

Miami-Dade Extension Connection

UF/IFAS Extension Miami-Dade County
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Summer 2018



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Natural Areas Management Environmental Resource Project Supervisor Eduardo Salcedo, center, describes appropriate mangrove trimming techniques during an Extension training event for Miami-Dade County PROS employees.

Photo: Ana Zangroniz



Letter from the Editor

Jeff Wasielewski, Commercial Tropical Fruit Extension Agent

Dear Friends of Extension,

Summertime, which means mangos and milkshakes, heat and high humidity, and your friendly neighborhood Extension office kicking it in to high gear for workshops and activities. The Extension office has classes on tropical fruit, fishing, pesticide safety, best management practices, chainsaw safety, worker protection standards and Master Gardener Training. You can see our article on recruiting Master Gardeners on page 7. We are also in the heart of hurricane season and you can read about pruning your trees for hurricane season by Extension agent Henry Mayer on page 10.

I want to extend a special Miami-Dade Extension welcome to our newest member Zakkiyyah Osuigwe who has graciously allowed us to call her Zee! I think that alone will save our staff hundreds of hours of mistakes and missteps. Zee is our new Family and Consumer Science support specialist and she has quite the impressive resume. You can read all about her on page 3.

Miami-Dade Extension is a great place to work and many of the things we do are specifically for the benefit of the community, but it's not always easy to do our jobs as sometimes we deal with difficult topics. The tropical fruit world recently was assaulted by the Lychee Erinose Mite which you can read about on page 4. This mite is the worst lychee pest in the world and can cause you to lose 80% of your crop. Lee County, where this mite was found in large numbers, currently has a quarantine for all lychee fruit and plants. Speaking of quarantines, the agricultural community of South Florida held its collective breath recently as three Oriental Fruit Flies were found in the growing area. If just three more flies were found, we would have been placed under quarantine and faced a similar situation to what we did in 2015 when heavy rules and restrictions went in to place in regards to moving fruit, vegetables and even some nursery products out of the ag area. At the current moment, no other Oriental Fruit Flies have been found and we may be out of the woods.

I would like close this letter by thanking all of the friends of Extension for your support. UF/IFAS Extension Miami-Dade County is constantly striving to accomplish bigger and better goals, but we couldn't do it without the support of our biggest fans, the Miami-Dade community. Thank you so much for your continued support.

Sincerely,



Comings and Goings

Welcome to Zakkiyyah “Zee” Osuigwe

We would like to welcome Zakkiyyah “Zee” Osuigwe, a dynamic, proactive and people-driven professional with over 20 years of experience working in the public sector to UF/IFAS Extension Miami-Dade County. Zee is our new Family and Consumer Science support specialist. She served 21 years in the U.S. Navy, and worked with several county governments as an Urban Planner and a Community Development Program Manager. She is a certified Military Instructor as well as SMART Program Instructor for UF. Zee has experience working with special needs students in the Escambia County School District and is currently a certified instructor for Child Passenger Safety Technician, Bicycle Helmet Fitter Technician, Crossing Guard Trainer, and Bike Rodeo Trainer. Zee has a passion for safety and family stability. She is President of the Escambia-Santa Rosa Safety Coalition and has volunteered many hours to promoting safety in local communities. She has earned a dual Masters’ Degree in Human Resources Management and Leadership Management at Webster University, and a Bachelors’ Degree in Urban and Regional Planning at Florida Atlantic University. Zee is also pursuing a Doctorate degree in Business Administration at Walden University. She enjoys teaching and empowering others to add value to and improve their quality of life.



Zakkiyyah “Zee” Osuigwe at the UF/IFAS Extension Miami-Dade County office in Hialeah. Photo: Shirley Bender

Tropical Research Education Center Spotlight

Commercial Grower Control Recommendations for the Lychee Erinose Mite (LEM)

Daniel Carrillo, Entomologist – Tropical Fruit Crops, UF/IFAS TREC; Jonathan H. Crane, Tropical Fruit Crop Specialist, UF/IFAS TREC; Jeff Wasielewski, Commercial Tropical Fruit Extension Agent

The invasive Lychee Erinose Mite (LEM), *Aceria litchi*, has the potential to debilitate lychee trees and decrease lychee yields by 80%. It was recently detected in Lee County infesting lychee trees. However, it may be in other counties as well; this is under investigation. The purpose of this document is to provide lychee and longan growers with control recommendations for the Lychee Erinose Mite (LEM), *Aceria litchii*. If you spot lychee trees with symptoms of the erinose mite infestation, please notify FDACS – DPI at 1-888-397-1517 or DPIHelpline@FreshFromFlorida.com immediately.

Scouting for this pest

Frequent and regular monitoring of trees should be conducted to detect LEM infestations. LEM infests immature leaves and forms small blisters (Figure 1) with silver-white colored hairs. As LEM populations grow, a reddish-brown hairy mass develops on the underside of the leaves may become distorted or curled (Figure 2). This damage, called “erineum” (velvety hairs), may also develop on other plant parts as the LEM population grows. The mites migrate to new shoots and feed upon petioles, stems, panicles, flower buds, and fruit (Figures 3 and 4). Monitoring for the presence of LEM requires regular inspections of the foliage to detect symptoms, especially around the time that the trees are expected to flush and when actively flushing.

Removal of infested branches

Pruning is the most important cultural practice against the LEM and the most efficient way to remove infestations. Prior to pruning, applications of whitewash (50:50 mix of white latex paint: water) should be made to all limbs and trunks from the height at which trees will be cut to the ground. This will protect them from sunburn when exposed to full sun.



Fig. 1. Trunk and major limbs whitewashed to height of pruning. Photos: Jonathan Crane

Tropical Research Education Center Spotlight

Commercial Grower Control Recommendations for the Lychee Erineose Mite (LEM)

continued

For eradication purposes, mature trees infested with LEM should be severely pruned back (hatracked) or stumped to remove all the foliage. When pruning trees be sure to make clean cuts. This may be done by making an under-cut partway through the underside of a limb, then an over-cut on the top of the limb, which will allow the limb to be cut off without tearing of the bark (Fig. 2).



Fig. 2. Three-cut limb removal method steps: undercut, overcut, limb-fall, stump removal and final. Photos Jeff Wasielewski

All removed branches should be burned on site. Burn permits may be required, prior to conducting any burns, please contact your local Florida Forest Service office. Miami-Dade growers please call 305-257-0875 or 954-475-4120 to obtain a burn permit.

Regular management during the non-fruiting period and particularly during the post-harvest period, includes cutting and burning all infested branches. Young lychee trees and severely cut-back mature trees are more susceptible to LEM infestations because of their frequent shoot and leaf flushing. Mature trees typically flush in response to harvesting when the fruit clusters are cut from terminal of stems. All infested flushes should be removed and burned. New flushes should be protected with approved acaricides (miticides) as described below.

All tools used for pruning infested trees should be washed with a 10% bleach solution (nine parts water to one part bleach) before being used on other trees.

Acaricide treatments to protect new flush

LEM primarily attack new leaf growth. After pruning, removing and destroying infested branches, acaricides should be used to protect new leaf flushes as they emerge and develop (grow). Sprays applied at times other than flushing provide poor control because of the protection provided to the mites by the erineum (velvety hairs).

Timed applications of acaricides targeted to protect the new leaf flush have proven effective for controlling LEM. The critical time for treatment is after removing the infested branches when the pruned trees are about to flush; this includes after harvesting fruit. The first spray should be applied to infested trees and neighboring trees as the new flush begins to emerge. Additional sprays should be applied when the new flushes have fully emerged and just before the leaves start to expand. The last spray should be applied after

Tropical Research Education Center Spotlight

Commercial Grower Control Recommendations for the Lychee Erinose Mite (LEM)

continued

the new leaves have fully expanded but have not hardened. Additional sprays may be warranted depending upon shoot and leaf growth rates.

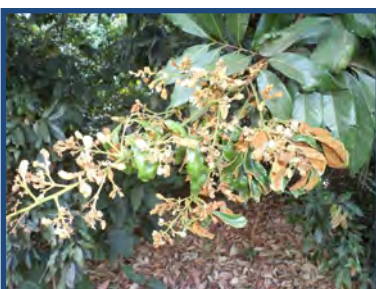
Among the acaricides registered for use in lychee in Florida, the only conventional pesticide (i.e., non-organic) registered acaricide proven to work against LEM in other parts of the world is Agri-Mek (abamectin). Agri-Mek is the only formulation of abamectin registered for lychee. The residual activity of Agri-Mek is increased when combined with horticultural oil or a surfactant because these products assist with translaminar movement and protect the active ingredient from photodegradation. Agri-Mek is toxic to honey bees and should not be sprayed onto flowering trees. Agri-Mek is a restricted use pesticide (you must have your pesticide license to use this material) and has a restriction of a maximum two applications per year on lychee. Caution: crop oils may cause plant/fruit damage when used under high temperatures and/or dry conditions. DO NOT apply any sulfur products within two weeks before or after an oil spray.

Of the other insecticides known to have activity against LEM, azadirachtin, which is extracted from neem oil, provides suboptimal control of this mite. Azadirachtin is labeled for use on lychee and can be used as an alternative acaricide while additional insecticides are being explored. Azadirachtin brand names include Aza-Direct, AzaGuard, Azatrol EC, and Trilogy. Although wettable sulfur has also proven efficacious against this mite, it is not registered for use on lychee at this time.

Trees currently with fruit: Infested harvested fruit (and leaves/stems) can move the LEM to new lychee trees, locations and regions of the State. Ideally, all fruit, leaves, and stems of infested trees should be removed and burned immediately. FDACS-DPI is conducting on-going surveys of groves and nurseries and has not made any determination and recommendation on the movement of fruit from infested groves.

Movement of the pest

LEM can be moved or disseminated by the movement of infested plants (i.e., leaves, stems, and fruit), especially when plants are propagated as air layers from infested parent trees. The mite may also be moved by touching the symptomatic leaves transferring live mites to additional leaves and trees. Please do not move these mites by moving infested plant material to new locations. Remember to burn infested plant material on site.



Left: LEM feeds upon petioles, stems, panicles and flower buds.

Right: LEM also feeds upon fruit. Consequently, erinea may also develop on fruit. Photos: Leticia Azevedo



Become a Master Gardener!

Adrian Hunsberger, Urban Horticulture Extension Agent

Do you have spare time to volunteer? Do you like plants and want to learn more about gardening? Do you like to help others by sharing your gardening knowledge? Become a Master Gardener volunteer for Miami-Dade County Extension! Join this elite group of dedicated gardeners who teach others how to solve their plant problems.

Through the Master Gardener training program, participants receive more than 70 hours of classroom and field training from University of Florida faculty. You'll learn about: flower & vegetable gardening, fruit trees, insects, disease and plant identification, landscape care, proper pesticide and fertilizer use, and much, much more!



Master Gardener volunteers doing what they love – helping the community by answering plant questions. Photo: Adrian Hunsberger

Master Gardeners are individuals who are interested in gardening, educating and helping others, and making civic contributions through volunteer work. They help answer gardening questions on the phone at our office, help with school gardens, are plant consultants at local events, and more. Even if you aren't physically able to do much gardening, we have plenty of volunteer opportunities for you!

How do you become a Master Gardener? Read about the program on our web page: <http://sfyl.ifas.ufl.edu/miami-dade/landscapes--gardening/mastergardener/> and return the registration form so that you can be contacted.

Once you are selected to take the Master Gardener training, you will be notified about the class schedule. Classroom training is one day during the workweek from 9:00 am – 4:00 pm. and lasts for 11–12 weeks, beginning in September. Volunteering opportunities are at our Homestead office and at other selected sites throughout the County.

Come join our Miami-Dade County team of Master Gardeners today: learn, share and have fun too!

Shuck, Don't Chuck! A Pilot Oyster Shell Recycling Project

Dr. Ashley Smyth, UF/IFAS TREC & Ana Zangroniz, Sea Grant Extension Agent



When we think of recycling, we commonly think about plastic, glass, and aluminum products. What is not at the forefront of people's minds is recycling the shells of the delicious oysters that they have just consumed during happy hour. Recycling oyster shells? This is a thing?

As it turns out, yes, it is a thing. Here in southeast Florida, this might be surprising since we do not have large oyster reefs in our bays and canals. The Eastern Oyster, *Crassostrea virginica*, is not found in southeast Florida because conditions aren't right for them. The Eastern Oyster favors more temperate and estuarine environments, and here in Miami-Dade County, it's just too consistently warm and salty for oysters. As residents, many of us delight in oysters as tasty treats at local seafood restaurants, and most often, when we're done, we toss the shells into the trash without a second thought. However, those shells can be recycled and used to create new oyster reefs. While not common in southeast Florida, oyster shell recycling occurs throughout the Maryland/DC area, as well as the Gulf Coast and further north on the Atlantic Coast of Florida.

Ana Zangroniz, left, and Dr. Ashley Smyth set up oyster recycling stations at the Deering Estate Seafood Festival on March 25.

Photo: Deering Estate/Karen Solms

Oyster shell recycling programs are exactly what they sound like. After the meat is consumed, the empty shells are collected in special bins, transported to a central location, and laid to dry and cure in the sun for 3–6 months. Once these shells are thoroughly cleaned and dry, they are returned to the coast and installed in specific areas where they provide homes for baby oysters. These created or restored reefs serve multiple functions: they help protect the shoreline from strong wind and wave action, and, more importantly, they are the perfect habitat for baby oysters (spat) to settle on and grow! This practice helps sustain the oyster population for future generations. While there are many oyster reef restoration programs in the state, these programs are often shell-limited, since oysters

Shuck, Don't Chuck! A Pilot Oyster Shell Recycling Project

continued

harvested in one area are often consumed out of the region. Oyster shell recycling programs are a popular way to meet this demand for shells.

This March, Dr. Ashley Smyth of UF/IFAS TREC and Ana Zangroniz of UF/IFAS Extension Miami-Dade County decided to test out a mini-oyster shell recycling program at the annual Deering Estate Seafood Festival. Special buckets were placed in strategic locations throughout the Festival and utilized volunteers to staff the stations, making sure that only oyster shells were placed inside. Additionally, Smyth and Zangroniz spoke with local seafood vendors and asked them to save the shucked shell for collection at the conclusion of the event. Both of these activities informed not only the vendors but also the consumers about the importance of shell recycling, and how by recycling their shells, participants would help contribute to the shell supply around the state.

At the end of the Deering Estate Seafood Festival, a total of 1,845 oyster shells (1,120 from vendors and 735 from consumers) were recycled. Shells are currently curing in the sun at TREC and will soon be transferred to restoration partners in need of shells. This was a great start to what is hoped will be a larger-scale, sustainable oyster shell recycling program. Given that one oyster reef section is about 20 feet long and usually requires 10,000 shells, the collection is about 20% of the way to a full reef! Smyth and Zangroniz are now working with local restaurants, restoration groups, and the public to develop an oyster shell recycling program in Miami-Dade County.



Dr. Ashley Smyth spreads out oyster shell to begin drying at Tropical Research Education Center. Photo: Asher Williams

Tips on Preparing Your Trees for Hurricane Season

Henry Mayer, Commercial Urban Horticulture Extension Agent

The 2018 Atlantic hurricane season officially began on June 1 and will end on November 30. Last year, Irma and Maria show us that hurricane winds can be extremely damaging to communities, power lines and urban forests. Without question, trees can become hazardous and pose risks to personal safety and property. It is important to recognize that trees provide many environmental benefits, such as providing shade, energy conservation, water preservation, provide oxygen, prevent soil erosion, and reduce violence between others.

During the last several years, valuable lessons were learned about how, when, and why trees fail in storms. Of course, there is no such thing as a hurricane-resistant tree, but with proper care and timely maintenance, trees can be more resistant to storm damage.

The objective of this article is to identify some guidelines before pruning trees for a storm.



Topping a tree creates a dangerous tree and it is illegal. Topping (hatracking) is the term used to describe over-pruning a tree by cutting it so badly that it is left with few or no leaves on the branches. Trees should never be topped. Topping creates hazardous trees because the wood inside the cut branch begins to decay which leads to internal rot. The sprouts which grow in response to topping are not well secured to the topped branch and they can easily split from the tree as they grow larger. To avoid this, always prune a branch back to a living branch crotch.

Left: Hat-racket or topped tree.
Photo: Henry Mayer

Trees with a thick canopy should be thinned. Avoid removing more than 25–30% of the foliage per year. Most trees do not need to be pruned each year. Thin the canopy when it becomes thick (hard to see through). Some interior branches should be removed to allow wind to go through the canopy. The aerial roots of ficus trees should not be removed.

Right: Ficus with compact and thick canopy.
Photo: Doug Caldwell



Tips on Preparing Your Trees for Hurricane Season

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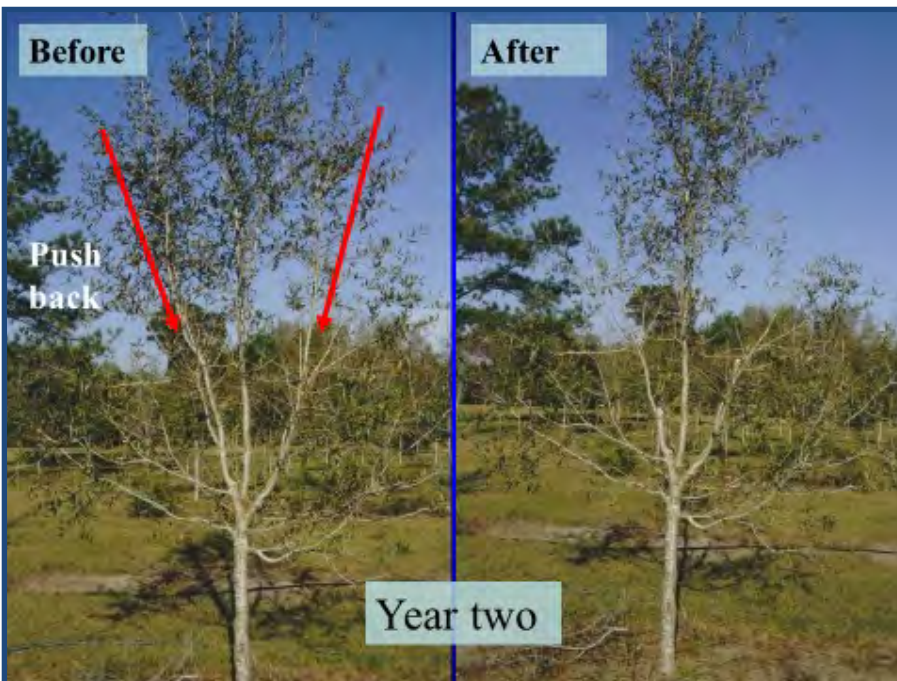
A tree with multiple leaders (trunks) will become hazardous to people and property as the tree grows larger. Never allow trees to grow with multiple upright leaders. These trees may look handsome when young but will become hazardous as they grow older. Always prune so that branches are spaced 18–36" apart along the main trunk. In trees with a single trunk be sure the main branches form an angle with the trunk of 40 degrees or more.

Horizontal oriented branches are better attached to trees than upright branches. Upright branches are poorly attached to trunks. Horizontally oriented branches (45° or greater) are usually well secured to trunks. A branch growing in an upright manner parallel to the trunk becomes a second trunk. The tree is said to have a double leader. Double leaders are dangerous because they can easily split from the tree during a storm. Vertical branches are weak attached to the tree causing the branch to fall during a storm. Horizontal branches are strongly attached to the trunk, resulting in a more resilient tree.



Above: Black-olive with multiple trunks resulting in a weak structure.

Photo: Henry Mayer



The best time to prune trees is when they are young. Not only are the branches easier to reach, but the resulting wound will be much smaller and callus over more quickly.

Left: After two years of pruning the young live oak has only one leader which makes the tree stronger to withstand hurricanes.

Photos: Dr. Ed Gilman

Right: Never cut flush with the trunk, this will allow the entrance of pathogens.

Photo: Grades and Standards website



Never cut a branch flush with the trunk. Always cut to the outside of the branch collar which is located at the base of every branch. This collar is sometimes easily seen as a swelling where the branch meets the trunk. When pruning in this manner it may appear as though a small stub is left on the trunk. However, properly done, this technique removes the entire branch and does not injure the trunk. Always leave a small stub that contains the branch collar and the ridge.

Tips on Preparing Your Trees for Hurricane Season

continued



Black-olives that have been liontailed or over-lift causing very weak structure.
Photo: Mike Orfanedes

Left: Severed over-pruned Queen palm with almost no leaves.

Photo: Tim Broschat

Right: Healthy roebelenii palm, with lot of green leaves. Photo: Tim Broschat



Avoid “liontailing” and “overlifting”.

“Liontailing” refers to removing smaller branches on large branches leaving the foliage only on the ends of branches. The limbs will look like a lion’s tail. “Overlifting” refers to removing lower branches of trees. These harmful practices make trees more vulnerable to wind damage and rot. The common guide is that the lower half of the tree needs to have 2/3 of the foliage and branches.

Palms don’t need hurricane pruning.

Palms are adapted to wind storms. Removing fronds is of no benefit and is detrimental to the palm. Even dying leaves benefit the health of the palm and should not be removed until completely brown. Only coconuts and large palm seeds should be removed during hurricane season.

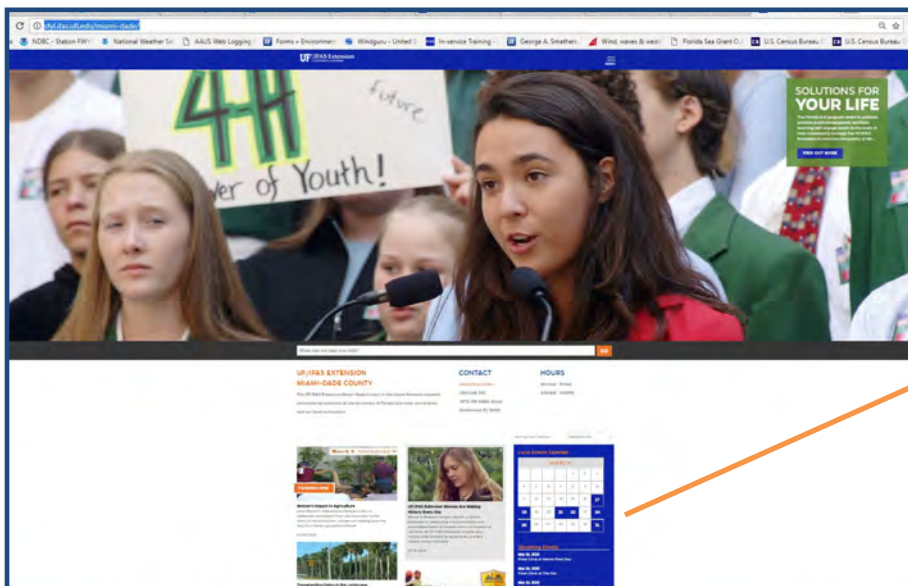
For additional information please visit the following websites:

Trees and Hurricanes, UF/IFAS: <http://hort.ifas.ufl.edu/treesandhurricanes/>

Trees and Hurricanes, EDIS: http://edis.ifas.ufl.edu/topic_trees_and_hurricanes

What's New at Miami-Dade Extension?

Check out our new website! To access our Extension Calendar, please visit our website: <http://sfyl.ifas.ufl.edu/miami-dade/> and scroll through the calendar. There, you will find all event information including how to register for classes and workshops.



Local Events Calendar						
MARCH						
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Upcoming Events

Mar 24, 2018
Plant Clinic at Native Plant Day

Mar 24, 2018
Plant Clinic at The Fair

Mar 24, 2018
Rain Barrel/Water Conservation Workshop at Native Plant Day at A.D. Barnes Park

What is UF/IFAS Extension?

The UF/IFAS Extension Service is the liaison between research conducted at the University of Florida, other institutions of higher learning, other universities and stakeholders in Miami-Dade County. Our clientele includes growers (agricultural and horticultural), homeowners, youth, people interested in family issues or food and nutrition, and marine industries.

The UF/IFAS Extension Miami-Dade County receives direct funding from the [University of Florida's Institute of Food and Agricultural Sciences \(IFAS\)](#) and [Miami-Dade County's Parks, Recreation and Open Spaces Department](#).

The United States Department of Agriculture (USDA) is the third partner in this cooperative agreement. The Miami-Dade County offices are part of a nationwide system of information, outreach, and education offered by county governments and land-grant educational institutions in each state.

Get Social With Us!

Follow us on our various social media outlets:



Like our FB Page: [UF IFAS Extension Miami-Dade County](#)



Check out our various informative videos on our YouTube channel: [UF/IFAS Extension Miami-Dade](#)



Tweet with our agents and programs on Twitter:
[@sflhort](#)
[@MiamiUCU](#)
[@miamidade4h](#)
[@evcampoverde](#)

This newsletter is edited by Jeff Wasielewski and Ana Zangroniz. If you have any questions or concerns, please contact us at jwasielewski@ufl.edu or azangroniz@ufl.edu.

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