UF | IFAS Extension
UNIVERSITY of FLORIDA

In-Service Training (IST#: 31438)/CEU Roundup (FDACS Program # 24271/CCA ID: FL 53103)

New Technology for Commercial and Fruit Vegetable Production (VI)

Meeting ID: 480 115 633

Join from PC, Mac, Linux, iOS or Android: https://ufl.zoom.us/j/480115633

IT Professional: Mr. Dennis Brown

Cell phone: (352)317-1701

Polycom from 1306 Fifield Hall, Gainesville, Florida to off-campus host sites statewide

Wednesday, February 28, 2018


Dr. Carrie L. Harmon

Disease update from the UF-IFAS Plant Diagnostic Center: horticultural samples in 2017


Dr. Ross Welch
Cornell University

The evolution of weed management in vegetable production systems

Using agriculture as a tool for better health


Dr. Dario Chavez
University of Georgia

Alternative Specialty Crops in Florida: Opportunities and Challenges

Peach production and what we have learned

New technology in postharvest plastics


Dr. .Nathan Boyd


Dr. Shinsuke Agehara


Dr. Jeffrey Brecht

Instructions for local Hosts:

1. Please download and print the **Sign-in sheet**; **Pre-test**; **Post-test**; and **Survey**
2. Please have all of your participants fill out or complete
   - the sign-in sheet
   - the pre-test before the first presentation starts
   - the post-test and survey after the last presentation is completed
3. Please mail the above papers including **sign-in sheet, pre-test, post-test, survey** to David Liu at PO Box 110690, 1253 Fifield Hall, Gainesville, FL 32611-0690 on February 28th, 2018
4. Please collect and email the questions from your participants to guodong@ufl.edu and the answers will sent to you
5. Please disseminate the CEU attendance forms

All of the materials plus related publications are available online at http://hos.ufl.edu/faculty/gdliu/service-training

Conference information

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All sites need to be manually got connected at 8:30 am EST.

New Technology for Commercial Crop Production (VI)

In-Service Training

Meeting ID: 480 115 633

Agenda

Wednesday, February 28, 2018

Delivery Format: a face-to-face session based in Gainesville and a supporting webinar available statewide

Moderator: Dr. Tatiana Sanchez

9:00 AM:	Gather, Refreshments, Welcome, Introduction
9:00-9:20 AM	Sign-in and Pre-test
9:20-10:10 AM	**Dr. Carrie L. Harmon:** Disease update from the UF-IFAS Plant Diagnostic Center: horticultural samples in 2017
10:10-11:00 AM	**Dr. Nathan S. Boyd**: The evolution of weed management in vegetable production systems
11:00-11:50 AM	**Dr. Ross Welch** (Cornell University): Using agriculture as a tool for better health
11:50-1:00PM	Lunch break
1:00-1:50 PM	**Dr. Shinsuke Agehara**: Alternative Specialty Crops in Florida: Opportunities and Challenges
1:50-2:40PM	**Dr. Dario Chavez** (University of Georgia)**:** Peach production and what we have learned
2:40-3:30PM	**Dr. Jeffrey Brecht:** New technology in postharvest plastics
3:30-3:50PM	Post-test and survey
3:50PM	Adjourn

For local hosts:

3:50-4:30 PM	Mail the Sign-in sheet, pre- and post-test, and survey to David Liu at 1253 Fifield Hall, PO Box 110690, Gainesville, FL 32611-0690 or scan and email the papers to guodong@ufl.edu

Proposers:

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Available CEUs

FDACS CEUs	
DEMONSTRATION AND RESEARCH	2
AG ROW CROP PEST CONTROL	2
AG TREE CROP PEST CONTROL	2
487 GENERAL STANDARDS/CORE	2
PRIVATE APPLICATOR AG PEST CONTROL	2
COMMERCIAL LAWN AND ORNAMENTAL	2
Maximum	**6**
CCA CEUs	
Nutrient Management	1
Soil Management	0
Pest Management	2
Crop Management	3
Total	**6**

Speakers' Presentation Description and Bio-Sketch

This program will have six specialists to present. The presentations cover plant disease diagnosis, weed control, plant nutrition and human health, new specialty crops, peach production, and new technology in postharvest plastics.

Presentation Description

Title: Disease update from the UF-IFAS Plant Diagnostic Center: horticultural samples in 2017.

Specialist: Dr. Carrie L. Harmon, University of Florida

Description: Plant samples of all kinds come to the UF-IFAS Plant Diagnostic Center for disease analysis. We will discuss the types of samples we received in 2017, some new diseases to watch for in fruit and vegetable production, where to find relevant disease management recommendations, and a few best practices to reduce disease pressure in your system.

Title: The evolution of weed management in vegetable production systems

Specialist: Dr. Nathan S. Boyd, University of Florida

Description: Weed management in vegetables is undergoing a transformation. Growers across the Southeast traditionally relied on methyl bromide for weed control with herbicides applied between the raised beds. Over the past ten years the number of herbicide applications and the number of herbicide types applied in vegetable crops has increased due in large part to the loss of methyl bromide. At the same time, growers have improved fallow management and adopted more diverse weed management practices. The rapid advances in precision agriculture and robotics over the past few years will most likely completely transform weed management practices and will be the next major transition. Weed management in the future is likely to look very different than it does today.

Title: Using Agriculture As A Tool For Better Health

Specialist: Dr. Ross Welch, **Cornell University**

Description: Because agricultural products are the primary source of all micronutrients, agricultural practices and policies have the potential to either exacerbate or prevent human micronutrient malnutrition on a global scale. A healthy agricultural industry is crucial for providing nutrients to human populations. Soil quality and soil fertility have a direct influence on the nutrient content of food crops. Soil improvements can increase productivity and allow for greater diversity of crops without increasing the area cultivated. Agricultural tools such as micronutrient-enriched fertilizers and farming systems designed to meet nutritional needs should be used as sustainable strategies to reduce micronutrient malnutrition. Plant breeders should include nutritional quality traits as well as yield traits as targets for enhancement when breeding for improved crop varieties. Biofortification is a new strategy that has great potential to help reduce the burden of micronutrient malnutrition globally especially in resource-poor families in rural areas. Clearly, agriculture must be closely linked to human nutrition and health if we are going to find sustainable solution to micronutrient malnutrition globally.

Title: Alternative Specialty Crops in Florida: Opportunities and Challenges

Specialist: Dr. Shinsuke Agehara, University of Florida

Description: Alternative crops have the potential to provide additional markets and greater profitability compared with traditional specialty crops. We are currently evaluating the potential of artichoke, blackberry, pomegranate, and hop, as alternative crops in Florida. Attractiveness of these crops include high nutritional values and antioxidant content, increasing consumption, premium prices, and demands for locally-grown produce. However, Florida's subtropical climates provide many constrains, such as conditions conducive to disease development and insufficient chill hours and photoperiod. This presentation will discuss the strategies to overcome these challenges.

Title: Peach production and what we have learned

Specialist: Dr. Dario Chavez, **University of Georgia**

Description: The presentation will touch on current technologies being tested in peach production in Georgia and in the Southeastern U.S. Among the techniques, studies will be presented comparing the use of beneficial nematodes for the control of borers in comparison to chemical standards. Similarly, the use of plant growth regulators to delay fruit ripening and increase fruit firmness.

Title: New technology in postharvest plastics

Specialist: Dr. Jeffrey Brecht, University of Florida

Description: Plastics are ubiquitous in the postharvest arena as bulk containers for harvest and transport, and especially as consumer packages. Concern about reducing plastic waste has led to innovations in recyclable, biodegradable and compostable plastics for postharvest uses. Plastic packages are widely used and critical for extending produce shelf life. Modified atmosphere packaging (MAP) regulates transmission of respiratory gases to achieve low O2 plus high CO2 atmospheres that slow produce metabolism. MAP and other smart packages supplement temperature control and are obligatory for successful marketing of many fresh-cuts and other highly perishable horticultural products.

Speakers' BioSketch

Dr. Carrie L. Harmon is the director of the UF-IFAS Plant Diagnostic Center and the Associate Director of the Southern Plant Diagnostic Network. She joined the faculty of the UF-IFAS Plant Pathology Department in 2003 with a BS in Plant and Soil Sciences from UMass, Amherst; an MS in Plant Pathology from Purdue University; and a Plant Pathology PhD from UF. She has worked in plant disease diagnosis for 15 years, and her focus is on extension plant pathology, detection of diseases, diagnostic method improvement, and dissemination of detection, diagnosis, and management information via the diagnostic network and her laboratory.

Dr. Nathan S. Boyd, associate professor of weed science at the University of Florida. Since arriving at the University of Florida Dr. Boyd has studied integrated weed management in vegetables, strawberries, and small fruit crops. He emphasizes a cropping systems approach that integrates cover crops, fumigants, and herbicides. In recent years he has focused on precision agriculture. Dr. Boyd has published many peer reviewed papers, articles, and book chapters on weed management.

Dr. Ross Welch is a Professor (Courtesy) of Plant Nutrition in the Section of Soil and Crop Sciences, School of Integrative Plant Science at Cornell University. Much of his research career was focused on micronutrient malnutrition in humans and in finding ways to improve the micronutrient nutritional quality of major staple food crops. He was instrumental in founding the concept of biofortification and in helping to develop a global program (HarvestPlus) that is currently delivering micronutrient-rich staple food crops in Asia, Africa, South America, Central America and Mexico. He was inducted into the Science Hall of Fame by USDA-ARS in 2014 and is a Fellow of the American Society of Agronomy and the Soil Science Society of America.

Dr. Shinsuke Agehara, assistant professor in plant physiology at University of Florida, Gulf Coast Research and Education Center. His research focus is on understanding plant physiological and morphological adaptation mechanisms to environmental stresses, and developing integrated sustainable management strategies for vegetable and small fruit crops. He serves on several Working Groups for the American Society of Horticultural Science and on the editorial board of International Journal of Plant Science and Agriculture.

Dr. Dario Chavez is the Peach Research and Extension Specialist for the state of Georgia. He is originally from Ecuador, and he attained a BS in Agriculture Sciences and Production in Zamorano, Honduras. Dr. Chavez obtained his MS and PhD in Horticulture working with blueberries, citrus, peaches, and plums at the University of Florida. His main area of interest at UGA is peach focus on orchard management, tree longevity, irrigation practices, root interaction with tree health, production, and plant breeding and genetics.

Dr. Jeffrey Brecht, professor of postharvest plant physiology, Director of the Center for Food Distribution and Retailing (CFDR) at the University of Florida. As CFDR Director he interacts with commodity associations, packers, shippers, distributors, importers, exporters, processors and retailers to extend information regarding advances in perishable food handling. He was named a University of Florida Research Foundation Professor in 2002, a Fellow of the American Society for Horticultural Science in 2006, and an Honorary Member of the Florida State Horticultural Society in 2014.