>UF/IFAS Putnam County Extension, East Palatka, FL; <sup>2</sup>UF/IFAS North Florida Research and Education Center, Live Oak, FL; <sup>3</sup>UF/IFAS Hastings Agriculture Extension Center, Hastings, FL; <sup>4</sup>Agricultural and Biological Engineering Department, University of Florida, Indian River Research and Education Center, Fort Pierce, FL; and <sup>5</sup>Entomology and Nematology Department, University of Florida, Gainesville, FL. ([wmussoli@ufl.edu](mailto:wmussoli@ufl.edu)) [V-2]
- 10:30 **Nitrogen fertilizer application strategies targeting potato yield goals.** [Fernando Rodrigo Bortolozo](mailto:lzota@ufl.edu)<sup>1</sup>, Judyson de Matos Oliveira<sup>1,3</sup>, André Luiz Biscaia Ribeiro da Silva<sup>2</sup>, and Lincoln Zotarelli<sup>1\*</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida, Gainesville, FL, <sup>2</sup>Department of Vegetable Cropping Systems, Department of Horticulture, Auburn University, Auburn, AL. <sup>3</sup>Department of Agronomy, State University of Maringa, Maringa, PR, 87020-900, Brazil. ([lzota@ufl.edu](mailto:lzota@ufl.edu)) [V-3]

## B – Alternative Crops, Genetics and Production Practices

- 10:45 **Establishment of the winter artichoke production system in Florida.** [Shinsuke Agehara](mailto:sagehara@ufl.edu)<sup>1\*</sup> and Weining Wang<sup>1</sup>. <sup>1</sup>Gulf Coast Research and Education Center, University of Florida IFAS, Wimauma, FL ([sagehara@ufl.edu](mailto:sagehara@ufl.edu)) [V-4]
- 11:00 **Field evaluation of CRISPR-Cas9-driven brachytic and jointless pedicel tomatoes.** [Tong Geon Lee](mailto:tonggeonlee@ufl.edu)<sup>1\*</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL. ([tonggeonlee@ufl.edu](mailto:tonggeonlee@ufl.edu)) [V-5]
- 11:15 **Potato genotypic difference in tolerance to aluminum toxicity.** Qiansheng Li<sup>1</sup> and [Guodong Liu](mailto:Guodong@ufl.edu)<sup>1\*</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL. ([Guodong@ufl.edu](mailto:Guodong@ufl.edu)) [V-6]
- 11:30 **Localized root-zone compost application improves establishment and yield of tomato in a subtropical sandy soil.** [Álvaro J. Bautista](mailto:abautistaflores@ufl.edu)<sup>1\*</sup>, Shinsuke Agehara<sup>1</sup>, and Joao Cardoso de Souza Junior<sup>1</sup>. <sup>1</sup>Gulf Coast Research and Education Center, University of Florida IFAS, Wimauma, FL. ([abautistaflores@ufl.edu](mailto:abautistaflores@ufl.edu)) [V-7]
- 11:45 **Genomics-enabled breeding in squash: progress towards high-throughput application.** [Geoffrey Meru](mailto:gmeru@ufl.edu)<sup>1\*</sup>, Swati Shrestha, Vincent Michael and Yuqing Fu. <sup>1</sup>Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ([gmeru@ufl.edu](mailto:gmeru@ufl.edu)) [V-8]

12:00 Lunch

## Monday Afternoon Session

(1:20 PM– 4:30 PM) Sarasota E/F – Ballroom

1:20 **Welcome back** – Prissy Fletcher

1:30 **Vegetable Session Business Meeting**, Prissy Fletcher, VP and Lisa Hickey VP-elect

## C - Student Presentations

- 1:45 **High-density planting of common bean (*Phaseolus vulgaris*) for improving vegetable productivity.** Paislyn M. Ellington<sup>1\*</sup>, Ryan A. Fraser<sup>1</sup>, Zachary E. Black<sup>1</sup>, and Bala Rathinasabapathi<sup>1</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL. ([pellington@ufl.edu](mailto:pellington@ufl.edu)) [V-9]
- 2:00 **Exploration of rapid phenotyping methods for detecting lettuce genotypes with high content of vitamins E and K1.** Jesse Murray<sup>1</sup> and Germán Sandoya<sup>1\*</sup>. <sup>1</sup>Everglades Research and Education Center, University of Florida, IFAS, Belle Glade, FL. ([gsandoyamiranda@ufl.edu](mailto:gsandoyamiranda@ufl.edu)) [V-10]
- 2:15 **Marker assisted back-crossing for rapid introgression of ZYMV and PRSV resistance in squash.** Swati Shrestha<sup>1\*</sup>, Yuqing Fu<sup>1</sup>, Vincent Michael<sup>1</sup>, and Geoffrey Meru<sup>1</sup>. Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ([s.shrestha@ufl.edu](mailto:s.shrestha@ufl.edu)) [V-11]
- 2:30 **Conserving water in strawberry production using intermittent sprinkler irrigation during establishment.** Junaid M. Lone<sup>1\*</sup>, Shinsuke Agehara, and Amr Abd-Elrahman. <sup>1</sup>Gulf Coast Research and Education Center, University of Florida IFAS, Balm, FL. ([j.lone@ufl.edu](mailto:j.lone@ufl.edu)) [V-12]
- 2:45 **Break**
- 3:00 **Exploring heat tolerance in the UF/IFAS lettuce germplasm for early season production.** Hannah Mather<sup>1</sup>, Germán Sandoya<sup>1\*</sup>, Gustavo Kreutz<sup>1</sup>, and Christian Christensen<sup>2</sup>. <sup>1</sup>Everglades Research and Education Center. University of Florida IFAS, Belle Glade, FL; and <sup>2</sup>Hastings Agricultural and Extension Center. University of Florida IFAS, Hastings, FL. ([gsandoyamiranda@ufl.edu](mailto:gsandoyamiranda@ufl.edu)) [V-13]
- 3:15 **Integrated approach using insecticides in combination with reflective plastic mulch for the management of pepper weevil, *Anthonomus eugenii* Cano (Coleoptera: Curculionidae) in South Florida.** Victoria O. Adeleye<sup>1\*</sup>, Dakshina Seal<sup>1</sup>, Oscar Liburd<sup>2</sup>, Xavier Martini<sup>3</sup>, and Geoffrey Meru<sup>1</sup>. <sup>1</sup>Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL; <sup>2</sup>Entomology and Nematology, University of Florida, IFAS, Gainesville, FL. <sup>3</sup>North Florida Research and Education Center, University of Florida IFAS, Quincy, FL. ([vadeleye@ufl.edu](mailto:vadeleye@ufl.edu)) [V-14]

Vegetable Section

- 3:30 **Sampling Corn Silk Fly (Diptera: Ulidiidae) Adults Using Traps Baited with Synthetic Food-based Lures.** [Larissa P. Lima](#)<sup>1\*</sup>, Julien Beuzelin<sup>1</sup>, Dakshina Seal<sup>2</sup>, Sandra Allan<sup>3</sup>, and Lindsay Campbell<sup>4</sup>. <sup>1</sup>Everglades Research and Education Center, University of Florida IFAS, Belle Glade, FL; <sup>2</sup>Tropical Research and Education Center, University of Florida IFAS, Homestead, FL; <sup>3</sup>Center for Medical, Agricultural and Veterinary Entomology, USDA-ARS, Gainesville, FL; and <sup>4</sup>Florida Medical Entomological Laboratory, University of Florida IFAS, Vero Beach, FL. ([lpereiralima@ufl.edu](mailto:lpereiralima@ufl.edu)) [V-15]
- 3:45 **Assessing anaerobic soil disinfestation for production of baby spinach in organic open-field and high-tunnel systems.** [Isaac Vincent](#)<sup>1\*</sup>, Erin Roskopf<sup>2</sup> and Xin Zhao<sup>1</sup>. <sup>1</sup>Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL; <sup>2</sup>USDA-ARS, US Horticultural Research Laboratory, Fort Pierce, FL. ([zxin@ufl.edu](mailto:zxin@ufl.edu)) [V-16]
- 4:00 **Using particle-size distribution for estimating soil water retention curve of irrigated sandy soils.** [Judyson de Matos Oliveira](#)<sup>1</sup>, Fernando R. Bortolozo<sup>1</sup>, Lincoln Zotarelli<sup>1\*</sup>, Cássio Antônio Tormena<sup>2</sup>, Allan Bacon<sup>1</sup>, and Julio C. Pachon<sup>1</sup>. <sup>1</sup>University of Florida, Gainesville, Florida, United States; <sup>2</sup>State University of Maringá, Maringá, Paraná, Brazil.. ([lzota@ufl.edu](mailto:lzota@ufl.edu)) [V-17]
- 4:15 **Lettuce accessions respond to different levels of phosphorus availability.** [Gustavo F. Kreutz](#)<sup>1</sup>, Jehangir H. Bhadha, and Germán V. Sandoya\*. <sup>1</sup>Everglades Research and Education Center, University of Florida IFAS, Belle Glade, Florida. ([gsandoyamiranda@ufl.edu](mailto:gsandoyamiranda@ufl.edu)) [V-18]
- 4:30 **Adjourn**

## Tuesday Morning Session

(9:50 AM– 11:30 AM) Sarasota E/F Ballroom

9:50 **Welcome and introductions** – Prissy Fletcher

### D - Pest Management

10:00 ***Listronotus* sp., an emerging weevil pest of celery and parsley in southern Florida.** [Anna Meszaros](#)<sup>1</sup> and Julien Beuzelin<sup>2</sup>. <sup>1</sup>Palm

Beach County Extension, University of Florida IFAS, West Palm Beach, FL; <sup>2</sup>Everglades Research and Education Center, University of Florida IFAS, Belle Glade, FL ([ameszaros@ufl.edu](mailto:ameszaros@ufl.edu)). [V-19]

- 10:15 **Common resistance identified for multiple diseases affecting the lettuce (*Lactuca sativa* L.) crop in Florida.** Lis N. R. Porto<sup>1</sup>, Amanda Carroll, Richard N. Raid<sup>1</sup>, and Germán V. Sandoya-Miranda<sup>1\*</sup>. <sup>1</sup>Everglades Research and Education Center, University of Florida IFAS, Belle Glade, FL. ([gsandoyamiranda@ufl.edu](mailto:gsandoyamiranda@ufl.edu)) [V-20]
- 10:30 **Evaluation of biological products for the control of Rhizoctonia root rot in snap bean.** Qingchun Liu<sup>1\*</sup> and Shouan Zhang<sup>1</sup>. <sup>1</sup>Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ([q.liu1@ufl.edu](mailto:q.liu1@ufl.edu)) [V-21]
- 10:45 **Insecticide performance against corn silk flies under laboratory and field conditions.** Julien M Beuzelin<sup>1\*</sup>, Eric Schwan Resende<sup>1</sup>, Donna Larsen<sup>1</sup>, Silvana Paula-Moraes<sup>2</sup>, Dakshina Seal<sup>3</sup>, and Gregg Nuessly<sup>1</sup>. <sup>1</sup>Everglades Research and Education Center, University of Florida, IFAS, Belle Glade, FL; <sup>2</sup>West Florida Research and Education Center, University of Florida IFAS, Jay, FL, <sup>3</sup>Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ([jbeuzelin@ufl.edu](mailto:jbeuzelin@ufl.edu)) [V-22]
- 11:00 **Applying spray drone for pest management, potential and restrictions.** Qingren Wang<sup>1\*</sup>. University of Florida IFAS Extension Miami-Dade County, Homestead, FL. ([qrwang@ufl.edu](mailto:qrwang@ufl.edu)) [V-23]
- 11:15 **Pest and disease incidence in different tomato varieties.** Rhafia Khan<sup>1\*</sup>. <sup>1</sup>Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ([rkhan@ufl.edu](mailto:rkhan@ufl.edu)) [V-24]
- 11:30 **End of sessions.** See you next year for the 136th FSHS annual meeting!

# In-Service Training– Agriculture

## Tuesday Afternoon Session

Hyatt Regency Hotel, Sarasota, FL

1:00 P.M.—5:00 Sarasota E/F - Ballroom

### **“Working with Clients to Measure Water Savings and Nutrient Load Reduction Associated with their BMP Implementation”**

Organizer: Davie Kadyampakeni, Coordinator: Jamie Burrow UF/

FAS, Citrus Research and Education Center

([dkadyampakeni@ufl.edu](mailto:dkadyampakeni@ufl.edu) and [jdyates@ufl.edu](mailto:jdyates@ufl.edu))

### **Agenda**

- 1:00 **Welcome and Introduction, pre-testing, background.** Dr. Davie Kadyampakeni and Jamie D. Burrow. UF/IFAS, Citrus Research and Education Center, Lake Alfred, FL
- 1:05 **Best Management Practices (BMPs) Research and Extension Perspectives and Impacts.** Dr. Michael Dukes, UF/IFAS Center for Land Use Efficiency, Gainesville, FL
- 1:25 **Using Smart Irrigation in Citrus and Vegetable Cropping Systems for Saving Water and Nutrients.** Dr. Kelly Morgan UF/IFAS, Soil and Water Sciences Department, Gainesville, FL
- 2:05 **Implementing Irrigation and Nitrogen BMPS in Potato Cropping Systems in Florida.** Dr. Lincoln Zotarelli UF/IFAS, Horticultural Sciences Department, Gainesville, FL
- 2:45 **Break**

- 2:55 **Importance of the active root zone and fertilizer placement in BMPs.** Dr. Shinsuke Agehara UF/IFAS, Gulf Coast Research and Education Center, Wimauma, FL
- 3:35 **Rising prices worrying specialty crop producers: Valuation of BMPs in Florida.** Dr. Kimberly Morgan UF/IFAS, Food and Resource Economics Department, SWFREC, Immokalee, FL
- 4:15 **Implementing Nitrogen BMPs in Selected Row Cropping Systems in Florida.** Dr. Lakesh Sharma. UF/IFAS, Soil and Water Sciences Department, Gainesville, FL
- 4:55 **Conclusion: questions, discussions, post-testing.** Dr. Davie Kadyampakeni and Jamie D. Burrow, UF/IFAS, Citrus Research and Education Center, Lake Alfred, FL.
- 5:00 **Adjourn**

# Mango Summit

## Tuesday Afternoon Session

Hyatt Regency Hotel, Sarasota, FL

1:00 —3:30 PM Sarasota C/D - Ballroom and zoom

Organizer: Noris Ledesma, UF/IFAS, Moderator: Alan Chambers UF/IFAS Tropical Research and Education Center

([norisledesma.mango@gmail.com](mailto:norisledesma.mango@gmail.com) and [ac@ufl.edu](mailto:ac@ufl.edu))

### Agenda

- 1:00 **Welcome and Introductions.** Alan Chambers UF/IFAS Tropical Research and Education Center.
- 1:15 **Export Potential of Mango Cultivars: Tolerance to the USDA APHIS Hot Water Insect Quarantine Treatment.** Jeffrey K. Brecht<sup>\*1</sup>, Steven A. Sargent<sup>1</sup>, and Pavlos Tsouvaltzis<sup>1</sup>, Charles A. Sims<sup>2</sup>, and Jonathan H. Crane<sup>3</sup>. <sup>1</sup>Horticultural Sciences Department, UF/IFAS, Gainesville, FL, <sup>2</sup>Food Science & Human Nutrition Department, UF/IFAS, Gainesville, FL, <sup>3</sup>Tropical Research and Education Center, UF/IFAS, Homestead, FL. ([jkbrecht@ufl.edu](mailto:jkbrecht@ufl.edu)) [K-14]
- 1:30 **What is Pollinating Our Mango Trees: A Brief Review.** Jonathan H. Crane, Matthew Quenaudon, and Daniel Carrillo, Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL; USDA APHIS. ([jhcr@ufl.edu](mailto:jhcr@ufl.edu)) [K-15]
- 1:45 **Cherry': A Potential Commercial Mango Cultivar.** Noris Ledesma, University of Florida, IFAS ([norisledesma.mango@gmail.com](mailto:norisledesma.mango@gmail.com)) [K-16]
- 2:00 **Improving mango fruit quality through plant breeding.** Alan Chambers, Tropical Research and Education Center, Horticultural Sciences Department, University of Florida, IFAS, Homestead, FL ([ac@ufl.edu](mailto:ac@ufl.edu)) [K-17]

- 2:15 **Recent Phenology of Mature Glenn Mango Trees.** Jonathan Crane, Alan Chambers, Yu Wang and Ray Melcon. Tropical Research and Education Center, University of Florida, IFAS, Home stead, FL; Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. ([jhcr@ufl.edu](mailto:jhcr@ufl.edu)) [K-18]
- 2:30 **Break**
- 2:45 **A brief summary of the current mango industry in Florida.** Jeff Wasielewski, Jonathan H. Crane, Richard J. Campbell, UF/IFAS Miami-Dade County Extension. ([sflhort@ufl.edu](mailto:sflhort@ufl.edu)) [K-19]
- 3:00 **Mango Blooming and Challenges.** Victor Galan Sauco, Instituto Canario de Investigaciones Agrarias, ([vgalan46@gmail.com](mailto:vgalan46@gmail.com)) [K-20]
- 3:15 **National Mango Board.** Tricia Bramley, National Mango Board. ([tbramley@www.mango.org](mailto:tbramley@www.mango.org)) [K-21]
- 3:30 **Adjourn**



# Meet your 2023 FSHS Sectional Vice-Presidents!

Agroecology & Natural Resources: **Bonnie Wells**, UF/IFAS Extension Brevard County, [bcwells@ufl.edu](mailto:bcwells@ufl.edu)

Citrus: **Lorenzo Rossi**, UF/IFAS Indian River Research and Education Center, [l.rossi@ufl.edu](mailto:l.rossi@ufl.edu)

Handling & Processing: **Angelo Deltsidis**, UGA Department of Horticulture, [adeltsidis@uga.edu](mailto:adeltsidis@uga.edu)

Krome Memorial Institute: **Kimberly Morgan**, UF/IFAS Southwest Florida Research and Education Center, [kimorgan@ufl.edu](mailto:kimorgan@ufl.edu)

Ornamental, Garden, & Landscape: **Ashley Kush**, UF/IFAS Jackson County, [ashleykush@ufl.edu](mailto:ashleykush@ufl.edu)

Vegetables: **Lisa Hickey**, UF/IFAS Extension Manatee County, [lisa.hickey@ufl.edu](mailto:lisa.hickey@ufl.edu)

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