

UF | IFAS Extension
UNIVERSITY of FLORIDA



36th Continued Training Conference



October 20-23, 2019
Kissimmee, Florida

40
YEARS



Embassy Suites Orlando-Lake Buena Vista South Conference Center



- General Session
- Silent Auction
- Plant ID and Judging
- Bookstore
- Breakout Rooms

UF | **IFAS Extension**
UNIVERSITY of FLORIDA



**36th Florida Master Gardener Volunteer
Continued Training Conference**

October 20-23, 2019

Kissimmee, Florida

www.conference.ifas.ufl.edu/gardener

Table of Contents

Planning Committee	4
Welcome Letter	5
Sponsor Recognition	6
Pre-Conference Field Trips	7
Silent Auction	8
4-H Plant ID & Judging Contest	9
Fun Workshops	10
Speaker Biographies	11
Detailed Agenda.....	16
Presentation Summaries.....	19
Map of Florida Counties	38
Notes	39

Planning Committee

David Austin Highlands County

Kaydie McCormick..... Seminole County

Eva Pabon..... Osceola County

Lisa Sanderson Sumter County

Sally Scalera Brevard County

Wendy Wilber Alachua County

Anne Yasalonis Polk County

Dear Master Gardeners,

Welcome to the Master Gardener Volunteer advanced training conference!

On behalf of the Florida Master Gardener Volunteer program, the Master Gardener Volunteer conference committee, and the UF Center for Land Use Efficiency, it is my pleasure to welcome you to beautiful Osceola County for the state Master Gardener Volunteer training conference. Let me offer a special welcome to our first time attendees and our service award winners. The conference committee, along with Master Gardener Volunteers, have put together three advanced training days filled with opportunities to learn and be inspired.

Please take a few minutes to study this program book. There are many sessions to choose from and you will want to make sure not to miss the ones most important to you. We lead the conference off with Brie Arthur. Her knowledge and enthusiasm are sure to inspire you to try a Foodscape revolution at your home. The concurrent sessions are divided into general, focused and Florida Friendly Landscaping™ and there is a good sampling in all to increase your knowledge to help you be the best Master Gardener Volunteer you can be. We have built in time for networking with other Master Gardener Volunteers because sharing and learning from each other is as beneficial as learning in a classroom.

Numerous Master Gardener Volunteers will be recognized for their well-deserved milestone of 10, 15, 20, 25, 30, 35 years of service. MGVs and their counties will also be recognized for their achievements with Awards of Excellence, and one county will be awarded the Legacy Award that funds a worthy project.

Counties and individuals will compete for the prestige and bragging rights to win the Horticulture ID and judging contest. Come by the contest to test your knowledge and to see the 140 interesting plant, vegetable and fruit samples.

This year, we continue the famous silent auction. The auction has rare plants, beautiful containers and all sorts of interesting items for the garden and landscape. The funds from the auction go to support the MGV awards.

Please visit our sponsors to find out about their products and services and to thank them for the partnerships and support of the Florida Master Gardener Volunteer program.

The conference committee and I look forward to connecting with you and hope that your training here is filled to the brim with positive and inspirational opportunities that you will share with your home county.

Sincerely,



Wendy Wilber

Florida Statewide Master Gardener Coordinator

Thank You to Our Sponsors

Gold Sponsor



Bronze Sponsors



General Sponsor



audubon.org/plantsforbirds

Optional Field Trips

Sunday, October 20, 2019



Shingle Creek Experience

Shingle Creek is at the headwaters of the Everglades. This beautiful creek is lined in cypress and pioneers would harvest the trees to make roof shingles, hence the name. Here you will be ensconced in natural Florida in the land and on the water. You will experience a two-hour guided kayak tour to see Florida plants and ecosystems, and an expert Naturalist and retired Extension Agent will lead the 90-minute forest walk.



Backstage Disney Horticulture and Island Grove Winery Tour

Have you ever wondered how Disney does it? Those amazing topiaries, gorgeous hanging baskets and showy color beds aren't made by the 7 dwarfs. Visit the Disney horticulture greenhouses where they make the magic happen! See inspired plant choices and combinations and learn to take a little magic home with you. Then discover the newest winery in Osceola County, Island Grove Wine Company and farm. Here you will tour the farm to see many interesting fruit trees, blueberries, and grapes. Afterwards, relax and enjoy a wine sampling in the beautiful tasting room.



Leu Gardens and Nehrling Gardens

Harry P. Leu Gardens is a 50-acre botanical garden located in the heart of Orlando. You will be amazed by their extensive rose garden and tropical stream garden. Nehrling Gardens is the former home of famed horticulturalist Henry Nehrling, who purchased the property in 1885 to establish a garden where he could experiment with tropical and subtropical plants year-round. Join us as we explore these two distinctively different yet beautiful gardens.

Silent Auction

The auction will be held in Palms EFG



Auction Donations

Auction items are donated by Master Gardener Volunteer county programs from around the state of Florida. Each county has a designated display area at the conference.

County Competition & Proceeds

The county whose auction item(s) bring in the most money will receive a prize packet! Counties can include a coordinator or group photo with the display item(s) so bidders can identify the county each contribution will benefit. Silent auction proceeds support the Master Gardener Awards of Excellence and Service Awards for their length of service and innovative programming.

Auction Itinerary

Sunday	Sunday, October 20
4:30pm - 6:30pm	Early Item Donation Check-In
Monday	Monday, October 21
7:00am - 4:30pm	Item Donation Check-In
Tuesday	Tuesday, October 22
7:00am - 3:00pm	Auction Open for Bidding
2:30pm - 3:00pm	Last Call for Bids - during refreshment break
4:00pm - 5:30pm	Auction Checkout

Note: Only cash or check payments will be accepted during auction checkout, so please plan accordingly! There is an ATM available onsite at the host hotel.

4-H Plant ID and Judging Contest

When: Tuesday, October 22nd | 4:00pm-6:00pm

Where: Cypress Rooms 2-4 of the conference center



Each year during the Florida Master Gardener Volunteer Conference, Master Gardeners have the option to compete in the 4-H plant identification and judging competition. Both teams and individuals can compete to identify samples of ornamental plants, vegetables, and fruits, as well as judge specific plant specimens on their appearance and vigor.

This year's contest will be held **Tuesday, October 22nd from 4:00pm-6:00pm** in Cypress Rooms 2-4 of the conference center. If you are interested in participating, be sure to stop by the registration desk and sign-up in advance!

Fun Workshops

Tuesday, October 22nd | 3:00pm – 4:00pm

New and exciting learning opportunities are coming to this year's conference. Don't miss out on our Fun Workshops! Each will give an interactive perspective and is free to attend. Sign up will take place onsite at the conference. Get ready to have some fun!



Sustainable Chocolate – From Gene to Bar

Jacob Marlin and Heather Barrett | Palms Ballroom

Special guests from Belize will explore the issues of sustainability, agriculture, and food systems as they instruct on various strategies and solutions to reverse negative trends leading to the loss of biodiversity of the rainforest. Chocolate farming and production will be highlighted as you experience the cacao bean to chocolate bar process.



Amalfi Lemons and Limoncello

Terra Freeman and Wendy Wilber | Magnolia B

Terra Freeman and Wendy Wilber will share their experiences with lemon production and food systems of southern Italy. They will instruct on the history, production and challenges of growing lemons in the current times. Lemon uses and the making of the lemon liquor, limoncello, will be highlighted.



Florida's Honeys

JK Yarborough and Amy Vu | Magnolia A

Bees collect nectar from flowers and bring it back to the hive. Then what happens? Extension Agent JK Yarborough and Area Beekeepers will instruct on how honey is made, harvested and processed to arrive on your table. You will taste and discern different Florida honeys from wildflower to tupelo and flavors in between.



Herbs in the Kitchen! "Cooking with Herbs"

Martha Maddox | Magnolia C

Many of us grow herbs in the garden, but are we getting the most out of them in the kitchen? An IFAS expert will share tips and tricks to using herbs in healthy meals, drying herbs and new recipe ideas for your kitchen.

Speaker Bios

Brie Arthur

Keynote Speaker

Known for her leadership with the Foodscape movement, Brie is a celebrated international speaker and best-selling author. A recipient of an American Horticultural Society Award, Brie studied landscape design at Purdue University. She has worked as a grower and propagator for leading nurseries and her passions center on sustainable land management and the value of gardening.

Brian Bahder

Currently an assistant professor in the department of entomology and nematology. Primary research interest at the moment is vector ecology and management of palm-infecting phytoplasmas.

Heather Barrett

Heather Barrett is the Deputy Director of the Belize Foundation for Research & Environmental Education. She has been a resident of Gainesville, Florida for the past fifteen years.

Robert Bowden

Robert Bowden has been the Director of Leu Botanical Gardens for twenty-five years and earlier served as the Director of the Atlanta Botanical Garden, and the Director of Horticulture of the Missouri Botanical Garden in St Louis, Missouri. He has a BS from Florida A&M University in Horticulture and an MBA from the University of Michigan. Throughout the U.S. and Caribbean, Robert's delightful photographs and enjoyable essays can be seen in a wide variety of gardening magazines and professional journals.

Stephen Brown

Stephen Brown has been an extension agent in Lee County for 26 years. His specialties include native plants, flowering trees, and landscape palms. He has written more than a thousand garden columns and scores of magazine articles on the subjects he receives as an extension agent. He has also produced more than 50 YouTube videos. Before moving to Florida, he was an extension agent in Los Angeles, California, for eight years. Immediately after leaving high school, he joined the Air Force and spent time in California, Vietnam, Montana and Guam.

Zachary Brym

Zack Brym is an Assistant Professor in the Department of Agronomy working from the Tropical Research and Education Center in Homestead. His research and extension programs cover a broad range of topics related to agroecology with a focus on crop physiology, diversity, and management. The goal of these programs is to establish new cropping systems, such as industrial hemp, that provide the complementary outcomes of crop production, environmental conservation, and community development.

Jim Davis

Jim Davis is the Multi-County Extension Director for the UF/IFAS Extension Sumter and Hernando Counties. Jim's area of specialization includes palm management, natural resources and integrated pest management.

Zhanao Deng

Keynote Speaker

Zhanao Deng is a professor and plant breeder at the UF/IFAS Department of Environmental Horticulture. He works at UF's Gulf Coast Research and Education Center in Wimauma, FL. He breeds caladium, gerbera, lantana, blackberry, etc. and has released several dozens of new cultivars.

Marc Frank

Marc is a lifelong plant enthusiast who completed Florida Master Gardener training in Alachua County in 2002 and earned a M.S. in Horticultural Science from the University of Florida in 2005. He manages the UF Herbarium's Plant Identification and Information Service, which serves Cooperative Extension personnel, UF faculty, and other clients throughout the state of Florida.

Gary Knox

Keynote Speaker

Gary Knox is Professor of Environmental Horticulture and Nursery Crops Extension Specialist with UF/IFAS at the North Florida Research and Education Center located outside Tallahassee. Dr. Knox evaluates new woody plants for their usefulness in Florida landscapes. This work is in conjunction with a volunteer group supporting Gardens of the Big Bend, a botanical, teaching and evaluation garden at the Research Center. Gary's plant passions are magnolia, crapemyrtle, camellia, and others (so many species, so little time!).

Claire Lewis

Claire Lewis is the Florida-Friendly Landscaping™ Statewide Florida Yards & Neighborhoods Coordinator. Prior to joining the FFL team, Claire earned a Master's degree in Landscape Architecture from the University of Florida and worked 12 years for private landscape architecture firms in Gainesville. Design projects included large scale commercial, institutional, and residential home sites. Claire's current job responsibilities include educational outreach to building professionals and UF/IFAS Extension Agents across the state to educate Floridians about sustainable landscape practices and encourage builders, developers, and HOAs to implement the Florida-Friendly Landscaping™ principles in their communities in order to preserve and protect Florida's water and natural resources. Claire is a native Floridian and enjoys spending time outdoors with her husband and two children.

Martha Maddox

Keynote Speaker

Martha Maddox is the FCS Agent with UF/IFAS Extension Alachua County. She received her MSE in Home Economics Education from Harding University & her BSE in Vocational Agriculture from Arkansas State University. She has been an Extension Agent for 34 years, starting her career with UA Cooperative Extension Service in Arkansas then UF/IFAS Extension Sumter County for 20 years. She believes in the Extension Mission & working together as a TEAM to make a difference in an individual's life and Making The Best Better with programs we undertake!

Rachel Mallinger

Dr. Rachel Mallinger is an Assistant Professor at the University of Florida in the Department of Entomology and Nematology. Her research and extension programs focus on pollinator conservation, especially native wild bees, and crop pollination. She works with land managers, gardeners, and farmers to promote bee-friendly landscapes and enhance plant pollination services. Outside of work, she loves to garden, hike, and explore Florida's parks.

Chris Marble

Chris Marble received his Ph.D. from Auburn University and is an Assistant Professor in the Environmental Horticulture Department at the UF/IFAS Mid-Florida Research and Education Center in Apopka, FL. He has held various research and extension roles for the University of Tennessee and Syngenta, and before completing his graduate studies, worked in the landscape industry for 7 years. Dr. Marble's research program focuses on the development of integrated weed management plans for ornamental plants in production nurseries, greenhouses, and landscapes focusing on more efficient use of herbicides and how cultural practices impact weed control. He travels extensively throughout Florida and beyond to work with nursery growers to address real-world weed management challenges.

Jacob Marlin

Jacob Marlin is the founder and Executive Director of the Belize Foundation for Research and Environmental Education (BFREE), a US 501c3 non-profit that owns a privately protected area and biological research station in the Maya Mountains of southern Belize.

Gene McAvoy

Gene McAvoy is Vegetable Extension Agent IV Emeritus and Associate Director for Stakeholder Relations at the UF/IFAS Southwest Florida Research and Education Center. He has over 22 years' experience helping farmers implement Best Management Practices to help improve water quality.

Brooke Moffis

Brooke Moffis is the Residential Horticulture Agent with UF/IFAS Extension in Lake County. She currently manages the UF/IFAS Lake County Master Gardener Volunteer Program and the Discovery Gardens located in Tavares. She previously worked as the Urban Horticulture Agent in Sumter County and in hydroponics at the Land Pavilion at EPCOT. She earned her Bachelor's in Horticulture from Tennessee Tech and her Master's in Entomology from the University of Florida. Planting flowers with her Zen-like grandfather introduced her to a passion for creatures both great and small.

Faith Oi

Dr. Faith Oi is the Director of Pest Management University, an academy that provides state-of-the-art education and hands-on training for the industry. As a faculty member in the Entomology and Nematology Dept at the University of Florida, she works at a "grassroots-level" doing applied research to solve industry problems. Her latest efforts also involve working with county faculty to direct market IPM to residents through existing programs. She received her Ph.D. from the University of Florida; M.S. and B.A. degrees from the University of Hawai'i, Mānoa.

Nick Place

Keynote Speaker

Dr. Nick T. Place was named Dean and Director of UF/IFAS Extension in September 2012. He is a Professor in the Agricultural Education and Communication Department at the UF College of Agriculture and Life Sciences (CALs). He oversees the Florida Cooperative Extension service found in 67 counties, 13 Research and Education Centers, 15 special Institutes and programs and many departments across the Sunshine State. From 2007 through 2012, Dr. Place served as the Associate Dean and Director of the University of Maryland Extension.

Sally Scalera

Sally Scalera graduated from Iowa State University with a Bachelor of Science degree in Horticulture. With degree in hand she left Iowa to work for a mouse! She started off in Florida working at Walt Disney World at EPCOT Center in landscaping, then to the Land Pavilion at EPCOT and then to the Disney Tree Farm and Nursery. In 1992 Sally started working on her Master's degree at UCF, graduating in 1995, and in January 1993 she joined the UF/IFAS Extension in Brevard County where she is the Urban Horticulture Agent and Master Gardener coordinator.

Jason Smith

Jason currently serves as Associate Professor & State Forest Health Extension Specialist in the School of Forest Resources and Conservation at the University of Florida. His appointment is split between research, teaching and extension and he serves on the graduate faculties of the School of Forest Resources and Conservation and Department of Plant Pathology and is a member of the UF Emerging Pathogens Institute as well as the Interdisciplinary Doctor of Plant Medicine Program. The primary focus of his team's research has been to provide a better understanding of the underlying mechanisms and biology of interactions between tree hosts, fungal pathogens, their vectors and the environment to reduce the impact of disease on trees in the context of global change. Jason serves on the tree advisory board for the City of Gainesville and has expertise in tree selection and diversity for the southeast.

Jessica Sullivan

Jessica Sullivan has been teaching topics in sustainable horticulture and agriculture with the UF/IFAS Extension in Osceola County for eighteen years. She has a B.S. in Horticultural Therapy and an M.S. in Pest Management. She enjoys gardening, beekeeping, and exploring Florida's amazing natural lands.

Laurie Trenholm

Dr. Trenholm received her BS and MS in Environmental Horticulture from the University of Florida and her Ph.D. in Crop Science from the University of Georgia. She has been in the position of Urban Turfgrass BMP specialist since 1999. She was active in the development of the Green Industry BMPs beginning in 2000 and has taught environmental turfgrass management to Master Gardener, commercial and homeowner audiences since that time. She led the state-wide FDEP nutrient leaching study through 2014.

Laura Elena Valencia

Laura E. Valencia has served as the 4-H Youth Development Agent in Lake/Osceola County Extension since 2012. Ms. Valencia specializes in developing and implementing new, innovative cultural programming for youth of diverse audiences to increase their participation in the 4-H Program. She is recognized for her work on Diversity, Equity and Inclusion. For the past seven years, she has been involved on DEI initiatives at the national, regional, state and university level. Some of the organizations she is involved with include: National Diversity Council, NAE4-HA Diversity Taskforce, and the National 4-H Latino Advisory Council. At the Regional level, SERA-37, Latinos in the New South. At the state level with FAE4-HA Diversity Committee and 4-H Diversity/Grow/Quality Action Team and most recently with UF/IFAS Diversity & Inclusion Committee.

Tom Wichman

Tom is a self-proclaimed plant nerd who has been in the horticultural industry for 45 years. Tom is currently the statewide coordinator for the Florida-Friendly Landscaping™ Green Industries Best Management Practices Program. This program teaches Green Industry professionals environmentally safe landscaping practices that help conserve and protect Florida's ground and surface waters and natural resources. Since 2006 the program has educated more than 60,000 individuals statewide. When he is not working, Tom works in the landscape with his wife Becky. Tom, Becky and his daughter Megan are big Gator fans and enjoy following many different Gator sports throughout the year.

Hannah Wooten

Hannah Wooten, UF/IFAS Extension Agent of Sustainable Agriculture & Food Systems in Seminole County, provides education promoting agricultural awareness through farm tours, environmental stewardship through integrated pest management training, and education in urban farming techniques with an emphasis on hydroponics. Through strategic scientific communication, Hannah aims to cultivate a new generation of urban farmers in a vibrant local food system.

JK Yarborough

JK is a Livestock and Natural Resources Agent for Orange and Seminole Counties.

Detailed Agenda

Sunday	<i>October 20, 2019</i>
12:30pm - 5:00pm	Optional Pre-Conference Field Trips
4:30pm - 6:30pm	Pre-Conference Registration Open Early Silent Auction Donation Check-In

Monday	<i>October 21, 2019</i>		
6:30am - 9:30am	Hotel Breakfast for In-House Guests		
7:00am - 4:30pm	Registration Open & Silent Auction Donation Check-In		
8:00am - 8:15am	Welcome and Announcements [Palms Ballroom] Wendy Wilber , Florida Statewide Master Gardener Volunteer Coordinator, UF/IFAS		
8:15am - 9:00am	Opening General Session [Palms Ballroom] Brie Arthur , The Foodscape Revolution Moderator: Wendy Wilber		
Concurrent Sessions			
9:15am - 10:15am	General	Focused	FFL
Location	Magnolia A	Magnolia B	Magnolia C
Moderator	Barbara Edmunds	Kate Rotindo	Whitney Elmore
	Marc Frank Understanding Plant Toxicity	Sally Scalera Understanding the Unsung Heroes: Soil Microbes	Laurie Trenholm Imagine You're a Lowly Turfgrass Plant
10:15am - 10:45am	Refreshment Break [Palms Ballroom Foyer]		
10:15am - 5:00pm	UF/IFAS Extension Bookstore Open [Cypress 1]		
Concurrent Sessions			
10:45am - 11:45am	General	Focused	FFL
Location	Magnolia A	Magnolia B	Magnolia C
Moderator	Tom Becker	Eva Pabon	Claire Lewis
	Stephen Brown Fabulous Flowering Shrubs	Jessica Sullivan Gardening for All: Tips and Tools for Easier Gardening	Brooke Moffis Landscapes of the Future
12:00pm - 1:45pm	Lunch and Keynote Speaker 12:00pm - 1:00pm [Palms Ballroom] Zhanao Deng , New UF Plant Breeding Introductions Service Awards 1:00pm - 1:45pm Moderator: Lisa Sanderson		

Monday	October 21, 2019 (continued)		
	Concurrent Sessions		
2:00pm - 3:00pm	General	Focused	FFL
Location	Magnolia A	Magnolia B	Magnolia C
Moderator	Pat Williams	Sally Scalera	Kaydie McCormick
	Laura Valencia Increasing Diversity to Strengthen Your Master Gardener's Program	Brian Bahder What's Wrong with My Palms? Palm Diseases	Hannah Wooten Hydroponics for Your Home and Community Garden
3:00pm - 3:30pm	Refreshment Break [Palms Ballroom Foyer] Silent Auction Opens [Palms EFG]		
	Concurrent Sessions		
3:30pm - 4:30pm	General	Focused	FFL
Location	Magnolia A	Magnolia B	Magnolia C
Moderator	Holly Bates	Taylor Clem	Tom Wichman
	Chris Marble Weeds and How to Prevent Them	Brie Arthur Growing Heirloom Tomatoes	Robert Bowden Think Outside the Box (Store): Different Trees and Plants for Your Florida Landscape
4:30pm - 6:00pm	Welcome Social [Palms Ballroom Foyer]		
	Dinner on Own		

Tuesday	October 22, 2019		
6:30am - 9:30am	Hotel Breakfast for In-House Guests		
7:00am - 5:00pm	Registration Open UF/IFAS Extension Bookstore Open [Cypress 1]		
7:00am - 4:30pm	Silent Auction Open [Palms EFG]		
8:45am - 9:45am	General Session [Palms Ballroom] Gene McAvoy , A Historical Perspective of Florida Agriculture and Look at Water Management in Florida Moderator: Wendy Wilber		
9:45am - 10:15am	Refreshment Break [Palms Ballroom Foyer]		
	Concurrent Sessions		
10:15am - 11:15am	General	Focused	FFL
Location	Magnolia A	Magnolia B	Magnolia C
Moderator	Brooke Moffis	Mark Tancig	Mary Salinas
	Faith Oi The Importance of Master Gardeners to Indoor Integrated Pest Management (IPM)	Zachary Brym The Agroecology Framework in Action: Bringing Industrial Hemp to Florida	Rachel Mallinger Supporting Native Bees in Your Garden
11:30am - 1:15pm	Lunch and Industry Updates from Sponsor Representatives [Palms Ballroom] Awards of Excellence Moderator: Anne Yasalonis		

36th Florida Master Gardener Volunteer Continued Training Conference

Tuesday	October 22, 2019 (continued)		
	Concurrent Sessions		
1:30pm - 2:30pm	General	Focused	FFL
Location	Magnolia A	Magnolia B	Magnolia C
Moderator	Kate O'Neill	Alyssa Vinson	Nickie Munroe
	Jason Smith New Cool Trees and Tree Diseases	Jim Davis PSI: Plant Scene Investigation	Florida-Friendly Landscaping™ Resource Update
2:30pm - 3:00pm	Refreshment Break [Palms Ballroom Foyer] Last Call for Silent Auction Bids [Palms EFG]		
3:00pm - 4:00pm	<p align="center">Fun Workshops</p> <p align="center">Jacob Marlin and Heather Barrett, Sustainable Chocolate - from Gene to Bar [Palms Ballroom] Moderators: Kate Rotindo and Kate O'Neill</p> <p align="center">JK Yarborough and Amy Vu, Florida's Honeys [Magnolia A] Moderators: Mark Tancig and Kaydie McCormick</p> <p align="center">Terra Freeman and Wendy Wilber, Amalfi Lemons and Limoncello [Magnolia B] Martha Maddox, Herbs in the Kitchen! "Cooking with Herbs" [Magnolia C] Moderators: Taylor Clem and Nickie Munroe</p>		
4:00pm - 5:30pm	Silent Auction Checkout [Palms EFG]		
4:00pm - 6:00pm	4-H Plant ID and Judging Contest [Cypress 2-4]		
	Dinner on Own		

Wednesday	October 23, 2019
6:30am - 9:30am	Hotel Breakfast for In-House Guests
8:00am - 11:00am	Registration Open UF/IFAS Extension Bookstore Open [Cypress 1]
8:30am - 9:30am	Keynote Presentation [Palms Ballroom] Nick Place , Living the Values of UF/IFAS Extension Moderator: Brooke Moffis
9:30am - 10:30am	Closing Keynote Presentation [Palms Ballroom] Gary Knox , Exciting New Magnolias for Florida! Old Favorites, Native Treasures and a World of New Discoveries Moderator: Taylor Clem
10:30am - 11:30am	Closing Remarks - Wendy Wilber Conference Concludes

Presentation Summaries

Listed alphabetically by presenter's last name.

Monday, October 21, 2019 | 8:15am-9:00am | Opening Keynote Presentation

The Foodscape Revolution

Brie Arthur, International Speaker and Best-Selling Author

Brie has fine-tuned her signature design technique of Foodscaping, a sustainable landscape practice that embraces beauty and bounty. Aiming to change the way landscapes are designed and managed, Brie encourages everyone to "think outside of the box." Learn how pairing edibles in a traditional ornamental landscape increases biodiversity and adds purpose to everyday spaces. The best edible and ornamental plant combinations for Florida gardeners are featured to inspire attendees to create purposeful landscapes that engage people of all ages! Easy strategies are explained, including how to plant a bed edge to deter moles and voles. This is a fast paced, informative presentation that leaves attendees inspired and ready to foodscope!

Monday, October 21, 2019 | 3:30pm-4:30pm

Growing Heirloom Tomatoes

Brie Arthur, International Speaker and Best-Selling Author

Heirloom tomatoes are the ultimate taste of summer; they are also a challenge to grow in hot climates! Brie shares expert tips for a successful growing season. In depth variety selection and cultural information are shared including a few creative solutions for combating with soil borne diseases and root knot nematodes. The best growing methods, fertilizers and staking strategies are discussed. Learn to be an expert from all of Brie's experiences (aka mistakes!) and grow like a pro this year!

Monday, October 21, 2019 | 2:00pm-3:00pm

What's Wrong with My Palms? Palm Diseases

Brian Bahder, Assistant Professor, Entomology and Nematology Dept, UF/IFAS, Fort Lauderdale Research and Education Center, Davie, FL

My presentation will be focusing on the current status of lethal bronzing disease in the state of Florida. I will discuss current distribution, symptoms of the disease, host range, and current management options. In addition, instructions will be outlined on how to properly take palm samples for testing and where to send samples.

Monday, October 21, 2019 | 3:30pm-4:30pm

Think Outside the Box (Store): Underutilized Trees and Shrubs for the Florida Landscape

Robert Bowden, *Director*, Leu Gardens, Orlando, Florida, Orange County

What is the role of diversity in the garden and what do we gain by increasing diversity in our gardens? Despite the wealth of plant species and cultivars at our fingertips, Floridians rely too heavily on too few different kinds of plants. By utilizing a greater variety that can thrive throughout Florida, we can beautify the landscape, minimize inputs, and support wildlife. Enjoy a fun-filled presentation by the City of Orlando's Director, Robert Bowden, as he presents many new and underutilized plants suitable for the Florida landscape.

Monday, October 21, 2019 | 10:45am-11:45am

Fabulous Flowering Shrubs

Stephen H. Brown, *Horticulture Agent*, UF/IFAS Extension, Lee County, Fort Myers, FL

Florida has received a wealth of plants from many parts of the world with similar or even dissimilar climates. Many plants cultivated in Florida gardens undoubtedly have their origins outside of Florida. The state itself has many native species that are often underrepresented in nurseries and consequently the landscapes. Many species found in older neighborhoods have disappeared from the inventories of nurseries, and the rendering of landscape designers and architects. So now, only a handful of flowering shrubs are seen the most in home gardens, communal gardens, and roadways. Yet for the curious, the flowering shrubs encountered in Florida may be so puzzling that the questions, "What is the name of this plant?", "Is this the right plant for this space?", "Is it native?" , "Can I get one to bloom non-stop?" are frequently asked. Since all shrubs flower, for flowering shrubs the most appealing part of their growth are the flowers. However, there are other aspects of their beauty including elegance of foliage, gracefulness of form and branching, and the fragrance they emit. This presentation will take you from familiar beauties, to new possibilities. The focus is to explore plants that should survive in the right spot without moving into the wrong place. To help you identify these shrubs, we will also discuss their leaves, inflorescences, flowers, and fruits.

Tuesday, October 22, 2019 | 10:15am-11:15am

The Agroecology Framework in Action: Bringing Industrial Hemp to Florida

Dr. Zachary Brym, *Assistant Professor*, Tropical Research and Education Center, Agronomy Department, Homestead, FL, Miami-Dade County

Agricultural and natural systems are inextricably interconnected. Agroecology provides a framework that links the shared goals of agricultural and natural area management. These shared goals linked by the agroecology framework are sustainable production, resource conservation, and social responsibility. The agroecosystem concept helps with goal-oriented management plans that consider the environmental and ecological characteristics of a farm and the surrounding area.

The UF/IFAS Industrial Hemp Pilot Project being developed using the agroecology framework to address the agricultural, environmental, and social challenges of establishing a new industry in Florida. The primary research objectives of the UF hemp program are to identify hemp varieties suitable to Florida's environment, assess the environmental impacts of hemp cultivation, and evaluate the economic impacts of various hemp cropping systems. Various hemp agroecosystems will be described with a focus on the ongoing hemp research at UF and how that work contributes to our overall understanding of hemp agroecology.

Agroecology-related materials are available at:

<https://trec.ifas.ufl.edu/agroecology/> and <https://trec-agroecology.github.io/introducing-agroecology/>

Hemp-related materials are available at: <https://programs.ifas.ufl.edu/hemp/>

Tuesday, October 22, 2019 | 1:30pm-2:30pm

Plant Scene Investigation

Jim E. Davis, *Multi-County Extension Director*, UF/IFAS Extension, Sumter and Hernando Counties, Bushnell, FL

Can you solve the case? Join us in a fun, but educational workshop on PSI or Plant Scene Investigation. We will provide real cases of plant clinic situations received by agents and your fellow UF/IFAS Extension Florida Master Gardeners. PSI will challenge you and your peers to determine what went wrong. We will show you the victim and provide the facts, or at least the facts we were given. We will provide the line-up of usual and not so usual suspects. Is herbicide to blame or freeze damage? Virus or nutrient deficiency? Rabbits or woodpeckers? It is up to you to crack the case! Are you up to solve the mystery?

Monday, October 21, 2019 | 12:00pm-1:00pm | Keynote Presentation

New UF Plant Breeding Introductions

Zhanao Deng, *Professor*, Department of Environmental Horticulture, Gulf Coast Research and Education Center, Wimauma, FL, Hillsborough County

The University of Florida (UF) boasts one of the largest plant breeding programs in the United States (U.S.A.) with 30 plant breeders developing new varieties in 50 different plant species. Over the last 10 years, UF breeders have introduced dozens of new cultivars that are excellent choices for landscapes and foodscapes across the state.

Caladium: Florida produces all the caladium tubers (or bulbs) used in the U.S.A. and in the world. UF has maintained an active caladium breeding program for more than 40 years. Dr. Zhanao Deng has introduced a number of new fancy-leaf caladium varieties including 'Cranberry Star', 'Fiesta', 'Garden White', 'Hearts Desire', 'Royal Flush', 'Sea Foam Pink', 'Strawberry Star', 'Summer Pink' and 'Tapestry', and a number of new lance-leaf caladium cultivars include 'Cherry Tart', 'Cosmic Delight', 'Icicle', 'Passionista', 'Red Hot', 'Sizzle', and 'White Butterfly'. Tubers of these can be ordered directly from Florida caladium growers.

Coleus: Cultivars developed by Dr. David Clark are characterized by a wide range of leaf coloration patterns, tolerance to sun, and non-flowering. They perform well in Florida.

Lantana: Dr. Deng has included two sterile cultivars 'Bloomify Red' and 'Bloomify Rose'. These varieties do not produce fruit or seeds and do not hybridize with native lantana species. They have been approved for planting and landscape use in Florida.

Ruellia: Machu Morado™ (or Mayan™ Compact Purple) has superior landscape performance than 'Purple Shower' and 'Mayan Purple'. It is more compact and has more branches, thus a fuller appearance. It does not produce fruit and it is an excellent alternative to the old invasive varieties. This variety was developed by Dr. Rosanna Freyre. Recently, she introduced 'Aztec Purple', 'Aztec White/Pink', and 'Aztec Pink', which also are fruitless and non-invasive.

Tomatoes: Dr. Jay Scott and Dr. Sam Hutton have introduced a number of tomato cultivars. Among them are the Tasti-Lee® tomato, which has superb flavor and color and is very popular among consumers. Dr. Harry Klee has released three home garden tomato varieties, including Garden Gem® and Garden Treasure®. Seeds of these varieties will be widely available in garden centers this coming year. These new varieties have the flavor of the heirloom varieties and high yield. Interested individuals can make a \$10 donation to Dr. Klee's research and receive packets of seeds of the three varieties. More varieties are in the pipeline. Dr. Sam Hutton

Strawberries: Florida is the leading producer of strawberries. Dr. Vance Whitaker has introduced 'Florida Beauty', 'Florida Brilliance', Florida Fortuna' and 'Florida Sensation' strawberry cultivars. These varieties are not only suitable for commercial production but also excellent choices for foodscapes and produce sweet berries.

Blueberries: Blueberries are many people's favorite; UF blueberry breeder Dr. Patricio Munoz has introduced 'Colossus', 'Keecrisp' and 'Patrecia' in the last three years. Berries of 'Colossus' are very large to jumbo, very firm and store very well. He has developed ever-green cultivars 'Arcadia', 'Avanti' and 'Endura'. These varieties retain their leaves through the fall and winter and can produce berries in early spring.

Citrus: Citrus is a popular fruit tree among gardeners. The citrus greening disease has been a major concern for citrus trees grown in Florida. UF citrus breeder Dr. F.G. Gmitter and Dr. J. Grosser have introduced several citrus greening-tolerant cultivars, including 'Sugar Belle®', 'Bingo', 'Marathon' and 13-51 mandarin. These varieties can tolerate the disease and remain productive for many years. UF breeder Dr. Jose Chaparro has introduced new peach cultivars, and Dr. Kevin Kenworthy has introduced new St. Augustine and zoysiagrass varieties for use in home lawns in Florida.

Monday, October 21, 2019 | 9:15am-10:15am

Understanding Plant Toxicity

Marc S. Frank, *Extension Botanist*, UF/IFAS Plant Identification and Information Service, University of Florida Herbarium, Gainesville, Florida, Alachua County

What exactly do we mean when we say a plant is poisonous? Why do plants produce poisonous compounds? What factors influence how our bodies react when we are exposed to poisons? And how do we avoid exposure to plant toxins? Marc Frank, Extension Botanist at the University of Florida Herbarium, will provide answers to these questions and help to dispel some common misconceptions about plant toxicity.

Tuesday, October 22, 2019 | 3:00pm-4:00pm

Amalfi Lemons and Limoncello

Terra Freeman, *Urban and Commercial Horticulture Extension Agent and Master Gardener Coordinator*, St. Johns County

Wendy Wilber, *Florida Statewide Master Gardener Volunteer Coordinator*, UF/IFAS, Gainesville, FL

Wendy Wilber and Terra Freeman will share the highlights of their experience at Amalfi Lemon Grove, an organic lemon grove that overlooks the Amalfi Coast. We will discuss sustainable production methods as well as how to make Limoncello. Taste testing will be encouraged. *Recipe to follow.*

Wednesday, October 23, 2019 | 9:30am-10:30am | Closing Keynote Presentation

Exciting New Magnolias for Florida: Old Favorites, Native Treasures and a World of New Discoveries

Gary Knox, *Professor of Environmental Horticulture and Nursery Crops Extension Specialist*, Department of Environmental Horticulture, UF/IFAS North Florida Research and Education Center, Quincy, Florida

Whether you're in Fort Myers or Fort Walton Beach, there's a new magnolia for you! Magnolias have long been favorite garden plants because of their beauty, adaptability and pest resistance. Native magnolias are experiencing a revival thanks to new selections with improved form and flowering. Yellow flowered magnolias, both deciduous and evergreen, are highly sought after, once gardeners learn about them. Recent introductions of pink and purple flowered evergreen magnolias are energizing gardeners from the Arctic to the Amazon, especially with the prospect of a pink flowered "Southern magnolia" in the near future. Development and availability of these and other new magnolias are possible thanks to scientific advances in magnolia genetics and propagation as well as new discoveries of *Magnolia* species.

Dr. Knox has traveled the world searching for --- and finding --- rare species of *Magnolia*. Back in the USA, he is on plant-swapping terms with botanical gardens, plant collectors and breeders all over the country. Thanks to these connections, he has amassed a collection of magnolias at the North Florida Research and Education Center in Quincy that is recognized as part of the National Collection of Magnolia. Not content to keep all this beauty to himself, he's become a "Johnny Appleseed" of magnolias, freely distributing new hybrids and rare species to gardens throughout Florida and the Southeast.

Join Dr. Knox as he describes the exciting new world of magnolias that is upon us!

Tuesday, October 22, 2019 | 3:00pm-4:00pm

Herbs in the Kitchen! "Cooking with Herbs"

Martha B. Maddox, *CEA IV*, Family & Consumer Sciences, UF/IFAS Extension Alachua County, Gainesville, Florida

Many of us grow herbs in the garden but are we getting the most out of them in the kitchen? Martha Maddox, CEA IV, Family & Consumer Science Agent from UF/IFAS Extension, Alachua County will share tips and tricks to using herbs in healthy meals, drying herbs and introducing new recipe ideas for your kitchen. Maddox has been recognized on the state, regional and national levels for her work with herbs through publications, PowerPoint presentations, exhibits and programming by National Extension Association of Family and Consumer Science Agents and National Association of County Agricultural Agents. Spice Up Your Life as Maddox walks you through the herb garden, learning how to use culinary herbs to enhance your health, become familiar with herb flavors, harvesting and storing herbs, drying & freezing techniques, plus the difference between dried and fresh herbs in a recipe. Your adventure begins when you get creative by discovering herbal blends, sugars, butters, vinegars and various ways herbs are used in recipes. Join us for a fun, adventures, favorable workshop that will be filled with a variety of aroma!

Tuesday, October 22, 2019 | 10:15am-11:15am

Supporting Native Bees in Your Garden

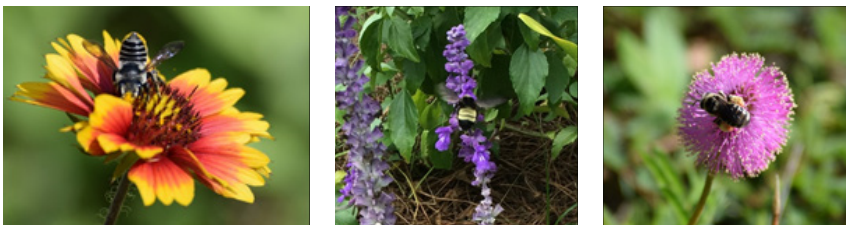
Dr. Rachel Mallinger, *Assistant Professor*, Department of Entomology and Nematology, University of Florida, Gainesville, FL, Alachua County

Florida is home to approximately 315 species of native wild bees. These bees are important pollinators for crop plants, ornamentals, and wildflowers. However, due to numerous factors including land-use change, many bee species are declining. Gardeners and land managers can aid in bee conservation efforts by planting flowers for bees in home or community gardens and by maintaining a bee-friendly landscape.

Unlike many other insects, bees rely exclusively on nectar and pollen for food. This makes them very dependent on the availability of flowers in the landscape. When selecting plants for native wild bees, use the following criteria:

1. Avoid pollen-less plant varieties. Remember that bees eat pollen!
2. Avoid plants with long narrow flower tubes (i.e. corollas) as their nectar is less accessible to many bees. Instead, choose flat flowers or ones with short and wide flower tubes.
3. Design your garden to have three or more different plants blooming at any given time during the growing season.
4. Flowering trees and shrubs can provide excellent floral resources for bees in the spring, while herbaceous wildflowers can provide good resources later in the summer and fall.
5. Choose flowers that are white, yellow, blue-purple, or multicolored as these are generally the most attractive to bees. Flowers that are all orange or red are generally less attractive to bees.
6. Provide a diversity of plants in the garden, including a range of flower colors, bloom times, and plant families, to attract a greater diversity of bees.
7. Include as many native plants as possible as these are generally best for native bees, particularly for their pollen resources. However, some non-natives provide abundant nectar and can be used in combination with native plants.

To prevent pesticide exposure, purchase seeds or starter plants that have not been treated with systemic pesticides such as neonicotinoids, and avoid using systemic pesticides on these plants throughout their lifespan. If using pesticides, select ones with a shorter period of activity and spray plants that are not in bloom. Applying pesticides to plants in bloom will have the greatest impact on bees and other pollinators. The majority of bees nest below ground, and benefit from having undisturbed and semi-bare ground. Thus, having portions of your yard that are not covered in thick mulch or weed barrier can enhance ground-nesting bee populations.



Pictures 1 – 3. Native wild bees foraging on attractive flowers that are good options for gardeners: blanketflower (*Gaillardia* spp.), salvia (*Salvia* spp.), and mimosa (*Mimosa* spp.)

Monday, October 21, 2019 | 3:30pm-4:30pm

Landscape Weed Management: Separating Fact from Fiction

Chris Marble, *Assistant Professor*, UF/IFAS, Mid-Florida Research and Education Center
Apopka, FL (Orange County)

Weeds are a constant nuisance in Florida landscapes and often require some sort of control measure (chemical or non-chemical) to keep landscapes looking clean, abide by local codes or homeowner association ordinances, or in the case of poisonous plants, protect children or pets that play in the area. There are two main schools of thought when it comes to pest management in general including:

- 1) using pesticides (hopefully in a responsible manner) and
- 2) going the non-chemical or organic route

Both methods can be effective for weed control, but certain tactics are definitely more effective than others are. This 60-minute talk will help separate the facts from the fiction as it pertains to weed control in the landscape.

For those who opt to use herbicides, information on the most commonly available herbicides marketed towards homeowners will be covered, including how different herbicides work, which weeds they are effective on, and why certain herbicides are combined together. The audience will gain new insight into how to select an effective retail herbicide by examining the label and the active ingredients. Quick and easy ways to accurately apply herbicides (both sprayable products and granulars) will also be discussed.

This presentation will also cover ways in which weeds can be controlled without use of any herbicide at all. Non-chemical methods of control will be discussed including solarization, flaming (a personal favorite and most satisfying method), and other tactics that can be used to keep lawns and planting beds as weed free as possible.

Tuesday, October 22, 2019 | 3:00pm-4:00pm

Sustainable Chocolate - From Gene to Bar

Jacob Marlin, *Executive Director* of BFREE and *CEO* of Crioco Cacao, LLC, Gainesville, Florida and Belize, Central America

Heather Barrett, *Deputy Director* of BFREE, Gainesville, Florida and Belize, Central America

Is all chocolate the same? *Certainly not*. The quality and flavor of chocolate starts with the genetics and variety of the cacao beans themselves, then factors such as soil, climate, time of harvest, fermentation, drying, handling, roasting, and the recipe of the chocolate-maker; each play an important role in the final product. Join staff of the Florida-based, conservation organization, Belize Foundation for Research and Environmental Education (BFREE) for an educational, fun, and tasty peak into the world of heirloom fine flavor chocolate from Gene to Bar.

Recently discovered deep in the rainforests of southern Belize lies a remnant population of ancient wild Cacao trees. This small pocket of cacao trees was found by Jacob Marlin growing on the 1,153 acre BFREE privately protected area located at the foothills of the Maya Mountains - an area described as one of the least disturbed and largest continuous expanses of tropical rainforest north of the Amazon. Based on the advice of cacao experts, beans from the wild trees were submitted for genetic testing to the Heirloom Cacao Preservation Fund (HCP). The results determined that this could be the original chocolate tree, genetically 100% pure Criollo parentage, grown and revered by the ancient Mayan Civilizations, and one of the few pure wild cacaos known to exist on the planet. In 2016, the beans were given the designation of "heirloom fine flavor" by HCP, only the 11th chocolate in the world to receive such an honor.

These discoveries were especially exciting to us because of the inherent conservation value - the variety of cacao appears to require environmental conditions that incentivize tropical forest conservation. A high percentage of shade and a structurally diverse forested environment provide natural ecological barriers to disease and cross-pollination, and are likely the conditions necessary for productivity; ultimately correlating a high value crop to a diverse and healthy rainforest habitat. As a result of this discovery, BFREE began a project to preserve and propagate this rare and wild ancient heirloom fine flavor cacao while investigating its economic, social, and environmental benefits. Propagated from these wild trees grown under the shade of natural forest, BFREE has over 15 acres of cacao growing in an agroforestry environment, where wildlife like Jaguars, Tapirs, Howler monkeys, Harpy eagles, and Scarlet macaws are ever-present.

An unexpected and delightful part of this journey has been learning to grow and make our own unique chocolate. During this presentation, we'll walk participants through the steps of making chocolate and relate what we've learned about flavor analysis in the fine flavor chocolate industry. We will also share delicious dark chocolate samples for tasting as part of the experience. We believe, if you are going to help save the rainforests by growing chocolate, why not make it the best?

Tuesday, October 22, 2019 | 8:45am-9:45am | Keynote Presentation

A Historical Perspective of Florida Agriculture and Look at Water Management in Florida

Gene McAvoy, *Associate Director for Stakeholder Relations*, UF/IFAS Southwest Florida Research and Education Center, Regional Vegetable Extension Agent IV Emeritus, Immokalee, FL

Prior to becoming a U.S. territory in 1825, it is estimated that 90% of peninsular Florida was comprised of wetlands. In the southern part of the state, Lake Okeechobee and the Everglades dominated the landscape. Prior to settlement and drainage, Lake Okeechobee had a much larger footprint than today and the Everglades comprised over 7 million acres and extended from Kissimmee to Florida Bay.

By the time the United States took possession of Florida, the indigenous inhabitants had been decimated and the peninsula was a vast wilderness. Upon becoming a U.S. territory, settlers slowly began to trickle into the state. Florida became the 27th state in 1845. Soon afterwards the U.S. government passed the Federal Swamp and Overflowed Lands Act in 1850, granting the state of Florida title to all submerged wetlands (nearly 21 million acres) for the purpose of draining and taming the wilderness to turn it into productive agricultural land and encourage settlement and development.

In 1855, the Internal Improvement Trust Fund was created as an agency of the Florida government to oversee the management, sale and development of public lands granted to the State. Among the internal improvements arranged through this agency were construction of canals, railroads and land drainage and reclamation to begin the work of improving the land acquired by the passage of the Swamp and Overflowed Lands Act.

The fund pledged land to railroad companies and guaranteed bonds issued by the railroad companies on the land. The high costs associated with the American Civil War and Reconstruction caused railroad companies to default on the bonds, the fund became liable and rapidly sank into debt and eventually into Federal Court receivership and by 1877, the fund was nearly \$1 million in debt.

In an effort to relieve the debt, the State of Florida under Governor William D. Bloxham offered for sale, four million acres of Internal Improvement Fund land for 25 cents per acre. In 1881, Philadelphia industrialist Hamilton Disston signed an agreement to purchase the land with the understanding that he would improve the land by draining lands around Lake Okeechobee. His original plan was to lower the Lake level by connecting Lake Okeechobee to the Caloosahatchee and St Lucie rivers and drain land north of the lake by dredging the Kissimmee River. Disston's efforts marked the beginning of what would become the most effective drainage network in the world. Each year the state spends hundreds of millions of dollars to maintain a system of canals, ditches, berms and levees that stretch from just south of Orlando to Florida Bay.

This presentation will provide a historical perspective of water management in South Florida and examine some of the constraints that exist to restoring historical flows and sending the water south.

Monday, October 21, 2019 | 10:45am-11:45am

Landscapes of the Future

Brooke Moffis, *Residential Horticulture Extension Agent*, UF/IFAS Extension, Lake County Tavares, FL

I. Influence of Technology on Design

- a. Minimalism
 - i. Similar silhouettes
 - ii. Subdued colors
- b. Functionality
- c. Return to nature

II. Millennial Generation

- a. Indoor plants
- b. Bohemian style
- c. Comparison to Victorian era

III. Environmental Solutions

- a. Ecosystem Services
 - i. Biodiversity
- b. Coping with changing weather patterns
 - i. Improved plant breeding technologies
 - ii. Drought/heat tolerant cultivars

IV. Automation

- a. Roving/programmable lawn mowers

V. Water conservation

- a. Irrigation technologies

VI. Other Gardening Trends

- a. Foodscapes
- b. Creating staycation spots - retreat
 - i. Overstimulation, inability to disconnect
 - 1. TV, Radio, Social Media, E-mail, Phone Calls, Text Messaging, Family, Friends
- c. Investing in high end outdoor furniture, thrift and consignment stores
- d. Meditation Gardens

VII. Master Gardener Support

Tuesday, October 22, 2019 | 10:15am-11:15am

The Importance of Master Gardeners to Indoor Integrated Pest Management (IPM)

Faith Oi, *Director*, Pest Management University, University of Florida, Entomology and Nematology Dept., Gainesville, FL, Alachua County

Happy 40th birthday, Florida Master Gardeners! Coincidentally, the field of urban entomology is in the same age-class, if we mark its birth by Walter Ebeling's landmark book aptly titled "Urban Entomology" published in 1978. Much of "urban entomology" covers indoor pests such as ants, cockroaches, bed bugs, fleas, clothing and stored products pests. Pests that originate from the outside can also become indoor pests such as flies, including mosquitoes, termites, rodent, landscape pests, and occasional invaders. Integrated pest management is a proven, dynamic decision-making process. However, adoption and implementation rates are low often because "IPM" sounds too academic and unachievable. Master gardeners are ideal messengers for IPM. You actively participate in community and school garden projects that can include IPM, you provide educational programs to the public using science-based information and are already familiar with many of the pests that invade indoor spaces. In this session, you will learn how to modify the IPM message for indoor pests. Come with your frequently asked questions (FAQs) or email them to me ahead of time at foi@ufl.edu. We will post the answers to FAQs at for future reference: <https://pestsinthehome.extension.org/>

Wednesday, October 23, 2019 | 8:30am-9:30am | Keynote Presentation

Living the Values of UF/IFAS Extension

Nick T. Place, Ph.D., *Dean for Extension*, UF/IFAS, and *Director* of the Florida Cooperative Extension Service, Gainesville, Florida

Values define an organization, and they have a profound effort on how we approach our work in Extension. Learn about how values guide and influence all of UF/IFAS Extension.

Monday, October 21, 2019 | 9:15am-10:15am

Understanding the Unsung Heroes: Soil Microbes

Sally Scalera, Urban Horticulture Agent & Master Gardener Coordinator, UF/IFAS Extension Brevard County, Cocoa, Florida

Discover the fascinating world that should be living right underneath your feet. Nature has an incredible workforce, the soil food web, that grows healthy and nutritious plants that produce healthy animals (including humans) and protects water quality! By establishing a thriving soil food web, you can turn lifeless dirt into living soil. When a plant is growing in soil, it's in control of its future by attracting aerobic bacteria and fungi (which are the base of the soil food web) with food. Plants share some of their carbohydrates produced during photosynthesis, by releasing root exudates, with the soil microbes. In return, the bacteria store nutrients in their body and the fungi gather phosphorus, water and other nutrients from a larger volume of soil than a plants' roots can access. The other important players in the soil food web are the predatory microorganisms such as protozoa and nematodes which consume other organisms, resulting in the release of nutrients. This nutrient cycling provides the plant with the nutrients it needs, in small amounts, and on a continual basis. Learn from nature's succession as the soil food web and plants change from one ecosystem to another.

It's also important to be aware of the common gardening practices that disturb the soil, resulting in the loss of organic matter and most, if not all, of the soil food web. Soil disturbances create dirt which causes the successional process to go backwards, selecting for the growth of weeds instead of the ornamental and edible plants we desire. Come learn what gardening activities are best to avoid.

Insects and diseases are often considered to be inevitable when gardening, yet we interpret their presence in our garden incorrectly. When insects and diseases attack a plant, they are not the problem, but merely a symptom. Their job is to dispose of stressed and unhealthy plants. So, to treat the symptom and expect it to be a cure will get you nowhere. Weeds are also misunderstood because their presence is an indication that the soil is heavily bacterial dominated and anaerobic. Establishing the correct soil food web is the only way to permanently control weeds.

To determine if your plants are growing in dirt or soil, just answer the following questions. Do my plants grow better after fertilizer has been applied? Are any of my plants experiencing insect or disease problems? Do I have any problems with weeds in my landscape? If you answered yes to any of these questions, your plants are growing in dirt. Dirt can't produce healthy plants or protect water quality.

Composting with layers of wood chips, green plant material and manure or vermicomposting are simple ways to create a soil food web inoculum for both the soil and plants. Aerobic microorganisms also live on all the plant surfaces, collectively called the phyllosphere, and out compete pathogens, rendering them harmless. Aerated compost teas and extracts can be used as both foliar sprays and soil drenches to establish and maintain the soil food web both below and above ground!

If you are open for a major paradigm shift, come check out this information! By "feeding the soil and not the plants" you will be able to grow healthy plants without the use of fertilizer or pesticides. Learn how to follow nature's lead and grow healthy plants without spending a lot of money just to move farther away from your goal. It is possible to grow insect and disease-free plants, in a weed-free landscape. When you work with nature, you can work less and reap more!

Tuesday, October 22, 2019 | 1:30pm-2:30pm

New Cool Trees and Tree Diseases

Jason A. Smith, *Associate Professor*, School of Forest Resources and Conservation, University of Florida, Gainesville, FL

Drawing on performance in regional trials, botanic gardens and nurseries, this presentation will highlight underutilized and novel varieties of trees for Florida landscapes with examples for north, central and south Florida. The emphasis will be placed on trees that have value in increasingly urban landscapes where space is tight, soils are man-made and conditions are tough. The second half of the talk will illustrate why diversity is critical with the emergence of new diseases that threaten our trees. New and potentially devastating tree diseases will be discussed and what you can do to prepare will be communicated.

Monday, October 21, 2019 | 10:45am-11:45am

Gardening for All: Tips and Tools for Easier Gardening

Jessica Sullivan, *Agriculture/Food Systems Faculty*, UF IFAS Extension, Kissimmee, FL, Osceola County

Learn how to avoid gardening injuries and hassles with the right gear, techniques, and tools. This presentation also offers essential tips to make gardening and yard care easier by designing and adapting your garden to you. Using the principles of Adaptive Gardening, anyone can garden anywhere, regardless of physical ability or garden space.

Monday, October 21, 2019 | 9:15am-10:15am

Imagine You're a Lowly Turfgrass Plant

Laurie E. Trenholm, *Professor*, Environmental Horticulture Department, UF/IFAS

Imagine that you're a lowly turfgrass plant. What are your days like? First you get trod upon by feet, vehicles or whatever else your owner might want to drag over the top of you. And not all species of turfgrass handle this traffic well. Poor St. Augustinegrass cringes at traffic. Why can't the owners understand what you want and need? Next, what's your environment like? Is it best suited for you? Is it too shady, is the soil compacted or the wrong pH? What kind of care does your owner give you? He probably thinks he's being good to you when he overwaters or waters if it's already rained. Or waters a little bit every day, because he doesn't know that's bad for you. And then when he gets out the fertilizer spreader, look out! You might just get fried or pick up some nasty disease from too much nitrogen! Again, too much (or none) can be very bad on your health. How do you think you like mowing? Haircuts can have many benefits for both humans and turfgrass, but how many people opt for buzzcuts these days? If you're a turfgrass plant, you might prefer something a bit more fashionable than a scalp job done with a mower with dull blades that rip and tear. Yikes! And then the dogs come along – here's the big female, oh no, she's squatting on me! Ouch, that burns! At least the male hits the tree!

But perhaps the worst indignation is the public perception. Many people think that you require too much water when you're actually close to drowning in it. And in my 25 years of studying turfgrass, I have never witnessed it get up from the ground, go into the garage and turn the irrigation on. Excess fertilizer? Woah, go easy on that point, you don't sneak into the garage and grab a bowl of fertilizer to munch on if you're a turfgrass plant. You'd probably much rather have it in moderation. Turfgrass plants are constantly being told that they're bad and cause pollution and are not the right plants for use in urban environments. Constant criticism leads to low self-esteem and ultimately to bad behavior. If turfgrass could talk, it might just tell you why it is an excellent choice for use in home lawns and what its job is in our urban environments. But, alas, it can't talk, it's just a lowly turfgrass plant.

And that's where I come in. I can speak for it. The lowly, misunderstood turfgrass plants actually provide a number of benefits and services in home lawns. These include:

- Soil erosion control and dust stabilization
- Groundwater recharge
- Filtration of stormwater runoff and potential pollutants
- Reduction of heat, noise, glare
- Uptake of air pollutants
- Reduction of dirt tracked into home
- Fire break
- Organic matter accumulation in soil
- Wildlife habitat

This talk will discuss these benefits and provide pointers on environmentally friendly turfgrass management.

Monday, October 21, 2019 | 2:00pm-3:00pm

Increasing Diversity to Strengthen your Master Gardener's Program

Laura Valencia, *UF/IFAS Osceola County Extension Agent II, 4-H Youth Development*

Eva Pabon, *UF/IFAS Osceola County Extension Agent I, Residential Horticulture*

In recent decades, there has been a dramatic increase in ethnic and racial minority populations in Florida. As the diversity of Extension clientele continues to grow, it is important for Extension volunteers to consider new ways of supporting this population. In this interactive workshop we will examine cultural competence practices toward enhanced equity across, race, culture, ethnicity, class, age, gender, sexual orientation, disability and experiences of our learners; to assist your Agent in designing, developing and implementing programs. We will examine strategies to intentionally build cultural engagement, commitment to cross-cultural teaching and learning, and celebrate and recognize diversity among all.

Tuesday, October 22, 2019 | 1:30pm-2:30pm

FFL Program Update and Resources Description

Esen Momol, Ph.D.

Director

Florida-Friendly Landscaping™ Program

Gainesville, Florida

Tom Wichman

GI-BMP Statewide Program Coordinator

Florida-Friendly Landscaping™ Program

Gainesville, Florida

Claire Lewis

Statewide Florida Yards & Neighborhoods Coordinator

Florida-Friendly Landscaping™ Program

Gainesville, Florida

Joe Sowards

Volusia County Extension Agent

UF/IFAS Extension

Deland, Florida

In this session we will provide an update on the latest activities and accomplishments conducted by the Florida-Friendly Landscaping™ Program. We will review exciting new opportunities and resources and share the latest information and success stories from this dynamic program.

Monday, October 21, 2019 | 2:00pm-3:00pm

Hydroponics for Your Home and Community Garden

Hannah Wooten, *UF/IFAS Extension Agent, Sustainable Agriculture & Food Systems, Sanford, FL, Seminole County*

Hydroponics can be an easy, affordable, and successful way to grow your own food. Additionally, with rising populations and urban development, using hydroponic methods to grow food can be incredibly productive and resource efficient in a wide variety of non-traditional spaces including rooftops, indoors, classrooms, and apartments. By following the simple principles of hydroponic growing, and honoring the basic needs of the plant, you will enjoy the harvest from your home hydroponic system using the “Set it and Forget It” hydroponic method.

According to follow up evaluations, class participants report that over 90% grow and consume their lettuce! After their experience of the joys and sorrows of growing your own, participants report on their interest into the future. 17% want to keep it simple and grow only lettuce using the “set and forget” method only in the growing season, 45% want to try to grow more things in the “set and forget” method, 28% are interested in learning more advanced hydroponic crops and systems, and 8% are interested in exploring commercial ventures in hydroponic growing. Hydroponics can be as simple or complex as you desire, and today’s presentation will provide you with a hydroponic method guaranteed to get you growing in no time!

Here is feedback from a past participant: “This workshop is amazing. I’ve never grown lettuce this big before nor bought such big beautiful heads from the store. It is so easy and you literally Set It and Forget It. Several weeks later you have big beautiful leaves to add to your food. I highly recommend this workshop, \$30 is a steal and totally worth it.”

Join the 150,000 + YouTubers who have found the “set it and forget it” method to be refreshingly simple and successful by watching this video at your convenience anytime, anywhere.

“Hydroponic Lettuce Hannah Wooten”: <https://www.youtube.com/watch?v=GQey35Tt24I>

Tuesday, October 22, 2019 | 3:00pm-4:00pm

Florida’s Honey

JK Yarborough, *Livestock and Natural Resources Agent, UF/IFAS Extension Multi-County*

Amy Vu, *Extension Coordinator, UF/IFAS Honey Bee Research and Extension Laboratory, Gainesville, FL*

What are honey bees most commonly known for? HONEY! Did you know that beekeepers in the state of Florida produced over 11,000,000 pounds of honey in 2015 (USDA 2016)? Sounds BEE-licious. Honey is one of the oldest sweets known to mankind and not all honey is the same. UF/IFAS Extension Orange County Agriculture Agent, JK Yarborough, and UF/IFAS Honey Bee Lab Extension Coordinator, Amy Vu, will be teaming together to provide a fun and educational presentation about the fascinating world of honey bees. In this workshop, participants will learn about Florida honey beekeeping, bee biology, how bees produce honey, the cottage food law, how to support your local beekeeper, and the variety of honey products around the world. A portion of this fun workshop will include hands-on demonstrations of honey harvesting equipment and methods.

Map of Florida Counties



GET SOCIAL!



www.facebook.com/florida.mastergardeners



www.twitter.com/FloridaMGs



www.pinterest.com/floridamgs

#FLMGconf

#FLMasterGardener

Thank You to Our Sponsors

Gold Sponsor



Bronze Sponsors



General Sponsor



audubon.org/plantsforbirds