Miami-Dade Extension Connection

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Spring 2019



Dr. Jonathan Crane, right, explains how to prune a sugar apple tree in the new commercial tropical fruit growers' classes. See story on page 6. Photo: Jeff Wasielewski

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Letter from the Editor

Ana Zangroniz, Florida Sea Grant Extension Agent

Dear Friends of Extension,

2019 is already a quarter complete. Spring has sprung. After a rather warm finish to our "winter," aka the dry season, the sun is out, humidity is creeping up, and we're really starting to feel more like it's summer!

I'm wrapping up a whirlwind couple of months of programming, including back-to-back modules in the Florida Master Naturalist Program (Coastal Systems and Coastal Shoreline Restoration), getting back into the field to test levels of dissolved oxygen with my dedicated volunteers of the Biscayne Bay Water Watch Program, and training recreational SCUBA divers to identify stony corals and how to monitor for signs of coral disease. As I write this, today marks the one-year anniversary of when my colleague Dr. Ashley Smyth and I began our small-scale oyster shell recycling program at last year's Deering Estate Seafood Festival. I'm proud to report that what began as a very modest effort has now expanded, and we returned to the event again this year, oyster recycling bins in hand, powered by enthusiastic volunteers.

Whether engaging with the community or teaching a class, I have to say that the pleasure is all mine. I know that my fellow Extension agents would agree. We are so fortunate to work cooperatively with one another, as well as our partners and volunteers. Without this network, we would not be nearly as successful in our work. I want to take this time to thank my co-workers and other colleagues for their continued guidance and support. The best part about my job is that I get to learn as well!

I look forward to meeting many of you as the year continues. Please stop by and visit me at the University of Miami Rosenstiel campus, or walk through the door of our main Extension office. It's where everybody knows your name.

Sincerely,





Comings and Goings

Goodbye and Good Luck to Andres Varela

Jeff Wasielewski, Commercial Tropical Fruit Extension Agent



Andres Varela at his goodbye party. Photo: Jeff Wasielewski

I'm sad to report that Andres Varela has left his job as the administrative secretary to our county Extension director, Teresa Olczyk. Andres wore many hats around the Extension office: he ran our Facebook page, he was the technical guru for our AV equipment, helped maintain our website, reminded everyone when reports and timesheets were due, and of course, he was the director's right hand man and helped her keep her schedule and much, much more. Andres was always willing to lend a helping hand, to both senior and new faculty alike.

The good news is that Andres has taken a new job with UF in Gainesville as the quality improvement specialist for the UF/IFAS Extension Family Nutrition Program. He will be in charge of providing in-depth fiscal and programmatic reviews of their program along with guiding programmatic decisions and assessing progress toward their program goals.

We will miss you Andres, but we wish you the best of luck in your new job and new town. Congratulations on your new job, and don't forget you can come back anytime to say hello.

Tropical Research Education Center Spotlight

TREC Highlighted at 56th Annual Ag Tour and Luncheon

Carolina Vendrame, Marketing and Communications Specialist, TREC

Over the past 56 years, the Agri Council has organized tours to visit the different agricultural operations in Miami-Dade to showcase the diversity and uniqueness of farming in South Florida's subtropical climate. Part of that tour includes a luncheon where esteemed members from the community are recognized for their many contributions to the agricultural industry, and for their continuous effort to support agriculture. The Board of Directors of the Dade County Agri Council, Inc. votes every year on student research submission based on their focus and the accomplishments they have attained and awards them with scholarships.

There were several members of The Redland community who were honored, and among those, Dr. Waldemar Klassen, Emeritus Professor for UF/TREC who was being recognized for his lifetime achievement work as a researcher. First, as a scientist for USDA, where he developed an IPM program for vegetable insects, and also for being a Center Director at



Dr. Waldemar Klassen, left, and Dr. Dak Seal. Photo: Carolina Vendrame

UF/TREC where he worked diligently to find solutions for the vegetable industry to keep it viable. He also investigated invasive and potentially invasive arthropods in the Caribbean and Latin American. Dr. Dak Seal, Vegetable Entomologist at UF/TREC, spoke to recognize Dr. Klassen and his wife Betty.

At the luncheon, graduate students from The <u>University of Florida-IFAS-Tropical Research and Education</u>

<u>Center</u> were also recipients of scholarships. Dr. Jonathan Crane, Associate Center Director for the Tropical Research and Education Center and Tropical Fruit Specialist, awarded the checks to each of the winners.

Rafia Khan, Ph.D. candidate, was awarded the Dennis Carpenter the Memorial Fellowship award. Her topic of research "Sustainable management approaches for controlling thrips (Thysanoptera: Thripidae) and their transmitted tospoviruses in tomatoes of South Florida". Her major professor is <u>Dr. Dak Seal</u>, Vegetable Entomologist.

The William H. Krome Memorial Fellowship was awarded to Lynhe Demesyeux, M.S. candidate, for her work on "Yield performance and miraculin content (miracle fruit) in Homestead, FL". Her major professor is Dr. Alan Chambers, Genetics and Breeder of Tropical Fruits.

Tropical Research Education Center Spotlight

continued

Vincent Michael, Ph.D. candidate, was awarded The Warren Wood, Sr. Memorial Fund for his work on "Developing commercial squash varieties with resistance to Phytophthora crown rot for Miami-Dade County". His major professor is <u>Dr. Geoffrey Meru</u>, Vegetable Breeder, Genetics and Genomics.

The Florida Mango Forum awarded the scholarship to Sara Brewer, Ph.D. candidate, for her work on "Building a better papaya for South Florida". Her major professor is Dr. Alan Chambers, Genetics and Breeding of Tropical Fruits.

Dr. Edward "Gilly" Evans, Center Director for The University of Florida-IFAS, Tropical Research and Education Center, also attended the luncheon to express his gratitude to the Agri Council organization for giving support to TREC graduate students by providing scholarships for the research work they are doing, as this eventually will benefit the community.

The mission of the UF/TREC is to develop and disseminate science-based information about tropical horticulture and natural resource sciences through basic and applied research, extension, and teaching to sustain and enhance the quality of human life and the natural environment.



Dr. Edward Evans, left, and with four of the award-winning students. Photo: Riphine Mainviel

New Tropical Fruit Growers Get Their Own Series of Workshops

Jeff Wasielewski, Commercial Tropical Fruit Extension Agent

As the commercial tropical fruit Extension agent for Miami-Dade County, it is my job to help commercial fruit growers in any way I can. Because our county has close to 1,600 tropical fruit growers, I need to service them through more than just one on one consultations and phone calls. Articles, mass emails, YouTube videos, and social media help, but the number one way for me to reach a larger audience is through workshops.

Workshop subjects are chosen based on input from my advisory committee, the tropical fruit community as a whole, surveys, and on what individual growers tell me they need. When I noticed that a high percentage of growers that visited my office were new tropical fruit growers with very little horticultural knowledge, I thought it might be a good idea to offer some basic courses to meet these growers' needs.

In late 2018, I collaborated with the tropical fruit specialist from UF/IFAS TREC, Dr. Jonathan Crane, to offer a general horticulture workshop for new growers. Things like pruning, planting, fertilizing, and crop selection were covered. I thought that if we could draw at least 20 students for this workshop, that it would be a success. We ended up having 54 students sign up! That's when I was sure that Dr. Crane and I were on to something and we needed to do more.



Dr. Jonathan Crane, left, diagrams pruning techniques for lychees and longans. Photo: Jeff Wasielewski

We decided to offer more workshops in the new tropical fruit growers series. Starting in February of 2019, we decided to offer one workshop per month that would go into detail on two different crops, as well as have a field visit component where students could see the crops firsthand. The first workshop of 2019 was on mangos and sugar apples and it also broke the 50 student mark. The second workshop was on lychees and longans and it had almost 40 students. Upcoming workshops include guavas and bananas, passion fruit and dragon fruit, limes and carambolas, mamey sapote and sapodillas, as well as workshops on hurricane preparation and freeze protection.

So far, the new tropical fruit growers workshop series has been a smashing success. Not only have the exit surveys for our first few classes been very complimentary, the students are also showing learning gains. Surveys are very important and allow us to know if what we are teaching is actually beneficial to the students that attend the workshops.

If you wish to find out more about upcoming tropical fruit workshops, please contact me at sflhort@ufl.edu and asked to be added to the tropical fruit email list.

Lethal Viral Necrosis Frequently Asked Questions

Henry Mayer, Commercial Urban Horticulture Agent

Recently in Miami-Dade County, several samples were diagnosed positive for a new disease called lethal viral necrosis (associated with sugarcane mosaic virus, SCMV) on the St. Augustinegrass, cultivar 'Floratam'. The following are the most frequent questions that people are asking about the disease:

Which is the most affected plant?

Unfortunately, the St. Augustinegrass 'Floratam' cultivar is the principal host of the disease. Some estimates are that 95% of Florida St. Augustinegrass lawns are planted with that cultivar! St. Augustinegrass 'Floratam' was released in 1973 by the University of Florida and Texas A&M University as an improved cultivar resistant to another virus, St. Augustine Decline Virus, and to chinch bug. All other varieties of St. Augustinegrass besides 'Floratam' show only mosaic symptoms when infected with SCMV.

Why is lethal viral necrosis a problem?

Lethal viral necrosis usually kills 'Floratam' in three years or less.

What are the symptoms?

Early symptoms include a mosaic pattern on the leaf that becomes necrotic (turns brown and dies prematurely) over time. The symptoms present blotchy and streaky patterns of yellow and green color. In fact, turfgrass tends to have broken yellow streaks running between the veins on an otherwise green blade. The only way to be sure the 'Floratam' St. Augustinegrass has lethal viral necrosis is through laboratory testing. Varieties other than 'Floratam' only show the yellow streaky patterns, but do not die from the virus.

When does the grass show the symptoms?

'Floratam' St. Augustinegrass is a tropical grass and grows much more vigorously during the warmer and wetter months. Also, when the temperature drops to approximately 70 F the grass will start to show more severe symptoms including leaf blade necrosis and plant death. The symptoms and dieback typically start in the fall/winter and continue through the spring.

How do I collect, send and pay for lab testing?

A sod plug of at least four or five inches across and a couple of inches deep into the roots of symptomatic (yellow mottling – not dead yet) 'Floratam' St. Augustinegrass should be brought as a "walk –in" or shipped over–night in a Ziploc type plastic bag to:

Plant Diagnostic Clinic

Tropical Research and Education Center Att. Dr. Romina Gazis 18905 S.W. 280 Street Homestead, FL 33031



Infected "Floratam" field. Visible dead patches along the wheels of the mowers.

Photo: Henry Mayer

Lethal Viral Necrosis Frequently Asked Questions

continued



Top: advanced browning and dead 'Floratam.'
Bottom: Bitter Blue is resistant to the virus.

Photos: Bill Schall

Samples must have all of the soil gently shaken off. Send samples early in the work week so they do not sit over the weekend waiting for analysis by the lab. The specimen submittal form is available here.

This is a fee-based service, the turf test costs \$40. The turnaround time varies, but if the sample is positive for lethal necrosis we will the Plant Diagnostic Clinic will inform you in 1-2 days.

Can non-symptomatic grass be a source of the virus?

Yes, if the grass is a known host of the virus. Lawns may not be showing obvious symptoms, but may contain the virus. Symptoms may be especially difficult to see during the warmer and wetter months.

Are other lawn grasses susceptible to lethal viral necrosis?

Yes, but it does not kill them. Grasses that are known hosts of SCMV include other St. Augustinegrass cultivars like 'Palmetto' and 'Bitterblue', and also, bermudagrass, paspalum, bahiagrass, and ornamental fountain grass (Pennisetum spp.). Other monocots including crabgrass, sorghum, corn and sugarcane can also be hosts to the virus. Zoysiagrass is not a host.

How is the lethal viral necrosis spread?

The virus is spread in the moist plant sap from infected grasses. Exposed plant sap occurs mostly when lawns are freshly cut. Lawn mowers, trimmers, equipment wheels, and other similar equipment pick it up at that time. Once the sap and clippings dry out, they no longer transmit the virus to new grass. The virus does not survive for long outside plant tissue. Mowing when lawns are wet can extend the viability of the virus on equipment because it keeps the plant sap hydrated longer. It is also believed that aphids and plant hoppers could spread the virus.

Can wheels from vehicles or lawn equipment spread the disease?

Yes, if wet plant sap from affected freshly cut lawns is carried to unaffected, but susceptible lawns.

Does the virus survive in soil?

No, once the virus is out of the plant tissue, and the sap dries, the virus is destroyed.

Do clippings need to be removed from freshly mowed lawns?

No, clippings dry out very quickly and then are not a source of the virus. Additionally, clippings recycle some of the nutrients back into the lawn.

Lethal Viral Necrosis Frequently Asked Questions

continued

Are there any chemicals, fungicides or pesticides that can be applied to lawns to cure the lethal viral necrosis?

Unfortunately, there is no cure for the virus.

So, if no chemical control is an option how do we manage the disease?

Grass clippings and plant sap should be blown off mowing equipment on lethal viral necrosis affected sites. Equipment should then be sprayed until wet with recommended sanitizers, and allowed to dry to destroy any virus that may remain on the equipment. A good management technique for commercial lawn maintenance companies is to mow lethal viral necrosis affected lawns as the last lawns of the day, and then sanitize. Theoretically, newly planted sugarcane mosaic virus infected sod could be a source, but currently none of the sod farms tested so far by the University of Florida Extension Plant Pathology Lab has been positive for the virus.

What are current recommended mower and trimmer sanitizing materials?

In areas where the disease is known to occur, potentially contaminated equipment parts should be cleaned and sprayed down using the following:

- 1 part PineSol type disinfectant with 3 parts water
- Potassium peroxymonosulfate & Sodium Chloride (Virkon S) mixed at a 2% solution
- Quaternary ammonia products
- Physan 20
- Lysol
- 1 part household bleach with 9 parts water. Caution: bleach rusts steel.

Can disinfectant materials be applied to lethal viral necrosis affected lawns for control?

No, the materials are surface disinfectants, and would not destroy the virus inside the living plant tissue. In addition, they are not legally labeled for disease management on lawns, and many are toxic to lawn grasses.

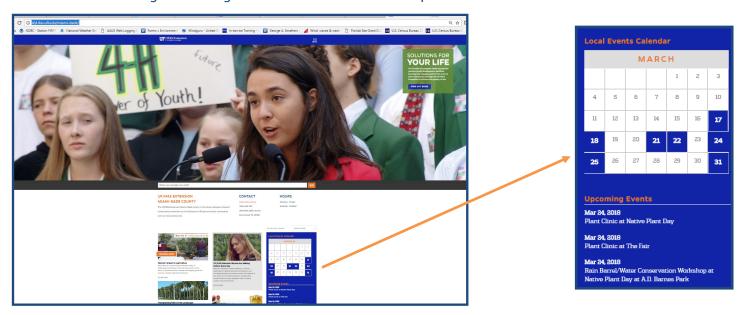
Are there other management options?

Replace dying 'Floratam' St. Augustinegrass with 'Bitterblue' or 'Palmetto' cultivars. Both are currently shown to be tolerant to the virus. 'Palmetto' is somewhat finer textured than 'Floratam', and both will require slightly different management, especially regarding fungal problems. Lawn areas can be completely resodded with recommended cultivars, or they can be "plugged" with smaller pieces into existing affected 'Floratam' lawns. Plugging allows the resistant cultivars to fill in as the 'Floratam' declines and dies. Neither 'Bitterblue' nor 'Palmetto' can be planted from seed. Do not replant 'Floratam' on the same site. 'Bitterblue' is an older variety that has been used since the 1930s.

Overseeding the affected 'Floratam' with a cool season grass like ryegrass can be a temporary aesthetic measure for the winter snowbird season.

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.



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.

UF/IFAS Extension Miami-Dade County receives direct funding from the <u>University of Florida's Institute of Food and Agricultural Sciences (IFAS)</u> and <u>Miami-Dade County's Parks, Recreation and Open Spaces</u>
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.

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Tweet with our agents and programs on Twitter:

<u>@sflhort</u>

<u>@MiamiUCU</u>

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