

**UF** | IFAS Extension  
UNIVERSITY of FLORIDA



35<sup>th</sup> Florida Master Gardener  
Continued Training Conference

**October 15-18, 2017**

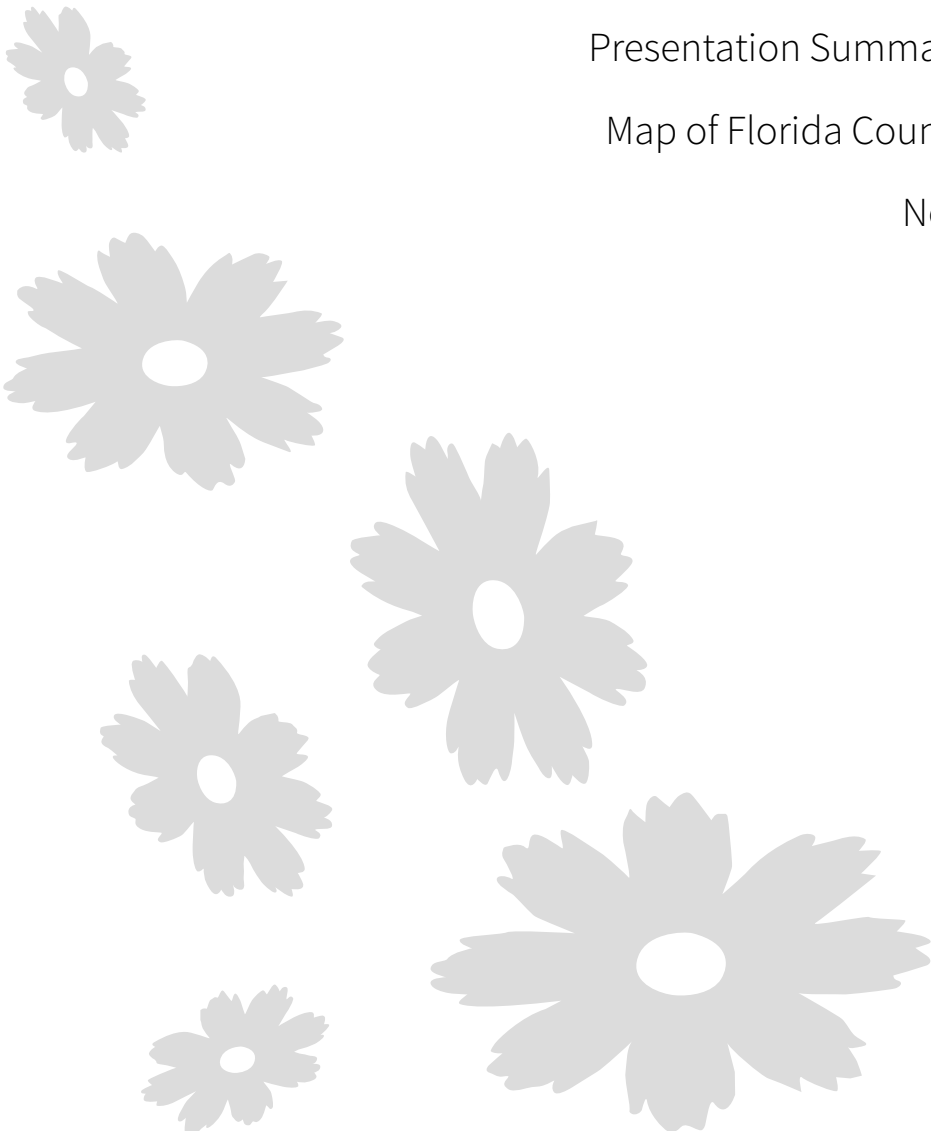
St. Augustine, Florida

[www.conference.ifas.ufl.edu/gardener](http://www.conference.ifas.ufl.edu/gardener)



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# Planning Committee

**David Austin**

Highlands County

**Jimmy De Valerio**

Bradford County

**Terry DelValle**

Duval County

**Emily Eubanks**

Center for Landscape  
Conservation and Ecology

**Prissy Fletcher**

Putnam County

**Terra Freeman**

St. Johns County

**Maxine Hunter**

Marion County

**Alicia Lamborn**

Baker County

**Claire Lewis**

Florida Friendly Landscaping™

**Nicole Pinson**

Hillsborough County

**Wendy Wilber**

Florida Master Gardener  
Program Coordinator

2017



**Dear Master Gardeners,**

On behalf of the 35th Florida Master Gardener Continued Training Conference planning committee, I would like to wish you a warm welcome to this year's conference. We have worked hard to put together a great line-up of classes, speakers, and events that will make this the best MG conference you have attended so far.

The pre-conference tours kick off on Sunday with visits to Old Town St. Augustine, Washington Oaks Botanical Garden, or the Hastings Research Center and St. Johns County Extension Office. These tours will provide you a greater understanding of St. Johns County horticulture, agriculture and natural resources.

The classes that you will be attending are advanced Master Gardener topics in the areas of diagnostics, horticulture and gardens, Florida Friendly Landscaping™, and more. There will be important new things to learn and training to brush up on, too. Our special speakers, Jenks Farmer and Carol Michel, will be selling and signing their books. Jenks will bring *Deep Rooted Wisdom: Lessons Learned from Generations of Gardeners* and Carol will have *Potted and Pruned: Living a Gardening Life* to sign. Stop by their tables to meet these nationally renowned authors one-on-one.

This year, the always-fun Silent Auction will be held again. Be sure to visit the auction to bid on the exciting items your fellow Master Gardeners have donated from throughout the state. Auction proceeds directly support the Awards of Excellence and Service Awards.

I know you will enjoy the top-rated conference facilities at the Renaissance World Golf Village. The hotel and conference center are a wonderful place to meet. Thank you for all you do as Master Gardeners and for investing in your education by attending the 35th Florida Master Gardener Continued Training Conference. Together we will make this the best conference we can!

**Sincerely,**

A handwritten signature in black ink that reads "Wendy Wilber".

Wendy Wilber  
Florida Master Gardener Program Coordinator

# Sponsor Recognition

## Gold Sponsor



## Bronze Sponsors



## General Sponsor



# Pre-Conference Field Trips

Sunday, October 15<sup>th</sup>, 2017



## Old Town St. Augustine Charm

Discover 400 years of history around the plants and places of our oldest City. This tour begins with a program on the ethnobotany and early landscapes of the St. Augustine colonists and Native Floridians. The class and tour will take place at the historic Government House on the Plaza de la Constitucion. The tour will then take a brief walk to the Spanish Military Hospital and medicinal herb garden to learn which plants aided the colonist in their survival. The tour ends with a self-guided tour of pocket gardens around famous St. George Street.



## Beachside Botanical Garden

One of our best state parks is a beachside botanical treasure called Washington Oaks Gardens State Park. Our tour begins with docent lead stroll through the beautiful grounds of this historic park. We will see the formal gardens, rose garden, and the shady foot paths that lead to reflecting ponds lined with tropical foliage. Then we cross A1A to hit the beach and discover the dune ecology and to see the beautiful and unique coquina rock formations in the surf of the Atlantic Ocean. Come enjoy this beautiful two sided state park!



## St. Johns County Agriculture and Horticulture

Hastings, Florida is well known for its potatoes, cabbage and friendly people. This tour takes us to the Hastings Agricultural Extension Center! The center uses "living" displays to educate extension clientele on alternative practices such as low-impact development (LID), Florida-Friendly Landscaping™ principles, alternative crops, and sustainable commercial agricultural practices, as well as traditional practices in agriculture, landscaping, water quality and use, and land management. Favorite sites to see are the blueberries, containerized vegetables and hydroponic systems. Then we head to one of the largest gardens of any extension office in the state; the St. Johns County Extension Office. They have beautiful Florida-Friendly Landscaping, lakeside plantings, and extensive community gardens. You will also tour the greenhouse and plant propagation area.

# Silent Auction



## Auction Donations

Auction items are being donated by Master Gardener county programs from around the state. Each donating county will have a designated display area at the conference.

## County Competition & Auction Proceeds

The county whose auction item(s) bring in the most money will receive a prize packet including a Master Gardener tablecloth, a \$50 gift certificate to the IFAS Extension Bookstore, and a box of caladiums. Be on the lookout for your county's items so you can start bidding!

Auction proceeds will go toward awards recognizing MG volunteers for their length of service and innovative programming at our Awards of Excellence and Service Awards ceremonies.

## Auction Itinerary

*The auction will be held in St. Augustine E*

<b>Sunday</b>	<b>Sunday, October 15, 2017</b>
4:30pm - 6:30pm	Early Item Donation Check-In
<b>Monday</b>	<b>Monday, October 16, 2017</b>
7:30am - 5:00pm	Item Donation Check-In
<b>Tuesday</b>	<b>Tuesday, October 17, 2017</b>
8:00am - 5:15pm	Auction Open for Bidding
4:45pm - 5:15pm	Last Call for Bids - during refreshment break
5:45pm - 6:45pm	Auction Checkout



# 4-H Plant ID and Judging Contest

**When:** Tuesday, October 17th | 3:45pm-5:45pm

**Where:** St. Augustine rooms F and G of the conference center



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

Participants benefit from the added plant knowledge and, if interested, gain experience in coaching a 4-H team from their county to compete at the plant ID and judging contest that takes place annually at the 4-H Congress.

**\*\*All Master Gardener Horticulture teams who have assisted in training 4H-ers in horticulture ID and judging will receive 10 additional points to their score at the Conference, by verification of your 4H agent.\*\***

This year's contest will be held Tuesday, **October 17th from 3:45pm-5:45pm** in St. Augustine rooms F and G of the conference center. If you are interested in participating, be sure to stop by and sign up in advance!

# Speaker Biographies

## Brian Bahder

Dr. Bahder is an assistant professor in entomology at the Fort Lauderdale Research and Education Center. His primary research interests involve insect vectors of plant pathogens in tropical plants with an emphasis on vector identification. Currently, he is studying the epidemiology of phytoplasma diseases that impact palms in the state of Florida and is attempting to identify the vector of the phytoplasma that causes Texas Phoenix Palm decline.

## Bill Black

Mr. Black provides computer-network support to the South Central District for the University of Florida Institute of Food and Agricultural Sciences. Mr. Black has been in the computer field for over 30 years.

## Stephen Brown

Stephen Brown has been a Lee County Extension Agent since 1993. He writes the South Region report for the Florida Gardening magazine and is a FLEPPC list committee member. As an Extension Agent, Stephen specializes in flowering trees, native plants, and palms.

## Adam Dale

Adam Dale is an Assistant Professor and Extension Specialist for turf and ornamental entomology at the University of Florida in Gainesville. His research program primarily focuses on ways to manipulate plants and insects in urban landscapes to reduce pests and increase plant health.

## Jaret Daniels

Jaret Daniels, Ph.D. is an Associate Professor of Entomology at the University of Florida and the Director of the McGuire Center for Lepidoptera and Biodiversity at the Florida Museum of Natural History. An entomologist by training, he specializes in the ecology and conservation of butterflies and other native insect pollinators.

## Scott Allen Davis

Scott Allen Davis works with the U.S. Fish and Wildlife Service, St. Marks and St. Vincent National Wildlife Refuges, and the Florida Native Plant Society. His interests include plant propagation, pollinator plant restoration, ecosystem evaluation and interpretation, and much more. Scott attended Florida State University and spent most of his time in Tallahassee observing plants, monarchs favor to certain plant species, and milkweed production.

## **Terry DelValle**

Terry DelValle is the Agriculture Program Area Leader and the Homeowner Horticulture Extension Agent at UF/IFAS Duval County Extension Office. She received her undergraduate degree in Horticulture from NCSU and masters from Virginia Tech. She has been an extension agent in Jacksonville for 33 years and is responsible for homeowner horticulture programs, which include the Duval County Master Gardeners, Florida-Friendly Landscaping™, and Urban Gardening.

## **Whitney Elmore**

Dr. Whitney Elmore grew up in south-central Kentucky. Whitney attended Western Kentucky University where she received an A.S. in Turfgrass Management, a B.S. in Agriculture, and M.S. in Agriculture with research focusing on water repellent soils. At the University of Florida, she received her Doctorate in Plant Pathology. Whitney was a tenured professor at Middle GA State College before becoming the CED/Hort Agent in 2014 at Pasco County.

## **Gary England**

Gary England received his Bachelors in Science at the University of Florida majoring in Agronomy. Mr. England then received his Masters of Science from the University of Florida in Agronomy and Weed Science. Currently, Mr. England is the Director of the Hastings Agricultural Extension Center and the Regional Specialist Agent for various counties; he has been with the company since July 2016. From 2011 to 2016, Gary worked as a Multi County Fruit Crops Ext. Agent in Lake County – from 2005 to 2011, Gary worked as a Commercial Horticulture in Sumter County. Prior to joining The University of Florida, Gary worked in commercial agriculture with production management, IPM scouting, crop research and technical support positions from 1982 to 2005; he dealt with commercial vegetable, citrus and sod production.

## **Jenks Farmer**

Specialty nursery owner, garden designer, author. Jenkins Farmer III is a renaissance plantsman. He fell in love with the natural world while growing up in a family of artists, musicians, and farmers. Jenks went on to get a more formal education in plant sciences at Clemson University and then botanical garden design at the University of Washington.

## **Larry Figart**

Larry Figart is an Extension Agent for the Duval County Extension Service. He is responsible for delivering educational programs in the field of Urban Forestry, arboriculture, and horticulture. He received his Bachelor of Science in 1985 from the University of Florida in Forest Resources and Conservation. He received his Master of Science in Agricultural Education and Communication from the University of Florida in 2008. He worked for the Florida Division of Forestry from 1985-2003. He joined the Extension Service as an Urban Forestry Extension Agent in 2004.

## **Jennifer Gillett-Kaufman**

Dr. Jennifer Gillett-Kaufman has been involved in research, teaching and Extension on integrated pest management for over 20 years. She supports the utilization and development of educational material for state and county Extension faculty and agricultural and urban clientele like Master Gardeners. She is the Featured Creatures project coordinator.

## **Tina Gordon**

Tina Gordon received her degree in Wildlife Ecology and Conservation from the University of Florida. She has worked in the public and non-profit sectors on environmental protection, water quality, green infrastructure, restoration, and endangered species management. She currently serves as the CTP Coordinator at the GTM Research Reserve providing technical assistance, facilitation, collaboration and training of professionals involved in coastal decisions in Northeast Florida on a wide range of topics.

## **Kelly Greer**

Kelly is currently the Residential Horticulture Florida-Friendly Landscaping™ agent for UF/IFAS Extension Orange County. Kelly is the manager of the Exploration Gardens, a 3-acre demonstration garden. She received her Bachelors of Science in Agriculture with a major in Horticulture from the University of Missouri Columbia. Kelly then received her Masters of Arts in Management and Leadership at Webster University. Her previous employment consists of working at SeaWorld as a Horticulture Supervisor from 2005 to 2013. Prior to moving to Florida in 2005, Kelly managed a 17-acre Llama Alpaca farm and estate in Wisconsin. Kelly has spent the last 35 years working in various areas of horticulture from greenhouse growing to landscape management to Extension. Kelly is a passionate gardener and teacher. She is currently learning a new style of gardening called “Urban Meadows.”

## **Erin Harlow**

Erin Harlow has been the Commercial Horticulture Agent in Duval County for the last 10 years. Her clientele include landscape and pest control professionals, nurseries, irrigation contractors, and golf courses. She specializes in turf and landscape management, pesticide safety, and community integrated pest management including bed bugs and termites. In 2014, she received Educator of the Year by the Florida Nursery, Growers, and Landscape Association.

## **Lisa Hassell**

Lisa Hassell is an Environmental Specialist and Regulatory Inspector for the Florida Department of Agriculture, Division of Plant Industry protecting Florida’s native and commercially grown plants from harmful pests and diseases.

## Steve Johnson

Dr. Steve Johnson is an Associate Professor and Extension Specialist in the Department of Wildlife Ecology and Conservation at the University of Florida in Gainesville. His extension program focuses on invasive species education (vertebrate emphasis), amphibian and reptile natural history, and mitigating conflicts between people and wildlife. Steve is a native Floridian and a beer snob.

## Gary Knox

The fun part of Dr. Knox's job is to evaluate plants for their potential to be recommended as Florida Friendly. As part of this, Dr. Knox is working with a nonprofit volunteer group to develop Gardens of the Big Bend, a series of botanical, teaching and evaluation gardens at the UF/IFAS NFREC-Quincy. Gary's current plant passions include magnolia, crapemyrtle, camellia, hydrangea, bulbs, succulents, and more (so many species, so little time!).

## Alicia Lamborn

Alicia Lamborn has nine years with the University of Florida IFAS Extension, serving as the Horticulture Agent for Baker County. Her programming focuses on Florida-Friendly Landscaping, edible gardening, and Master Gardener training. Alicia has also established the Baker County Arboretum and Gardens, which is used for teaching and is open to the public.

## Jen Marvin

Jennifer Marvin is pursuing a PhD degree in environmental horticulture at the University of Florida with a focus on ethnobotany. Jennifer has a Bachelor's of Science in Psychology with a minor in Anthropology and an MLA in landscape architecture. She has practiced in the private sector in St. Augustine for six years. She is also the Education and Training Specialist for the Florida-Friendly Landscaping™ Program at the University of Florida.

## Carol Michel

Carol Michel is a lifelong gardener and resident of Indiana with a Bachelor's degree in Horticulture Production from Purdue University. She is an avid collector of old gardening books and claims to have the largest hoe collection in the world. She regularly writes about her old books, hoes, and many other gardening related topics on her award-winning garden blog, [www.maydreamsgardens.com](http://www.maydreamsgardens.com). She is the author of the recently released book *Potted & Pruned: Living a Gardening Life*.

## Mike Mulvaney

Mike Mulvaney is a Cropping Systems Specialist at the University of Florida IFAS West Florida Research and Education Center in Jay, FL. His program focuses on nutrient management in row crops. Michael has extensive international experience, having worked and traveled in over 50 countries on six continents, most recently as Cropping Systems Agronomist with CIMMYT in Mexico, and before that as the Assistant Program Director for the USAID SANREM CRSP at Virginia Tech.

## **Matthew Orwat**

After Receiving a Biology degree from UTA, Matthew attended and taught at Texas A&M University with a major in Horticulture specially focused on disease resistant roses, plant breeding, ornamentals and community gardens. Matthew moved to Florida in 2011 and currently works as a Horticulture agent for the University of Florida IFAS Extension Service in Washington County Florida. His goal is to provide educational programming to meet the diverse needs of and provide solutions for homeowners and commercial horticulturists.

## **Evie Pankok**

Evie came from the business world of insurance and finance to join the Master Gardener Program in 1999. The following year she was hired as Program Assistant under the Horticulture Agent and has been there ever since.

## **Héctor Pérez**

Héctor is an Associate Professor in the Environmental Horticulture Department at the University of Florida. His research program focuses on understanding how different environments influence seed dormancy alleviation and germination; what enables seeds to tolerate various abiotic stressors; and why seed quality varies in wild species.

## **Carolyn Saft**

Carolyn received her Bachelors of Science in Ornamental Horticulture and her Masters of Science in Agriculture Communication and Education. Carolyn has been an Agent in Palm Beach County for 5 years and a Suwannee Agent for 10 years. She has worked in family orchid business, Interior plant industry, and Mounts Botanical Garden. Carolyn is a sixth generation Floridian.

## **Lloyd Singleton**

Lloyd Singleton is the Florida-Friendly Landscaping™ agent with the University of Florida IFAS Extension Sumter County, and serves as interim director for Lake County Extension. His program focuses on teaching sustainable landscape maintenance methods to industry professionals and residents. Lloyd also manages a vocational training program for inmates of FCC Coleman, the largest federal prison complex in the nation. He is studying for a Master's of Science degree in Agronomy with an Agroecology concentration at the University of Florida.

## **Matthew Smith**

Dr. Matthew E. Smith is an Assistant Professor in the Department of Plant Pathology at University of Florida and is curator of the Fungal Herbarium at the Florida Museum of Natural History (FLAS). Dr. Smith studies fungal ecology, evolution, and systematics and he teaches Fungal Biology at UF. He is a recognized expert on the biology and systematics of hypogeous fungi (“truffles”) and the ecology of plant-symbiotic ectomycorrhizal (ECM) fungi. Dr. Smith loves to talk about fungi!

## **Lee Staudt**

Lee Staudt works for the University of Florida, IFAS for FAWN (Florida Automated Weather Network) as an IT Specialist and Senior Field Technician for the past 29 years. His main job function is to oversee the FAWN Weather Stations maintenance and provide quality weather data. His goal is to help and inform people about Fawn and its benefits.

## **Danielle Treadwell**

Dr. Treadwell is a state Extension Specialist in the Dept. of Horticultural Sciences in Gainesville. Her research program is focused on developing farming system practices that conserve natural resources, typically with cover crops and in organic systems. She provides statewide leadership for the Farm to School, Small Farms and Alternative Enterprises, and Food Systems programs, and believes she has the best job in the world. She spends her free time gardening, enjoying her family, and listening to music.

## **Steve Turnipseed**

A Chemical Engineer by degree, Steve Turnipseed is retired from a 32-year career with Chevron where he held assignments in Mississippi, Texas, California, Indonesia and Nigeria. Currently a Master Gardener, Florida Water-Star Accredited Professional and President of The Villages Chapter of FNPS.

## **Richard Tyson**

Richard Tyson is the Director of the University of Florida IFAS Extension in Orange County. He received his Ph.D. in Horticultural Sciences from the University of Florida. He has spent 27 years in Extension education working with vegetable growers and 7 years as a vegetable farm manager. He is the past president of the Florida State Horticultural Society and received the Excellence in Crop Production and Sustainable Agriculture Awards from the National Association of County Agricultural Agents.

## **J. Bryan Unruh**

Dr. J. Bryan Unruh is a Professor of Environmental Horticulture at the University of Florida. His turfgrass science program focuses on water quality (nutrient impairment) and quantity (drought), pest management, and cultivar development. His research improves quality of life by providing aesthetically pleasing green space and safe places in which to recreate. His work demonstrates that these green spaces are sustainable and can coexist with nature without negative environmental impact.

# Detailed Agenda

<b>Sunday</b>		<b>October 15, 2017</b>			
12:30pm - 4:30pm	Optional Pre-Conference Field Trips				
4:30pm - 6:30pm	Pre-Conference Registration Open [ <i>Pre-Function Foyer</i> ] Early Silent Auction Donation Check-In [ <i>St. Augustine E</i> ]				
<b>Monday</b>		<b>October 16, 2017</b>			
7:30am - 5:00pm	Registration Open [ <i>Pre-Function Foyer</i> ]				
7:30am - 5:00pm	Silent Auction Donation Check-In [ <i>St. Augustine E</i> ]				
7:30am - 8:30am	Morning Refreshments [ <i>St. Augustine C</i> ]				
8:30am - 9:00am	Welcome and Announcements [ <i>St. Augustine D</i> ] <b>Wendy Wilber</b> , Florida Statewide Master Gardener Coordinator, UF/IFAS				
9:00am - 10:00am	OPENING GENERAL SESSION [ <i>St. Augustine D</i> ] <b>Soil Building Tips; From Our Organic Lily Farm to Your Yard</b> <b>Jenks Farmer</b> , Plantsman, Jenks Farmer Nurseries and Gardens Moderator: Terry DelValle				
10:00am - 10:30am	Refreshment Break [ <i>St. Augustine C</i> ]				
10:00am - 10:30am	Jenks Farmer Book Signing [ <i>Pre-Function Foyer</i> ]				
<b>Concurrent Sessions 1</b>					
10:30am - 11:30am	<b>A-1 Horticulture</b>	<b>B-1 Diagnostics</b>	<b>C-1 Edibles</b>	<b>D-1 FFL</b>	
Location	Legends 1	St. Augustine D	Legends 2	Legends 3	
Moderator	Kathy Oliver	Adam Dale	Maxine Hunter	Eva Pabon	
	<b>Jen Marvin</b> Ethnobotany of Early Florida	<b>Lisa Hassell</b> Insect and Plant Disease Threats to Florida Horticulture	<b>Danielle Treadwell</b> Cover Crops for Your Florida Garden	<b>Evie Pankok</b> Renew, Reuse, Recycle in Your Florida-Friendly Landscape	
11:30am - 5:00pm	UF/IFAS Extension Bookstore Open [ <i>Wentworth/Troon</i> ]				
11:45am - 12:45pm	LUNCH & KEYNOTE PRESENTATION [ <i>St. Augustine D</i> ] <b>GMOs - Just the Facts</b> <b>Michael Mulvaney</b> , Cropping Systems Specialist, UF/IFAS Moderator: Matt Orwat				
12:45pm - 1:00pm	Move to Next Session				
<b>Concurrent Sessions 2</b>					
1:00pm - 2:00pm	<b>A-2 Horticulture</b>	<b>B-2 Diagnostics</b>	<b>C-2 Edibles</b>	<b>D-2 FFL</b>	
Location	Legends 1	St. Augustine D	Legends 2	Legends 3	
Moderator	Brooke Moffis	Carolyn Saft	Denise DeBusk	Kelly Greer	
	<b>Matt Orwat</b> Growing Old Garden Roses	<b>Michael Mulvaney</b> Identifying Nutrient Deficiencies in Your Plants	<b>Jennifer Gillett-Kaufman &amp; Whitney Elmore</b> Growing Olives in Florida	<b>Tina Gordon</b> A Site Level Approach to Landscape Plants that Support Wildlife	
2:00pm - 2:15pm	Move to Next Session				



Concurrent Sessions 3				
2:15pm - 3:15pm	<b>A-3 Horticulture</b>	<b>B-3 Diagnostics</b>	<b>C-3 Edibles</b>	<b>D-3 FFL</b>
Location	Legends 1	Legends 2	St. Augustine D	Legends 3
Moderator	Emily Eubanks	Kate O'Neill	Terry DelValle	Evie Pankok
	<b>J. Bryan Unruh &amp; Erin Harlow</b> Zoysia Grass Bootcamp	<b>Brian Bahder</b> Texas Phoenix Palm Decline	<b>Jenks Farmer</b> Small Fruit Trees for Your Productive Backyard	<b>Lloyd Singleton &amp; Steve Turnipseed</b> Conventional to Florida Friendly in 9 Steps
3:15pm - 3:45pm	Refreshment Break <i>[St. Augustine C]</i> Book Club Review <i>[Legends 1]</i> FAWN Review - Lee Staudt, FAWN IT Specialist and Senior Field Technician, UF/IFAS <i>[Legends 2]</i>			
Concurrent Sessions 4				
3:45pm - 4:45pm	<b>A-4 Horticulture</b>	<b>B-4 Diagnostics</b>	<b>C-4 Edibles</b>	<b>D-4 FFL</b>
Location	Legends 1	Legends 3	Legends 2	St. Augustine D
Moderator	Holly Bates	Emily Eubanks	Maxine Hunter	Evie Pankok
	<b>Stephen Brown</b> Flowering Trees for Florida: Part II	<b>Adam Dale</b> Lawn and Landscape Insects and Their Control	<b>Richard Tyson</b> Aquaponics: What You Need to Know	<b>Kelly Greer</b> Great Plant Choices for Your Florida-Friendly Landscaping™
5:00pm - 6:00pm	Welcome Networking Social <i>[St. Augustine C]</i>			
	Dinner on Own			
Tuesday		October 17, 2017		
7:30am - 5:00pm	Registration Open <i>[Pre-Function Foyer]</i>			
7:30am - 5:00pm	UF/IFAS Extension Bookstore Open <i>[Wentworth/Troon]</i>			
8:00am - 5:15pm	Silent Auction Open <i>[St. Augustine E]</i>			
8:30am - 9:30am	BREAKFAST WITH SERVICE AWARDS & COUNTY PHOTOS <i>[St. Augustine D]</i>			
9:30am - 10:30am	GENERAL SESSION <i>[St. Augustine D]</i> <b>The Secrets to Happiness in Your Garden</b> <b>Carol Michel</b> , Author, Potted and Pruned: Living a Gardening Life Moderator: Wendy Wilber			
10:30am - 11:00am	Refreshment Break <i>[St. Augustine C]</i>			
10:30am - 11:00am	Carol Michel Book Signing <i>[Pre-Function Foyer]</i>			
Concurrent Sessions 5				
11:00am - 12:00pm	<b>A-5 Horticulture</b>	<b>B-5 Diagnostics</b>	<b>C-5 Edibles</b>	<b>D-5 FFL</b>
Location	St. Augustine D	Legends 1	Legends 2	Legends 3
Moderator	Holly Bates	Nicole Pinson	Lisa Hickey	Kate O'Neill
	<b>Larry Figart</b> Tree Pruning Done Right	<b>Bill Black</b> Computer Safety for Master Gardeners	<b>Terry DelValle</b> Grow Your Own Microgreens	<b>Carolyn Saft &amp; Alicia Lamborn</b> Micro-irrigation Made Easy
12:15pm - 1:15pm	LUNCH & GENERAL SESSION <i>[St. Augustine D]</i> <b>Industry Updates Sponsor Representatives</b> Moderator: Wendy Wilber			
1:15pm - 1:30pm	Move to Next Session			

Concurrent Sessions 6				
1:30pm - 2:30pm	A-6 Horticulture	B-6 Diagnostics	C-6 Edibles	D-6 FFL
Location	Legends 1	Legends 3	Legends 2	St. Augustine D
Moderator	Maxine Hunter	Whitney Elmore	Larry Figart	Holly Bates
	<b>Héctor Pérez</b> It All Starts With a Seed	<b>Steve Johnson</b> Know Your Florida Snakes	<b>Gary England</b> Growing Citrus in Difficult Times	<b>Gary Knox</b> Alternatives to Turfgrass Lawns
2:30pm - 2:45pm	Move to Next Session			
2:45pm - 3:45pm	GENERAL SESSION <i>[St. Augustine D]</i> <b>Florida Mushrooms and Cool Fungi</b> <i>Matt Smith</i> , Plant Pathology Assistant Professor, UF/IFAS Moderator: Wendy Wilber			
3:45pm - 5:45pm	4-H Plant ID and Judging Contest <i>[St. Augustine FG]</i>			
4:45pm - 5:15pm	Refreshment Break <i>[St. Augustine C]</i> Last Call for Silent Auction Bids <i>[St. Augustine E]</i>			
5:45pm - 6:45pm	Silent Auction Checkout <i>[St. Augustine E]</i>			
	Dinner on Own			
<b>Wednesday</b>				
<b>October 18, 2017</b>				
8:00am - 11:00am	Registration Open <i>[Pre-Function Foyer]</i>			
8:00am - 11:00am	UF/IFAS Extension Bookstore Open <i>[Wentworth/Troon]</i>			
8:30am - 9:30am	BREAKFAST & KEYNOTE PRESENTATION <i>[St. Augustine D]</i> <b>Butterflies &amp; Pollinators: Master Gardeners Can Make a Difference</b> <i>Jaret Daniels</i> , Associate Professor & Insect Conservationist, UF/IFAS Moderator: Whitney Elmore			
9:30am - 10:30am	Awards of Excellence Ceremony <i>[St. Augustine D]</i>			
10:30am - 11:30am	CLOSING KEYNOTE PRESENTATION <i>[St. Augustine D]</i> <b>Monarchs and Milkweeds</b> <i>Scott Allen Davis</i> , Refuge Ranger, U.S. Fish and Wildlife Service Moderator: Nicole Pinson			
11:30am - 12:00pm	Conference Evaluations			
12:00pm	Conference Concludes			

# Presentation Summaries

Listed Chronologically



Opening Keynote Presentation | Monday, October 16, 2017 | 9:00am-10:00am

**Soil Building Tips: From Our Organic Lily Farm to Your Yard**

*Augustus Jenkins "Jenks" Farmer III, Owner, Jenks Farmer Nurseries and Gardens, South Carolina*

How does a small farm thrive for 200 years? By adapting constantly to the times and by taking great care of our soil. Take home lessons to use in backyards and consider the wider health and environmental impacts of soil building. Enjoy pictures and stories of plants, animals, pollinators, visitors and interns who all depend on the great soil of our one of a kind crinum lily farm.

Session A-1: Horticulture | Monday, October 16, 2017 | 10:30am-11:30am

**Ethnobotany of Early Florida**

*Jennifer W. Marvin*, Education and Training Program Specialist, State-wide Florida-Friendly Landscaping™ Program and PhD student in Environmental Horticulture, University of Florida, Gainesville, FL

Ethnobotany is the study of how plants and culture interact throughout history. Before the Spanish arrived in Florida, early Floridians' knowledge of native plants and their uses was staggering and helped them survive the harsh wilderness of Florida for thousands of years. Everything they needed to survive grew at their feet.

This session features plant use in Florida's pre-colonial Native American populations and how plants not only helped them to survive, but to thrive. Topics include plants used to make tools, weapons, housing, transportation, household items, food, medicine and ritual items. Several specific examples of plants will be featured to show the diversity of uses for Florida's plants and how new uses continue to be found.

Session B-1: Diagnostics | Monday, October 16, 2017 | 10:30am-11:30am

**Insect and Plant Disease Threats to Florida Horticulture**

*Lisa Hassell*, Environmental Specialist/Regulatory Inspector, Florida Department of Agriculture, Division of Plant Industry, Duval County, Jacksonville, FL

The Bureau of Plant Inspection's environmental specialists annually inspect thousands of Florida nurseries and stock dealers, service a network of over 50,000 fruit fly traps, conduct surveillance, detection and regulatory monitoring of exotic plant pests of agriculture and natural plant resources, complete import inspections, and certify plants for movement and export.

Since exclusion of plant pests has always been the best possible solution to preventing pest problems, considerable emphasis is placed on inspection of plants entering the state. As a major importer of nursery stock from foreign countries, Florida is particularly vulnerable to plant pest introductions.

Plant inspection activities lead to the identification of hundreds of new pest records annually. Survey and inspection targets include plant diseases, insects, weeds, nematode and other invertebrate organisms. This session features new and emerging plant pests, pest risk pathways, and updates ongoing exotic pest eradication efforts. Several insect specimens will be available for hands-on viewing.

Session C-1: Edibles | Monday, October 16, 2017 | 10:30am-11:30am

**Cover Crops for Your Florida Garden**

*Danielle Treadwell*, Associate Professor and State Extension Specialist, UF/IFAS Dept. of Horticultural Sciences, Gainesville, FL

**The objectives of this session are:**

- 1) To learn why cover crops are important management tools in the garden
- 2) To identify the important pre-plant and management decisions needed to grow a cover crop successfully
- 3) To apply these best practices to your own garden in a group exercise. Participants will have an opportunity to examine cover crops on display

**Cover Crops** are crops grown to provide some ecological service to the farm or garden. Typically, cover crops are not harvested for income. The term *cover crop* has its origins from farming systems in the late 1800’s when farmers would plant a crop of seed that had little income potential (such as older seed) as a way to cover their soil during winter winds and rains to minimize erosion.

**Cover crops are important tools** for the garden. Florida gardeners will likely choose a cover crop that will contribute one or more of the following benefits below. Five key benefits for Florida gardeners will be discussed in detail.

- Increase overall soil health
- Increase soil organic matter
- Scavenge and/or contribute nitrogen
- Increase yields in following crops
- Controls weeds
- Attracts pollinators
- Reduce disease in edible crops
- Manage insects

**Cover crop species and cultivars** are numerous and there are many that can be used in the garden without special equipment if they are managed properly. Cover crops are generally grouped into these categories: legumes, grasses, and forbs, or non-legumes. Below are three examples of recommended cover crops for Florida gardens. Many more will be discussed during the session.

TYPE	LATIN NAME	COMMON NAME	SEASON PLANTED	POTENTIAL BENEFITS
Legume	<i>Trifolium incarnatum</i> L.	Crimson clover 'Dixie'	Winter	Provides nitrogen Suppresses weeds
Grass	<i>Pennisetum glaucum</i> (L.) R. Br.	Pearl millet Dwarf cultivars: 'Tifleaf 1-3'; Tall cultivar 'Tifgrain 102'	Summer	Scavenges nitrogen Prevents erosion
Forbs or Non-legume	<i>Fagopyrum esculentum</i> (Moench)	Buckwheat 'Manor'	Early Spring, Late Fall	Attracts pollinators Improves soil structure



Session D-1: Florida-Friendly Landscaping™ | Monday, October 16, 2017 | 10:30am-11:30am

**Renew, Reuse, Recycle in Your Florida-Friendly Landscape**

*Evie Pankok*, “Regina” of Recycle, Program Assistant, Duval County, Jacksonville, FL



Wikipedia ---- Regina is Latin for “Queen”

Reduce the growing landfills by giving another life to the many items you ordinarily throw away. The practice of recycling will be kinder to the environment, save you money, and make you feel “green.” In Duval County alone, 2,500-3,000 tons are going to landfills daily. Let’s not throw it out, let’s give it a second or even a third life.

This session is about reusing such items in your yard and garden. The topics include Things from Paper, Don’t forget the Cardboard, The Other Paper, What about Plastic, A Reason to Drink Wine, The Color Yellow and many other things you wouldn’t think of plus much more, along with three hands-on activities.

Keynote Presentation | Monday, October 16, 2017 | 11:45am-12:45pm

**GMOs – Just the Facts**

*Michael J. Mulvaney*, PhD, CCA, Cropping Systems Specialist, Assistant Professor,  
UF/IFAS West Florida Research and Education Center, Jay, FL

Everyone has an opinion on GMOs. But what are the facts? In this session, we will discuss what exactly is a GMO and what is not. This distinction not only has important implications for crops that are regulated as GMOs and those that are not, but is also responsible for much of the cross-talk between advocates of the technology and those opposed to it. Support for, objections to, and limitations of the technology will be addressed using available evidence for environmental, human health, socio-economic, and food security concerns.

Session A-2: Horticulture | Monday, October 16, 2017 | 1:00pm-2:00pm

**Growing Old Garden Roses**

*Matthew Orwat*, Horticulture Extension Agent, UF/IFAS Extension Washington County, Chipley, FL

The rose has been the official national flower of the United States since 1986, and still holds a special place in our gardens. However, it has become increasingly difficult to grow due to the development of favorable climactic conditions to pathogen development, diverse pathogen strains, invasive insect species, reduced options for chemical control, and reduced amount of time available for home gardening. To find solutions for these challenges we must look to the past, present, and future. This seminar will discuss the selection and culture of roses for Florida. First, we will look to the past, to roses grown in the Deep South before the advent of modern chemical controls. Often, older cultivars are more disease resistant and respond favorably to hot, humid conditions so prevalent in our state. Many of these cultivars are worth a second look and recommendations will be discussed. We will also discuss nutrient and irrigation requirements, and strategies to reduce pests through irrigation management. Finally, we will cover integrated pest management of disease and insects including mechanical, biological, cultural and chemical controls.

Session B-2: Diagnostics | Monday, October 16, 2017 | 1:00pm-2:00pm

**Identifying Nutrient Deficiencies in Your Plants**

*Michael J. Mulvaney*, PhD, CCA, Cropping Systems Specialist, Assistant Professor  
UF/IFAS West Florida Research and Education Center, Jay, FL

This session will focus on preventing, diagnosing and understanding nutrient deficiencies in plants. While there is no substitute for tissue and soil testing to diagnose a suspected nutrient deficiency or toxicity, an understanding of how nutrients move through the soil profile and their mobility in plants will assist in the field diagnosis of nutrient-related issues. Soil texture plays a key role in how nutrients are retained or leached through the rooting zone and therefore affects nutrient availability. We will highlight the major factors that affect nutrient availability, but we will also discuss specific deficiencies related to N, P, K, Ca, B and other common nutrient problems often seen in Florida, as well as highlight key plant growth features typical of deficiency symptoms related to specific nutrients, so that you will know what to look for in the field. Real life soil and tissue sample reports will be interpreted and resources will be showcased that will enable you to diagnose nutrient deficiencies for yourself.

## Session C-2: Edibles | Monday, October 16, 2017 | 1:00pm-2:00pm

### **Growing Olives in Florida**

*Jennifer Gillett-Kaufman*, UF/IFAS Extension Specialist, Entomology & Nematology Department, Gainesville, FL, Alachua County

*Whitney Elmore*, UF/IFAS County Extension Director & Horticulture Agent III, Pasco County Cooperative, UF/IFAS Extension, Dade City, FL, Pasco County

Olive trees (*Olea europaea*) are becoming a popular ornamental in Florida and some people are even planting trees for groves. Homeowner complaints you might receive about olives fall into four categories 1) Not enough fruit (or no fruit), 2) Too much fruit, 3) Leaves are missing overnight, and 4) Sooty mold (this complaint is often in conjunction with a complaint about scale or ants). If you have a homeowner with the first complaints that usually stems from the fact that olives need to cross fertilize, if a homeowner only has one tree (and there are not nearby olives) they will not get fruit. The publication *Olives for your Florida Landscape* has a helpful table you can refer your client to so they can choose the best pollinating variety to complement the tree they already have. If a homeowner is complaining about too much fruit it is usually because they planted the tree too close to a hardscape in the landscape, when this happens fallen fruit can be a nuisance for the homeowner.

Complaint three, leaves are missing overnight. The culprit: the rustic sphinx hornworm caterpillar. This hornworm looks a lot like the tomato hornworm you may have seen munching on tomatoes and peppers in your garden. This hornworm can get almost four inches long and is a voracious eater. As far as pest management complaints are concerned complaint number four has you covered on two fronts – insects and sooty mold. The black scales I mentioned earlier excrete honeydew and that is the perfect food for ants and sooty mold. Most of you know sooty mold can be washed away, and with successful management of the scales it should not return.

Any soap or oil labeled for scale management on fruit trees should work to manage black scale on olive. Do remember that olives are considered a fruit tree so any products used on them should be labeled for use on a fruit tree or specifically on olive trees. The second part of this complaint is ants. Black scale can be tended by several different species of ants in Florida. All of these ants are looking for one thing, a sugary sweet meal, honeydew. Once the scales are removed from the plant the ants will move on in search of another food source. Keep in mind that treating ants around olives requires a pesticide treatment that can be used around fruit trees. Read the label to be sure you are not recommending a misapplication of the ant bait!

As more landscapers and homeowners add olives to their design pallets the more you will be exposed to them in the landscape. Fortunately these plants are relatively pest and disease free and with the tips outlined in this talk you should have no problem managing them.

If you want to learn more about how to care for olives in Florida I would suggest you read this: *Olives for your Florida Landscape*, by Thetford, Gillett-Kaufman, and Mulvaney. <http://edis.ifas.ufl.edu/ep515> This article will help you see if there are cultural practices that might be harming the tree (was the tree planted in a wet area, overwatered, planted too deep, or planted in too much shade).

To learn more about olive pests you might like to review: *Pests and Fungal Organisms Identified on Olives (Olea europaea) in Florida*, by Gillett-Kaufman, Allan, Bosquez-Mendez and Buss. <https://edis.ifas.ufl.edu/in1046> This article is also available in Spanish - <https://edis.ifas.ufl.edu/in1052> if you have Spanish language speakers coming to you with questions.

Session D-2: Florida-Friendly Landscaping™ | Monday, October 16, 2017 | 1:00pm-2:00pm

**A Site Level Approach to Landscape Plants that Support Wildlife**

*Tina M. Gordon*, Coastal Training Program Coordinator, GTM Research Reserve, Co-Chair, First Coast Invasive Working Group, Ponte Vedra Beach, FL, St. Johns County

As urbanization continues throughout Florida, the natural habitats which wildlife depend upon become fragmented and native plants that support wildlife can become scarce. Providing landscaping that supports wildlife in urban and suburban areas creates stepping stones that allow wildlife to more easily move between natural areas. In addition to supporting wildlife, these techniques can also result in improved water quality, reduced erosion risk in coastal areas and provide aesthetic appeal in communities.

This presentation will share with participants considerations for landscaping to attract a variety of wildlife into their yards. It will cover providing basic needs for wildlife including food, water, shelter and nest space. This talk will also share how to structure landscaping to attract a wide variety of wildlife, examples of Florida native plants that provide for basic wildlife needs and the benefits of native landscaping.

## Session A-3: Horticulture | Monday, October 16, 2017 | 2:15pm-3:15pm

### **Zoysia Grass Bootcamp**

*J. Bryan Unruh, Ph.D.*, Professor and Associate Center Director, UF/IFAS West Florida Research and Education Center, Jay, FL – Santa Rosa County

*Erin E. Harlow, M.S.*, Commercial Horticulture Agent, UF/IFAS Extension, Jacksonville, FL, Duval County

Zoysiagrasses (*Zoysia* spp.) were introduced into the United States from Asia and provide attractive turf throughout much of the United States. In recent years, turfgrass breeders have made significant improvements in zoysiagrass. These improvements include insect resistance, accelerated establishment, and overall performance. Zoysiagrasses are adapted to a variety of soil types and have good tolerance to shade, salt, and traffic. They provide an extremely dense sod that resists weed invasion, but certain pests can be problematic.

Zoysiagrass maintenance is different from that of other Florida lawn grasses such as St. Augustinegrass, centipedegrass, and bahiagrass. Proper lawn maintenance practices are the best means for avoiding pest problems and maintaining a healthy lawn. Zoysiagrass requires inputs of fertilizer to maintain good cover and healthy growth characteristics. Zoysiagrasses generally requires about one-half the quantity of nitrogen than St. Augustinegrass and about twice as much as centipedegrass or bahiagrass.

Zoysiagrass is a very drought tolerance species. However, it responds to drought differently than other lawn grasses. Zoysiagrass responds to drought by turning brown and going dormant in a short time period (within one week under typical drought conditions). In the absence of rain or irrigation, zoysiagrass will stay dormant for extended periods of time. Once irrigation or rainfall resumes, one can expect zoysiagrass to regain its green color.

Zoysiagrasses typically develop a thick thatch layer in the years after establishment – especially when over-fertilized with nitrogen. This thatch must be controlled or removed mechanically to maintain a uniform grass appearance.

Like other lawn grasses grown in Florida, zoysiagrass lawns will encounter pest problems. Periodic control of one or more of these problems will be necessary to grow a healthy turf.

Presentation Highlights:

- Species and cultivars commonly grown in Florida
- Proper maintenance practices necessary for successful zoysiagrass lawns
- Irrigation requirements of zoysiagrass
- Common pest problems of zoysiagrass and their management

Session B-3: Diagnostics | Monday, October 16, 2017 | 2:15pm-3:15pm

**Texas Phoenix Palm Decline**

*Brian Bahder, Dr., Assistant Professor, Fort Lauderdale, FL*

Texas Phoenix Palm Decline (TPPD) is a lethal disease of various palm species in the state of Florida that is caused by a phytoplasma belonging to the 16SrIV-D taxonomic group. The disease first appeared in Florida in 2006 near Tampa and has since spread throughout much of the state. The negative impact is being seen by both the private and public sector in nurseries and along major highways. Additionally, the disease does impact homeowners and has potential to cause ecological harm due to its impact on the native Cabbage palm in Florida. Recent advances have increased the speed, accuracy, and sensitivity of tests for the detection of the phytoplasma in infected palms, allowing for management decisions to be implemented faster. Other areas currently under investigation are for identifying the vector of TPPD. By understanding what insects are responsible for spread of the pathogen, more specific practices can be implemented to further aid in controlling the impact of the disease in Florida.



Session C-3: Edibles | Monday, October 16, 2017 | 2:15pm-3:15pm

**Small Fruit Trees for Your Productive Backyard**

*Augustus Jenkins "Jenks" Farmer III*, Owner, Jenks Farmer Nurseries and Gardens, South Carolina

If you are into healthy, easy care food, you'll want to attend this presentation. We'll discuss fruit fig, persimmon, paw-paw, pineapple guava and pomegranate. All easy care, low fertilizer need plant. In his garden design work for public settings and home gardens, Jenks has years of experience working these plants into landscapes. Learn about varieties, sources and design issues of using small fruit trees in home landscapes.

Session D-3: Florida-Friendly Landscaping™ | Monday, October 16, 2017 | 2:15pm-3:15pm

**Conventional to Florida Friendly in 9 Steps**

*Lloyd Singleton*, UF/IFAS Extension Sumter County, Extension Agent II,

Florida-Friendly Landscaping™/Urban Horticulture, The Villages, FL, Sumter County

*Steve Turnipseed*, UF/IFAS Extension Master Gardener, President - The Villages Chapter Florida Native Plant Society, The Villages, FL, Sumter County

Knowing the 9 principles of Florida-Friendly Landscaping™ is easy, but implementing them successfully takes some real thought. The rewards are great, and worth the effort! Join Lloyd Singleton and Steve Turnipseed for the story of real-life examples complete with lessons learned and hurdles to avoid.

- 1) Research – habitat, soil, sunlight, pH, and plants
- 2) Plan – landscape and irrigation design, soil improvement
- 3) Approval – from HOA and municipality
- 4) Prepare – herbicide, (sod removal), and amend, or “Solarize or Smother”
- 5) Procure – buy plants and contract for installation service
- 6) Execute – plant, modify irrigation and mulch
- 7) Nurture – inspect, water
- 8) Maintain – weed, refresh mulch, selectively prune, modify
- 9) Enjoy – improved wildlife habit, lower water bill, less “fossil fueled” maintenance, active gardening with physical and mental health benefits



Monday, October 16, 2017 | 3:15pm-3:45pm

**FAWN Review**

*Lee Staudt*, Network Technician III & Senior Field Technician, UF/IFAS Florida Automated Weather Network

Florida Automated Weather Network

My main job function is to oversee FAWN Weather Stations and maintain quality weather data.

My other main goal is to help and inform people about Fawn and its benefits.

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Cell Phone: 352-682-0287

Session A-4: Horticulture | Monday, October 16, 2017 | 3:45pm-4:45pm

**Flowering Trees for Florida: Part II**

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

This presentation is more than about pretty trees. Learn about flowering trees presentation in the landscape. What makes them flower, for how long, and which ones are the most powerful and least impressive presenters. If you saw the webinar, you will not want to miss this follow-up on flowering trees education. The presentation includes small, medium, and large sized trees. In addition, the ones best suited for recommendations to our county customers. Lessons learned from these bloomers will be applicable to other landscape trees. Stephen Brown has accumulated more than 20 years of flowering tree observations. Stephen will highlight the unexpected.

Session B-4: Diagnostics | Monday, October 16, 2017 | 3:45pm-4:45pm

**Lawn and Landscape Insects and Their Control**

*Adam Dale*, Dr., Assistant Professor, Entomology & Nematology Department, University of Florida, Gainesville, FL, Alachua County

Turfgrasses, shrubs, and trees are the vegetation of urban or residential landscapes, where the majority of people live. Therefore, plant health and the services plants provide are valuable because they directly benefit people. Unfortunately, plants in urban landscapes are often under more stress from the disturbances common to developed or managed landscapes, which can make insect pests more abundant and damaging in urban than surrounding rural landscapes.

During this session, we will discuss the identification, biology, and management of important established and emerging insect pests of urban and residential landscapes in Florida. We will also focus on how features of urban landscapes can affect insect pests and their associated damage to plants. After covering the basics of important insect pests, we will discuss the latest research on strategies for managing insects in the landscape to increase plant health and reduce pest abundance.

Session C-4: Edibles | Monday, October 16, 2017 | 3:45pm-4:45pm

**Aquaponics: What You Need to Know**

*Richard Tyson, County Extension Director, UF/IFAS Extension Orange County, Orlando, FL*

Support for local food systems is gaining ground all across America and is bringing significant economic benefits to local communities. Food safety, food security and socially responsible food production are all reasons why citizens are intentionally supporting local farms, farmers' markets and restaurants that cater to local food production. In addition, public interest in locally produced food is creating agri-tourism opportunities which showcase sustainable and environmentally sound food raising techniques.

On a commercial scale, aquaponics is an intensive production system with the potential to produce multiple crops with reduced water and fertilizer inputs. These systems require a significant investment in equipment and expertise to operate. Homeowner applications of these conventional aquaponic systems can also be expensive and difficult to manage. This presentation will discuss the fish, plants and nitrifying bacteria, the living organisms present in aquaponic systems, and review the pros and cons of hydroponic and aquaculture system design with particular emphasis on ways to simplify and reduce costs in order to fit the budget and time constraints of typical families.



Figure 1. Aquaponic media filled bench bed (left) floating raft system (right) and recirculating tanks and filters (top) at Green Acre Aquaponics, Brooksville, FL. Credits: Green Acre Aquaponics

Session D-4: Florida-Friendly Landscaping™ | Monday, October 16, 2017 | 3:45pm-4:45pm

**Great Plant Choices for Your Florida-Friendly Landscaping™**

*Kelly Greer*, Residential Florida Friendly Landscaping Horticulture, Orlando, FL, Orange County

A meadow habitat is generally made up of wildflowers and grasses that are native to Florida. This type of habitat provides valuable nectar, food, nesting materials and shelter to our native pollinators, butterflies, birds and other creatures. This presentation will demonstrate how to incorporate some of our native meadow plants into your landscape to add diversity to your urban landscape and how to maintain them. I'll also show you how we created a meadow demonstration site with the help of the Florida Wildflower Foundation, a professional meadow designer and master gardener volunteers at the Exploration Gardens in Orange County, FL.

Keynote Presentation | Tuesday, October 17, 2017 | 9:30am-10:30am

**Secrets to Happiness in Your Garden**

Carol Michel, Gardenangelist, Avid Gardener, Horticulturist, Writer, Author of *Potted and Pruned: Living a Gardening Life*, Indianapolis, Indiana

**Summary**

Many people are too busy digging, weeding, pruning, watering, sweating, and even grumbling in their gardens to learn the secrets to happiness in their gardens. To learn the secrets, they must first assess their own level of happiness in their garden.

**Your Garden Happiness Score:**

A tool to assess your happiness with your garden and gardening in general.\*

S (Soil)	Ti (Time)
P (Plants)	To (Tools)
C (Climate)	W (Weeds)
D (Design)	CU (Chemical Usage)
$(P+S+C) \times D = G$	$Ti+To+W+CU = E$
Your Garden Happiness Score = $G + E$	

\*With no scientific validity whatsoever.

Once a gardener understands their own garden happiness level, they are ready to learn the secrets to happiness in their gardens.

**Top Ten Secrets to Happiness in Your Garden**

- |    |     |
|----|-----|
| 1. | 6.  |
| 2. | 7.  |
| 3. | 8.  |
| 4. | 9.  |
| 5. | 10. |



Session A-5: Horticulture | Tuesday, October 17, 2017 | 11:00am-12:00pm

**Tree Pruning Done Right**

*Larry Figart*, Urban Forestry Extension Agent, Duval County Extension Service

Pruning trees properly is one of the most important things you can do to improve the wind resistance, longevity, and safety of your tree. The number one goal of tree pruning should be to improve the structure of the tree. In this session we will discuss both natural target pruning and reduction pruning, where and when they should be used and how to apply them. We will also look at how to identify and correct defects in a tree while it is young so that its useful lifespan is increased. We will also take what we have learned and practice with some small landscape trees.

Session B-5: Diagnostics | Tuesday, October 17, 2017 | 11:00am-12:00pm

**Computer Safety for Master Gardeners**

*Bill Black, UF/IFAS IT South Central Computer Support, Office of Information Technology*

We are in a growing digital age. Electronic devices are everywhere within our reach. It is important that Master Gardeners are aware of this technology. We will take a journey on how to apply it to your daily life in the office, home, and daily activities.

Main Topics:

1. World Wide Web facts
2. Internet usage by Countries
3. Devices that contain Web Browsers
4. Top 5 Cybercrime Vectors
5. Spam and Phishing
6. Viruses and Bugs
7. Don't be scammed
  - a. Links
  - b. Devices
  - c. Apps
  - d. Phone Call
8. Shopping with my money
9. Two Step Verification
10. Internet Precautions
11. Password strength checker
12. IoT Devices
13. WiFi always on
14. Account Setup local vs Administrator

Session C-5: Edibles | Tuesday, October 17, 2017 | 11:00am-12:00pm

**Grow Your Own Microgreens**

*Terry Brite DelValle*, Horticulture Extension Agent IV, Master Gardener Coordinator, UF/IFAS Extension, Jacksonville, FL, Duval County

Microgreens is a term used to describe a very young tender crop that is harvested as the seed leaves or first true set of leaves emerge. Growing microgreens is an easy way to produce edibles inside the home or in a greenhouse. There is a wide assortment of vegetables and herbs that are on the market for microgreen enthusiasts. Learn basic techniques such as how to grow, when to harvest, food safety tips, and how they can be used to supplement your diet. Practice what you learn by planting a small ramekin container with seed to take home for a future meal.

Session D-5: Florida-Friendly Landscaping™ | Tuesday, October 17, 2017 | 11:00am-12:00pm

**Micro-irrigation Made Easy**

*Carolyn Saft*, UF/IFAS Horticulture Agent, FACAA, ESP, FANREP. Live Oak, FL, Suwannee County

*Alicia Lamborn*, UF/IFAS Horticulture Agent, FACAA, ESP. Macclenny, FL, Baker County

- Low-volume irrigation (also called micro-irrigation, drip irrigation) is a watering system that carries water to plants under low pressure.
- When micro-irrigation is installed and used correctly, water use is reduced because water is delivered directly to the plants' roots instead of sprayed through sprinklers. Converting from traditional spray heads to micro-irrigation can save 15,000 - 30,000 gallons per 1,000 square feet per year. Disease problems can be reduced because plant foliage stays drier.
- This type of irrigation system can be installed above, on, or below the surface of the soil. It can be used in various landscape and garden situations including vegetables, trees, shrubs, containers, and flower beds. Micro-irrigation is easily installed, and kits and components are readily available.
- There are three main types of low-volume irrigation systems:
  - o **In-line drip tubing:** Placed on or below the soil surface or mulch, drip tubing is ideal for vegetable gardens where plants are in rows. The flexible tubing can also be easily wound through a plant bed.
  - o **Drip emitters:** Used where plants are spaced farther apart or used for potted plants and hanging baskets. The emitters can be punched directly into the "header" tubing-and/or attached to "spaghetti tubes" that lead to plants.
  - o **Micro-sprayers:** Used just above the surface, micro-sprayers wet a larger portion of the ground and emit more water than other types of micro-irrigation systems.
- Micro-irrigation systems can be attached to a hose or outdoor faucet and controlled manually or with a battery-operated timer. They can also be "hard-piped" into an existing in ground system and automatic irrigation controller.
- Drip emitter conversion kits make it easy to convert pop-up spray heads to spot watering emitters.
- This system does require adequate maintenance, but it is relatively easy to manage. Monitor both the system and your plants for problems. The most common issues are:
  - o Clogged emitters (soak in vinegar)
  - o Punctures to the tubing (squirrels?)
  - o Remove the end cap and flush the system occasionally to remove debris
  - o Replace washers regularly to avoid leaks at the spigot
  - o Check your timer battery

Session A-6: Horticulture | Tuesday, October 17, 2017 | 1:30pm-2:30pm

**It All Starts With a Seed**

*Héctor E. Pérez*, Ph.D., Associate Professor, Department of Environmental Horticulture, University of Florida, Gainesville, Alachua, FL

From forests full of the largest trees to young flowering plants in four inch containers to the foods, fibers, and medicines humans use it all starts with seeds. However, humans often take for granted that seeds are the most important biological resource for sustaining life on Earth. This presentation will therefore attempt to reconnect us with the wonders of seeds by focusing on interrelated topics such as evolution of the seed habit and subsequent developments including various dispersal and dormancy mechanisms. I will also show that humans are feeble compared to seeds when it comes to tolerating various types of stress. We will then explore how seed stress tolerance is necessary for global food and natural resource security. I will share research highlights from our work throughout the presentation in order to connect us with seed biology in our own backyards.

Session B-6: Diagnostics | Tuesday, October 17, 2017 | 1:30pm-2:30pm

**Know Your Florida Snakes**

Steve A. Johnson, Dr., Associate Professor and State Extension Specialist,  
Department of Wildlife Ecology & Conservation, University of Florida, Gainesville, FL, Alachua County

There are approximately 50 species of snakes in Florida that may be found in a diversity of habitats throughout the state. The smallest—Brahminy Blindsnake—and largest species—Burmese Python—were both introduced by people. The former is the smallest snake in Florida, is the size of an earthworm, and was likely introduced in the ornamental plant trade. The Burmese Python made its way to Florida via the pet trade. This impressive constrictor reaches lengths in excess of 15 ft. and may weigh more than 150 lbs. The great diversity of native snakes that live in the Sunshine State also show considerable variation in size, as well color/pattern and habitat preferences. Native species include the diminutive Crowned Snakes, which are no bigger than a pencil, as well as the largest venomous (Eastern Diamondback Rattlesnake) and nonvenomous species, the federally Threatened Eastern Indigo Snake. Both of these impressive snakes have declined throughout their range, and anyone who encounters one should consider themselves lucky.

While these are some of the more awe-inspiring species, our many other native species are also intriguing in their own right. All of our native snakes play important roles as predators and prey in Florida's diversity of natural and human-modified ecosystems. As such, native snakes can be considered as indicators that a Florida Friendly Landscape is indeed as its name implies—"Florida Friendly" = "Snake Friendly." As FFL principle number 5 states, attracting wildlife is an essential component of a Florida Friendly yard, and snakes may be *the* group of Florida animals that most need a helping hand. Common snakes likely encountered in a Florida Friendly yard include Black Racers, Common Gartersnakes, Ring-necked Snakes, Brownsnakes, and others.

In this presentation I will discuss how to identify some of our more common species of snakes and provide information on their natural history. I will also focus on venomous snake identification and safety. Following my presentation I'll display numerous species of preserved (NOT live) venomous and nonvenomous species for participants to examine up close.

I look forward to seeing many you at my presentation and will do my best to provide an informative and entertaining presentation, and ensure that you "Know Your Florida Snakes."

Cheers—Dr. Johnson

Session C-6: Edibles | Tuesday, October 17, 2017 | 1:30pm-2:30pm

**Growing Citrus in Difficult Times**

*Gary K. England, RSA/Director, UF/IFAS Hastings Ag Extension Center, Hastings, FL*

- I. Introduction to Citrus Culture
  - a. Site Selection
  - b. Planting
  - c. Irrigation
  - d. Fertilization
- II. Citrus Cultivars for the Landscape
  - a. Oranges
  - b. Grapefruit
  - c. Mandarins
  - d. Specialty
- III. Common Citrus Pests
  - a. Weeds
  - b. Insects/Mites
  - c. Diseases/Nematodes
- IV. Current and Future Invasive Citrus Pests
  - a. Citrus Canker
  - b. Citrus Greening
  - c. Citrus Blackspot
  - d. Leprosis
- V. Summary

Session D-6: Florida-Friendly Landscaping™ | Tuesday, October 17, 2017 | 1:30pm-2:30pm

**Alternatives to Turfgrass Lawns**

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

The lawn, a level area of cultivated and mowed grass, originated in England and western Europe and spread to become a worldwide symbol of social status. The emergence of mechanical lawn mowers in the 19<sup>th</sup> century made this status symbol attainable for everyone such that a turfgrass lawn is now a landscaping standard.

Turfgrass is an excellent plant for sunny Florida lawns because it creates a dense, green groundcover that prevents soil erosion and is durable enough for recreational uses. However, some people are frustrated because the high standard for appearance of a turfgrass lawn usually requires high levels of inputs. Others are disappointed that a monoculture turfgrass lawn has seemingly few environmental benefits, and a few people are just bored with turfgrass.

Thus, many Floridians are expressing an interest in alternatives to turfgrass for Florida lawns. These activists dream of a lawn that requires less water, less fertilizer, less mowing and less pest management than turfgrass while also offering more benefits to pollinators and wildlife. Possible alternatives to turfgrass include groundcovers, perennials and low growing shrubs, though these may not function as a lawn. Examples include groundcover roses, liriopse, blue-eyed grass, groundcover junipers, and wildflowers.

A number of lower growing plants offer more lawn-like alternatives to turfgrass. These potential lawn plants include partridgeberry (*Mitchella repens*), peacock spikemoss (*Selaginella uncinata*), mondo grass (*Ophiopogon spp.*), dichondra (*Dichondra repens* and *D. carolinensis*), matchweed or frogfruit (*Phyla nodiflora*), powderpuff mimosa (*Mimosa strigillosa*) and rhizoma perennial peanut (*Arachis glabrata*).

Each of these alternatives has advantages and disadvantages for use as a lawn. All of these plants have not been researched enough to develop management practices for use as a lawn or to determine environmental impacts as compared to turfgrass. It is doubtful that any of these can withstand significant foot traffic. All of these plants have limited availability and a relatively high cost of purchasing, planting and establishing a lawn. Of these turfgrass alternatives, rhizoma perennial peanut is closest to commercialization as an alternative lawn and already may be found in landscapes across Florida.

Finally, another approach is to use two or more plants to create a blended lawn in hopes that combinations of plants would complement performance and compensate for individual limitations. Possible combinations include matchweed and turfgrass, mimosa and turfgrass, mimosa and rhizoma perennial peanut, and rhizoma perennial peanut and turfgrass. This approach requires research on species combinations, variety selection, proportions of each at planting, management, and environmental implications.

Alternatives to turfgrass lawns have a promising but challenging future. Success can be achieved step by step and yard by yard as we individually and collectively experiment with turfgrass alternatives.



Keynote Presentation | Tuesday, October 17, 2017 | 2:45pm-3:45pm

**Florida Mushrooms and Cool Fungi**

*Matthew E. Smith*, Assistant Professor (Department of Plant Pathology) & Curator of the Fungal Herbarium (Florida Museum of Natural History), University of Florida, Alachua County, Gainesville, FL

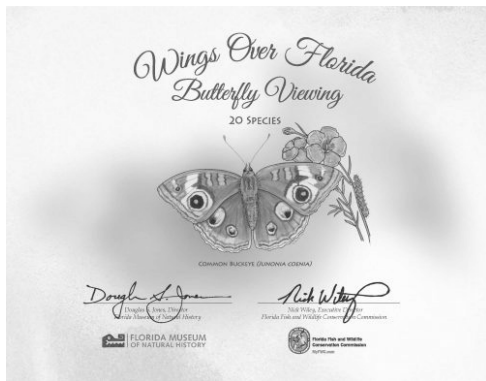
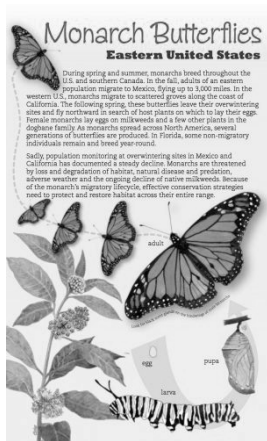
Gardeners and horticulturalists are focused on growing plants; we grow vegetables for the table, trees for their shade and wood, native species to attract local fauna, and flowers to decorate our homes. Although plants are always the focus of a garden, our Florida yards are also filled with a diverse and hidden component that is overlooked by most people: the fungi. Dr. Matthew Smith is a University of Florida mycologist (fungal biologist) who spends his time thinking about and studying fungi. He will provide a glimpse into the hidden world of fungi with a focus on some of the local species that can be found in Florida yards and gardens. Most people learned about fungi as strange and aberrant plants, but in fact the fungi constitute a unique kingdom of life that includes millions of species. Fungi are a major component of healthy soils and many fungi are either pathogens or symbiotic mutualists with our garden plants. Dr. Smith will introduce the fungi and will discuss the many different ecological roles that these organisms play in nature. He will introduce the audience to their underappreciated microscopic bodies and discuss some of the reasons that fungi are difficult but also rewarding to study. This talk will certainly entertain and inform any gardener who wants to know more about the diversity of hidden fungi in their garden.

Keynote Presentation | Wednesday, October 18, 2017 | 8:30am-9:30am

**Butterflies & Pollinators: Master Gardeners Can Make a Difference**

Jaret C. Daniels, Ph.D., Associate Curator and Director, McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida, Gainesville, FL, Alachua County

Pollinators are critical to our environmental and economic well-being. The ecological service provided by these organisms, the majority of which are insects, is necessary for the reproduction of some 80% of all flowering plants on earth. This includes the vast majority of the fruit, vegetable and seed crops that humans consume, as well as many other plants that provide commercial or medicinal value. Beyond the direct economic value to humans, insect pollination provides essential maintenance of the structure and function of a wide range of natural communities. While wild and managed bees are arguably the most efficient pollinators, many other insects including flies, beetles, wasps, moths and butterflies play a significant role. They tend to make more flower visits than bees and are more resilient to habitat and landscape changes. As a group, they display tremendous diversity in life history, behavior, size and form. Such rich species assemblages have been shown to increase pollination services and provide insurances against continued declines in bee populations. Public education is critical to generating conservation impacts. Numerous collaborative efforts underway at the Florida Museum of Natural History are meant to generate interest and promote nature exploration. These include materials ideal for outreach and educational programming including brochures highlighting Monarchs & Milkweeds, Flowering Plants & Butterflies, Florida Wildflowers and Butterflies, and Native Insect Pollinators; Wings Over Florida - a free butterfly listing recognition program that rewards people for their Florida life list achievements; and 3D Butterfly Cards that use augmented reality to introduce people to several common and imperiled Florida butterflies.



# Map of Florida Counties



