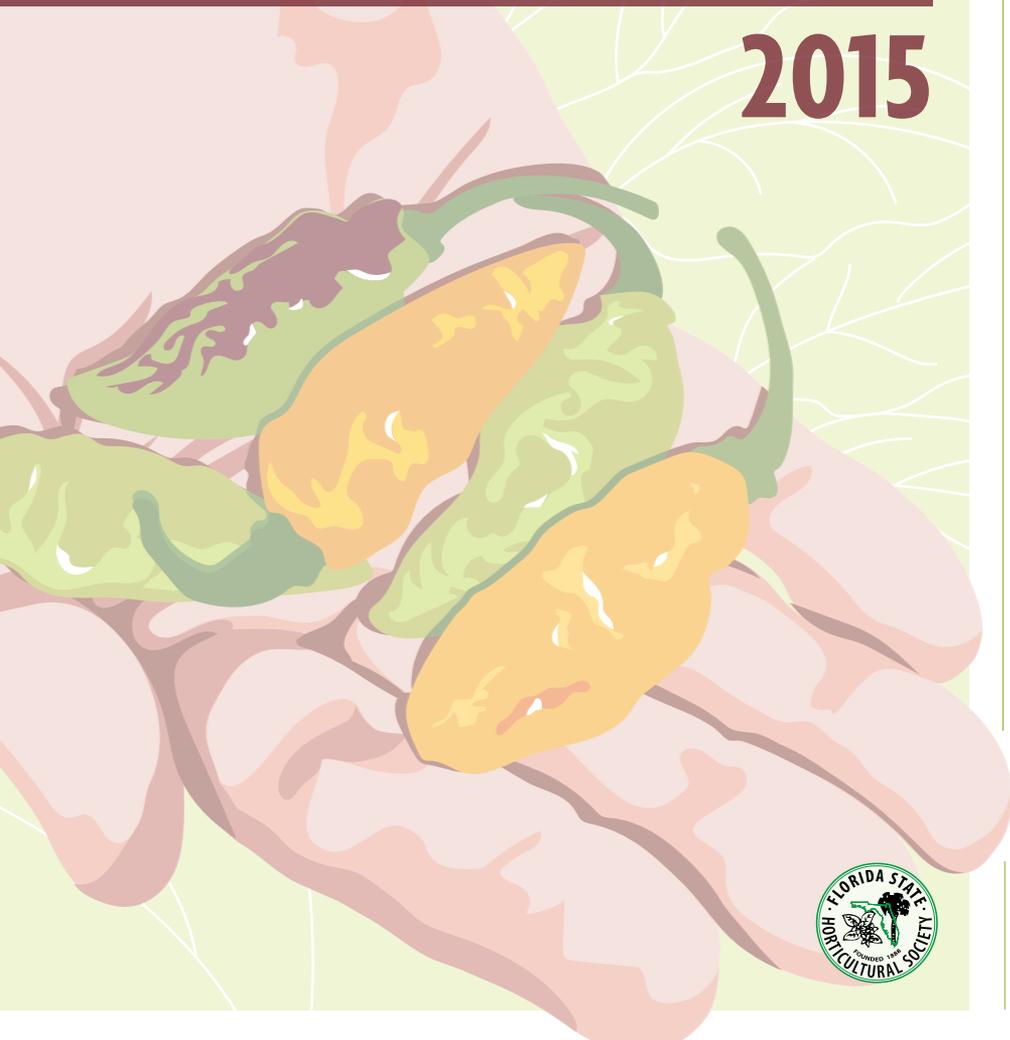


128<sup>th</sup> *Annual Meeting of the*  
**FLORIDA STATE**  
**HORTICULTURAL SOCIETY**

**2015**



# 2015 Program Contents

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## *2015 FSHS Annual Meeting Facts*

Oral Invited Presentations	4
Poster Presentations	9
Oral Contributed Presentations	121
Citrus	25
Handling and Processing	20
Krome Memorial institute	17
Natural Resources	15
Ornamental, Garden & Landscape	25
Vegetables	19
In-service Training Presentations	1
<b>Total Meeting Presentations</b>	<b>135</b>

# Program Overview

## Registration Desk Hours—Convention Registration Desk

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Sunday May 31 2:00 PM – 6:00 PM

Monday June 1 7:00 AM – 6:00 PM

Tuesday June 2 8:00 AM – 11:00 AM

## Sunday Afternoon

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10:00-2:00	ASHS Certified Horticulture Exam	Wentworth
2:00-4:00	FSSH Board of Directors Meeting	Troon
3:00-4:30	Posters Set up, <b>Erin Harlow</b>	Pre-Convence
4:30-5:30	Opening Ceremony, <b>Ed Etxeberria</b>	St. Augustine C
4:45-5:15	Speaker: <b>Rob Smith, Jr.</b> , Swampy's Florida <b>"A Humorous Look at Florida's Agriculture History"</b>	
5:15-5:30	Awards Ceremony	
6:00-7:00	Welcome Reception <i>(Included in paid conference registration)</i>	La Terrazza

## Monday Morning

---

7:00-8:00	Continental Breakfast <i>(Included in paid conference registration)</i>	St. Augustine C
8:30-9:45	General Session	St. Augustine C
8:30	Welcome & Presidential Address: <b>Steve Sargent</b> , FSSH President	
9:00	General Session Keynote Speaker: <b>Dr. Reza Ehsani</b> , Professor, UF/IFAS Citrus Research and Education Center <b>"Horticultural Applications of Unmanned Aerial Systems"</b>	
9:45	End of General Session	

### Concurrent Morning Sessions:

10:00-12:00	Citrus (p.31)	St. Augustine D
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10:00-11:30	Krome Memorial Institute (p.24)	Wentworth
10:00-11:45	Natural Resources (p.17)	Troon
10:00-12:00	Ornamental, Garden & Landscape (p.13)	St. Augustine A
10:00-12:00	Handling & Processing (p.27)	St. Augustine B
10:00-12:00	Vegetable (p.20)	St. Augustine C

## Monday Lunch

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12:00-1:20	Lunch (on your own) – at Villagio Italian Grille, The Resort Shop, or Legends Bar and Grill	
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## Monday Afternoon

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### Concurrent Afternoon Sessions:

1:30-4:30	Citrus	St. Augustine D
1:30-4:15	Krome Memorial Institute	Wentworth
1:30-4:15	Natural Resources	Troon
1:30-5:00	Ornamental, Garden & Landscape	St. Augustine A
1:45-5:00	Handling & Processing	St. Augustine B
1:30-5:00	Vegetable	St. Augustine C
5:00-6:00	Poster Session, <b>Erin Harlow</b> (See list of posters on p. 12)	Pre-Convene

## Monday Evening

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6:00-7:00	Industry Reception (Included in paid conference registration)	La Terrazza
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## Tuesday Morning

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7:00-8:15	Horticultural Crops Breakfast (Event ticket required) Invited Speaker: <b>Dr. David Dean</b> , USDA, APHIS, Plant Protection & Quarantine, Center for Plant Health Science & Technology, Palmetto, FL. “ <b>Detection and Responses to Economic Fruit Fly Outbreaks in Florida and the Caribbean</b> ”	St. Augustine A
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8:30-9:45	FSHS Annual Business Meeting: <b>Steve Sargent</b> , FSHS President Student Competition Awards, <b>Kelly Morgan</b>	St. Augustine C
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**Concurrent Morning Sessions:**

10:00-11:45	Citrus	St. Augustine D
10:00-12:00	Krome Memorial Institute	Wentworth
10:00-12:00	Ornamental, Garden & Landscape	St. Augustine C
10:00-12:00	Handling & Processing	St. Augustine B
10:00-12:00	Vegetable Tour St. Augustine Vegetable Industry	<i>Arranged</i>
12:00	All posters are taken down	Pre-Convene

**Tuesday Lunch**

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12:00-1:15	Extension Luncheon <i>(Event ticket required)</i>  Invited speaker: <b>Dr. Norm Leppa</b> , Professor and IPM Program Director, UF/IFAS Entomology and Nematology Department, Gainesville, FL. <b>“Learning about IPM and its Role in Pesticide Resistance          Management”</b>	St. Augustine A
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**Tuesday Afternoon**

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1:30-5:00	In-Service Training and Producer Workshop: <b>“Monitoring and Controlling Pesticide Resistance in          Horticultural and Agricultural Crops”</b> Co-sponsored by: FSHS and UF/IFAS Cooperative Extension Service	St. Augustine C
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**Thank you for attending the 2015 annual meeting.  
 Have a safe trip home, and see you next year at the  
 Hutchinson Island Marriott!**

# Florida State Horticultural Society 2014-2015 Board of Directors

**Chairman of the Board:** Ed Etxeberria

**President:** Steve Sargent

**President-elect:** Chris Oswalt

**Sectional Vice-presidents:**

**Citrus–** Cami Esmel McAvoy  
**Krome Memorial Institute–** Christian Miller  
**Natural Resources–** Lyn Gettys  
**Ornamental, Garden and Landscape–** Shawn Steed  
**Handling & Processing–** Michelle Danyluk  
**Vegetable–** Mary Beth Henry

**Secretary and Treasurer:** Lynn Barber

**Proceedings Editor:** Mary Lamberts & George Fitzpatrick

**Marketing Coordinator/  
Webmaster:** Mark Ritenour

**Members At-large:** Ed Stover  
Robert Adair

**Program Coordinator:** Mercy Olmstead

## 2015 Meeting Facilitators

**Meeting Coordinator:** Tracy Shawn

**Local Arrangements Coordinators:** Mike Sweat  
Liz Felter  
Keith Fuller  
Erin Harlow

**Sponsorship Coordinator:** Gene Albrigo

**Student Competitions  
Coordinator:** Kelly Morgan

**CEU Coordinator:** Barton Wilder

**Poster Session Coordinator:** Erin Harlow

**FSHS Newsletter Team:** Kathy Snyder  
Ed Etxeberria  
Shawn Steed

# 2015 Meeting Sponsors

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

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Citrus Research and Development Foundation  
Plant Food Systems  
Valent BioSciences Corporation

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## Gold Level Sponsor (\$1,000–1,999)

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## Silver Level Sponsor (\$500–999)

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## Bronze Level Sponsor (under \$500)

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Triangle Chemical Company  
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Florida Tomato Committee

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

# 2015 FSHS Patron Members

Ed Etxeberria

## *Volunteers Needed!*

**FSHS is a volunteer-run organization. Make a difference, and volunteer your time, leadership, service and talents!**

**Visit [fshs.org](http://fshs.org) and help today!**

# Welcome 2015 FSHS Sectional Vice-Presidents!

**Citrus:** **Cami Esmel McAvoy**, UF/IFAS Extension  
Sumter County, Bushnell, FL  
(cami13@ufl.edu)

**Handling & Processing:** **Michelle Danyluk**, UF/IFAS Citrus  
Research & Education Center, Lake Alfred,  
FL  
(mddanyluk@ufl.edu)

**Krome Memorial Institute:** **Christian Miller**, UF/IFAS Extension Palm  
Beach County, Palm Beach, FL  
(cfmiller@ufl.edu)

**Ornamental, Garden, & Landscape:** **Shawn Steed**, UF/IFAS Extension,  
Hillsborough County, Seffner, FL  
(ststeed@ufl.edu)

**Natural Resources:** **Lyn Gettys**, UF/IFAS Fort Lauderdale  
Research and Education Center, Davie, FL  
(lgettys@ufl.edu)

**Vegetables:** **Mary Beth Henry**, UF/IFAS Extension,  
Polk County, Bartow, FL  
(mbhenry@ufl.edu)

## *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 and figures, and videos are included FREE of CHARGE in the online Proceedings.
- Take advantage of this possibility and pass the word around!

# Presentation, Publication and Submission Guidelines

- Full payment of page charges from past years is required before presentations and submissions can be accepted in current year.
- The SENIOR AUTHOR must be a member of the Society, and the PRESENTING AUTHOR of the paper must be registered at the annual meeting (except for invited papers) for papers to be accepted for the Proceedings. Papers not presented at the meeting will not be published.
- Electronic submissions are highly encouraged and preferred. Manuscripts should be delivered in FINAL electronic form at the time of meeting to the appropriate section VP.
- Manuscripts to be considered as “refereed” MUST be submitted electronically at the time of the meeting.
- For all submissions, see complete Manuscript Preparation Guide (<http://fshs.org/author-instructions/>) for the *Proceedings of the Florida State Horticultural Society*.

## Paper Submissions:

Remember to e-mail full-length manuscripts to the sectional VP:

**Citrus:** Cami Esmel McAvoy,  
[cami13@ufl.edu](mailto:cami13@ufl.edu)

**Handling & Processing:** Michelle Danyluk,  
[mddanyluk@ufl.edu](mailto:mddanyluk@ufl.edu)

**Krome Memorial Institute:** Christian Miller,  
[cfmiller@ufl.edu](mailto:cfmiller@ufl.edu)

**Natural Resources:** Lyn Gettys,  
[lgettys@ufl.edu](mailto:lgettys@ufl.edu)

**Ornamental, Garden, and Landscape:** Shawn Steed,  
[ststeed@ufl.edu](mailto:ststeed@ufl.edu)

**Vegetable:** Mary Beth Henry,  
[mbhenry@ufl.edu](mailto:mbhenry@ufl.edu)

# Become a Member of FSHS!

Are you a member of the Florida State Horticultural Society? *If not, join today!*

FSHS is the nation's oldest horticultural society, established in 1888, and continues to provide multiple benefits for its members.

*Discover our history while shaping our future.*

## Benefits of Membership:

- Access to most recent three years of the FSHS Proceedings
- Copy of current year's proceedings on CD
- Newsletter
- Reduced meeting registration and publication fees
- Special student rates
- Networking opportunities for students, scientists, and industry personnel from diverse horticultural backgrounds and crops.

Yearly membership runs from January 1st - December 31st each calendar year, with international and student rates available.

Access the membership page at:

<http://fshs.org/join-now/>.



## Extension Luncheon Speakers

- Dr. Kelly Morgan, 2014**
- Dr. Eva Worden, 2013**
- Dr. Daniel Cantliffe, 2012**
- Mr. Ted Campbell, 2011**
- Mr. Kevin Morgan, 2010**
- Dr. Jim Horne, 2009**
- Mr. Armando Campos, 2008**
- Mr. Ted Winsberg, 2007**
- Mr. Chuck Obern, 2006**
- Dr. Larry Arrington, 2005**

# FSHS Student Scholarships

## *Attention, students:*

Did you know that FSHS awards fifteen (15), \$200 scholarships to students attending the Annual Meeting?

To apply, please submit a statement (100 words or less) describing the importance of attending the FSHS Annual Meeting to the achievement of your personal and professional goals and aspirations at [fshs@crec.ifas.ufl.edu](mailto:fshs@crec.ifas.ufl.edu). The FSHS Board of Directors judges submissions and verifies that the awardees are eligible registered students who have registered for the Annual Meeting. Scholarship checks will be awarded during the annual business meeting; awardees must be registered and present to receive their scholarship check.

# FSHS Student Competitions

FSHS offers two competitions for students: Student Best Oral Presentation (SBOPC) and Student Best Paper (SBPC). Awards for the SBOPC will be presented during the Annual Business Meeting at the 2015 FSHS annual meeting in St. Augustine, FL. The SBPC awards will be announced at the 2016 FSHS annual meeting in Hutchinson Island, FL. Awardees will receive cash prizes and will be recognized in the Proceedings of FSHS. Students may participate in either or both competitions.

## **Student Best Oral Presentation Competition (SBOPC):**

The number of entries in the SBOPC is limited to 15 and must be submitted to the sectional VP. Acceptance in the competition is on a first-come, first-serve basis. Participants are judged on importance of the subject to Florida horticulture, scientific merit, organization, awareness of current literature, fluency, clarity of presentation, effective use of figures and tables, report of conclusions, completeness, timing, and response to questions. For more information on the SBOPC competition, contact Kelly Morgan at [conserv@ufl.edu](mailto:conserv@ufl.edu).

## **Student Best Paper Competition (SBPC):**

To participate in the SBPC, students must submit a manuscript (use author guidelines for the Proceedings of the FSHS) by email with the subject "Student Best Paper Competition" to [fshsproc@ashs.org](mailto:fshsproc@ashs.org) by May 31, 2015. Student papers will be published in the Proceedings of FSHS. Entries will be judged on relevance to Florida horticulture, scientific merit, experimental design rigor, literature review, completeness, and clarity. For more information on the SBPC competition, Kelly Morgan at: [conserv@ufl.edu](mailto:conserv@ufl.edu).

# Technical Program Schedule

**Poster Session:** Erin Harlow,  
Coordinator  
([erine@coj.net](mailto:erine@coj.net))

## Monday Afternoon Session

*(Authors present at posters from 5:00 - 6:00 PM)*

### **Celebrating the History and Future of the Florida Small Farms and Alternative Enterprises Conference.**

**M.E. Henry**, UF/IFAS Extension Polk County, Bartow, FL; **D. Treadwell**, UF/IFAS Horticultural Sciences Department, Gainesville, FL; **R. Hochmuth**, UF/IFAS North Florida Research and Education Center, Live Oak, FL. ([mbhenry@ufl.edu](mailto:mbhenry@ufl.edu)) [P-1]

### **Evaluation of Fungicides Applied at the Cotyledon Stage for Control of Downy Mildew on Baby Kale Grown for Spring Mix.**

**C.F. Miller**, UF/IFAS Extension Palm Beach County, West Palm Beach, FL; **E. McAvoy**, UF/IFAS Extension Hendry County, LaBelle, FL; **R. Raid**, UF/IFAS Everglades Research and Education Center, Belle Glade, FL. ([cfmiller@ufl.edu](mailto:cfmiller@ufl.edu)) [P-2]

### **Expanding Florida's SNAP-Ed Program from Farm to Plate.**

**Zach Glorioso**, UF/IFAS Extension Sarasota County, Sarasota, FL; **K. Korman & D. Campbell**, UF/IFAS Family Youth and Community Sciences Department, Gainesville, FL; **C. Walmer**, UF/IFAS Extension Escambia County, Pensacola, FL; **B. Owens**, UF/IFAS Ft. Lauderdale Research and Education Center, Ft. Lauderdale, FL; **C. Glatting**, UF/IFAS Extension Orange County, Orlando, FL; **D. Treadwell**, UF/IFAS Horticultural Sciences Department, Gainesville, FL. ([zjglorioso@ufl.edu](mailto:zjglorioso@ufl.edu)) [P-3]

### **Expanding Pesticide Education and Safety Training Across County Lines.**

**Crystal Snodgrass & Martha Glenn**, UF/IFAS Extension Manatee County, Palmetto, FL; **S. Steed**, UF/IFAS Extension Hillsborough County, Seffner, FL; **C. Esmel McAvoy**, UF/IFAS Extension Sumter County, Dade City, FL; **M.E. Henry**, UF/IFAS Extension Polk County, Bartow, FL. ([ststed@ufl.edu](mailto:ststed@ufl.edu)) [P-4]

### **Picturing Youth in Horticulture.**

**K. Fuller**, UF/IFAS Extension St. Johns County, St. Augustine, FL. ([kfuller@ufl.edu](mailto:kfuller@ufl.edu)) [P-5]

### **Community Coyote Awareness Toolkit.**

**Lisa Hickey**, UF/IFAS Extension Manatee County, Palmetto, FL. ([lisa.hickey@ufl.edu](mailto:lisa.hickey@ufl.edu)) [P-6]

**Right Plant – Right Place – Right Here: The Florida-Friendly Landscaping™ Plant Selection Guide: A Mobile Web App.**

**D. Rainey**, UF/IFAS Extension Sarasota County, Sarasota, FL; **E. Momol**, **G. Hansen**, **T. Wichman**, **B. Schutzman**, **C.J. Bain**, **C. Lewis**, **L. Trenholm**, **J. Marvin**, and **J. Bossart**, UF/IFAS Environmental Horticulture Department, Gainesville, FL. ([eam@ufl.edu](mailto:eam@ufl.edu)) [P-7]

**Screening of Ornamental Herbicides: Small Demonstration Plots.**

**Cami Esmel McAvoy**, UF/IFAS Extension Sumter County, Bushnell, FL; and **S.T. Steed**, UF/IFAS Extension Hillsborough County, Seffner, FL. ([cami13@ufl.edu](mailto:cami13@ufl.edu)) [P-8]

**Workshop: Winter Strawberries for the Spring.**

**Matthew Orwat**, UF/IFAS Extension Washington County, Chipley, FL. ([mjorwat@ufl.edu](mailto:mjorwat@ufl.edu)) [P-9]



# Ornamental, Garden & Landscape Section:

Shawn Steed  
Presiding  
(ststeed@ufl.edu)

## Monday Morning Session

(9:50AM–12:00PM) St. Augustine A

9:50 Welcome and Introductions, Shawn Steed

### A—Pest and Pathogens

---

- 10:00 **Solarized Potting Soil Effects on Growth of *Lagerstroemia* x ‘Natchez’ and *Viburnum suspensum*.** Shawn T. Steed, UF/IFAS Extension Hillsborough County, Seffner, FL. (ststeed@ufl.edu) [OGL-1]
- 10:15 **Evaluating the Plant Performance and Downy Mildew Resistance of Impatiens and New Guinea Impatiens Cultivars in Central Florida.** Weining Wang & Z. Deng, Horticultural Sciences Department, UF/IFAS Gulf Coast Research and Education Center, Balm, FL; A. Palmateer, UF/IFAS Tropical Research and Education Center, Homestead, FL. (zdeng@ufl.edu) [OGL-2]
- 10:30 **A New Miticide PLP Natural Products LLC Provided Excellent Control of Spider Mites (*Teranychus* sp.) on (*Anthurium andreaum*) ‘Misty Rose’.** Robert T. McMillan, UF/IFAS Tropical Research and Education Center, Homestead FL. (mcmillanroberttj@bellsouth.net) [OGL-3]
- 10:45 **Rate Response of Halosulfuron, Trifloxysulfuron, and Thifensulfuron-methyl on Three Common Weed Species of Field Grown Caladiums.** Nathan Boyd, Horticultural Sciences Department, UF/IFAS Gulf Coast Research and Education Center, Balm, FL. (nsboyd@ufl.edu) [OGL-4]

### B—Student Competition

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- 11:00 **Effects of Pruning Height on Axillary Bud Development in *Dracaena* ‘Waikiki’ and *Dracaena* ‘Ruth Luka’ Grown from Stem Cuttings.** Joel D. Stuckey, M.M. Manners, & J.L. Griffis, Jr., Horticulture Department, Florida Southern College, Lakeland, Florida; A. Kawabata & K. Cheah, Tropical Plant and Soil Sciences Department, University of Hawai‘i, Manoa, HI. (malcolmmanners@me.com) [OGL-5]

**11:15 Phytotoxic Effects of Chlorine, Chloramines, and Chlorine Dioxide in Irrigation Water Applied to Bedding Plants.**

**Catherine M. Donovan**, P.R. Fisher, J. Huang, UF/IFAS Environmental Horticulture Department, Gainesville, FL. ([pfisher@ufl.edu](mailto:pfisher@ufl.edu)) [OGL-6]

**11:30 Effects of Control Release Fertilizers on Nutrient Leaching and Palm Growth.**

**Angie Fleurissaint, P. Soti, and K. Jayachandran**, Agroecology Program, Florida International University, Miami, FL; **S. Reed**, United States Department of Agriculture, Agricultural Research Service, Miami, FL. ([afleu005@fu.edu](mailto:afleu005@fu.edu)) [OGL-7]

## C—Landscape Maintenance

---

**11:45 The Landscaper Rodeo: Five Years of Training and Fun in St. Lucie County.**

**Ed Skvarch**, UF/IFAS Extension St. Lucie County, Ft. Pierce, FL; **H. Mayer**, UF/IFAS Extension Miami-Dade County, Homestead, FL; **D. Culbert**, UF/IFAS Extension Okeechobee County, Okeechobee, FL. ([eask@ufl.edu](mailto:eask@ufl.edu)) [OGL-8]

12:00 **End of Morning Session/Lunch**

# Monday Afternoon Session

(1:30PM–5:00PM)

**1:20 Welcome and Introductions, Shawn Steed**

## C—Landscape Maintenance (con't)

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**1:30 Lawn and Garden Help Desk Survey Process and Results.**

**Theresa Badurek & J. Morse**, UF/IFAS Extension Pinellas County, Largo, FL. ([tbadurek@co.pinellas.fl.us](mailto:tbadurek@co.pinellas.fl.us)) [OGL-9]

**1:45 Repurposing Interesting Objects to Encourage Recycling in the Landscape or Garden.**

**Lisa Hickey**, UF/IFAS Extension Manatee County, Palmetto, FL. ([lisa.hickey@ufl.edu](mailto:lisa.hickey@ufl.edu)) [OGL-10]

**2:00 Update to the Urban Turf Fertilizer Rule.**

**L. Trenholm**, UF/IFAS Environmental Horticulture Department, Gainesville, FL; **D. Rainey**, UF/IFAS Extension Sarasota County, Sarasota, FL. ([drainey@ufl.edu](mailto:drainey@ufl.edu)) [OGL-11]

**2:15 Diagnostic Workshops Improve Environmental Turfgrass Impacts.**

**Susan Haddock**, UF/IFAS Extension Hillsborough County, Seffner, FL. ([szcrmchz@ufl.edu](mailto:szcrmchz@ufl.edu)) [OGL-12]

**2:30 Educating Homeowner Associations on Hiring Landscape Contractors.**

**Michelle Atkinson**, UF/IFAS Extension Manatee County, Palmetto, FL. ([michelleatkinson@ufl.edu](mailto:michelleatkinson@ufl.edu)) [OGL-13]

**2:45 Ornamental, Garden, and Landscape Section Business Meeting:**  
Vanessa Campoverde

## D—Production and Marketing

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- 3:00 Grafting Buddleja for Nematode Resistance.** Lynn A. Barber, UF/IFAS Extension Hillsborough County, Seffner, FL. ([labarber@ufl.edu](mailto:labarber@ufl.edu)) [OGL-14]
- 3:15 Consumer Response to Novel Indoor Foliage Plant Attributes: Evidence from a Rating-based Conjoint Experiment and Gaze Analysis.** Hayk Khachatryan & A. Rihn, Department of Food and Resource Economics, UF/IFAS Mid-Florida Research and Education Center, Apopka, FL; B. Campbell, Department of Agriculture and Research, Economics, University of Connecticut, Storrs, CT; C. Hall, Department of Horticultural Sciences, Texas A&M University, College Station, TX; B. Behe, Department of Horticulture, Michigan State University, East Lansing, MI. ([hayk@ufl.edu](mailto:hayk@ufl.edu)) [OGL-15]
- 3:30 Break**
- 3:45 Cryopreservation of Orchid Seeds, Protocorms and Pollen.** Wagner A. Vendrame, Environmental Horticulture Department, UF/IFAS Tropical Research and Education Center, Homestead, FL. ([vendrame@ufl.edu](mailto:vendrame@ufl.edu)) [OGL-16]

## E—Environmental Horticulture Education

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- 4:00 Partnerships to Reach New Audiences: The Florida Creole GI-BMP Training Program.** L. Albrecht, W. Schall, F. Dowdle, and C. Asuaje, UF/IFAS Extension Palm Beach County, West Palm Beach, FL; Henrique Mayer, UF/IFAS Extension Miami-Dade County, Homestead, FL; M. Orfanedes, UF/IFAS Extension Broward County, Davie, FL; Marc Evenst Jn Jacques, E. Momol, L. Trenholm, J. Bossart, J. Marvin, and C.J. Bain, UF/IFAS Environmental Horticulture Department, Gainesville, FL; Benjamin Hebblethwaite, Department of Languages, Literatures and Cultures, Gainesville, FL; M. Snyder, Florida Department of Environmental Protection, Rookery Bay National Estuarine Research Reserve, Naples, FL; D. Rainey, UF/IFAS Extension Sarasota County, Sarasota, FL. ([drainey@ufl.edu](mailto:drainey@ufl.edu)) [OGL-17]
- 4:15 Soil pH and Fertility Test Interpretation on Homeowner Landscape Practices.** Nicole D. Pinson, UF/IFAS Extension Hillsborough County, Seffner, FL. ([nicolepinson@ufl.edu](mailto:nicolepinson@ufl.edu)) [OGL-18]
- 4:30 Green and Growing: Peaking Youth Interest In Agriculture.** Martha Glenn, C. Snodgrass, and D. Smith, UF/IFAS Extension Manatee County, Palmetto, FL. ([mglenn@ufl.edu](mailto:mglenn@ufl.edu)) [OGL-19]

**4:45 School Garden Summer Camp.** Theresa Badurek, UF/IFAS Extension Pinellas County, Largo, FL. ([tbadurek@co.pinellas.fl.us](mailto:tbadurek@co.pinellas.fl.us)) [OGL-20]

**5:00 End of Monday Session**  
**Poster Sessions**—Please Visit the Posters!  
(Located in Pre-Convene Area)

**6:00 Industry Reception** (Ticket included in paid conference registration)

## Tuesday Session

(10:00AM–12:00PM) St. Augustine C

**9:50 Welcome and Introduction,** Vanessa Campoverde

### F—Environmental Horticulture Workshop

---

**10:00 Workshop: Environmental Horticulture Outlook: National to Niche Markets.** Hayk Khachatryan, UF/IFAS Mid-Florida Research and Education Center Department of Food and Resource Economics, Apopka, FL; Alan Hodges, UF/IFAS Department of Food and Resource Economics, Gainesville, FL. ([hayk@ufl.edu](mailto:hayk@ufl.edu)) [OGL-21]

### G—Environmental Horticulture Education (con't)

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**11:00 “Your Florida Vegetable Garden” Video Series.** Theresa Badurek and J. Morse, UF/IFAS Extension Pinellas County, Largo, FL. ([tbadurek@co.pinellas.fl.us](mailto:tbadurek@co.pinellas.fl.us)) [OGL-22]

**11:15 Parks That Teach.** R. E. Mitchell, UF/IFAS Extension Sarasota County, Sarasota, FL. ([shadowed@ufl.edu](mailto:shadowed@ufl.edu)) [OGL-23]

**11:30 Motivational Mentors for the Master Gardener Training Program.** Lisa Hickey, UF/IFAS Extension Manatee County, Seffner, FL. ([lisa.hickey@ufl.edu](mailto:lisa.hickey@ufl.edu)) [OGL-24]

**11:45 Extension and Industry: Spreading Roots and Branching Out with Tree Installation Training.** E. Bolles, UF/IFAS Extension Escambia County, Cantonment, FL; S. Dunning, UF/IFAS Extension Okaloosa County, Crestview, FL; B. Thaxton, UF/IFAS Extension Santa Rosa County, Milton, FL; J. Davy, Panhandle Growers, Milton, FL. ([sdunning@ufl.edu](mailto:sdunning@ufl.edu)) [OGL-25]

**12:00 End of Session**  
**Extension Luncheon** (Event ticket required)

# Monday Morning Session

(9:50AM–11:45AM) Troon

9:50 Welcome and Introductions, Lyn Gettys

## A—Managing Fauna and Contaminants

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10:00 **Reducing Coyote Encounters through Community Awareness Programs.** Lisa Hickey, UF/IFAS Extension Manatee County, Palmetto, FL. (lisa.hickey@ufl.edu) [NR-1]

10:15 **Sneaking it In: Linking Integrated Pest Management (IPM) and Water Quality to Homeowner Horticulture Workshops.** Nicole D. Pinson, UF/IFAS Extension Hillsborough County, Seffner, FL. (PinsonN@hillsboroughcounty.org) [NR-2]

10:30 **St. Augustine Response to Reduced Annual Nitrogen Application.** Tracey Wasylik, K. Moore, and T. Broschat, UF/IFAS Fort Lauderdale Research and Education Center, Davie, FL; S. Daroub, UF/IFAS Everglades Research and Education Center, Belle Glade, FL. (tkwasylik@ufl.edu) [NR-3]

10:45 **Does Divot Fill Composition Affect Bermudagrass Recovery from Damage?** George H. Snyder, UF/IFAS Everglades Research and Education Center, Belle Glade, FL. (ghsnyder@ufl.edu) [NR-4]

11:00 **Air Potato Biological Control Extension Needs Assessment.** Kenneth Gioeli, UF/IFAS Extension Lucie County, Fort Pierce, FL; W. Overholt, UF/IFAS Indian River Research and Education Center, Fort Pierce, FL; M. Rayamajhi, USDA-ARS, Invasive Plant Research Laboratory, Davie, FL; E. Rohrig & K. Hibbard, FDACS Division of Plant Industry, Gainesville, FL. (ktgioeli@ufl.edu) [NR-5]

## B—Native Plants, Irrigation and Climate Change

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11:15 **Make a Beeline with Native Plants.** Gabrielle C. Milch, UF/IFAS Extension Seminole County, Sanford, FL. (GMilch@seminolecountyfl.gov) [NR-6]

11:30 **Showing the Value of Extension to Local Government using Smart Irrigation Apps.** Michelle Atkinson, UF/IFAS Extension Manatee

County, Palmetto, FL; **M. Dukes & K. Migliaccio**, UF/IFAS Agricultural and Biological Engineering, Gainesville, FL. (*michelleatkinson@ufl.edu*) [NR-7]

**11:45** End of morning session, Lunch

# Monday Afternoon Session

**(1:30PM–4:15PM)**

**1:20** Welcome and Introductions, Lyn Gettys

## D—Student Competition

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- 1:30** **Evaluation of a Surfactant Coating on Soluble and Slow-Release Fertilizers in Bermudagrass.** **Mica F. McMillan**, Aquatrols Corp. Paulsboro, NJ; **J.L. Cisar**, Cisar Turfgrass Services; **K.E. Williams**, UF/IFAS Fort Lauderdale Research and Education Center, Davie, FL. (*mcmillan@aquatrols.com*) [NR-8]
- 1:45** **Effect of Soil Carbon Content on Phytotoxicity of Topramezone to St. Augustinegrass.** **Carl Della Torre III, L.A. Gettys, and W.T. Haller**, UF/IFAS Fort Lauderdale Research and Education Center, Center for Aquatic and Invasive Plants, Davie, FL. (*dellatorrec@ufl.edu*) [NR-9]
- 2:00** **Growth of Naiad and Hydrilla using Controlled Release Fertilizer.** **Heather Hasandras, K. Moore, and L.A. Gettys**, UF/IFAS Fort Lauderdale Research and Education Center, Davie, FL; **W. Vendrame**, UF/IFAS Tropical Research and Education Center, Homestead, FL. (*heatheragape@yahoo.com*) [NR-10]

## C—Water and Aquatic Plants

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- 2:15** **Growth of Native Wetland Plants after Irrigation with Wastewater or Dilute Seawater.** **Lyn Gettys, C. Della Torre III, and K. Moore**, UF/IFAS Fort Lauderdale Research and Education Center, Davie, FL. (*lgettys@ufl.edu*) [NR-11]
- 2:30** Break
- 3:00** **Response of Sugarcane to Carbon Dioxide Enrichment and Elevated Temperatures.** **Leon Hartwell Allen Jr., J.C.V. Vu, and J.D. Ray**, USDA/ARS Chemistry Research Unit, Gainesville, FL. (*hartwell.allen@ars.usda.gov*) [NR-12]
- 3:15** **Using a Science Café Format to Educate Homeowners on Stormwater Ponds.** **Michelle Atkinson**, UF/IFAS Extension Manatee County, Palmetto, FL; **P. Monaghan & E. Ott**, UF/IFAS Agricultural Education

## Natural Resources Section

and Communication Department, Gainesville, FL.  
([michelleatkinson@ufl.edu](mailto:michelleatkinson@ufl.edu)) [NR-13]

**3:30 Conducting a Water School.** **BJ Jarvis**, UF/IFAS Extension Citrus County, Lecanto, FL; **Lynn Barber**, UF/IFAS Extension Hillsborough County, Seffner, FL; **C. Martinez**, UF/IFAS Agricultural and Biological Engineering Department, Gainesville, FL; **T. Borisova**, UF/IFAS Food and Resource Economics Department, Gainesville, FL; **S. Carnevale**, UF/IFAS Extension Polk County, Bartow, FL; **L. Seals**, UF/IFAS Extension Brevard County, Cocoa, FL. ([LABarber@ufl.edu](mailto:LABarber@ufl.edu)) [NR-14]

**3:45 Alabama and Florida Extension Agents Partner to Offer the Beaches to Woodlands Pre-tour at the Mobile A.M.P.I.C.** **Libbie Johnson**, UF/IFAS Extension Escambia County, Cantonment, FL; **Sheila Dunning**, UF/IFAS Extension Okaloosa County, Crestview, FL; **C. Stevenson**, UF/IFAS Extension Escambia County, Cantonment, FL; **C. Verlinde**, UF/IFAS Extension Santa Rosa County, Milton, FL; **R. O’Conner**, UF/IFAS Extension Escambia County, Cantonment, FL; **A. Baril**, Alabama Regional Natural Resource Extension Agent, Jasper, AL; **R. Hendrix**, Escambia County Forester, AL; **H. Matthews**, Baldwin/Escambia County, Alabama Forest Landowner, AL.; **Captain M. Dorrie**, Five Rivers Delta Safari, Mobile, AL. ([sdunning@co.okaloosa.fl.us](mailto:sdunning@co.okaloosa.fl.us)) [NR-15]

**4:00 Natural Resources Business Meeting: Lyn Gettys**

**4:15 End of afternoon session**

**5:00 Poster Sessions—Please Visit the Posters!**  
(Located in Pre-Convene Area)

**6:00 Industry Reception** (Ticket included in paid conference registration)

## Tuesday Session

**12:00 Extension Luncheon** (Event ticket required)

**Vegetable Section:** Mary Beth Henry  
Presiding  
(mbhenry@ufl.edu)

# Monday Morning Session

(10:00AM–12:00PM) St. Augustine C

9:50 Welcome and Introductions, Mary Beth Henry

## A—Production and Cultural Practices

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10:15 **Inheritance of Fruit Traits in *Capsicum annuum* L.: Heirloom Varieties as Sources of Quality Parameters Relating To Pericarp Shape, Color, Thickness and Total Soluble Solids Content.** B. Rathinasabapathi, L. Vilarinho, D. Silva, A. Greene, D. Salazar, C. Alves, M. Eveleth, B. Nichols, S. Tehseen, J. Khoury Jr., J. Johnson, and S. Sargent, UF/IFAS Horticultural Sciences Department, Gainesville, FL. (brath@ufl.edu) [V-1]

10:30 **Evaluation of Jalapeño Peppers (*Capsicum annuum* L.) Production Under Different Shade Cloth.** Wellington Araujo, K. Migliaccio, D. Seal, and B. Schaffer, UF/IFAS Tropical Research and Education Center, Homestead, FL; E. Chagas, Embrapa Roraima/Brazil, Boa Vista, Roraima, Brazil. (wellington.araujo@ufr.br) [V-2]

10:45 **Making Behavior Changes in Home Vegetable Gardening.** Lisa Hickey, UF/IFAS Extension Manatee County, Palmetto, FL. (lisa.hickey@ufl.edu) [V-3]

## B—Nutrient and Water Management

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11:00 **Comparison of Water Usage Between Seepage and Sprinkler Irrigation for Snap Bean Production.** Yuqi Cui, X. Liao, G. Liu, and L. Zotarelli, UF/IFAS Horticultural Sciences Department, Gainesville, FL. (guodong@ufl.edu) [V-4]

11:15 **Optimizing Nitrogen Rates for Chipping and Tablestock Potato Production in Florida.** Guodong “David” Liu, M. Doron, and S. Sargent, UF/IFAS Horticultural Sciences Department, Gainesville, FL; D. Dinkins, UF/IFAS Extension Putnam County, Hastings, FL; D. Johns, Blue Sky Farms, Elkton, Florida. (guodong@ufl.edu) [V-5]

## C—Economics

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- 11:30 An Economic Analysis of Organic Strawberry Production in High Tunnel in Northern Florida.** **Xin Zhao & Z. Black**, UF/IFAS Horticultural Sciences Department, Gainesville, FL; **Z. Gao**, UF/IFAS Food and Resource Economics Department, Gainesville, FL. ([zxin@ufl.edu](mailto:zxin@ufl.edu)) [V-6]
- 11:45 Willingness to Pay for Fresh Strawberry Labeled with Different Sustainable Practices and Environmental Benefits.** **Zhifeng Gao & X. Chen**, UF/IFAS Food and Resource Economics Department, Gainesville, FL; **X. Zhao**, UF/IFAS Horticultural Sciences Department, Gainesville, FL; and **M. Swisher**, UF/IFAS Family Youth and Community Sciences Department, Gainesville, FL. ([zfgao@ufl.edu](mailto:zfgao@ufl.edu)) [V-7]
- 12:00 End of morning session, Lunch**

## Monday Afternoon Session

(1:30PM–5:00PM)

- 1:20 Welcome and Introductions**, Mary Beth Henry

## D - Disease, Pest and Weed Management

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- 1:30 Crop Rotation and Pest Management for Vegetable Crops in Miami-Dade County, Florida.** **Qingren Wang**, UF/IFAS Extension Miami-Dade County, Homestead, FL. ([qrwang@ufl.edu](mailto:qrwang@ufl.edu)) [V-8]
- 1:45 Management Practices for Controlling Various Thrips and Their Transmitted Tospoviruses, Groundnut Ring Spot Virus (GRSV) and Tomato Chlorotic Spot Virus, in Tomatoes.** **Dakshina Seal, M. Razzak and C. Sabines**, UF/IFAS Tropical Research and Education Center, Homestead, FL. ([dseal3@ufl.edu](mailto:dseal3@ufl.edu)) [V-9]
- 2:00 Newly Labeled Nematicides for Vegetables in Florida.** **Donald Dickson, J.E. Thomas, and M.L. Mendes**. UF/IFAS Entomology and Nematology Department, Gainesville, FL. ([dwd@ufl.edu](mailto:dwd@ufl.edu)) [V-10]
- 2:15 Managing Root-Knot Nematodes (*Meloidogyne* spp.) in Grafted Watermelon.** **Josh Freeman**, UF/IFAS North Florida Research and Education Center, Quincy, FL. ([joshuafr@ufl.edu](mailto:joshuafr@ufl.edu)) [V-11]
- 2:30 Assessing Strawberry Canopy Size and Sting Nematode Impact Using Multispectral Reflectance and Color Digital Imaging.** **Joe W. Noling, A.W. Schumann and M. Cody**, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. ([jnoling@ufl.edu](mailto:jnoling@ufl.edu)) [V-12]

- 2:45 Effect of Nozzle Selection and Application Volume on Glyphosate Control of Nutsedge.** Peter Dittmar, UF/IFAS Horticultural Sciences Department, Gainesville, FL. (*pdittmar@ufl.edu*) [V-13]
- 3:00 Vegetable Section Business Meeting:** Josh Freeman
- 3:15 Break**

## E—Student Competition

- 3:30 Effects of Passive Ventilation and Pine Bark Volumes on Bell Pepper Growth and Yield in High Tunnels.** Carlos Zambrano Vaca, M. Olmstead, and L. Zotarelli, UF/IFAS Horticultural Sciences Department, Gainesville, FL; B. Santos. (*mercy1@ufl.edu*) [V-14]
- 3:45 Feeding Deterrence and Inhibitory Effects of the Bee Balm (*Monarda didyma*) Leaves on the Fall Armyworm (*Spodoptera frugiperda*).** Rebecca Rabinowitz, A. Rowley, R. Brown, and R. Meagher, USDA-ARS CMAVE, Gainesville, FL; B. Rathinasabapathi, UF/IFAS Horticultural Sciences Department, Gainesville, FL. (*brath@ufl.edu*) [V-15]
- 4:00 Field Evaluation of Resistant Tomato for Management of Root Knot Disease in Florida.** S. Vau & D. Dickson, UF/IFAS Entomology and Nematology Department, Gainesville, FL. (*dwd@ufl.edu*) [V-16]
- 4:15 Developing Technologies for Florida-Produced Strawberry Plug Transplants.** Emmanuel Torres-Quezada & V.M. Whitaker, UF/IFAS Gulf Coast Research and Education Center, Wimauma, FL; L. Zotarelli & R.L. Darnell, UF/IFAS Horticultural Sciences Department, Gainesville, FL; K. Morgan, UF/IFAS Southwest Florida Research Education Center, Immokalee, FL. (*lzota@ufl.edu*) [V-17]
- 4:30 Influence of Summer Cover Crops on Organic Strawberry Production.** Yurui Xie, X. Zhao, C.A. Chase, Z. Black, and D.J. Graves, UF/IFAS Horticultural Sciences Department, Gainesville, FL. (*zxin@ufl.edu*) [V-18]
- 4:45 Undergraduate Student Engagement in an Introductory Course in Vegetable Gardening: Do Students from Urban and Rural Localities Differ?** Matthew Mattia & B. Rathinasabapathi, UF/IFAS Horticultural Sciences Department, Gainesville, FL. (*brath@ufl.edu*) [V-19]
- 5:00 End of afternoon session**  
**Poster Sessions—Please Visit the Posters!**  
 (Located in Pre-Convene Area)

*Vegetable Section*

**6:00 Industry Reception** *(Ticket included in paid conference registration)*

# Tuesday Morning Session

*(10:00AM–12:00PM) St. Augustine C*

**10:00 Vegetable Section Tour, Mary Beth Henry, Bonnie Wells**

Please carpool if interested in attending this tour. Transportation will not be provided. Details to be distributed at the Vegetable Section Business meeting, Monday at 3:00 PM.

**12:00 Extension Luncheon** *(Event ticket required)*

# Monday Morning Session

(10:00AM–11:30AM) Wentworth

9:50 Welcome and Introductions, Christian Miller

## A—Fruit Production

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- 10:00 **Fertilization of Tissue-Culture Bananas Grown in Sugarcane Filter Press Mud and Sphagnum Peat Based Media.** N. Larsen, UF/IFAS Everglades Research and Education Center, Belle Glade, FL; K. Moore, UF/IFAS Environmental Horticulture Department, Fort Lauderdale Research and Education Center, Ft. Lauderdale, FL. ([larsnick@ufl.edu](mailto:larsnick@ufl.edu)) [K-2]
- 10:15 **The Performance of Blackberry Cultivars in North Florida.** Peter C. Andersen, UF/IFAS Horticultural Sciences Department, North Florida Research and Education Center, Quincy, FL. ([pcand@ufl.edu](mailto:pcand@ufl.edu)) [K-2]
- 10:30 **Myanmar's Emerging Tobadee (Avocado) Industry.** Jonathan H. Crane, R.C. Ploetz, UF/IFAS Tropical Research and Education Center, Homestead, FL; U. Soe Than Min Din, U. Win Aung, U Soe Nyunt, and T.T. Sein, Myanmar Fruit, Flower and Vegetable Producer and Exporter Association, Yangon, Myanmar; A. Thanda Kyaw, and Y.Y. Thant, Winrock International, Little Rock, AR. ([jhcr@ufl.edu](mailto:jhcr@ufl.edu)) [K-3]
- 10:45 **Estate Mango Farming for Farmers Markets and Direct Sale.** Thiago B. Campbell & R.J. Campbell, Fairchild Tropical Botanic Garden, Coral Gables, FL. ([rcampbell@fairchildgarden.org](mailto:rcampbell@fairchildgarden.org)) [K-4]
- 11:00 **South Florida Cottage Industry with Canistel (*Pouteria campechiana*).** Noris Ledesma & R.J. Campbell, Fairchild Tropical Botanic Garden, Coral Gables, FL. ([inledesma@fairchildgarden.org](mailto:inledesma@fairchildgarden.org)) [K-5]
- 11:15 **The Prospects of Commercial Etrog Production in South Florida, a Culturally Significant Citron.** Christian F. Miller, UF/IFAS Extension Palm Beach County, West Palm Beach, FL; S. Silvers & N. Mannosse, Esrog Delights, Loxahatchee, FL. ([cfmiller@ufl.edu](mailto:cfmiller@ufl.edu)) [K-6]
- 11:30 End of morning session, Lunch

# Monday Afternoon Session

(1:30PM–4:15PM)

1:20 Welcome and Introductions, Christian Miller

## B—Production, Breeding, Insect Pests and Diseases

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- 1:30 **Economic Feasibility of Small-Scale Specialty Mango Production in South Florida.** Noris Ledesma & R.J. Campbell, Fairchild Tropical Botanic Garden, Coral Gables, FL. (*nledesma@fairchildgarden.org*) [K-7]
- 1:45 **Impact of Cross and Self-Pollination on Fruit Set, Fruit Size, Seed Number, and Harvest Timing in Thirteen Southern Highbush Blueberry Cultivars.** Sarah K. Taber & James W. Olmstead, UF/IFAS Horticultural Sciences Department, Gainesville, FL. (*jwolmstead@ufl.edu*) [K-8]
- 2:00 **In Pursuit of the Perfect Peach: Consumer-Assisted Selection of Peach Traits.** Mercy A. Olmstead & J. Gilbert, UF/IFAS Horticultural Sciences Department, Gainesville, FL; T. Colquhoun & D. Clark, UF/IFAS Environmental Sciences Department, Gainesville, FL; R. Kluson, UF/IFAS Extension Sarasota County, Sarasota, FL; H. Moskowitz, Moskowitz-Jacobs, White Plains, NY. (*mercy1@ufl.edu*) [K-9]
- 2:15 **O42-21-5, a Potential Early Ripening Breeding Selection for Florida Muscadine Grape.** Zhongbo Ren, J. Lu, and V. Tsolova, Center for Viticulture and Small Fruit Research, College of Agriculture and Food Sciences, Florida Agricultural and Mechanical University, Tallahassee, FL. (*zhongbo.ren@famu.edu*) [K-10]

## C—Student Competition

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- 2:30 **Root-Knot Disease of Peach in Florida.** Sai Qiu, D.W. Dickson, and M.L. Mendes, UF/IFAS Entomology and Nematology Department, Gainesville, FL; J. Brito, Division of Plant Industry Florida Department of Agriculture and Consumer Services, Gainesville, FL; J.X. Chaparro, UF/IFAS Horticultural Sciences Department, Gainesville, FL. (*saiqiu@ufl.edu*) [K-11]
- 2:45 **Evaluation of Container-Grown Blueberry Cultivars and the Effects of Gibberellic Acid on Fruit Set and Fruit Quality.** Victor A. Zayas & P.R. Fisher, UF/IFAS Environmental Horticulture Department, Gainesville, FL. (*pfisher@ufl.edu*) [K-12]

- 3:00 In vitro Propagation of Camu-Camu (*Myrciaria dubia*) an Important Medicinal Plant.** Maria C.R. Araújo & W.A. Vendrame, UF/IFAS Tropical Research and Education Center, Homestead, FL; E.A. Chagas, Embrapa CPAFRR Roraima, Departamento de Fruticultura, Boa Vista, RR - Brazil. (*nilmacoly@hotmail.com*) [K-13]
- 3:15 Break**

## D—Insect Pests and Diseases

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- 3:30 The Potential Distribution of *Myloccerus undecimpustuatus undatus* (Sri Lankan Weevil) in North America.** Anita S. Neal, UF/IFAS Extension St. Lucie County, Fort Pierce, FL. (*asn@ufl.edu*) [K-14]
- 3:45 Efficacy of Three Macroinfused Fungicides to Control Laurel Wilt on Avocado in Martin and Brevard Counties.** Jonathan H. Crane, R.C. Ploetz, T. White, J. Konkol, and R. Wideman, UF/IFAS Tropical Research and Education Center, Homestead, FL; G.C. Krogstad & T. Prosser, Rainbow Treecare, Minnetonka, MN. (*jhcr@ufl.edu*) [K-15]
- 4:00 Krome Memorial Section Business Meeting:** Christian Miller
- 4:15 End of Monday afternoon session**
- 5:00 Poster Sessions—Please Visit the Posters!**  
(Located in Pre-Convene Area)
- 6:00 Industry Reception** (Ticket included in paid conference registration)

## Tuesday Morning Session

(10:00AM–12:00PM) Wentworth

- 9:50 Welcome and Introductions,** Christian Miller
- 10:00 A Step by Step Guide of Pruning and Shaping Young Tropical Fruit Trees.** Jeff Wasielewski, UF/IFAS Extension Miami-Dade County, Homestead, FL. (*jwasielewski@ufl.edu*) [K-16]
- 10:15 Tropical Fruit Research and Extension Summit.**  
Jonathan H. Crane, UF/IFAS Tropical Research and Education Center, Homestead, FL. (*jhcr@ufl.edu*) [K-17]
- 12:00 Extension Luncheon** (Event ticket required)

**Handling & Processing Section:** **Michelle Danyluk**  
Presiding  
([mddanyluk@ufl.edu](mailto:mddanyluk@ufl.edu))

# Monday Morning Session

(10:00AM–12:00PM) *St Augustine B*

9:50 Welcome and Introductions, **Michelle Danyluk**

## A—Student Competition

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**10:00 Anthocyanins and *in vitro* Antioxidant Capacity of Strawberries from Different Disease Control Treatments.** **Marvin Abountiolas, & M. Cecilia do Nascimento Nunes**, Department of Cell Biology, Microbiology and Molecular Biology, University of South Florida, Tampa, FL. ([mariacecilia@usf.edu](mailto:mariacecilia@usf.edu)) [HP-1]

**10:15 Impact of Low and High Temperature Stress on Volatile Profile in Ripe Tomato Fruit.** **Libin Wang** and Zhifang Yu, Nanjing Agricultural University, Nanjing, China; **E.A. Baldwin, A. Plotto and J. Bai**, USDA-ARS, USHRL, Ft. Pierce, FL. ([Jinhe.Bai@ars.usda.gov](mailto:Jinhe.Bai@ars.usda.gov)) [HP-2]

**10:30 Orange Juice Improves the Food Intake and Cholesterol Concentration in Patients with Chronic Hepatitis C.** **Danielle Goncalves, C. Gonçalves de Lima, P. Souza Ferreira, and T. Borges Cesar**, Department of Food and Nutrition and Paulo Inácio da Costa, Department of Clinical Analysis, São Paulo State University-UNESP, Araraquara, São Paulo, Brazil. [HP-3]

**10:45 Effect of Pectinmethylesterase on the Rheological Properties or Orange Pulp.** **Xuan Li, & J. Reyes De Corcuera**, Department of Food Science and Technology, University of Georgia, Athens, GA. ([jireyes@uga.edu](mailto:jireyes@uga.edu)) [HP-4]

**11:00 A Quality Assessment of HLB-Affected Cold Pressed Oils and Juice from Florida Hamlin and Valencia Oranges.** **Brittany Hubbard, & R. Goodrich Schneider**, UF/IFAS Food Science and Human Nutrition Department, Gainesville, FL. ([martinb@ufl.edu](mailto:martinb@ufl.edu)) [HP-5]

**11:15 The effects of hot water on growth of *Guignardia citricarpa*, the causal agent of citrus black spot on ‘Valencia’ orange fruit.** **Jiaqi Wang & M. Ritenour**, UF/IFAS Indian River Research and Education Center, Fort Pierce, FL; **Pamela Roberts**, UF/IFAS Southwest Florida Research and Education Center, Immokalee, FL; **Megan Dewdney**, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. ([ritenour@ufl.edu](mailto:ritenour@ufl.edu)) [HP-6]

## B—Vegetable Handling

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- 11:30 1-MCP Reduces Development of Chilling Injury Symptoms in Yellow Summer Squash.** Maria Pittsiouni, University of Foggia, Department of Science Agriculture, Food, & Environment, Foggia, Italy; **Jeffrey K. Brecht & D. J. Huber**, UF/IFAS Horticultural Sciences Department, Gainesville, FL. (*jkbrecht@ufl.edu*) [HP-7]
- 11:45 Pre-storage Application of Oxalic Acid with or without Quarantine Hot Water Treatment to Alleviate Chilling Injury in Mango Fruit.** Peiyan Li, **Xiaolin Zheng**, Zhejiang Gongshang University, College of Food Science and Biotechnology, Hangzhou 310018, PR China; M.G.F. Chowdhury, K.Cordasco, and J.K. Brecht, UF/IFAS Horticultural Sciences Department, Gainesville, FL. (*jkbrecht@ufl.edu*) [HP-8]
- 12:00 End of morning session, Lunch**

# Monday Afternoon Session

(1:30PM–5:00PM)

- 1:20 Welcome and Introductions, Michelle Danyluk**

## B—Fruit Handling

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- 1:30 Effect of Pulp Temperature and Drop Height on Blueberry Quality.** Merce T.A. Santana, S.A. Sargent, and A.D. Berry, UF/IFAS Horticultural Sciences Department, Gainesville, FL. (*sasa@ufl.edu*) [HP-9]
- 1:45 Consumer Knowledge on Handling of High-Value Specialty Crops in the United States: Potential Implications for Producers and Educators.** Amy Simonne, M. Daniels, S. Jensen, D. Diehl, K.P. Shelnut, C. Bruhn, J.K. Brecht, and E. Mitcham, UF/IFAS Family, Youth and Community Sciences Department, Gainesville, FL. (*asim@ufl.edu*) [HP-10]

## C—Food Safety

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- 2:00 Fate of *Salmonella* spp. on Whole and Fresh Cut Cucumbers.** **Laura Strawn, & S. Riedout**, Eastern Shores Agricultural Research and Education Center, Virginia Polytechnic University, Painer, VA; **Michelle D. Danyluk**, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. (*mddanyluk@ufl.edu*) [HP-11]
- 2:15 Prevention of *Salmonella* Cross-Contamination between Green Round Tomatoes in a Model Flume System.** A. Sreedharan, **You Li**, R. Silverberg, A. Gutierrez, and K. Schneider, UF/IFAS Food Science and

## Handling & Processing Section

Human Nutrition Department, Gainesville, FL. (*keiths29@ufl.edu*) [HP-12]

### 2:30 Microbiological Evaluation of Florida Cantaloupe Packinghouses.

**Lorrie Friedrich & M.D. Danyluk**, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL; **A. Whidden**, UF/IFAS Extension Hillsborough County, Seffner, FL; **L. Strawn**, Eastern Shores Agricultural Research and Education Center, Virginia Polytechnic University, Painer, VA. (*mddanyluk@ufl.edu*) [HP-13]

### 2:45 Handling and Processing Business Meeting: Alicia Whidden

### 3:00 Break

### 3:30 Handling and Procession Section Tour

Whetstone Chocolates  
1 Dolphin Drive  
St. Augustine, FL 32080

### 5:00 Poster Sessions—Please Visit the Posters!

(Located in Pre-Convene Area)

### 6:00 Industry Reception (Ticket included in paid conference registration)

# Tuesday Morning Session

(10:00AM–12:00PM) St. Augustine B

### 9:50 Welcome and Introductions, Alicia Whidden

## D—Fresh Citrus

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### 10:00 Flavor Quality Evaluation of USDA Sweet Orange-like Hybrids.

**Jinhe Bai, E. Baldwin, R. Driggers, J. Hearn, and E. Stover**, USDA-ARS, United States Horticulture Research Laboratory, Fort Pierce, FL. (*Jinhe.Bai@ars.usda.gov*) [HP-14]

### 10:15 Evaluation of Postharvest Quality of Six Recently Released

**Citrus Cultivars in Florida. Cuifeng Hu & M. Ritenour**, UF/IFAS Indian River Research and Education Center, Fort Pierce, FL; **F. Gmitter & J. Grosser**, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. (*ritenour@ufl.edu*) [HP-15]

### 10:30 Color Evaluation of Natural Colorants and their Application on

**Citrus Fruit as Alternatives to Citrus Red II. Xuiuxiu Sun, E. Baldwin, A. Plotto, and J. Bai**, USDA-ARS, United States Horticulture Research Laboratory, Fort Pierce, FL. (*Jinhe.Bai@ars.usda.gov*) [HP-16]

- 10:45 **Relationship of Multi-Year Hand Hygiene Training to Florida Fresh Citrus Packinghouse Workers and their Reported Attitudes, Awarenesses, and Practices Away From the Workplace.** **Karla Lenfesty**, UF/IFAS Extension St. Lucie County, Ft. Pierce, FL. ([lenfesty@ufl.edu](mailto:lenfesty@ufl.edu)) [HP-17]

## E—Citrus Byproducts

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- 11:00 **Chemical and Nutraceutical Properties of Polymethoxyflavones in Orange Peel.** **Yu Wang**, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. ([yu.wang@ufl.edu](mailto:yu.wang@ufl.edu)) [HP-18]
- 11:15 **Changes in the Volatile Profile of Citrus Peel Oils caused by HLB Disease.** **Huging Yang, E. Bourcier, W. Zhao, A. Plotto, E. Baldwin, M. Irey, and J. Bai**, USDA-ARS, United States Horticulture Research Laboratory, Fort Pierce, FL. ([Jinhe.Bai@ars.usda.gov](mailto:Jinhe.Bai@ars.usda.gov)) [HP-19]
- 11:30 **Examination of Citrus Pectins by Field Flow Fractionation.** **Gary Luzio & R. Cameron**, USDA-ARS, United States Horticulture Research Laboratory, Fort Pierce, FL. ([Gary.luzio@ars.usda.gov](mailto:Gary.luzio@ars.usda.gov)) [HP-20]
- 11:45 **Discussion**
- 12:00 **Extension Luncheon** (*Event ticket required*)

**Citrus Section:** Cami Esmel McAvoy  
Presiding  
([Cami13@ufl.edu](mailto:Cami13@ufl.edu))

# Monday Morning Session

(10:00AM–12:00PM) St. Augustine D

9:50 Welcome and Introductions, Cami Esmel McAvoy

## A—Citrus Insect & Disease Management

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- 10:00 Plant Growth Regulator Trials To Reduce Preharvest Fruit Drop of Florida Citrus Trees Affected with HLB.** L. Gene Albrigo, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. ([albrigo@ufl.edu](mailto:albrigo@ufl.edu)) [C-1]
- 10:15 The Effect Of A Single Application of 2,4-D On Preharvest Fruit Drop in HLB-Affected Valencia Orange Trees.** James P. Syvertsen, T. Minter, H. Yonce, and W. Bandaranayake, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. ([JmSn@ufl.edu](mailto:JmSn@ufl.edu)) [C-2]
- 10:30 Evaluation of Chemical and Microbial-Based Pesticides for Control of Asian Citrus Psyllid in Organic Citrus Production.** Michael E. Rogers & B. McLean III, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. ([mrgrs@ufl.edu](mailto:mrgrs@ufl.edu)) [C-3]
- 10:45 Spectral Band Selection for Citrus Black Spot Disease Detection.** A. Pourreza, W.S. Lee, and M.A. Ritenour, UF/IFAS Indian River Research and Education Center, Ft. Pierce, FL. ([apourreza@ufl.edu](mailto:apourreza@ufl.edu)) [C-4]
- 11:00 Evidence for Alternative Pathways of CLas Movement in Citrus Trees.** Ed Etxeberria & P. Gonzalez, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL; C. Broderson, Yale School of Forestry and Environmental Studies, New Haven, CT. ([etxeber@ufl.edu](mailto:etxeber@ufl.edu)) [C-5]

## B—Citrus Variety and Improvement

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- 11:15 Revisiting the ‘Parson Brown’ Sweet Orange.** Gary England, UF/IFAS Extension Lake County, Tavares, FL. ([gke@ufl.edu](mailto:gke@ufl.edu)) [C-6]
- 11:30 Update on ‘US Early Pride’ in Florida.** Greg McCollum, USDA-ARS, Horticulture Research Laboratory, Fort Pierce, FL. ([Greg.McCollum@ars.usda.gov](mailto:Greg.McCollum@ars.usda.gov)) [C-7]

## C—Student Competition

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**11:45 Evaluation of Foliar Nutrition Fertilizers to Enhance Growth and Productivity in HLB-Affected Citrus Trees.** **Diego Ramirez, B.R. Gruber, B.J. Boman, and M.A. Ritenour**, UF/IFAS Indian River Research and Education Center, Fort Pierce, FL; **R. Rouse, K. Morgan, P. Roberts, and F. Roka**, UF/IFAS Southwest Florida Research and Education Center, Immokalee, FL; **A.W. Schumann**, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL; **J. Chaparro**, UF/IFAS Horticultural Sciences Department, Gainesville, FL. (*dframireza@ufl.edu*) [C-8]

**12:00 End of morning session, Lunch**

## Monday Afternoon Session

*(1:30PM–4:30PM)*

**1:20 Welcome and Introductions**, Cami Esmel McAvoy

## B—Citrus Variety and Improvement (con't)

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**1:30 Relevance of Epidemiology to Identifying HLB Resistance.** **Dan J. Anco**, North Carolina State University, National Science Foundation Center for Integrated Pest Management, Raleigh, NC; **T. Gottwald**, USDA-ARS, United States Horticulture Research Laboratory, Fort Pierce, FL. (*Dan.Anco@ars.usda.gov*) [C-9]

**1:45 Ornacitrus: Development of Genetically Modified Ornamental Citrus.** **Manjul Dutt**, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. (*manjul@ufl.edu*) [C-10]

**2:00 Citrus Scion Cultivar Performance Under Severe Huanglongbing Disease Pressure.** **Ed Stover & S. Inch**, USDA-ARS, Horticulture Research Laboratory, Fort Pierce, FL. (*ed.stover@ars.usda.gov*) [C-11]

**2:15 Relevance of Epidemiology to Identifying HLB Resistance.** **Tim Gottwald & E. Stover**, USDA-ARS, Horticulture Research Laboratory, Fort Pierce, FL. (*Tim.Gottwald@ars.usda.gov*) [C-12]

## D—Citriculture and Production Techniques

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**2:30 Optimizing Foliar Nutrient Sprays.** **L. Waldo & A.W. Schumann**, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. (*ljwaldo@ufl.edu*) [C-13]

**2:45 A Prototype Robotic Sprayer for High Density Plantings of Horticultural Crops.** **Arnold W. Schumann & H.K. Hostler**,

## Citrus Section

UF/IFAS Citrus Research and Education Center, Lake Alfred, FL; **B.R. Gruber**, UF/IFAS Indian River Research and Education Center, Ft. Pierce, FL. ([schumaw@ufl.edu](mailto:schumaw@ufl.edu)) [C-14]

- 3:00 Using Real-Time Onsite Weather Data in Support of Freeze Protection of Florida Crops: A My Florida Farm Weather Update.** **Rick Lusher**, UF/IFAS Florida Automated Weather Network, Gainesville, FL; **K. Morgan**, UF/IFAS Southwest Florida Research and Education Center, Immokalee, FL. ([rlusher@ufl.edu](mailto:rlusher@ufl.edu)) [C-15]
- 3:15 Break**
- 3:30 Screen House Production Systems for Fresh Citrus Cultivation, Part I: Effects on Meteorology, Pest Damage, and Huanglongbing Disease (HLB) Development in Young Grapefruit Trees.** **Barrett R. Gruber & B.J. Boman**, UF/IFAS Indian River Research and Education Center, Ft. Pierce, FL; **A.W. Schumann, F.G. Gmitter, and J.W. Grosser**, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. ([bgruber@ufl.edu](mailto:bgruber@ufl.edu)) [C-16]
- 3:45 Short-time Heat Treatment for Prolonging the Life of HLB Infected Trees.** **Reza Ehsani**, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. ([ehsani@ufl.edu](mailto:ehsani@ufl.edu)) [C-17]
- 4:00 Screen House Production Systems for Fresh Citrus Cultivation, Part II: Effects on Young Grapefruit Tree Growth, Leaf Photosynthesis, and Nutrient Status.** **Barrett R. Gruber & B.J. Boman**, UF/IFAS Indian River Research and Education Center, Fort Pierce, FL; **A.W. Schumann, F.G. Gmitter, and J.W. Grosser**, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. ([bgruber@ufl.edu](mailto:bgruber@ufl.edu)) [C-18]
- 4:15 Citrus Business Meeting: Jaime Burrow**
- 4:30 End of Afternoon Session**
- 5:00 Poster Sessions—Please Visit the Posters!**  
(Located in Pre-Convener Area)
- 6:00 Industry Reception** (Ticket included in paid conference registration)

# Tuesday Morning Session

(10:00AM–11:45AM) St. Augustine D

## E—Citriculture and Production Techniques

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- 10:00 Fate of Indicator Organism Populations on Citrus Trees Following Foliar Application of Agricultural Water Containing**

**Copper Hydroxide** T.K. Chapin, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL; G.K. Mootian, Rutgers, The State University of New Jersey, New Brunswick, NJ; L.M. Friedrich, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL; T.M. Spann, California Avocado Commission, Irvine, CA; D.W. Schaffner, Rutgers, The State University of New Jersey, New Brunswick, NJ; M.D. Danyluk, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. (*tkchapin@ufl.edu*) [C-19].

- 10:15 Pre-harvest Fruit Drop and Fruit Quality of “Huanglongbing”-Infected Sweet Oranges.** Tripti Vashisth, M.D. Danyluk, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL; C. Oswalt, UF/IFAS Extension Polk County, Bartow, FL. (*tvashisth@ufl.edu*) [C-20]
- 10:30 Evaluation of Impacts of Mechanically Harvesting High-Density Semi-Dwarf Citrus on Tree Health and Yield.** T. Burks, UF/IFAS Department of Agricultural and Biological Engineering, Gainesville, FL; K. Morgan & F. Roka, UF/IFAS Southwest Florida Research and Education Center, Immokalee, FL. (*tburks@ufl.edu*) [C-21]
- 10:45 Estimation of Water Use by Young, Containerized Grapefruit Trees In Citrus Screen House Production Systems.** Barrett R. Gruber, B.J. Boman, J. Lu, J. Wu, and G. Shao, UF/IFAS Indian River Research and Education Center, Fort Pierce, FL. (*bgruber@ufl.edu*) [C-22]

## F—Citrus Physiology

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- 11:00 Chemical Composition of Xylem Sap from *Citrus sinensis* L. Osbeck (Sweet Orange).** N. Killiny and F. Hijaz, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. (*nabilkilliny@ufl.edu*) [C-23]
- 11:15 Strigolactones (SL) Induced Vegetative and Reproductive Growth in Citrus.** N. Kumar & E. Etxeberría, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. (*naveenkumar@ufl.edu*) [C-24]
- 11:30 The History and Current Status of Citrus in Putnam County.** E.V. Fletcher, UF/IFAS Extension Putnam County, East Palatka, FL; and J. Sowards, UF/IFAS Volusia County Extension, Deland, FL. (*pfletch@ufl.edu*) [C-25]
- 11:45 End of Session**
- 12:00 Extension Luncheon** (*Event ticket required*)

# In-Service Training

## Tuesday Afternoon Session

### *St. Augustine C*

#### **“Monitoring and Controlling Pesticide Resistance in Horticultural and Agricultural Crops”**

Organizer: **Peter Dittmar**, Assistant Professor, UF/IFAS Horticultural Sciences Department. ([pdittmar@ufl.edu](mailto:pdittmar@ufl.edu))

### Agenda

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- 1:00 Welcome and Pretest**
- 1:15 Why Does Pest Resistance Occur?**  
Dr. Peter Dittmar, UF/IFAS Horticultural Sciences Department, Gainesville, FL
- 2:00 Fungicide Resistance in Florida**  
Dr. Nick Dufault, UF/IFAS Plant Pathology Department, Gainesville, FL
- 2:20 Managing Insecticide Resistance in Florida Tomato Production**  
Dr. Hugh Smith, UF/IFAS Entomology and Nematology Department, Gulf Coast Research and Education Center, Balm, FL
- 2:40 Monitoring Pest Resistance and Determining Resistance or Misapplication**  
Dr. Jason Ferrell, UF/IFAS Agronomy Department, Gainesville, FL
- 3:05 Break**
- 3:20 Herbicide Resistance in Palmer Amaranth**  
Ted Webster, USDA-ARS, Crop Protection and Management Research Unit, Tifton, GA
- 4:00 Insecticide Resistance in Thrip Populations**  
Dr. Joe Funderburk, UF/IFAS Entomology and Nematology Department, North Florida Research and Education Center, Quincy, FL
- 4:40 Fungicide Resistance Genes**  
Dr. Shad Ali, UF/IFAS Plant Pathology Department, Mid-Florida Research and Education Center, Apopka, FL
- 5:15 Posttest and Conclusion**

# Notes



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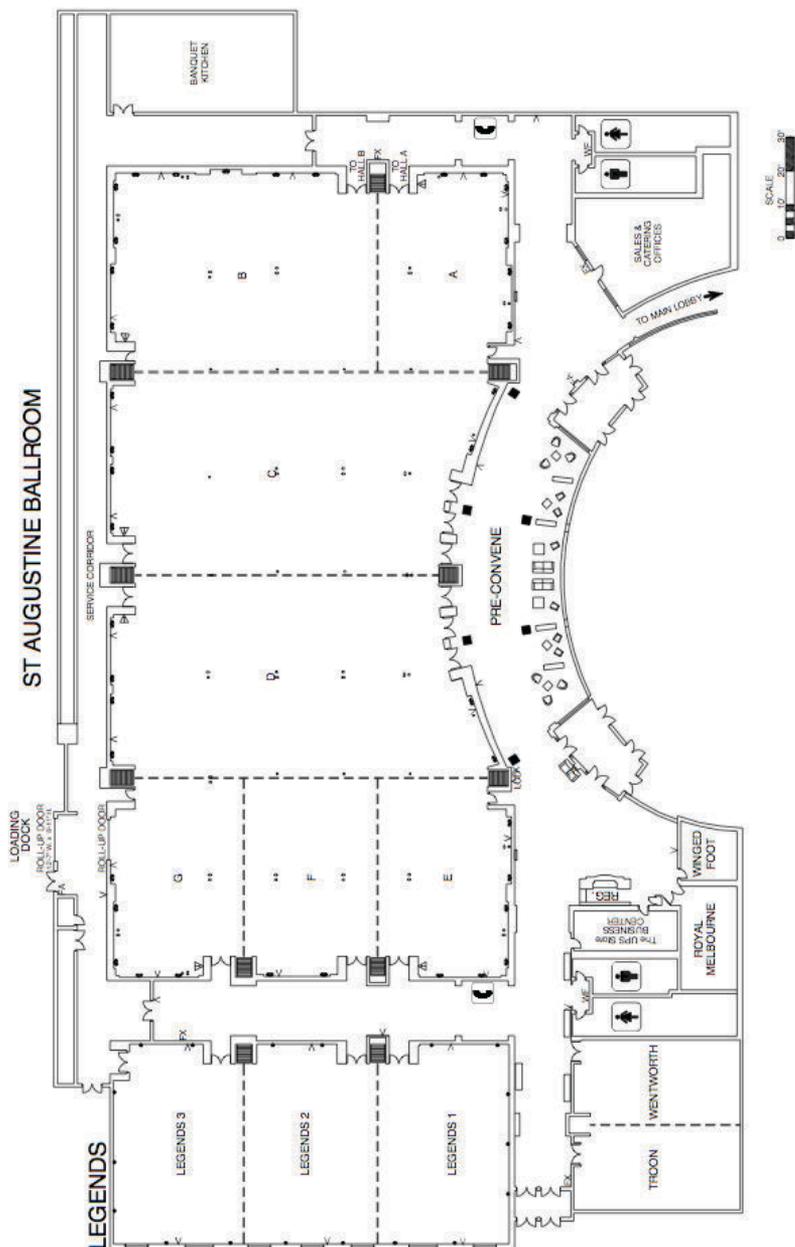
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# Renaissance World Village Resort Map



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