



138th Annual Meeting of the

FLORIDA STATE
HORTICULTURAL SOCIETY
2025



2025 Program Contents

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Horticultural Commodities in the Southwest of Florida. Photo Credits: Ute Albrecht, Jessica Chitwood-Brown, Pam Roberts, UF/IFAS Photo Stock, Pavlos Tsouvaltzis

Program Overview

Registration Desk Hours –Conference Foyer

Sunday June 08	2:00 PM—6:00 PM
Monday June 09	7:30 AM—5:00 PM
Tuesday June 10	8:00 AM—12:00 PM

Sunday Afternoon—June 08

3:00—4:00	Poster Set up, Anna Mészáros	Estero Pre-Function
5:00—5:15	Opening Ceremony, Ute Albrecht	Estero Ballroom A-C
5:15—5:45	Speaker: Robin Back. Assistant Dean for Academic Policy in the College of Undergraduate Studies, University of Central Florida "Evaluating consumer perceptions: Challenging the negative perceptions of <i>Vitis rotundifolia</i> wines through effective marketing strategies "	Estero Ballroom A-C
5:45—6:00	Awards Ceremony, Ute Albrecht	Estero Ballroom A-C
6:00—7:00	Welcome Reception (Included in conference registration)	Belvedere Terrace

Monday Morning—June 09

8:00—8:30	Coffee & Tea	Estero Pre-Function
8:30—9:45	General Session	Estero Ballroom A-C
8:30	Welcome & Presidential Address: Prissy Fletcher, FSHS President	Estero Ballroom A-C
9:00	Speaker: Marcella Lucio-Chinchilla, Vice President of Marketing and Sales at Silver Vase Inc. "Dig Deep, Grow Bold: A Horticultural Journey of Discovery and Drive."	Estero Ballroom A-C
9:45	End of General Session	

Concurrent Monday Morning Sessions:

9:50-12:15	Agroecology & Natural Resources	Calusa G
9:50-12:00	Citrus	Estero A-C
9:50-12:00	Handling & Processing	Sanibel AB
9:50-12:00	Krome Memorial Institute	Captiva AB
9:50-12:00	Ornamental, Garden, & Landscaping	Pine A-C
9:50-12:00	Vegetables	Calusa F

Monday Lunch

12:00—1:00 Lunch (on your own)

Monday Afternoon

Concurrent Monday Afternoon Sessions:

1:25-4:15	Agroecology & Natural Resources	Calusa G
3:45-5:00	Agritourism	Captiva AB
2:00-5:15	Best Management Practices	Sanibel AB
1:25-4:15	Citrus	Estero A-C
1:20-2:00	Handling & Processing	Sanibel AB
1:20-3:45	Krome Memorial Institute	Captiva AB
1:20-4:15	Ornamental, Garden, & Landscaping	Pine A-C
1:20-5:00	Vegetables	Calusa F

Monday Evening

5:30—6:30	Reception and Poster Session (Included in conference registration - Presenters are encouraged to stay by their posters)	Estero Pre-Function
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Tuesday Morning —June 10

7:30—8:15	Horticultural Crops Breakfast (Event ticket required) Invited Speaker: Patricio Muñoz, Associate Professor, UF/IFAS Horticultural Sciences De- partment. "Breeding blueberries for Florida and the world"	Calusa F
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8:30—9:00	FSHS Annual Business Meeting. Ute Albrecht, FSHS President	Estero A-C
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9:00—9:30	Student Oral Competition and Poster Awards. Tie Liu, Anna Mészáros	Estero A-C
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9:30	Coffee Break	Estero Pre-Function
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Concurrent Tuesday Morning Sessions:

9:50—12:00	Agroecology & Natural Resources	Tour
9:50—11:30	Citrus Concurrent Session I	Estero A-C
9:50—12:00	Citrus Concurrent Session II	Pine A-C
9:50—12:00	Handling & Processing	Sanibel AB
9:50—12:00	Krome Memorial Institute	Captiva AB
9:50—12:00	Vegetables	Calusa F

Tuesday Lunch

12:00—1:00	Extension Luncheon (Event ticket required) Invited Speakers: Carlos Messina Professor, UF/IFAS Horticultural Sciences Department. "Introducing a Genotype-by-Management Framework to Enable New Copping Systems"	Calusa GH
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Tuesday Afternoon

1:20—4:00	In-Service Training "Controlled Environment Agriculture" See full agenda at back of program	Captiva AB
1:30—4:15	Mango Summit See full agenda at back of program	Calusa F

Florida State Horticultural Society

2024-2025 Board of Directors and

Ex-Officio Members

Chair of the Board: Ute Albrecht

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Vegetable: Wael Elwakil

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Florida State Horticultural Society

2025 Meeting Facilitators

Local Arrangements Coordinator: Ralph Mitchell

Sponsorship Coordinator: Gene McAvoy

Student Competitions Coordinator: Tie Liu

CEU Coordinator: Lisa Hickey

Poster Session Coordinator: Anna Mészáros

FSHS Newsletter Editor: Alicia Lamborn

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Diamond Level Sponsor (\$5,000 and above)

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UF IFAS Dean of Extension

Platinum Level Sponsor (\$2,000—\$4,999)

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Citrus Research and Development Foundation (Inc) CRDC

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None

Silver Level Sponsor (\$500—\$999)

MDPI

Florida Tomato Committee

Bronze Level Sponsor (under \$500)

None

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

2025 FSHS Patron Members

Helen Arnold

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Presentation, Publication and Submission Guidelines

- Full payment of page charges from past years is required before presentations and submissions can be accepted in the current year.
- The SENIOR AUTHOR must be a member of the Society, and the PRESENTING AUTHOR of the paper must be registered for the annual meeting (except for invited papers) for papers to be accepted for publication in 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 emailed as a **Word document** to the FSHS editor, Mary Lamberts (editors@fshs.org), copying the appropriate sectional VP, at the time of the meeting. PDFs will be returned to the author for resubmission in the correct format.

Please **name** your manuscript using: the paper number from the Conference Program (ANR-5), your last name (Gettys) (you can add other last names using a hyphen between them); please add **SN** at the end if the paper is a scientific note or **Abstract + doi** if that is the format you are using. Both the Editor and Publish keep track of manuscripts using this system.

- Authors may also publish their manuscripts in any refereed journal, grower publication or EDIS document. The publications will be published as an abstract + a doi or other link.

For **all** submissions, see the complete Manuscript Preparation Guide (<https://www.fshs.org/instructions-for-authors>), **including the Literature Cited Chart**, for the Proceedings of the Florid State Horticultural Society.

Please put all **TABLES** (with titles) and **FIGURES** (with captions) in a separate file with the **paper number, your last name** and **tables + figures** as the **filename**. Make sure TABLES and FIGURES are referenced in your paper.

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.

2025 FSHS

Poster Presentation Guidelines

- All posters must be set up Sunday, June 8th, between 3:00 to 4:00 pm at the Estero Pre-function Area .
- Student posters will be judged between Sunday 5:00 pm and Monday 3:00 pm.
- Student poster competition participants DO NOT need to prepare an oral presentation supporting their poster display. Only the poster display will be judged.
- Judging scoring criteria will be provided to poster presenters and judges via email in advance.
- Poster presenters are encouraged to be at their displays during the Monday Evening Reception (5:30 pm-6:30 pm) to interact with meeting participants.
- The winners for best student poster will be announced at the business meeting Tuesday morning.
- Posters must be taken down on Tuesday, June 10th, by noon.

Poster dimensions and set-up:

- A 40" wide x 28" tall poster board and paper clips will be provided for participants to display their posters.
- The poster **must not** exceed the 40" x 28" size limit (landscape).
- Two posters will be displayed per table.



Welcome 2025 FSHS Sectional Vice-Presidents!

Agritourism: **Stephen Jennewein** UF/IFAS
Extension Duval County,
sjennewein@ufl.edu

Agroecology & Natural **Jay Capasso**, UF/IFAS Exten-
Resources: sion. RSA Northeast, [jcapas-
so@ufl.edu](mailto:jcapasso@ufl.edu)

Citrus: **Muhammad A. Shahid**, UF/
IFAS
North Florida Research and
Education Center, [msha-
hid@ufl.edu](mailto:mshahid@ufl.edu)

Handling & Processing: **Moshe Doron**, UF/IFAS Horti-
cultural Sciences ,
moshik@ufl.edu

Krome Memorial Institute: **Jeff Wasielewski**, UF/IFAS
Extension. Miami-Dade Coun-
ty, sflhort@ufl.edu

Ornamental, Garden, & **Kara Krueger**, UF/IFAS Exten-
Landscape: sion. Palm Beach County, [ka-
rackrueger@ufl.edu](mailto:karackrueger@ufl.edu)

Vegetables: **Wael Elwakil**, UF/IFAS Exten-
sion Hillsborough County.
wael.elwakil@ufl.edu

Technical Program Schedule

Poster Session:

Anna Mészáros

Coordinator

ameszaros@ufl.edu

Poster with a "S" indicates Student Listed for Competition

- [P-1-AGR] **Florida horticulture sweetens the deal for residents of The Villages.** Madelyn Greathouse Barchlett^{1*}, James Davis¹, Laura Bennett², Joanna Oswalt³, Anna Jameson⁴, Kristy Russell⁵, Ed Blommel⁶, Cindy Brown⁷, Sylvia Willis⁸, Lucas Renehan⁸, and Hal Teegarden⁸. ¹ Sumter County Extension, University of Florida IFAS, Bushnell, FL, ² Pasco County Extension, University of Florida IFAS, Dade City, FL, ³ Sumter County Farm Bureau, Bushnell, FL, ⁴ Brite Leaf Citrus Nursery, Lake Panasoffkee, FL, ⁵ Board of Sumter County Commissioners, Bushnell, FL, ⁶ Florida Dept. of Agriculture and Consumer Services, Bushnell, FL, ⁷ Office of US Congressman Daniel Webster, The Villages, FL, ⁸ Splenda Stevia Farms/Heartland FPG, Lake Panasoffkee, FL. (mgreathouse@ufl.edu)
- [P-2-AGR] **Inaugural Florida mango fest: Extension education, community, and Florida's growers.** Emily Marois^{1*}, Kara Krueger¹, Anna Mészáros¹, John Roberts¹, Yesenia Rodriguez¹, Tavia Gordon³, Matthew VanWeelden², Ron Rice¹, Leslie Munroe⁴, Daniel Gonzales², Noelle Guay¹, Jenna Austhof-Curtis², and Cyndi Longley¹. ¹ Palm Beach County Extension, University of Florida IFAS, West Palm Beach, FL, ² Palm Beach County Extension, University of Florida IFAS, Belle Glade, FL, ³ Florida A&M University Extension, West Palm Beach, FL, ⁴ Indian River County Extension, University of Florida IFAS, Vero Beach, FL. (emarois@ufl.edu)
- [P-3-ANR] **Melittin: A natural bee venom peptide for cardiovas-**

cular therapy and disease modulation. Tritiya Rajagopal*. Williams Middle Magnet School, Tampa, FL. (deepa.shb99@gmail.com)

- [P-4-ANR-S] **Utilizing salt water to manage terrestrial weeds in southwest Florida.** Sequoia Lipman*, Reed Gilmore, Brian Bovard, and Jeannine Richards. Dept. of Ecology and Environmental Studies, Florida Gulf Coast University, Fort Myers, FL. (sclipman3069@eagle.fgcu.edu)
- [P-5-ANR] **AI-BMP taskforce for north Florida: First steps to using AI to advance BMPs.** Tyler Pittman¹, Marnie Ward², Dana Choi³, Ziwen Yu⁴, Eric Simonne^{5*}, and Jae Ahn⁶. ¹Gilchrist County Extension, University of Florida IFAS, Trenton, FL, ²Citrus County Extension, University of Florida IFAS, Lecanto, FL, ³Gulf Coast Research and Education Center, University of Florida IFAS, Balm, FL, ⁴Dept. of Agricultural and Biological Engineering, University of Florida IFAS, Gainesville, FL, ⁵Northeast Extension District, University of Florida IFAS, Gainesville, FL, ⁶Agriculture Education and Communication, University of Florida IFAS, Gainesville, FL. (esimonne@ufl.edu)
- [P-6-C] **Use of machine learning for the early detection of cottonet in citrus crops.** Alba Agenjos-Moreno^{1*}, Rubén Simeón¹, Beatriz Ricarte⁴, Daniel Tarrazó-Serrano³, Salva Escriche¹, Javier Coronado¹, Enric Cruzado¹, Patricia Arizo-García¹, Belen Franch², Constanza Rubio³, and Alberto San Bautista¹. ¹Dept. of Plant Production, Universitat Politècnica de València, Valencia, Spain, ²Global Change Unit, Image Processing Laboratory, Universitat de València, Valencia, Spain, ³Physics Technologies Research Centre, Universitat Politècnica de València, Valencia, Spain, ⁴Dept. of Applied Mathematics, Universitat Politècnica de València, Valencia, Spain. (agenjosalba@gmail.com)
- [P-7-C] **Assessing the influence of fabric mulch ground cover on grapefruit tree growth and soil characteristics in the Indian River District.** Audrey H. Beany^{1*}, John-Paul Fox¹, Lukas Hallman¹, Khalid Hussain¹, Robert C. Adair, Jr.², Mark Ritenour¹, and Lorenzo Rossi¹. ¹Indian River Research and Education Center, University of Florida IFAS, Fort Pierce, FL, ²Florida Research Center for Agricul-

tural Sustainability, Inc., Vero Beach, FL.
(ahbeany@ufl.edu)

- [P-8-C-S] **Effects of cover crops and herbicide strategy in mature 'Valencia' sweet orange trees.** Estevao Dea*, Gabriel Pugina, Sarah L. Strauss, Ramdas Kanissery, and Ute Albrecht. Southwest Florida Research and Education Center, University of Florida IFAS, Immokalee, FL.
(estevao.dea@ufl.edu)
- [P-9-C-S] **Investigating zinc for resilience in healthy and HLB-affected young citrus.** Monika Peddapuli* and Davie Kadyampakeni. Citrus Research and Education Center, University of Florida IFAS, Lake Alfred, Florida.
(peddapulimonika@ufl.edu)
- [P-10-C] **Incorporating and improving the TREEGRO model in DSSAT-CSM to simulate sweet orange crops.** Julia Boscaroli Rasera¹, Henrique Boriolo Dias^{2*}, Patricia Angelica Alves Marques¹, Francisco de Assis Alves Mourão Filho³, Kelly Morgan⁴, Cheryl H. Porter², Kenneth J. Boote⁵, and Gerrit Hoogenboom^{2,6}. ¹Dept. of Biosystems Engineering, Luiz de Queiroz College of Agriculture, University of Sao Paulo, Piracicaba, SP, Brazil, ²Dept. of Agricultural and Biological Engineering, University of Florida IFAS, Gainesville, FL, ³Dept. of Crop Science, Luiz de Queiroz College of Agriculture, University of Sao Paulo, Piracicaba, SP, Brazil, ⁴ Dept. of Soil, Water, and Ecosystem Sciences, University of Florida IFAS, Gainesville, FL, ⁵Tropical Research and Education Center, University of Florida IFAS, Homestead, FL, ⁶Global Food Systems Institute, University of Florida IFAS, Gainesville, FL.
(henrique.boriolo@ufl.edu)
- [P-11-C] **Effects of iron in lignosulfonate form on young citrus plant growth.** Rubén Simeón^{1*}, Patricia Arizo-García¹, Alba Agenjos¹, Javier Coronado¹, Enric Cruzado¹, Ana Martínez¹, Ana Isabel Escudero¹, Miguel Ángel Naranjo², Marcos Caballero², and Alberto San Bautista¹. ¹Departamento de Producción Vegetal, Universitat Politècnica de València, Valencia, Spain ²Fertinagro Biotech, Teruel, Spain. (rusibro@etsiamn.upv.es)

- [P-12-C-S] **Optimizing zinc and potassium applications to enhance sweet orange yield.** Murillo Otavio de Sousa* and Fernando Alferez. Southwest Florida Research and Education Center, University of Florida IFAS, Immokalee, FL. ([motaviodesousa@ufl.edu](mailto:otaviodesousa@ufl.edu))
- [P-13-KM-S] **Exploring the effects of GA₃, hydrogel, and nitrogen on boosting pomegranate (*Punica granatum* 'Salavatski') yields in Florida.** Elena V. Maximo*, Sriti Nurjahan, M.J.I. Shohag, and Goudong Liu. Horticultural Sciences Dept., University of Florida IFAS, Gainesville, FL. (emaximosalgado@ufl.edu)
- [P-14-KM] **Effect of biochar amendment on morphology and physiology of potted banana.** Amir Rezazadeh*. St Lucie County Extension, University of Florida IFAS, Fort Pierce, FL. (amir2558@ufl.edu)
- [P-15-KM] **Introducing a new research program: Advancing sustainability and quality in grapes and other tree crops for Texas and beyond.** Lorenzo Rossi* and Garrett L. Nicholas. Dept. of Horticultural Sciences, Texas A&M University, College Station, TX. (l.rossi@tamu.edu)
- [P-16-OGL-S] **Effects of nitrogen fixing bacteria on zoysiagrass lawns.** Victor Hugo Abarca* and Alex J. Lindsey. Environmental Horticulture Dept., University of Florida IFAS, Gainesville, FL. (vabarcoello@ufl.edu)
- [P-17-OGL] **Native grass: An alternative to bahiagrass sod in southwest Florida.** Emily Hosea^{1*}, Brian Bovard¹, and Chad Washburn². ¹ The Water School, Florida Gulf Coast University, Fort Myers, FL, ² Naples Botanical Garden, Naples, FL. (emilyhosea@icloud.com)
- [P-18-OGL] **'Chico', a new and improved UF/IFAS cultivar of ornamental rhizome perennial peanut (*Arachis glabrata*) for the landscape.** Leynar Leyton Naranjo^{1*}, Ann Blount¹, Gary Knox¹, Cheryl Mackowiak¹, Kelly Thomas², and Bryan Unruh¹. ¹North Florida Research and Education Center, University of Florida IFAS, Quincy, FL, ²Chicago Botanic Garden, Falls Church, VA. (L.LeytonNaranjo@ufl.edu)

- [P-19-OGL-S] **Measuring nitrate and phosphate in leachate during greenhouse production of *Philodendron* 'Moonlight'-comparing analysis methods and evaluating results.** Krystin Perry^{1*}, Rory E. Dunn², Madeleine Tenny⁴, Malcolm M. Manners³, John L. Griffis, Jr.⁴, and Senthil B. Girimurugan⁵. ¹Biological Sciences Dept., Florida Gulf Coast University, Ft. Myers, FL, ²Bioengineering, Civil Engineering and Environmental Engineering Dept., Florida Gulf Coast University, Ft. Myers, FL, ³Horticultural Sciences Dept., Florida Southern College, Lakeland, FL, ⁴Ecology and Environmental Studies Dept., Florida Gulf Coast University, Ft. Myers, FL, ⁵Mathematics Dept., Florida Gulf Coast University, Ft. Myers, FL. (kperry7919@eagle.fgcu.edu)
- [P-20-OGL] **Assessing weed invasion into an experimental native saltmarsh sod planting in SWFL.** Abigail Tatum^{1*}, Emily Hosea¹, Chad Washburn², and Brian Bovard¹. ¹The Water School, Florida Gulf Coast University, Fort Myers, FL, ²Naples Botanical Garden, Naples, FL. (bbovard@fgcu.edu)
- [P-21-OGL] **Growing together towards water-efficient landscapes.** Odine Wells^{1*} and Yilin Zhuang². ¹Marion County Extension, University of Florida IFAS, Ocala, FL, ²Mid-Florida Research and Education Center, University of Florida IFAS, Apopka, FL. (owells@ufl.edu)
- [P-22-V] **Assessing seed-borne pathogen risks in globally sourced okra.** Peyton Ecklund^{*}, Maria Lugo Duque, Shouan Zhang, and Xiaoying Li. Tropical Research and Education Center, University of Florida IFAS, Homestead, FL. (p.ecklund@ufl.edu)
- [P-23-V] **Incorporating phosphorus fertilization response for tomato growth and yield in the CSM-CROPGRO model.** Cleverson Henrique de Freitas^{1*}, Henrique Boriolo Dias¹, Girma Worku Awoke², Haimanote Bayabil², Yuncong Li², Kenneth J. Boote¹, and Gerrit Hoogenboom^{1,3}. ¹Dept. of Agricultural and Biological Engineering, University of Florida IFAS, Gainesville, FL, ²Tropical Research and Education Center, University of Florida IFAS, Homestead, FL, ³Global Food Systems Institute, University of Florida IFAS, Gainesville, FL. (c.freitas@ufl.edu)

- [P-24-V] **Differences in postharvest ripening characteristics of tomato fruits from a long shelf-life hybrid and an heirloom variety stored under light and darkness.** Ioannis Karapanos* and Vijay Chandra Verma. North Florida Research and Education Center, University of Florida IFAS, Quincy, FL. (i.karapanos@ufl.edu)
- [P-25-V-S] **Evaluating yield performance in commercial cucumber varieties under Anthracnose pressure.** Simranjot Kaur*, Prerna Sabharwal, Sudeep Adhikari, Shallu Thakur, Yuqing Fu, and Geoffrey Meru. Tropical Research and Education Center, University of Florida IFAS, Homestead, FL. (s.kaur@ufl.edu)
- [P-26-V] **On-farm application of Fluazaindolizine for managing nematodes in okra cultivation in South Florida.** Vander Rocha Lacerda^{1*}, You's Kertye Myrti¹, Abolfazl Hajihassani², and Xiaoying Li¹. ¹Tropical Research and Educational Center, University of Florida IFAS, Homestead, FL, ²Fort Lauderdale Research and Education Center, University of Florida IFAS, Davie, FL. (rochalacerdav@ufl.edu)
- [P-27-V] **Monitoring the growth of commercial edamame varieties throughout the fall season in Miami-Dade County.** You's Kertye Myrti*, Vander Rocha Lacerda, and Xiaoying Li. Tropical Research and Educational Center, University of Florida IFAS, Homestead, FL. (myrtily@ufl.edu)
- [P-28-V] **Study on biosolid compost integration on basil plant production and nutritional composition.** Madeleine Tenny², Sotirios Tasioulas^{1*}, Jessie Watson¹, John Griffis Jr.², and Pavlos Tsouvaltzis¹. ¹Southwest Florida Research and Education Center, University of Florida IFAS, Immokalee, FL. ²Dept. of Ecology and Environmental Studies, Florida Gulf Coast University, Ft. Myers, FL. (tasioulas.s@ufl.edu)
- [P-29-V-S] **Comparison between on-vine and off-vine tomato fruit ripening.** Sotirios Tasioulas*, Madeleine Tenny, Jessie Watson, and Pavlos Tsouvaltzis. Southwest Florida Research and Education Center, University of Florida IFAS, Immokalee, FL. (tasioulas.s@ufl.edu)

Agritourism Section

Stephen Jennewein
Presiding
sjennewein@ufl.edu

Monday Afternoon Session

(3:45 to 5:00) Captiva AB

3:45 **Welcome and Introductions**, Stephen Jennewein.

A – AgriTourism

- 3:45 **Farm Tour Planning - Keeping the Event Safe, Fun and Educational.** Evelyn “Prissy” Fletcher*. Soil, Water, and Ecosystem Sciences Department University of Florida, IFAS. Gainesville, FL. (pfletcher@ufl.edu) [AGR-01]
- 4:00 **Board Our Bus: Promoting an Appreciation for & Understanding of Local Agriculture.** Alissa Hevesh*. University of Florida, IFAS, Extension Highlands County. Sebring, FL. (ahevesh@ufl.edu) [AGR-02]
- 4:15 **Grove to Community: Mango Fest Successes and Lessons Learned.** Kara Krueger and Emily Marois*. University of Florida, IFAS, Extension Palm Beach County. West Palm Beach, FL (karackrueger@ufl.edu) [AGR-03]
- 4:30 **Farm Tours in Northeast Florida: The Past, Present, and Future of the Tour de Farm.** Stephen Jennewein*. University of Florida, IFAS, Extension Duval County. Jacksonville, FL. (sjennewein@ufl.edu) [AGR-04]
- 4:45 **Agritourism Section Business Meeting.** Presiding Stephen Jennewein, VP, and Brittany Council-Morton, VP-Elect
- 5:00 **End of Sessions.** See you next year at the 139th FSHS annual meeting! (Jacksonville, FL)

Agroecology & Natural Resources Section

Jay Capasso
Presiding
jcapasso@ufl.edu

Monday Morning Session

(9:50 – 12:15) Calusa G

9:50 **Welcome and Introductions**, Jay Capasso.

A– Agroecology

- 10:00 **Evaluation of Nitrogen Rates and Cultivar Effects on Growth and Fiber Biomass Yield of Industrial Hemp (*Cannabis sativa* L.)**. Nkem J. Nwosu^{1*}, Yogendra R. Upadhyaya¹, Oluseyi Ajani², Ejaz A. Dar¹, Zachary Brym³, Lakesh Sharma⁴, and Hardeep Singh¹. ¹West Florida Research and Education Center, University of Florida, IFAS, Jay, FL. ²University of Arkansas. ³Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ⁴Soil, Water and Ecosystems Sciences Department, University of Florida, IFAS, Gainesville, FL. (nkem.nwosu@ufl.edu) [ANR-01]
- 10:15 **Phosphorus Bioavailability in the Suwannee Valley Agricultural Area**. Jay Capasso^{1*}, Kelly Morgan², Vimala Nair², Jehangir Bhadha², Vivek Sharma³, Lilit Vardanyan², and Kevin Athearn¹. ¹North Florida Research and Education Center – Suwannee Valley, University of Florida, IFAS, Live Oak, FL. ²Soil, Water and Ecosystem Sciences Department, University of Florida, IFAS, Gainesville, FL. ³Agricultural & Biological Engineering Department, University of Florida, IFAS, Gainesville, FL. (jcapasso@ufl.edu) [ANR-02]
- 10:30 **Somatic Embryogenesis and Micropropagation of Elite Cultivars of Hazelnut (*Corylus avellana*) and the Influence of Cultivar and PGR Selection on Successful Initiation**. David Beleski^{1*}, Paul Montello², Scott A. Merkle², and Wagner Vendrame¹. ¹Environmental Horticulture Department, University of Florida, IFAS, Gainesville, FL. ²University of Georgia, Warnell School of Forestry. (dbeleski@ufl.edu) [ANR-03]

- 10:45 **A Review and Meta Analysis of Plant Reference Lists for Miami-Dade County.** Zachary Brym^{*}, and Cliff Martin.
Tropical Research and Education Center, University of Florida, IFAS. Homestead, FL. (brymz@ufl.edu) [ANR-04]
- 11:00 **Overview of Best Cultural Practices and Performance of Curry Leaf Tree (*Murraya koenigii*) for the Mass Rearing of *Tamarixia radiata* Wasp.** Raquel Ruggeberg^{*}. Florida Department of Agriculture & Consumer Services. Dundee Biological Control Laboratory, Dundee, FL. (raquel.ruggeberg@fdacs.gov) [ANR-05]
- 11:15 **Mass Rearing of *Tamarixia radiata* Parasitoid for Release Throughout Florida's Citrus Groves.** Lourdes Pérez Cordero^{*}. Florida Department of Agriculture & Consumer Services, Gainesville, FL. (lourdes.perezcordero@fdacs.gov) [ANR-06]
- 11:30 **Plant Collections at the UF/IFAS Tropical Research and Education Center, Homestead.** Cliff Martin^{*}, and Zachary Brym. Tropical Research and Education Center, University of Florida, IFAS. Homestead, FL. (cgm@ufl.edu) [ANR-07]

B– Soil Amendments

- 11:45 **Application of Silicon Extracted from Rice Straw as a Post-Harvest Effect in the Cultivation of Persimmon.** Rubén Simón^{1*}, Patricia Arizo-García¹, Alba Agenjos¹, Javier Coronado¹, Enric Cruzado¹, Ana Martínez¹, Ana Isabel Escudero¹, Miguel Ángel Naranjo², Marcos Caballero², and Alberto San Bautista¹. ¹Universitat Politècnica de València, Spain. ²Fertinagro Biotech, Teruel, Spain. (rusibro@etsiia.upv.es) [ANR-08]
- 12:00 **Composting with Cowpea (*Vigna unguiculata*).** David Herbert^{*}. University of Florida, IFAS Extension, Nassau County, Callahan, FL. (david.hebert@ufl.edu) [ANR-09]
- 12:15 **Lunch**

Monday Afternoon Session

(1:25 – 4:00) Calusa G

- 1:25 **Welcome Back and Introductions,** Jay Capasso

C– Student Presentations

- 1:30 **Variable Irrigation and Potassium Fertilization Rates for *Den-drocalamus asper* in Florida.** Labake Agunbiade^{1*}, Marcio R. Nunes², and Davie M. Kadyampakeni¹. ¹Citrus Research and Education Center, University of Florida, IFAS. Lake Alfred, FL. ²Soil, Water and Ecosystem Sciences Department, University of Florida, IFAS. Gainesville, FL. (labakeogunkanmi@ufl.edu) [ANR-10]
- 1:45 **Evaluating Different Strategies to Enhance Phosphorus Availability in Organic Soils: A Comparative Assessment of Chemical, Biological, and Organic Amendments.** Aradhana Regmi^{1*}, Niguss Solomon Hailegnaw¹, Hardev S. Sandhu¹, and Rao S. Mylavarapu². ¹Everglades Research and Education Center, University of Florida, IFAS. Belle Glade, FL. ²Soil, Water and Ecosystem Sciences Department, University of Florida, IFAS. Gainesville, FL. (regmiaradhana@ufl.edu) [ANR-11]
- 2:00 **Evaluation of Phosphorus Fertilization on Florida Young Bamboo in a Controlled Environment.** Cyrus J. Januarie^{1*}, Lakesh Sharma², Joao Vendramini³, and Davie M. Kadyampakeni¹. ¹Citrus Research and Education Center, University of Florida, IFAS. Lake Alfred, FL. ²Soil, Water and Ecosystem Sciences Department, University of Florida, IFAS. Gainesville, FL. ³Range Cattle Research and Education Center, University of Florida, IFAS. Ona, FL. (**Student Oral Competition Entry**) (dkadyampakeni@ufl.edu) [ANR-12]
- 2:15 **Impact of Nitrogen Rates on Growth and Biomass Accumulation of Young Macadamia Trees.** Lopes Fernando Bonda^{*}, and Davie M. Kadyampakeni. Citrus Research and Education Center, University of Florida, IFAS. Lake Alfred, FL. (dkadyampakeni@ufl.edu) [ANR-13]
- 2:30 **Phosphorus Fixation Dynamics in Quartz Sands, Mixed Medium, and Agricultural Soils of Northeastern Florida.** Elena Maximo-Salgado^{*}, M.J.I. Shohag, and Guodong Liu. Horticultural Sciences Department, University of Florida, IFAS. Gainesville, FL. (guodong@ufl.edu) [ANR-14]

D— Extension and Decision Support Tools

- 2:45 **Florida Agricultural Soil Moisture Sensor Network: Engaging Growers, Agents, and Technology Industry to Conserve and Protect Water Resources.** Vivek Sharma^{1*}, Neus Alcon-Bou¹, Jay Capasso², Craig Frey³, Yvette Goodile⁴, Lisa Hickey⁵, and Anna Mészáros⁶. ¹Agricultural and Biological Engineering Department, University of Florida, IFAS. Gainesville, FL. ²North Florida Research

and Education Center – Suwannee Valley, University of Florida, IFAS. Live Oak, FL. ³University of Florida, IFAS, Hendry County Extension. ⁴University of Florida, IFAS, Martin County Extension. ⁵University of Florida, IFAS, Manatee County Extension. ⁶University of Florida, IFAS, Palm Beach County Extension. (ysharma1@ufl.edu) [ANR-15]

- 3:00 **Alternative Resources for Extension Clients Who Oppose Using Glyphosate on Invasives and Hard-to-Kill Weeds.** Maxine Hunter*. University of Florida, IFAS, Marion County Extension, Ocala, FL. (maxine32666@ufl.edu) [ANR-16]
- 3:15 **Indirect Educational Experiences from Native Plant Demonstration Gardens.** Tiare Silvasy*. University of Florida, IFAS, Extension Hillsborough County, Seffner, FL. (tsilvasy@ufl.edu) [ANR-17]
- 3:30 **Florida-Friendly Landscaping: Five Key Guidelines for Successfully Highlighting Native Plants in Demonstration Gardens.** and*. University of Florida, IFAS, Indian River County Extension, Vero Beach, FL. (lnmunroe@ufl.edu) [ANR-18]
- 3:45 **Florida-Friendly Landscaping: Ideas for Incorporating Native Plants in Demonstration Plots.** Leslie N. Munroe*. University of Florida, IFAS, Indian River County Extension, Vero Beach, FL. (lnmunroe@ufl.edu) [ANR-19]
- 4:00 **Agroecology & Natural Resources Section Business Meeting.**
Presiding: Jay Capasso, VP; Zachary Brym, VP-elect
- 4:15 **Adjourn**

Tuesday Morning Session

(10:00 – 12:00)

10:00 **Agroecology & Natural Resources Field Trip – ECHO GLOBAL, Fort Myers, Florida**

Hosted by Jay Capasso, Zachary Brym, and ECHO GLOBAL.

Join us for a farm tour at ECHO GLOBAL in Fort Myers, Florida. This farm is internationally recognized for its work in sustainable agriculture and innovations related to international development and ecological farming systems. The tour will include discussions on agroecological practices, natural resource management, and techniques that support sustainable food systems. Please wear comfortable clothing and bring sun protection and water to stay hydrated during the tour.

End of sessions. See you next year at the 139th FSHS annual meeting! (Jacksonville, FL)

Citrus Section

Muhammad A. Shahid

Presiding

mshahid@ufl.edu

Monday Morning Session

(9:50 – 12:00) Estero Ballroom A-C

9:50 **Welcome and Introductions**, Muhammad A. Shahid, Ph.D.

A– Student Presentations

- 10:00 **Screening Novel Citrus Rootstock Hybrids for Salinity Tolerance Under Controlled Greenhouse Conditions.** Caroline Tardivo^{1*}, Deived U. de Carvalho¹, Kim D. Bowman², and Ute Albrecht¹. ¹Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL, ²United States Horticulture Research Laboratory, Agricultural Research Service, USDA, Fort Pierce, FL (caroline.defava@ufl.edu). [C-01]
- 10:15 **Brassinosteroids and Fruit Quality: Investigating Hormonal Influence in HLB-infected Sweet Orange.** Divya Aryal* and Fernando Alferez. Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL (divyaaryal@ufl.edu). [C-02]
- 10:30 **The Influence of Soil pH on Citrus Root Morphology and Nutrient Uptake Efficiency.** Duplicate Sambani*, Tripti Vashisth, Diane B. Bright and Davie M. Kadyampakeni. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL (d.sambani@ufl.edu). [C-03]
- 10:45 **Evaluating Sectoring Effects of OTC Administered By Trunk Injection in 'Valencia' Sweet Orange.** Larissa Nunes da Silva*, and Ute Albrecht. Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL (nunesdasilva.la@ufl.edu). (Student Oral Presentation Competition Entry) [C-04]

Citrus Section

- 11:00 **Exploring the Potential of Silicon Nanoparticles to Mitigate Water Stress in Citrus.** Jose L. Prieto Fajardo^{1*}, Muhammad A. Shahid², William Hammond³, Lauren Diepenbrock¹, and Davie M. Kadyampakeni¹. ¹Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred FL, ²North Florida Research and Education Center, University of Florida, IFAS, Quincy, FL, ³Department of Agronomy, University of Florida, IFAS, Gainesville, FL (j.prietofajardo@ufl.edu). (Student Oral Presentation Competition Entry) [C-05]
- 11:15 **Exploring the Systemic Delivery of Streptomycin as a Complement to Oxytetracycline for Managing Huanglongbing.** Igor Rodrigues da Silva*, and Ute Albrecht. Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL (igorrodriguesdas@ufl.edu). (Student Oral Presentation Competition Entry) [C-06]
- 11:30 **Hedging, Thinning, Controlled Release Fertilizer, and Oxytetracycline Trunk Injections to Mitigate Fruit Disorder Incidence in HLB-Affected Sugar Belle ® Mandarin.** Joe H. Volpe*, and Dr. John M. Chater. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL (joevolpe@ufl.edu). (Student Oral Presentation Competition Entry) [C-07]
- 11:45 **Impact of Single and Consecutive Annual Injections of Oxytetracycline at Different Rates on Field Performance of HLB-affected 'Hamlin' Sweet Orange Trees.** Gabriel Pugina*, Caroline Tardivo, and Ute Albrecht. Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL (gabrieldecastro@ufl.edu). [C-08]

12:00 **Lunch**

Monday Afternoon Session

(1:25 – 5:00) Estero Ballroom A-C

1:25 **Welcome back and Introductions,** Muhammad A. Shahid, Ph.D.

A– Student Presentations (continued)

1:30 **Defining Best Management Practices for Trunk Injections of**

- Oxytetracycline in Citrus: Exposure Time.** Lauren Fessler Mathews*, Ana Redondo, Sanju Kunwar, and Ozgur Batuman. Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL (fessler.lauren@ufl.edu). [C-09]
- 1:45 **Comparison of Conventional and Drip Irrigation Systems for Young HLB-Affected Citrus Trees.** Kondwani Kamsikiri*, and Davie Kadyampakeni. Citrus Research and Education Center, University of Florida IFAS, Lake Alfred FL (kkamsikiri@ufl.edu). [C-10]
- 2:00 **Evaluating the Impact of Variable Nitrogen Rates on the Growth and Yield of HLB-Affected Sweet Orange Trees.** Noor UI Basar¹*, Muhammad Adnan Shahid² and Davie M. Kadyampakeni¹. ¹Citrus Research and Education Center, University of Florida IFAS, Lake Alfred FL, ²North Florida Research and Education Center, University of Florida, IFAS, Quincy, FL (n.basar@ufl.edu). [C-11]
- 2:15 **Fine-tuning Propionic Acid Dosage for Reducing Pre-harvest Fruit Drop in 'Hamlin' Sweet Oranges and Mechanisms Involved.** Pablo Orozco*, and Fernando Alferez. Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL (porozcoquesada@ufl.edu). [C-12]
- 2:30 **Impacts of Nutrient Ratios of Calcium and Zinc on Citrus Growth and Root Development.** Therese Thompson*, and Davie Kadyampakeni. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL (theresethompson@ufl.edu). [C-13]
- 2:45 **Enhancing Canopy Height Measurement Accuracy and Efficiency in Citrus Orchards with LiDAR.** Wenhao Liu*, and Yiannis Ampatzidis. Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL (wenhaoliu@ufl.edu). [C-14]
- 3:00 **Citrus section business meeting.** Presiding Muhammad A. Shahid, VP and Flavia Zambon, VP-elect

B– Water, Soil, and Nutrient Management

- 3:15 **Impact of Applying Zn and Mn from Black Mass on Citrus**

Citrus Section

Plant Productivity. Ana Isabel Escudero¹, Patricia Arizo-García¹, Rubén Simeón^{1*}, Alba Agenjos¹, Javier Coronado¹, Enric Cruzado¹, Ana Martínez¹, Miguel Ángel Naranjo², Marcos Caballero², and Alberto San Bautista¹. ¹Departamento de Producción Vegetal, Universitat Politècnica de València, Valencia, Spain, ²Fertinagro Biotech, Teruel, Spain (lorenzo.rossi@ag.tamu.edu). [C-15].

3:30 **Assessing Grapefruit Responses to Different Irrigation Rates for Managing High Salinity Water Under Greenhouse-Controlled Conditions.** Neus Alcon-Bou^{1*}, Sandra M. Guzman¹, John-Paul Fox¹, Gerard Sapes², William M. Hammond², and Lorenzo Rossi¹. ¹Indian River Research and Education Center, University of Florida IFAS, Fort Pierce, FL, ²Agronomy Department, University of Florida, IFAS, Gainesville, FL (rusibro@etsiamn.upv.es). [C-16].

C– Cultural Practices, Tree and Fruit Physiology

3:45 **Physiological Impacts of Proline Supplementation on Citrus Leaves under Freeze Stress.** Carlos E. Aucique-Perez*, Iqbal Shahid, Julia S. Adamson Felix, Alaiha Asif, and Muhammad A. Shahid. North Florida Research and Education Center, University of Florida, IFAS, Quincy, FL (c.auciqueperez@ufl.edu). [C-17].

4:00 **Effects of OTC Injection on ‘OLL’ and ‘Valencia’ Budlines.** Cheelo M Maitwa*, and John M Chater. Citrus Research and Education Center, University of Florida IFAS, Lake Alfred FL (cmaitwa@ufl.edu). [C-18].

4:15 **Adjourn**

Tuesday Morning Concurrent Session I

(9:50 – 11:30) Estero Ballroom A-C

9:50 **Welcome Back and Introductions,** Muhammad A. Shahid, Ph.D.

C– Cultural Practices, Tree and Fruit Physiology (Continued)

- 10:00 **Impact of Volume and Number of Injection Sites for Management of Huanglongbing by Oxytetracycline Trunk Injection.** Jasmine de Freitas*, Deived Uilian de Carvalho, and Ute Albrecht. Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL (jasminedefreitas@ufl.edu). [C-19]
- 10:15 **OTC Affects Fruit Quality On OLL-8 Sweet Orange Grown on Different Rootstocks.** John M. Chater*, Joseph H. Volpe, and Emily S. Worbington. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL (jchater@ufl.edu). [C-20]
- 10:30 **Comparative Analysis of Stabilized and Non-Stabilized Silicon Sources on Photosynthetic Performance of Young Orange Trees.** Jonas Pereira de Souza Junior*, and Davie M. Kadyampakeni. Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL (jpereiradesouza@ufl.edu). [C-21]
- 10:45 **Effects of OTC Trunk Injection on Various Citrus Scions.** John M. Chater* and Emily S. Worbington. Citrus Research and Education Center, University of Florida IFAS, Lake Alfred FL (jchater@ufl.edu). [C-22]
- 11:00 **Systemic Delivery of Oxytetracycline for Treatment of Citrus Huanglongbing Using a Drill-based and No-drill Injection System.** Ute Albrecht*, Caroline Tardivo, Gerardo Moreno, and Jasmine de Freitas. Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL (ualbrecht@ufl.edu). [C-23]
- 11:15 **Effect of OTC Trunk Injection on Three HLB Tolerant Citrus Cultivars.** Faustin Mukunzi* and John M. Chater. Citrus Research and Education Center, University of Florida IFAS, Lake Alfred FL (fmukunzi@ufl.edu). [C-24]
- 11:30 **End of sessions.** See you next year for the 139th FSHS annual meeting! (Jacksonville, FL)

Tuesday Morning Concurrent Session II

(9:50 – 12:00) Pine ABC

9:50 **Welcome and Introduction**, Flavia Zambon, Ph.D.

D– Citrus Horticultural Manipulations

- 10:00 **Maximizing Budbreak and Winter Growth of ‘Washington’ Navel in the Citrus Nursery Through Supplemental LED Lighting and Use of 6-Benzylaminopurine.** Deived Uilian de Carvalho^{1*}, Rayane Barcelos Bisi^{1,2}, Kim D. Bowman², and Ute Albrecht¹. ¹Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL, ²United States Horticulture Research Laboratory, Agricultural Research Service, USDA, Fort Pierce, FL (ddecarvalho@ufl.edu). [C-25]
- 10:15 **Homobrassinolide Application Enhances Yield and Quality of ‘Sugar Belle’ Mandarin Fruit under Endemic Huanglongbing (HLB).** Saoussen Ben Abdallah*, and Fernando Alferez. Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL (saoussen.benabda@ufl.edu). [C-26]

E– Citrus Disease Management

- 10:30 **Optimizing Antibiotic Rotations and Alternative Therapeutics for Sustainable HLB Management in Florida Citrus.** Sanju Kunwar*, Lauren Fessler Mathews, Ana Redondo, and Ozgur Batuman. Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL (sanju.kunwar@ufl.edu). [C-27]

F– Citrus Economics

- 10:45 **Insights into OTC Adoption and Profitability from a Florida Citrus Survey.** Tara Wade*, and Kelvin Amon. Southwest Florida Research and Education Center, University of Florida, IFAS Immokalee, FL (tara.wade@ufl.edu). [C-28]

G– Citrus Genetics

- 11:00 **HLB-Tolerant Early-season Sweet Oranges: Genetic Insights for Controlling Citrus Greening Disease.** Sheetal Ramekar^{1*}, Jaideep Kaur Deol¹, Gary England², and Manjul Dutt¹. ¹Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL, ²University of Florida, IFAS, Extension Central District, DeLand, FL (sheetalramekar@ufl.edu). [C-29]

H– Fertilizer Recommendations

- 11:15 **The Impact of Phosphorus Rates on HLB-Affected Tree Health and Performance in Sandy Soils.** Alisheikh Atta^{*1}, Kelly T. Morgan², Mark A. Ritenour³, Muhammad A. Shahid⁴, Alan Wright³, Kimberly Morgan⁴, Mongi Zekri⁵, Chris Oswalt⁶, Danielle Williams⁷ and Davie Kadyampakeni¹. ¹Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL, ²Department of Soil, Water, And Ecosystem Sciences, University of Florida, IFAS, Gainesville, FL, ³Indian River Research and Education Center, University of Florida, IFAS, Fort Pierce, FL, ⁴North Florida Research and Education Center, University of Florida, IFAS, Quincy, FL, ⁵University of Florida, IFAS, Extension Hendry County, Labelle, FL, ⁶University of Florida, IFAS, Extension Polk County, Bartow, FL, ⁷University of Florida, IFAS, Extension Gadsden County, Quincy, FL (aatta@ufl.edu). [C-30]
- 11:30 **Impact of Nitrogen Fertilizer Rates on Citrus Fruit Quality and Maturity.** Muhammad Nadeem^{1*}, Shahid Iqbal¹, Davie Kadyampakeni², and Muhammad A. Shahid¹. ¹North Florida Research and Education Center, University of Florida IFAS, Quincy, FL, ²Citrus Research and Education Center, University of Florida IFAS, Lake Alfred FL (nadeem.muhammad@ufl.edu). [C-31]
- 11:45 **Developing Site-Specific Recommendations on Nitrogen Application Rates and Timing for Satsuma Mandarin Production in North Florida.** Shahid Iqbal^{1*}, Davie M. Kadyampakeni², and Muhammad A. Shahid¹. ¹North Florida Research and Education Center, University of Florida IFAS, Quincy, FL, ²Citrus Research and Education Center, University of Florida IFAS, Lake Alfred FL (shahidiqbal@ufl.edu). [C-32].
- 12:00 **End of sessions.** See you next year for the 139th FSHS annual meeting! (Jacksonville, FL)

Handling & Processing Section

Moshe Doron
Presiding
moshik@ufl.edu

Monday Morning Session

(9:50 – 12:00) Sanibel AB

9:50 **Welcome and Introductions**, Moshe Doron

A– Student Competition

- 10:00 **Dry Matter in Florida Avocados Does Not Necessarily Correlate with Taste Preference.** Rachel Noma^{1*} and M.A. Ritenour¹, A. Plotto². Indian River Research and Education Center, University of Florida, IFAS. Fort Pierce, FL ²USDA–ARS, U.S. Horticultural Research laboratory, Fort Pierce, FL (**Student Oral Presentation Competition Entry**) (rachelnoma@ufl.edu) [H&P-01]
- 10:15 **Effects of Postharvest Melatonin Treatment on Quality and Pink Rib Development in Lettuce.** Brianna Haynes^{1*}, Steven Sargent¹, Germán Sandoya-Miranda², Tie Liu¹, and Jeongim Kim¹. ¹Horticultural Sciences Department, University of Florida, IFAS. Gainesville, FL ²Everglades Research and Education Center, University of Florida, IFAS. Belle Glade, FL (**Student Oral Presentation Competition Entry**) (briannahaynes@ufl.edu) [H&P-02]
- 10:30 **Segregation Analysis of Tolerance to Pink Rib Discoloration in Lettuce Potentially Reveals Inheritance of Multiple Loci.** Jesse Murray¹, Brianna Haynes^{2*}, Steve Sargent², and Germán Sandoya¹. ¹Everglades Research and Education Center, University of Florida, IFAS. Belle Glade, FL. ² Horticultural Sciences, University of Florida, IFAS. Gainesville, FL (briannahaynes@ufl.edu) [H&P-03]

- 10:45 **Identifying relationships between muscadine (*Muscadinia rotundifolia*) peel characteristics and postharvest quality.** Alana Brinley*, [Tie Liu](#), and Ali Sarkhosh. Horticultural Sciences Department, University of Florida, IFAS. Gainesville, Florida, USA (alana.brinley@ufl.edu) [H&P-04]
- 11:00 **Establishing Moisture Content Isotherm for Florida Grown Macadamia Nuts (*Macadamia integrifolia*)** [Jiwon Park](#)^{1*}, Amarat Simonne² Andrew J MacIntosh¹. ¹Food Science and Human Nutrition Department, University of Florida, IFAS. Gainesville, FL. ²Department of Family, Youth and Community Sciences, University of Florida, IFAS. Gainesville, FL (jiwonpark@ufl.edu) [H&P-05]
- 11:15 **Estimated Shelf-life of Lettuce Grown in Early and Late Season Heat Using an Accelerated Testing Methodology.** Jesse Murray^{1*}, Adrian Berry², Brianna Haynes² Christian Christensen³, Steve Sargent², and [Germán Sandoya](#)¹. ¹Everglades Research and Education Center, University of Florida, IFAS. Belle Glade, FL. ²Horticultural Sciences Department, University of Florida, IFAS. Gainesville, FL. ³Hastings Agricultural Extension Center, University of Florida, IFAS. Hastings, FL (jesse.murray@ufl.edu) [H&P-06]

B– Postharvest pathology

- 11:30 **Identifying HLB-Symptomatic and Asymptomatic Citrus Fruit Characteristics Using Deep Learning Methodologies.** Ketan Shende^{1*}, Thomas Burks², Michelle Heck³ and [Mark A. Ritenour](#)¹. ¹Indian River Research and Education Center, University of Florida, IFAS. Fort Pierce, FL. ²Agricultural and Biological Engineering, University of Florida, IFAS. Gainesville, FL ³USDA ARS Emerging Pests and Pathogens Research Unit, Ithaca, NY. (ketanshende@ufl.edu) [H&P-07]
- 11:45 **A New Strawberry Postharvest Decay Caused by *Gilbertella persicaria* in Florida and Its Control Using Cold Temperature, Gaseous ClO₂, and Thyme Oil.** Jiuxu Zhang* and [Mark A. Ritenour](#). Indian River Research and Education Center, University of Florida, IFAS. Fort Pierce, FL. (jiuxuzhang@ufl.edu) [H&P-08]
- 12:00 **Lunch**

Monday Afternoon Session

(1:10 – 2:00) Sanibel AB

1:10 **Welcome Back and Introductions**, Moshe Doron

C– Postharvest Storage and Shelf life

1:15 **Optimizing Shelf Life: Strategies for Enhancing Nutritional Value and Health Benefits.** Tie Liu^{*1}, Avninder Kaur², Gabriela María Olmedo³, Jinhe Bai³, Shinsuke Agahara². ¹Horticultural Sciences Department, University of Florida, IFAS. Gainesville, FL. ²Gulf Coast Research and Education Center, University of Florida, IFAS. Wimauma, FL. ³USDA-ARS Horticultural Research laboratory, Fort Pierce, FL. (tieliu@ufl.edu) [H&P-09]

1:30 **Postharvest storage and quality of edamame varieties in South Florida.** Vander Rocha Lacerda, You's Kertye Myrtil, Peyton Ecklund, and Xiaoying Li*. Tropical Research and Educational Center, University of Florida, IFAS. Homestead, FL. (rochalacerdav@ufl.edu) [H&P-10]

1:45 **Handling & Processing Business Meeting.** Presiding: Moshe Doron, VP; Jiuxu Zhang, VP-elect

2:00 **Adjourn**

Tuesday Morning Session

(9:50 – 12:00) Sanibel AB

9:50 **Welcome Back and Introductions**, Moshe Doron

D– Postharvest Citrus

10:00 **Effect of rootstocks and storage temperatures on quality and postharvest storage life of Florida-grown finger lime fruit (*Citrus australasica*).** Faisal Shahzad^{*1}, Tripti Vashisth², Moshe Doron³, Manjul Dutt², and Jeffrey K. Brecht³. ¹Institute of Horticultural Sciences, University of Agriculture, Faisalabad, Pakistan ²Citrus Research and Education Center, University of Florida, IFAS. Lake Alfred, FL. ³Horticultural Sciences Department, University of Florida, IFAS. Gainesville, FL. (f.shahzaduaf@gmail.com) [H&P-11]

10:15 **Postharvest changes in finger lime fruit (*Citrus australasica*, F. Muell.) during storage at chilling or non-chilling temperatures.** Moshe Doron^{*1}, Faisal Shahzad², and Jeffrey K.

- Brecht¹. ¹Horticultural Sciences Department, University of Florida, IFAS. Gainesville, FL ²Institute of Horticultural Sciences, University of Agriculture, Faisalabad, Pakistan. (moshik@ufl.edu) [H&P-12]
- 10:30 **Tree Nutrition Effects on Postharvest Fruit Quality and Shelf Life of 'Hamlin' Sweet Orange.** Mark A. Ritenour^{*1}, Alisheikh A. Atta², Cuifeng Hu¹, Audrey Beany¹, and Davie M. Kadyampakeni². ¹Indian River Research and Education Center, University of Florida, IFAS. Fort Pierce, FL. ²Citrus Research and Education Center, University of Florida, IFAS. Lake Alfred, FL, (cuifenghu@ufl.edu) [H&P-13]
- 10:45 **Postharvest Performance of 'Marathon' Mandarin Fruit After Degreening, Washing and Waxing.** Cuifeng Hu^{1*}, Fred G. Gmitter², John Chater², Jude Grosser², and Mark A. Ritenour¹. ¹Indian River Research and Education Center, University of Florida, IFAS. Fort Pierce, FL ²Citrus Research and Education Center, University of Florida, IFAS. Lake Alfred, FL. (ritenour@ufl.edu) [H&P-14]
- 11:00 **Postharvest hypoxia and anoxia stresses on bioactive compounds and total antioxidant activity of 'Moro' blood orange fruit.** Fariborz Habibi^{*}, Ali Sarkhosh, Jeffrey K. Brecht. Horticultural Sciences Department, University of Florida, IFAS. Gainesville FL. (fhhabibi@ufl.edu) [H&P-15]
- 11:15 **Quality of Three Mandarin (*Citrus reticulata* Blanco) Cultivars When Grafted Onto Commercial Rootstocks.** Ramadhani O. Majubwa¹, Steven A. Sargent^{2*}, José X. Chaparro², Charles A. Sims³, Mark A. Ritenour³ and Theodosy J. Msogoya¹. ¹Department of Crop Science and Horticulture, Sokoine University of Agriculture (SUA), Morogoro, Tanzania ²Horticultural Sciences Department, University of Florida, IFAS. Gainesville, FL. ³Food Science and Human Nutrition Department, University of Florida, IFAS. Gainesville, FL. ⁴Indian River Research & Education Center, University of Florida, IFAS. Fort Pierce, FL. (sasa@ufl.edu) [H&P-16]

E– Postharvest Storage and Shelf life

- 11:30 **Hydrocooling with or without chlorine and storage temperature effects on green snap bean discoloration.** Jeffrey K. Brecht^{*}, Kathy A. Bergsma, and Steven A. Sargent. ¹Horticultural Sciences Department, University of Florida, IFAS. Gainesville, FL. (jkbrecht@ufl.edu) [H&P-17]
- 11:45 **Tracking Postharvest Quality of Caladium (*Caladium x hortulanum*) Tubers and Plants after Extended Refrigerated Stor**

Handling & Processing Section

age. Adrian Berry^{1*}, Steven Sargent¹, Gasselle Cordova², Zhanao Deng² and Robert Hartman³. ¹Horticultural Sciences Department, University of Florida, IFAS. Gainesville, FL. ²Gulf Coast Research and Education Center, University of Florida, IFAS. Wimauma, FL. ³Classic Caladiums, LLC, Avon Park, FL. (aberry@ufl.edu) [H&P-18]

12:00 **End of Sessions.** See you next year at the 139th FSHS annual meeting! (Jacksonville, FL)

Krome Memorial Institute

Jeff Wasielewski
Presiding
sflhort@ufl.edu

Monday Morning Session

(9:50 – 12:00) Captiva AB

9:50 **Welcome and Introductions**, Jeff Wasielewski

A– Tropical/Subtropical Fruits

- 10:00 **Papaya Ringspot Virus Diversity in Florida and its Virulence on Diverse Papaya Germplasm.** Jugpreet Singh^{*}, Sumit Jangra, and Jonathan Crane. Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL, 33030 (jugpreetsingh@ufl.edu) [KRO-01]
- 10:15 **Jaboticaba, *Plinia* spp., can be an excellent choice as a potted tree, or specimen tree in central Florida.** Craig A. Campbell^{*1}, and Richard J. Campbell², ¹Retired Horticulturist, Winter Garden, FL. ²Ciruli Brothers, LLC, Homestead, FL (craigc96@gmail.com) [KRO-02]
- 10:30 **Usage, Benefits, and Pitfalls of the Miami-Dade County Tropical Fruit Learning Grove.** Jeff Wasielewski^{*}, University of Florida, IFAS Extension, Miami-Dade County Homestead, FL (sflhort@ufl.edu) [KRO-03]
- 10:45 **Optimizing In Vitro Methodologies Through Literature-Derived Data Synthesis: Case Studies in Sugarcane (*Saccharum officinarum*) and Mango (*Mangifera indica*).** Andrew Kunik^{*}, and Wagner Vendrame. Environmental Horticulture Department, University of Florida, IFAS, Gainesville, FL (akunik@ufl.edu) [KRO-04]
- 11:00 **Progress Towards Finding a Sustainable Solution for Laurel Wilt Disease Affecting Commercial Avocado Production.** Ro-mina Gazis¹, Monica Navia-Urrutia^{1,2}, Jorge Díaz-Valderrama^{*1,3}, Sara Salcedo-Sarmiento¹, Maria Lugo-Duque¹, and Jonathan

Krome Memorial Institute

Crane^{*1}, ¹Tropical Research and Education Center, University of Florida, IFAS, ²Everglades Research and Education Center, University of Florida, IFAS, Belle Glade, FL. ³Facultad de Ingeniería y Ciencias Agrarias, Universidad Nacional Toribio Rodríguez de Mendoza de Amazonas, Perú (jhcr@ufl.edu) [KRO-05]

11:15 **Interspecific *Mangifera* hybrids for boutique mango orchards in South Florida.** Richard J. Campbell* and Thiago de Botton Campbell, Mango Men Homestead, LLC, Homestead, FL (rcampbell@cirulibrothers.com) [KRO-06]

11:30 **Is Dragon Fruit a Sustainable Industry for Florida? An Assessment of Five Years of Research and Extension on Disease Management.** Romina Gazis¹, Shouan Zhang¹, Pamela Dutra^{1,2}, Carlos Sendoya¹, Jeff Wasielewski³, and Jonathan Crane^{*1}. ¹Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ²Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. ³University of Florida, IFAS Extension Miami-Dade County (jhcr@ufl.edu) [KRO-7]

11:45 **South Florida Performance Evaluation of Selected Avocado Cultivars.** Jonathan Crane* and Ray Melcon. Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL (jhcr@ufl.edu) [KRO-8]

12:00 **Lunch**

Monday Afternoon Session

(1:15 – 3:45) Captiva AB

1:15 **Welcome Back and Introductions,** Jeff Wasielewski

1:20 **Krome Memorial Institute Business Meeting.** Presiding Jeff Wasielewski, VP and Lisa Strange, VP-Elect

B– Blackberry, Blueberry, and Raspberry

1:30 **Progress Towards Determining Nitrogen Fertilizer BMPs for Commercial Blueberry Production in Florida.** Hanna I. de Jesus*, Gerardo H. Nunez, and Jeffrey G. Williamson. Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL 32611 (hannaibiapinadej@ufl.edu) [KRO-09]

1:45 **Progress in Raspberry Breeding and Variety Trials at UF/IFAS/GCREC.** Zhanao Deng^{*1}, Mohammed Fetouh^{1,2}, Marcus V. Marin¹,

and Natalia Peres¹. ¹Gulf Coast Research and Education Center, University of Florida, IFAS, Wimauma, FL, ²Department of Horticulture, Faculty of Agriculture, Tanta University, Tanta, Egypt (zdeng@ufl.edu) [KRO-10]

- 2:00 **Identifying Low-Chill Blackberry Cultivars for Optimal Performance in Florida.** Nurjahan Sriti^{*1}, Zhanao Deng², Steven Sargent¹, Jeffrey Williamson¹, and [Guodong Liu](#)¹. ¹Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL. ²Gulf Coast Research and Education Center, University of Florida, IFAS, Wimauma, FL (n.sriti@ufl.edu) [KRO-11]
- 2:15 **Progress in Blackberry Breeding and Variety Trials at UF/IFAS/GCREC.** [Zhanao Deng](#)^{*1}, Mariel Gallardo¹, and Mohammed Fe-touh^{1,2}. ¹ Gulf Coast Research and Education Center, University of Florida, IFAS, Wimauma, FL, ²Department of Horticulture, Faculty of Agriculture, Tanta University, Tanta, Egypt (zdeng@ufl.edu) [KRO-12]
- 2:30 **Assessing Black and White Groundcovers on Blackberry Production in Florida.** Nurjahan Sriti^{*1}, Zhanao Deng², Steven Sargent¹, Jeffrey Williamson¹, and [Guodong Liu](#)¹. Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL. ¹Gulf Coast Research and Education Center, University of Florida, IFAS, Wimauma, FL (**Student Oral Presentation Competition Entry**) (n.sriti@ufl.edu) [KRO-13]

C– Peaches and Grapes

- 2:45 **Developing a Guideline on NPK Application Rates for Low-chill Peach Production in the Subtropical Climate of Florida.** Ali Sarkhosh^{*}, Fariborz Habibi, and Uzman Khalil. Horticultural Sciences Department, University of Florida, IFAS, Gainesville FL 32611, USA (sarkhosha@ufl.edu) [KRO-14]
- 3:00 **Fruiting-wall Training System for Production of Low-Chill Peaches in Florida.** Jonathan Clavijo-Herrera and Ali Sarkhosh. Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL 32611 (sarkhosha@ufl.edu) [KRO-15]
- 3:15 **Evaluation of Pierce's disease resistant wine grapes (*Vitis vinifera*) cultivars under the climate of Florida.** Ali Sarkhosh^{*}, Uzman Khalil and Fariborz Habibi. Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL 32611 (sarkhosha@ufl.edu) [KRO-16]
- 3:30 **FAMU Muscadine Breeding Line 'D8-7-1' Shows High Industri-**

Krome Memorial Institute

al Potential. Zhongbo Ren*, Violet Tsoleva, and Islam El-Sharkawy. Center for Viticulture & Small Fruit Research, College of Agriculture and Food Sciences, Florida A&M University, Tallahassee, FL 32317 (zhongbo.ren@famu.edu) [KRO-17]

3:45 **Adjourn**

Tuesday Morning Session

(9:50 – 12:00) Captiva AB

9:50 **Welcome Back and Introductions**, Jeff Wasielewski

D– Passion Fruit

10:00 **Exploring the relationship between fruit size and its quality attributes in passionfruit (*Passiflora edulis*) cultivar Purple Possum.** Uzman Khalil*, Fariborz Habibi and Ali Sarkhosh. Horticultural Sciences Department. University of Florida, IFAS, Gainesville, FL 326011 (ukhalil.chaudhry@ufl.edu) [KRO-18]

10:15 **Yellow passionfruit (*Passiflora edulis f. flavicarpa*) as a companion crop in South Florida.** Richard J. Campbell* and Cecilia de Botton Campbell. Mango Men Homestead, LLC, Homestead, FL (rcampbell@cirulibrothers.com) [KRO-19]

10:30 **Comparing Sensory Evaluation of Passion fruit Varieties.** Mark Bailey*. University of Florida, IFAS, Extension Marion County, Ocala, FL (ironhill@ufl.edu) [KRO-20]

E – Pistachio and Olives

10:45 **Evaluating the Viability of Olive Cultivation in Florida: Insights from a Two-Year Statewide Study.** Audrey H. Beany^{1*}, John-Paul Fox¹, Davie M. Kadyampakeni², Michael O'Hara Garcia³, Alejandro Bolques⁴, and Lorenzo Rossi¹. ¹Indian River Research and Education Center, University of Florida, IFAS, Fort Pierce, FL. ²Soil, Water and Ecosystem Sciences Department, University of Florida, IFAS, Gainesville, FL 32611. ³Florida Olive Council, LAA, Alachua, FL. ⁴Florida A&M University (ahbeany@ufl.edu) [KRO-21]

11:00 **Root proteomics and protein interaction studies showed shift in biosynthetic pathways to different salt stress levels in *Pistachio*.** Mohammad Akbari, and Ramesh Katam*, ¹Department of Biological Sciences, Florida A&M University, Tallahassee FL. (ramesh.katam@famu.edu) [KRO-22]

F– Marketing and Economics

- 11:15 **Data-Driven Simulation to Forecast Economic Outcomes and Guide Fertilizer Decisions.** Victor Contreras*¹, Kimberly L. Morgan¹ and Weizhe Wang². ¹Southwest Florida Research and Education Center, University of Florida, IFAS, Immokalee, FL. ²Food and Resource Economics Department, University of Florida, IFAS, Gainesville, FL (vjosue.contreras@ufl.edu) [KRO-23]
- 11:30 **Values Based Marketing and Supply Chains for Florida Produce Industry.** French Price* and Kimberly L. Morgan. Southwest Florida Research and Education Center, University of Florida, IFAS, Immokalee, FL (e.price@ufl.edu) [KRO-24]
- 11:45 **The Economics of Markets and Marketing Risk Analytics for Florida Fresh Produce Growers.** Kimberly L. Morgan*. Southwest Florida Research and Education Center, University of Florida, IFAS, Immokalee, FL (kimorgan@ufl.edu) [KRO-25]
- 12:00 **End of session.** See you next year for the 139th FSHS Annual Meeting! (Jacksonville, FL)

Ornamental Garden and Landscape

Kara Krueger
Presiding
karackrueger@ufl.edu

Monday Morning Session

(9:50 AM – 12:00 PM) Pine A-C

9:50 **Welcome and Introductions**, Kara Krueger

A– Plant Production

10:00 **Compost Suitability in Ornamental Container Production Demonstrated with Gardenia and Crape Myrtle.** Qingchun Liu^{1*} and Shawn T. Steed^{2*}. ¹Miami-Dade County Extension, University of Florida, IFAS, Homestead, FL; ²Multi-County Extension, University of Florida, IFAS, Seffner, FL. (q.lin1@ufl.edu, ststeed@ufl.edu). [OGL-01]

10:15 **Pittosporum, Loropetalum, and Abelia Growth in a Nursery Using Plastic and Fabric Containers.** Thomas Yeager^{1*} and Ted Gardner². ¹Environmental Horticulture Department, University of Florida, IFAS, Emeritus, Nursery Plant Production. ²Hibernia Nursery, FL. (yeager_t@yahoo.com). [OGL-02]

B– Best Management Practices

10:30 **Developing Optimal Nitrogen Fertilizer Recommendation for Sod Producers in Florida.** A.J. Lindsey^{1*} and J. Bryan Unruh²; ¹Environmental Horticulture Department, University of Florida, IFAS, Gainesville, FL. ²West Florida Research and Education Center, Environmental Horticulture Department, University of Florida, IFAS, Jay, FL. (alex.lindsey@ufl.edu). [OGL-03]

10:45 **Back to Basics: Publishing a Bilingual Landscaping Flipbook.** Tina McIntyre^{1*}, Hannah Eason², Morgan Pinkerton¹, Tatiana

Sanchez-Jones³; ¹Seminole County Extension, University of Florida, IFAS, Sanford, FL; ²Orange County Extension, University of Florida, IFAS, Orlando, FL; ³Alachua County Extension, University of Florida, IFAS, Newberry, FL. (k.mcintyre@ufl.edu). [OGL-04]

C– Plant Breeding

- 11:00 **Two New Caladium Cultivars ‘Juicy Gossip’ and ‘Passion Punch’.** Zhanao Deng^{*}, Natalia Peres, and Johan Desaegeer. Gulf Coast Research and Education Center, University of Florida, IFAS, Wimauma, FL (zdeng@ufl.edu). [OGL-05]

D– Pests

- 11:15 **Identifying Drivers of Invasive Scale Insect Density and Distribution on Palms in Florida Landscapes Especially the Phantasma Scale, Fiorinia Phantasma.** Adam Dale¹, Andrew Mongue¹, Ryan Klein², Henry Mayer^{3*}, Michael Orfanedes⁴, and Erin Powell⁵. ¹Entomology and Nematology Department, University of Florida, IFAS, Gainesville, FL; ²Environmental Horticulture Department, University of Florida, IFAS, Gainesville, FL; ³Miami-Dade County Extension Service, University of Florida, IFAS, Homestead, FL; ⁴Broward County Extension Service, University of Florida, IFAS, Davie, FL; ⁵Florida Department of Agriculture and Consumer Services (FDACS) – DPI, Gainesville, FL. (hmayer@ufl.edu). [OGL-06]

E– Resilience

- 11:30 **Effects of Paclobutrazol on Salinity Tolerance of Bald Cypress, *Taxodium distichum*.** A.D. Ali^{*}. The Davey Tree Expert Company, Davey Institute. (ad.ali@davey.com). [OGL-07]
- 11:45 **Ornamental Garden & Landscaping Business Meeting.**
Presiding – Kara Krueger, VP, and Julio Perez, VP - Elect
- 12:00 **Lunch**

Monday Afternoon Session

(1:20 PM – 4:15) Pine A-C

- 1:20 **Welcome Back and Introductions,** Kara Krueger

F– Student Presentations

- 1:30 **Testing Infectivity of a *Pythium aphanidermatum* Strain for Use in Hydroponic Research.** Heather Buss^{1*}, Dharti Thakulla¹, Jeffrey A. Rollins² and Paul R. Fisher^{1*}; ¹Environmental Horticulture Department, University of Florida, IFAS, Gainesville, FL; ²Department of Plant Pathology, University of Florida, IFAS, Gainesville FL. **(Student Oral Presentation Competition Entry)**
(heatherbuss@ufl.edu). [OGL-08]
- 1:45 **Enhancing Lawn Health and Water Efficiency with Compost Topdressing.** Jaspal Singh^{1*}, Victor Abarca¹, Natasha Restuccia¹, Eban Bean², and A.J. Lindsey¹; ¹Environmental Horticulture Department, University of Florida, IFAS, Gainesville, FL; ²Agricultural and Biological Engineering Department, University of Florida, IFAS, Gainesville, FL. (jaspalsingh@ufl.edu). [OGL-09]
- 2:00 **Production Recommendations for Philodendron ‘Moonlight’ Grown in a Central Florida Greenhouse.** Rory E. Dunn^{1*}, Krystin Perry¹, Madeleine Tenny¹, John L. Griffis, Jr.¹, Malcolm M. Manners², Senthil B. Girimurugan¹; ¹Ecology and Environmental Studies Department, Florida Gulf Coast University, Fort Myers, FL; ²Department of Horticultural Science, Florida Southern College, Lakeland, FL. (redunn@eagle.fgcu.edu). [OGL-10]
- 2:15 **Enhancing Vanilla Indoor Production Through Nitrogen and Light Management.** Alejandra Taco^{*}, Jesse Potts, Pamela Moon, Yuncong Li, Bruce Schaffer, and Xingbo Wu. Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. (alejandr.tacovil@ufl.edu). [OGL-11]
- 2:30 **Optimization of Parameters in Biocoupler™ Temporary Immersion Bioreactors for the Micropropagation of *Vanilla planifolia*.** Autumn Reeves^{1*}, Mariana de Souza¹, David Beleski¹, Michele Reis², and Wagner Vendrame¹; ¹Environmental Horticulture Department, University of Florida, IFAS, Gainesville, FL; ²Departamento de Agricultura, Universidade Federal de Lavras, Lavras, MG, Brazil. (Autumnreeves@ufl.edu). [OGL-12]
- 2:45 **Evaluation of Biocoupler™ Temporary Immersion Bioreactor for the Micropropagation of *Vanilla planifolia*.** Mariana Souza^{1*}, Autumn Reeves¹, David Beleski¹, Michele Reis², Wagner Vendrame¹; ¹Environmental Horticulture Department, University of Florida, IFAS, Gainesville, FL; ²Departamento de Agricultura,

Universidade Federal de Lavras, Lavras, MG,
Brazil. (m.cruzesouza@ufl.edu). [OGL-13]

G– Residential Landscapes

- 3:00 **Expanding Home Landscapes with Alternative Fruit-Bearing Plants.** Julio Perez^{1*} and Judy Jean²; ¹Putnam County Extension, University of Florida, IFAS, Palatka, FL; ²Flagler County Extension, University of Florida, IFAS, Bunnell, FL. (pjulio@ufl.edu). [OGL-14]
- 3:15 **Addressing New Home Landscape Challenges with a Florida-Friendly Inspiration Demonstration Garden.** Cynthia Nazario-Leary^{*} and Mary Ann Harris. Alachua County Extension, University of Florida, IFAS, Newberry, FL. (cnazarioleary@ufl.edu). [OGL-15]
- 3:30 **A Published EDIS Series: Florida-Friendly Edible Landscaping.** Tina McIntyre^{1*}, and Tia Silvasy²; ¹Seminole County Extension, University of Florida, IFAS, Sanford, FL; ²Hillsborough County Extension, University of Florida, IFAS, Seffner, FL. (k.mcintyre@ufl.edu). [OGL-16]
- 3:45 **Master Gardener Volunteers Amplify Impacts of the Great Southeast Pollinator Census Citizens Science Program.** Lisa Strange^{1*}, Jeremy Rhoden^{2*}, Tiare Silvasy³, Brittany Council-Morton⁴, Cynthia Nazario-Leary^{5*}, Beth Bolles⁶, Mark Tancig⁷, Julie McConnell⁸; ¹Taylor County Extension, University of Florida, IFAS, Perry, FL; ²Marion County Extension, University of Florida IFAS, Ocala, FL; ³Hillsborough County Extension, University of Florida, IFAS, Seffner, FL; ⁴Volusia County Extension, University of Florida, IFAS, Deland, FL; ⁵Alachua County Extension University of Florida, IFAS, Newberry, FL; ⁶Escambia County Extension, University of Florida, IFAS, Cantonment, FL; ⁷Leon County Extension, University of Florida, IFAS, Tallahassee, FL; ⁸Washington County Extension, University of Florida, IFAS, Chipley, FL. (lstrange@ufl.edu). [OGL-17]

H– Propagation

- 4:00 **In Vitro Production Methods for an Endangered Florida Endemic Cactus.** Reed Gilmore^{*} and John L. Griffis Jr.; Ecology and Environmental Studies Department, Florida Gulf Coast University, Fort Myers, FL. (rdgilmore0671@eagle.fgcu.edu). [OGL-18]
- 4:15 **End of sessions.** See you next year for the 139th FSHS annual meeting! (Jacksonville, FL)

Vegetable Section

Wael Elwakil
Presiding
wael.elwakil@ufl.edu

Monday Morning Session

(9:50 – 12:00) Calusa F

9:50 **Welcome and Introductions**, Wael Elwakil.

A– Nutrient Management

- 10:00 **Assessing the Effects of Phosphorus and Solid Oxygen Fertilization on Potato (*Solanum tuberosum* L.) Growth, Yield, and Nutrient Uptake: A Two-Year Field Study.** M. J. I. Shohag*, Elena Máximo Salgado, and Guodong (David) Liu. Horticultural Sciences Department, University of Florida, IFAS Gainesville, FL. (guodong@ufl.edu) [V-01]
- 10:15 **Phosphorus Fertilizer Application Threshold for Snap Bean (*Phaseolus vulgaris* L.) Based on Plant Nutritional Requirement in Spodosol.** M. J. I. Shohag*, Elena Máximo Salgado, and Guodong (David) Liu. Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL. (guodong@ufl.edu) [V-02]
- 10:30 **Optimizing Phosphorus Rates for Snap Bean Production in Calcareous Soils.** Girma W. Awoke^{1*}, Mulatu L. Berihun¹, Getachew A. Kefelegn¹, Saddam H. Wahla¹, Niguss S. Hailegnaw², Haimanote K. Bayabil¹. ¹Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ²Everglades Research and Education Center, University of Florida, IFAS, Belle Glade, FL. (hbayabil@ufl.edu) [V-03]
- 10:45 **Effect of Organic Compost Material on Basil Growth and Yield.** Jessie Watson^{1*}, Pavlos Tsouvaltzis¹, Michael Sipos², and Sotirios

Tasioulas¹. ¹Southwest Research and Education Center, University of Florida, IFAS, Immokalee, FL, ² Extension University of Florida, IFAS, Collier County, Naples, FL. (jwatson84@ufl.edu) [V-04]

- 11:00 **Effects of Biochar and Cover Crops on Yield of Collard Greens (*Brassica oleracea*).** Alejandro Bolques^{1*}, Lucy Ngatia², Gilbert Queeley¹, Walker Marechal², Fanny Ospina¹, and Larisner Simeon¹. ¹Research and Extension Center, Florida A&M University, Quincy, FL. ²Center for Water Resources, Florida A&M University, Tallahassee, FL. (alejandrobolques@famu.edu) [V-05]
- 11:15 **Evaluating the Combined Effects of Irrigation and Nitrogen Fertilization on Potato Growth, Yield, and Water and Nitrogen Use Efficiency Under Sprinkler Irrigation in Florida.** Vivek Sharma*, and Varshitha Prasanna. Agricultural and Biological Engineering Department, University of Florida, IFAS, Gainesville, FL. (vsharma1@ufl.edu) [V-06]

B– Crop Production

- 11:30 **Purple Sweet Potato as a Source of Health Promoting Food Colorants.** Bala Rathinasabapathi*, Michale Harrington, Zach Black, and Jingwei Fu. Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL. (brath@ufl.edu) [V-07]
- 11:45 **Watermelon Fruit Detection for Automated Yield Mapping.** Arnold W. Schumann^{1*}, and Nathan S. Boyd². ¹Citrus Research and Education Center, University of Florida, IFAS, Lake Alfred, FL. ²Gulf Coast Research and Education Center, University of Florida, IFAS, Wimauma, FL. (schumaw@ufl.edu) [V-08]
- 12:00 **Lunch**

Monday Afternoon Session

(1:20 – 5:00) Calusa F

- 1:20 **Welcome Back and Introductions.** Wael Elwakil

B– Crop Production (Continued)

- 1:30 **Impact of Late-Season Heat on Phytochemical Content of Lettuce Grown in Two Florida Production Systems.** Jesse Murray^{1*}, Christian Christensen², and Germán Sandoya¹. ¹Everglades

Vegetable Section

Research and Education Center, University of Florida, IFAS, Belle Glade, FL. ² Hastings Agricultural Extension Center, University of Florida, IFAS, Hastings, FL. (gsandoyamiranda@ufl.edu) [V-09]

- 1:45 **Vegetable Section Business Meeting.** Presiding Wael Elwakil, VP and Donna Arnold, VP-elect

C– Student Presentations

- 2:00 **Exploring Synergy Between Pre-Emergence Herbicides to Enhance Nutsedge Control in Plastic Mulched Tomato Beds.** Nithin Batthula*, Pavlos Tsouvaltzis, and Ramdas Kanissery. Southwest Florida Research and Education Center, University of Florida, IFAS, Immokalee, FL. (rkanissery@ufl.edu) [V-10]
- 2:15 **A Case for Breeding Heat-Tolerant Broccoli.** Melanie Cabrera*, and Carlos Messina. Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL. (melanie.cabrera@ufl.edu) [V-11]
- 2:30 **Effectiveness of Commercial Biostimulants in Enhancing Tomato Production and Fruit Quality.** Bryan Merlos Osorio*, Pavlos Tsouvaltzis, Watson Jessie, and Tasioulas Sotirios. Southwest Florida Research and Education Center, University of Florida, IFAS, Immokalee, FL. (bmerlososorio@ufl.edu) [V-12]
- 2:45 **Afternoon Break**
- 3:00 **Battling Whiteflies in Cucurbita Crops – Exploring Host Resistance for Cultivar Development.** Sudeep Adhikari*, Perna Sabharwal, Simranjot Kaur, Yuqing Fu, and Geoffrey Meru. Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. **(Student Oral Presentation Competition Entry)** (gmeru@ufl.edu) [V-13]
- 3:15 **The Effect of Phosphorus Fertilizer Rates in Romaine and Iceberg Lettuce in Histosol Soils.** Jairo Arcos*, Shabnam Sadeghibaniani, Lidysce Andrea Mata, and Germán Sandoya. Everglades Research and Education Center, University of Florida, IFAS, Belle Glade, FL. **(Student Oral Presentation Competition Entry)** (jarcosjaramillo@ufl.edu) [V-14]
- 3:30 **Assessing Warm Season Cover Crops as Carbon Sources for Anaerobic Soil Disinfestation in Organic Broccoli Production.** Lucas Anrecio*, and Xin Zhao. Horticultural Sciences Department,

University of Florida, IFAS, Gainesville, FL. **(Student Oral Presentation Competition Entry)** (zxin@ufl.edu) [V-15]

- 3:45 **The Extremely Needed Heat Tolerance in Lettuce for Cultivation in Controlled Environment Agriculture.** Lidysce Mata Cantarero^{1*}, Robert C. Hochmuth², Wanda Laughlin², Ying Zhang³, and Germán V. Sandoya¹. ¹Everglades Research and Education Center, University of Florida, IFAS, Belle Glade, FL. ²North Florida Research and Education Center, Suwannee-Valley, University of Florida, IFAS, Live Oak, FL. ³Agricultural and Biological Engineering Department, University of Florida, IFAS, Gainesville, FL. **(Student Oral Presentation Competition Entry)** (gsandoyamiranda@ufl.edu) [V-16]
- 4:00 **Evaluating Edamame Commercial Varieties for Seasonal Adaptation in South Florida.** You's Kertye Myrtil*, Vander Rocha Lac-erda, and Xiaoying Li. Tropical Research and Educational Center, University of Florida, IFAS, Homestead, FL. (xiaoying.li@ufl.edu) **(Student Oral Presentation Competition Entry)** [V-17]
- 4:15 **On the Nature of *Me3*, The R Gene Responsible for *Meloidogyne* spp. Resistance in *Capsicum annuum*.** Dominick Padilla^{1*}, Jingwei Fu¹, Eduardo C. Vallejos¹, Johan Desaegeer², Donald W. Dickson², and Bala Rathinasabapathi¹. ¹Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL. ²Entomology and Nematology Department, University of Florida, IFAS, Gainesville, FL. **(Student Oral Presentation Competition Entry)** (brath@ufl.edu) [V-18]
- 4:30 **The Role of pH and Micronutrient Composition Around the Rootzone on Pepper Seedling Hydroponic Production Using a Floating System.** Sotirios Tasioulas^{1*}, Jessie Watson¹, Dimitrios Kasampalis², and Pavlos Tsouvaltzis¹. ¹Southwest Florida Research and Education Center, University of Florida, IFAS, Immokalee, FL. ²Department of Horticulture, Aristotle University of Thessaloniki, Thessaloniki, Greece. **(Student Oral Presentation Competition Entry)** (tasioulas.s@ufl.edu) [V-19]
- 4:45 **Lettuce Tolerance to Pendimethalin on Organic Soil.** Walter Wong*, and Calvin Odero. Everglades Research and Education Center, University of Florida, IFAS, Belle Glade, FL. **(Student Oral Presentation Competition Entry)** (dcodero@ufl.edu) [V-20]
- 5:00 **Adjourn**

Tuesday Morning Session

(9:50 – 12:00) Calusa F

9:50 **Welcome Back and Introductions**, Wael Elwakil.

D– Pest Management

- 10:00 **Tomato Resistant Variety Plays a Vital Role to Mitigate the Yield Loss.** Qingren Wang^{*}. University of Florida, IFAS Extension, Miami-Dade County, Homestead, FL. (qrwang@ufl.edu) [V-21]
- 10:15 **Breeding for Disease Resistance in Squash.** Geoffrey Meru^{1*}, Yuqing Fu¹, Perna Sabharwal¹, Shallu Thakur¹, Sudeep Adhikari¹, Simranjot Kaur¹, Vincent N. Michael¹, and Swati Shrestha^{1,2}. ¹Tropical Research and Education Center, University of Florida, IFAS, Homestead, FL. ²Plant and Soil Sciences Department, Oklahoma State University, Stillwater, OK. (gmeru@ufl.edu) [V-22]
- 10:30 **Persistence and Behavior of Pre-emergence Herbicides in Plastic-Mulched Vegetable Beds.** Isabela Figueiredo de Oliveira^{1*}, Nathan Boyd², Ramdas Kaniserry¹. ¹Southwest Florida Research and Education Center, Immokalee, FL. ²Gulf Coast Research and Education Center, University of Florida, IFAS, Wimauma, FL. (rkaniserry@ufl.edu) [V-23]
- 10:45 **Weed Control in Celery with Pyroxasulfone in Organic Soils.** Calvin Odero^{1*}, and Anna Mészáros². ¹Everglades Research and Education Center, University of Florida IFAS, Belle Glade, FL. ²University of Florida, IFAS Extension, Palm Beach County, West Palm Beach, FL. (dcodero@ufl.edu) [V-24]
- 11:00 **Review of New Reduced-Risk Synthetic Nematicide Experiments in Florida Plasticulture.** Johan Desaeger^{1*}, Hung Bui¹, David Moreira¹, Justin Carter¹, and Wael Elwakil². ¹Gulf Coast Research and Education Center, University of Florida, IFAS, Wimauma, FL. ²University of Florida, IFAS Extension, Hillsborough County, Seffner, FL. (jad@ufl.edu) [V-25]
- 11:15 **Continued Extension and Research Program for *Thrips parvispinus*, A Pest of Pepper in Florida.** Anna Mészáros^{1*}, Julien M. Beuzelin², De-Fen Mou², Adrian Chavez². ¹University of Florida, IFAS Extension, Palm Beach County, West Palm Beach, FL. ²Ever-

glades Research and Education Center, University of Florida, IFAS
Belle Glade, FL. (ameszaros@ufl.edu) [V-26]

- 11:30 **Biology and Management of a Weevil Attacking Apiaceous Crops in Florida.** Julien Beuzelin^{1*}, Hayden Mickley¹, Anna Mészáros². ¹Everglades Research and Education Center, University of Florida IFAS, Belle Glade, FL ²University of Florida, IFAS Extension, Palm Beach County, West Palm Beach, FL. (jbeuzelin@ufl.edu) [V-27]
- 11:45 **Stakeholder Directed Research: Large-Scale On-Farm Whitefly Trials.** Craig Frey^{*}, and Meghan Foos. University of Florida, IFAS Extension, Hendry County, LaBelle, FL. (craigfrey@ufl.edu) [V-28]
- 12:00 **End of Session.** See you next year for the 139th FSHS annual meeting! (Jacksonville, FL)

Best Management Practices

Monday Afternoon Session

(2:00 to 5:15 pm) Sanibel AB

“Renaissance of Nutrient Management Research in Florida – Update”

Organizer: Michael Dukes and Lisa Hickey (mddukes@ufl.edu; li-sa.hickey@ufl.edu)

2:00 **UF/IFAS Nutrient Management Program Update.** Michael Dukes^{*} and Bernard Cardenas. Center for Land Use Efficiency, University of Florida IFAS, Gainesville, FL. (mddukes@ufl.edu) [BMP-01]

A- Student Presentations

2:15 **Assessing Potato Yield Response to Phosphorus Fertilizer in Soils with High Phosphorus Legacy.** Judyson M. Oliveira^{1*}, Ester C. Ricken¹, Bernardo A. Silva¹, Lincoln Zotarelli¹, Mark W. Clark², Sandra Guzman³, and Gerardo Nunez¹. ¹Horticultural Sciences Department, University of Florida IFAS, Gainesville, FL. ²Soil, Water and Ecosystem Sciences Department, University of Florida IFAS, Gainesville, FL. ³Agricultural and Biological Engineering Department, University of Florida IFAS, Gainesville, FL. (judyson.dematoso@ufl.edu) [BMP-02]

B- General BMP

2:30 **Optimizing Phosphorus Fertilizer Practices for Potatoes: Evaluating Sources, and Timing of Application.** Ester Ricken^{1*}, Judyson Oliveira¹, Lincoln Zotarelli¹, Edzard van Santen², Vimala Nair³, and Lakesh Sharma³. ¹Horticultural Sciences Department, University of Florida IFAS, Gainesville, FL. ²Agronomy Department, University of Florida IFAS, Gainesville, FL. ³Soil, Water and Ecosystem Department, University of Florida IFAS, Gainesville, FL. (ester.ricken@ufl.edu) [BMP-3]

2:45 **Computer Modeling to Support Best Management Practices for Vegetable Production in Florida.** Henrique

Boriolo Dias^{1*}, Kenneth J. Boote¹, Lincoln Zotarelli², and Gerrit Hoogenboom¹. ¹Department of Agricultural and Biological Engineering. University of Florida IFAS, Gainesville, FL. ²Horticultural Sciences Department. University of Florida IFAS, Gainesville, FL. (henrique.boriolo@ufl.edu) [BMP-4]

C– Vegetables

- 3:00 **Optimizing Phosphorus Rates for Different Lettuce Types over Two Seasons.** Shabnam Sadeghibaniani^{1*}, Jairo Arcos Jaramillo¹, Jesse Murray¹, Niguss Solomon Hailegnaw¹, Jehangir Bhadha¹, Steven Sargent² and Germán Sandoya¹. ¹Everglades Research and Education Center, University of Florida IFAS, Belle Glade, FL. ²Horticultural Sciences Department, University of Florida, Gainesville, FL. (shabnam@ufl.edu) [BMP-5]
- 3:15 **A Three-year On-farm Study to Evaluate the Phosphorus Fertilization Recommendation for Fresh-market Tomato in Central Florida.** João Cardoso de Souza Junior^{1*}, Shinsuke Agehara¹, Sanjay Shukla², Vijay Santikari², Mehran Homayounfar², Justin Schabow², Nikolay Bliznyuk³, Craig Frey⁴, Lisa Hickey⁵, and Anna Mészáros⁶. ¹Gulf Coast Research and Education Center, University of Florida IFAS, Wimauma, FL. ²Southwest Florida Research and Education Center, University of Florida IFAS, Immokalee, FL. ³Agricultural and Biological Engineering Department, University of Florida IFAS, Gainesville, FL. ⁴Hendry County Extension, University of Florida IFAS, LaBelle, FL. ⁵Southwest District Extension, University of Florida IFAS, Plant City, FL. ⁶Palm Beach County Extension, University of Florida IFAS, West Palm Beach, FL. (j.sardosodesouza@ufl.edu) [BMP-6]
- 3:30 **Hydrologic Factors Should be Considered for Developing Phosphorus Fertilizer BMPs for Fresh-market Tomato in Florida.** Vijay Santikari^{1*}, Sanjay Shukla¹, Mehran Homayounfar¹, Justin Schabow¹, Ibukun Ayankojo², Nikolay Bliznyuk³, Joao Cardoso de Souza Junior⁴, Shinsuke Agehara⁴, Craig Frey⁵, and Lisa Hickey⁶. ¹Southwest Florida Research and Education Center, University of Florida IFAS, Immokalee, FL. ²North Mississippi Research and Extension Center, Department of Plant and Soil Sciences, Mississippi State University, Verona, MS. ³Agricultural and Biological Engineering Department, University of Florida IFAS, Gainesville, FL.

⁴Gulf Coast Research & Education Center, University of Florida IFAS, Wimauma, FL. ⁵University of Florida IFAS Extension, Hendry County, LaBelle, FL. ⁶Southwest District Extension, University of Florida IFAS, Plant City, FL. (vsantikari@ufl.edu) [BMP-7]

3:45

A Three-Year On-Farm Study to Evaluate the Phosphorus Fertilization Recommendation for Potato in Central Florida. João Cardoso de Souza Junior^{1*}, [Shinsuke Agehara](#)¹, Sanjay Shukla², Vijay Santikari², Mehran Homayounfar², Justin Schabow², Nikolay Bliznyuk³, Craig Frey⁴, Lisa Hickey⁵, and Anna Mészáros⁶. ¹Gulf Coast Research and Education Center, University of Florida IFAS, Wimauma, FL. ²Southwest Florida Research and Education Center, University of Florida IFAS, Immokalee, FL. ³Agricultural and Biological Engineering Department, University of Florida IFAS, Gainesville, FL. ⁴Hendry County Extension, University of Florida IFAS, LaBelle, FL. ⁵Southwest District Extension, University of Florida IFAS, Plant City, FL. ⁶Palm Beach County Extension, University of Florida IFAS, West Palm Beach, FL. (j.sardosodesouza@ufl.edu) [BMP-8]

4:00

Phosphorus Bioavailability and Environmental Fate Associated with Potato Production in Northeast Florida. Priyanka Chandra^{1*}, Aaron Portmess¹, Ester Ricken², Lilit Vardanyan¹, Lincoln Zotarelli² and [Vimala Nair](#)¹. ¹Soil, Water, and Ecosystem Sciences Department. University of Florida IFAS, Gainesville, FL. ²Horticultural Sciences Department. University of Florida IFAS, Gainesville, FL. (priyankachandra@ufl.edu) [BMP-9]

4:15

Consideration of Hydrologic Effects on Florida Potato Yield Is Important while Evaluating Phosphorous Fertilizer BMP Recommendation. Justin E. Schabow^{1*}, Vijay P. Santikari¹, Ibukun T. Ayankojo², Mehran Homayounfar¹, João Cardoso de Souza Jr⁴, [Sanjay Shukla](#)¹, Nikolay Bliznyuk³, Shinsuke Agehara⁴, Craig Frey⁵, Anna Mészáros⁶, and Lisa Hickey⁷. ¹Southwest Florida Research and Education Center, University of Florida IFAS, Immokalee, FL. ²North Mississippi Research and Extension Center, Department of Plant and Soil Sciences, Mississippi State University, Verona, MS. ³Department of Agricultural and Biological Engineering, University of Florida, Gainesville, FL. ⁴Gulf Coast Research & Education Center, University of Florida IFAS, Wimauma, FL. ⁵Hendry

County Extension, University of Florida IFAS, LaBelle, FL.
⁶Palm Beach County Extension, University of Florida IFAS.
West Palm Beach, FL. ⁷Southwest District Extension, University of Florida IFAS. Plant City, FL. (jschabow@ufl.edu) [BMP-10]

4:30 **A Two-year On-farm Study to Evaluate the Phosphorus Fertilization Recommendation for Snap Beans in Central Florida.** João Cardoso de Souza Junior^{1*}, [Shinsuke Agehara](#)¹, Sanjay Shukla², Vijay Santikari², Mehran Homayounfar², Justin Schabow², Nikolay Bliznyuk³, Craig Frey⁴, Lisa Hickey⁵, and Anna Mészáros⁶. ¹Gulf Coast Research and Education Center, University of Florida IFAS, Wimauma, FL. ²Southwest Florida Research and Education Center, University of Florida IFAS, Immokalee, FL. ³Agricultural and Biological Engineering Department, University of Florida IFAS, Gainesville, FL. Hendry County Extension, University of Florida IFAS, LaBelle, FL. ⁵Southwest District Extension, University of Florida IFAS, Plant City, FL. ⁶Palm Beach County Extension, University of Florida IFAS, West Palm Beach, FL. (j.sardosodesouza@ufl.edu) [BMP-11]

4:45 **Evaluation of Phosphorus Fertilizer Best Management Practices for Fresh-market Bean.** Mehran Homayounfar^{1*}, [Sanjay Shukla](#)¹, Vijay Santikari¹, Justin Schabow¹, Ibukun T. Ayankoji², Shinsuke Agehara³, João Cardoso de Souza Junior³, Nikolay Bliznyuk⁴, and Lisa Hickey⁵. ¹Southwest Florida Research and Education Center, University of Florida IFAS, Immokalee, FL. ²North Mississippi Research and Extension Center, Department of Plant and Soil Sciences, Mississippi State University, Verona, MS. ³Gulf Coast Research and Education Center, University of Florida IFAS, Wimauma, FL. ⁴Department of Agricultural and Biological Engineering, University of Florida IFAS, Gainesville, FL. ⁵Southwest District Extension, University of Florida IFAS. Plant City, FL. (homayounfar@ufl.edu) [BMP-12]

5:00 **Optimizing Phosphorus Application Rates for Snap Bean Production: A Three-Year Trial Summary in North Florida.** Elena V. Maximo^{1*}, M. J. I. Shohag, and [Guodong Liu](#). Horticultural Science Department, University of Florida IFAS, Gainesville, FL. (emaximosalgado@ufl.edu) [BMP-13]

5:15 **Adjourn**

In-Service Training– Agriculture

Tuesday Afternoon Session

Hyatt Regency Coconut Point 5001 Coconut Rd., Bonita Springs,
Florida.

(1:20 PM—4:00) Captiva AB

“Introducing Emerging Crops and Enhancing Their Productivity Through Adapted Cultivars and Optimized Practices”

Organizers: Xiaoying Li (xiaoying.li@ufl.edu) and Qingren Wang
(qrwang@ufl.edu)

Agenda

- 1:20 **Welcome and Introduction, Pre-testing, Background.** Dr. Xiaoying Li, Tropical Research and Education Center, University of Florida, IFAS. Homestead, FL; Dr. Qingren Wang, University of Florida, IFAS Extension Miami-Dade County, FL
- 1:30 **Fruit Crop Diversification for Profit.** Dr. Ali Sarkhosh, Horticultural Sciences Department, University of Florida, IFAS. Gainesville, FL (sarkosha@ufl.edu)
- 1:45 **Vanilla Cultivation in Florida: An Overview of Current Practices and Future Directions.** Dr. Xingbo Wu, Tropical Research and Education Center, University of Florida, IFAS. Homestead, FL (xingbo.wu@ufl.edu)
- 2:00 **Specialty pumpkins– Opportunities for Florida and Beyond.** Dr. Geoffrey Meru, Tropical Research and Education Center, University of Florida, IFAS. Homestead, FL (gmeru@ufl.edu)
- 2:15 **Spicing Up Florida: The Boom in Ethnic Vegetable Production!** Dr. Guodong Liu, Horticultural Sciences Department, University of Florida, IFAS. Gainesville, FL (guodong@ufl.edu)
- 2:30 **Break**

- 2:40 **Florida Bamboo Production Practices: Irrigation and Fertilization.** Dr. Davie Kadyampakeni, Citrus Research and Education Center, University of Florida, IFAS. Lake Alfred, FL (dkadyampakeni@ufl.edu)
- 2:55 **The Potential of Growing Edamame in South Florida: Opportunities and Challenges.** Dr. Xiaoying Li, Tropical Research and Education Center, University of Florida, IFAS. Homestead, FL (xiaoying.li@ufl.edu)
- 3:10 **Agroecology Foundations for Plant Selection and Management.** Dr. Zachary Brym, Tropical Research and Education Center, University of Florida, IFAS. Homestead, FL (brymz@ufl.edu)
- 3:25 **Dare to be Different: Considerations for Marketing Alternative Crops.** Kimberly Morgan, Southwest Florida Research and Education Center, University of Florida, IFAS. Immokalee, FL (kimorgan@ufl.edu)
- 3:40 **Conclusion: Questions, Discussions, Post-testing.** Dr. Xiaoying Li, Tropical Research and Education Center, University of Florida, IFAS. Homestead, FL; Dr. Qingren Wang University of Florida, IFAS, Extension Miami-Dade County, FL.
- 4:00 **Adjourn**

Mango Summit



Tuesday Afternoon Session

Hyatt Regency Coconut Point, Bonita Springs, FL

(1:30 - 4:15) Calusa F and Zoom

Organizer and Moderator: **Nathalia Tello**, National Mango Board
(ntello@mango.org)

This is a free session. To register for the online session, please click the following link: https://us02web.zoom.us/webinar/register/WN_Lbe1m2KSS5GbWOJXRRp_9g#/registration

If you have any questions, please contact **Wanda Ramos**
(wramos@mango.org)

Agenda

- 1:30 **Welcome and Introductions.** Nathalia Tello, National Mango Board, Orlando, FL
- 1:40 **Mango Cultivars Suited to Boutique Mango Growing in South Florida.** Richard J Campbell*, Cecilia de Botton Campbell, Daniel de Botton Campbell, Ian de Botton Campbell and Thiago de Botton Campbell. Mango Men Homestead LLC, Homestead, FL. (rcampbell@cirulibrothers.com) [K-26]
- 2:00 **Description and Comments on Selected Mango Cultivars Developed by Gary Zill, Zill High Performance Plants.** Gary Zill¹, Jonathan Crane^{2*}, Richard Campbell³, Alexander Salazar⁴ and Jeff Wasielewski⁵. ¹Zill High Performance Plants, Lake Worth, ²Tropical Research and Education Center, Homestead, ³Mango Men, Homestead ⁴Tropical Acres Farms, West Palm Beach, and ⁵Miami-Dade County Extension, Homestead, FL. (jfrc@ufl.edu) [K-27]
- 2:20 **Exploring the World of Unripe Mangoes.** Nick Bernal*. Seasons Farm Fresh, Miami, FL. (nick@seasonsfarmfresh.com) [K-28]
- 2:40 **Mango Anthracnose Management: From Field Resistance to Cold Storage Solutions.** Luz M. Serrato Diaz*, U.S. Department of Agriculture SEA-Tropical Crops and Germplasm Research Unit, PR (Luz.Serrato@usda.gov) [K-29]
- 3:00 **Mango Propagation in South Florida.** Richard J Campbell*, Ce-

cilia de Botton Campbell, Daniel de Botton Campbell, Ian de Botton Campbell and Thiago de Botton Campbell. Mango Men Homestead LLC, Homestead, FL. (rcampbell@cirulibrothers.com) [K-30]

- 3:20 **Mango Nutritional Regimen for Florida Growers.** Alexander Salazar^{*}. Tropical Acres Farms, West Palm Beach, FL. (tropicalacresfarms@gmail.com) [K-31]
- 3:40 **Mango Fruit Drop.** Jessica M. Ryals^{*}. University of Florida, IFAS Collier County, Naples, FL. (jessicaryals@ufl.edu) [K-32]
- 4:00 **Marketing Considerations for Farmers' Markets.** Jennifer Bearden^{1*}, Matthew Lollar², ¹University of Florida, IFAS Okaloosa County, ²University of Florida, IFAS Extension, Santa Rosa County, Milton, FL. (bearden@ufl.edu) [K-33]
- 4:15 **Adjourn**

Resort Map

MAIN LEVEL

MEETING AND EVENT SPACE

POOLS AND WATERSLIDES

PUBLIC SPACE

THE LAZY RIVER

ADVENTURE POOL

ROYAL PALM COURTYARD

CYPRESS COURTYARD

BOARDWALK TO MARINA

BOARDWALK TO BEACH

PORT COCHERE

STILLWATER SPA

LOBBY

ENTRANCE FOYER

CONFERENCE FOYER

ESTERIO PRE FUNCTION

ESTERIO B

ESTERIO A

ESTERIO C

ESTERIO D

ESTERIO E

ESTERIO F

ESTERIO G

ESTERIO H

ESTERIO I

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ESTERIO JF

ESTERIO JG</

Meet your 2026 FSHS Sectional Vice-Presidents!

Agritourism: **Brittany Council**, UF/IFAS Extension. Volusia County,
bcouncil1@ufl.edu

Agroecology & Natural Resources: **Zackary Brym**, UF/IFAS Tropical Research and Education Center, brymz@ufl.edu

Citrus: **Flavia Zambon**, UF/IFAS Indian River Research and Education Center,
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Handling & Processing: **Jiuxu Zhang**, UF/IFAS Indian River Research and Education Center, jiuxuzhang@ufl.edu

Krome Memorial Institute: **Lisa Strange**, UF/IFAS Extension. Taylor County,
lstrange@ufl.edu

Ornamental, Garden, & Landscape: **Julio Perez**, UF/IFAS Extension. Putnam County, pjulio@ufl.edu

Vegetables: **Donna Arnold**, UF/IFAS Extension Gadsden County. dar-nold1@ufl.edu

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