

UF/IFAS Tropical Research and Education Center



# *Inside* TREC

---

---

## ***From our Director:***



A few months ago, we hosted the 7th South Florida Graduate Research Symposium. It was the first time our Center hosted the event, but it surely will not be our last. Our decision to host this forum was multifold. First, the forum fits in quite nicely with a series of events we are planning to celebrate our 90th anniversary. (By the way, our gala fundraising One Night in the Tropics event takes place on October 26th at the Coral Gables Country Club; tickets are going fast, with only a few more remaining.) Returning to the point I was making, our second reason for hosting the forum is the fact that the forum provides us an opportunity to help train the next generation of problem solvers; they are so central to the sustainability of our communities and, indeed, our planet. And third, the forum provides graduate students an opportunity to showcase their research and unleash their talents. We were extremely happy that Dr. Elaine Turner, Dean for CALS, Mr. Jerry Fankhauser, Assistant Director of the Florida Agricultural Experiment Station, and Dr. Gregg Nuessly, EREC Center Director, among others, were present to witness first-hand this occasion. There was a record-breaking attendance of 54 posters at the forum, and the research presented by the students covered a wide range of topics and subject areas pertinent to our communities. Needless to say, the quality of the presentations was of such high standard that the judges feared they would be unable to award only three prizes. This led us to improvise on the spot, whereby we increased the number of prizes, offering two second and three third-place prizes. When it was over, everyone agreed that it was well worth it and requested that we do it again next year. As for me, it was the first time in a long while that I had such a good night's sleep, not because I was tired, the planning committee comprising Drs. Wagner Vendrame, Ashley Smyth and Young Gu Her with assistance

from Carolina Vendrame and Cata Cabrera did all the work, nor was it because I was extremely glad that Mr. Mick Gnaegy, president of the local FNGLA chapter, decided to cover the lunch for everyone (more than 120 people) as well as pay for the additional prizes, but because having read all those posters and listening to the ideas of our future scientists, I know that the future of our planet is in good hands. Go Gators!

---

## *Latest Publications from our Faculty:*

Peer-reviewed papers:

- Gloaguen, RM., Coucha, A., Rowland, DL., Bennett, J., Hochmuth, G., Langham, DR., **Brym, ZT**. 2019. Root life history of non-dehiscent sesame (*Sesamum indicum* L.) cultivars and the relationship with canopy development. *Field Crops Research*. [Link](#)
- Kuhn, Livingstone, Rochards, Monosalva, Van de Berg, **Chambers**. Application of genomic tools to avocado (*Persea americana*) breeding: SNP discovery for genotyping and germplasm characterization. *Scientia Horticulturae*, 246. [Link](#)
- Ji, X., J. Li, Z. Meng, **S. Zhang**, B. Dong, and K. Qiao. 2019. Synergistic effect of combined application of a new fungicide fluopimomide with a biocontrol agent *Bacillus methylotrophicus* TA-1 for management of gray mold in tomato. *Plant Disease* 103(8): [1991-1997](#). [Link](#)
- Poudel, B., O. Abdalla, Q. Liu, Q. Wang, E. McAvoy, D. Seal, K. Ling, M. McGrath, and **S. Zhang**. 2019. Field distribution and disease incidence of tomato chlorotic spot virus, an emerging virus threatening tomato production in South Florida. *Tropical Plant Pathology*. [Link](#).
- Shi, X., K. Qiao, B. Li, and **S. Zhang**. 2019. Integrated management of *Meloidogyne incognita* and *Fusarium oxysporum* in cucumber by combined application of abamectin and fludioxonil. *Crop Protection* 126: 104922. [Link](#)

## *Other Publications :*

**EDIS Publications:**

- EDIS, Martin, CG and **Brym, ZB**. The Value of Tropical Plant Diversity. [Link](#)

- EDIS, **Ballen, F., Evans, E., Crane, J.**, Singh, A. (2019) "Sample Profitability and Cost Estimates of Producing Sweet Flavored Carambola (Averrhoa carambola) in south Florida". [Link](#)

#### UF/IFAS Blogs

- UF/IFAS Researchers Continue Work on Saving Guacamole's Key Ingredient. [Link](#)
- UF/IFAS TREC Plant Diagnostic Clinic: Keeping Florida's Diverse Horticulture Industry Healthy. [Link](#)
- Haitian master's students in spotlight at agricultural research forum. [Link](#)
- UF/IFAS Researchers Honored for Avocado Integrated Pest Management. [Link](#)
- Industrial Hemp growing in Florida for the first time in decades: University of Florida pilot project plants seeds for new Florida crop. [Link](#)

---

### *Featuring TREC:*



**Edible South Florida:**

["One Night in the Tropics"](#)

---



### Washington Post:

"A state long linked to oranges looks to a lucrative future — with hemp".

---

### More on Hemp:

- ECB Publishing, **Will hemp help north Florida?** [Link](#)
- Growing Produce, **What Florida Growers Need to Know About Hemp.** [Link.](#)
- Growing Produce, **Hemp Officially on the Map in Florida.** [Link.](#)
- Crestview News Bulletin, **UF advancing hemp-growing experimental program,** [Link](#)

---

## *Important Information for Our Producers :*

- The first planting season for the UF/IFAS **Industrial Hemp** Pilot Project is wrapping up. For results and information, follow this [Link](#)
- We are now getting close to the end of flower bud emerging in this **pitahaya** production season. Many growers may have noticed that the disease and pest pressure had been accumulating since the start of the season. Based on **Dr. Zhang's** team recent study, Neoscytalidium canker of stem and fruit is the most prevailing disease on pitahaya in the early season. The more canker disease on cladodes (stems) in the early season may lead to a higher incidence of fruit canker, thereby significantly impacting the fruit price. Hence, growers are recommended to take management approaches to minimize the early season disease pressure and prepare for the next season. After harvest, approximately from late October to early November, growers are recommended to plan on major pruning programs to remove diseased and damaged cladodes, clean up and sanitize the groves. This may help to mitigate

the disease pressure, particularly during the vegetative growth of new cladodes in the early season.

---

## Faculty and Staff Awards

- **Dr. Edward "Gilly" Evans** received **The Babe Greer Award** in Recognition of Outstanding Service to the Miami Dade County Nursery Industry [2019-2020](#) from FNGLA Miami-Dade Chapter
  - **Drs. Khan, Seal, and Zhang** received from The Florida State Horticultural Society the **Florida Tomato Research Award** – for contributing work to advance the fresh market tomato industry in Florida.
- 

## Student, Alumni and Staff News

- **Mr. Octavio Menocal Sandoval**, Dr. Carrillo's Ph.D. student, has received the **William C and Bertha M. Cornett Fellowship** for the second year in a row.
- **Ms. Sarah Brewer**, Dr. Chambers' Ph.D. student, has received funding from the **Southern SARE Graduate Student Grant** program for her proposal titled "Sustainable Strategies to Combat the Papaya Ringspot Virus."
- **Ms. Yi Huang**, Dr. Zhang's Ph.D. student, won the **PPGSO/Departmental travel award** to participate in the annual meeting of the American Phytopathological Society (APS) during August 3-7, 2019 in Cleveland, OH.
- **Ms. Damaris Hernandez**, Dr. Wagner Vendrame's MS student earned the third place in the poster competition at the **7th South Florida Graduate Reseach Symposium**, held at TREC
- During this last semester, seven of our student graduated
  - **Lynhe Demesyieux** with Dr. Chambers
  - **Larousse Dorissant** with Dr. Brym



- **Marie Dorval** with Dr. Meru
- **Cassandre Feuille** with Dr. Vendrame
- **Riphine Mainviel** with Dr. Meru
- **Redjino Mompremier** with Dr. Her
- **Matthew Quenaudon** with Dr. Carrillo

## Outreach and Extension Activities

- On June 18th, **State Representative Anika Omphroy**, from Broward County, toured TREC (invited by **Attorney Scheril Murray Power**). We had the opportunity to showcase the research work done by **Dr. Alan Chambers**, with

vanilla and toured TREC's vanilla collection fields. **Dr. Zachary Brym** showed the different Industrial Hemp varieties in the field. **Dr. Geoffrey Meru** spoke about his research in squash-calabaza and the potential of the pumpkin seed oil market. The tour ended with a visit to **Dr. Romina Gazis**, Director of the Plant Diagnostic Clinic. We are grateful for the time **Representative Omphroy** spent at TREC, and she left amazed by the research TREC's scientists are doing.



- **Dr. Shouan Zhang** presented a poster "Preliminary study on exogenous NAD<sup>+</sup>-induced transcriptome changes in vegetable crops by RNA-seq" at the **2019 annual meeting of the American Phytopathological Society** (APS) in Cleveland, OH August 3-7, 2019.



- On August 12th, **Deputy Commissioner of the Florida Department of Agriculture and Consumer Services, Ms. Mary Barzee Flores**, visited TREC to learn about the important research work that is currently underway. **Dr. Evans**, Center Director, provided her with an overview of the economic impact TREC provides to the community and beyond. She also met with **Dr. Zachary Brym**, who answered questions about the Industrial Hemp Pilot Project. In addition, he provided a tour of TREC fields and talked about the many plant varieties TREC has. She also met with **Dr. Geoffrey Meru** who spoke to her about the vegetable breeding program currently underway in his laboratory. **Dr. Alan Chambers** explained his research on vanilla and the potential as a crop for Florida. **Drs. Haimanote Bayabil, Young Gu Her and Yuncong Li** gave a

wide overview of their work regarding sea-level rise issues impacting the community and how they collaborate to finding a viable solution.

- On Sept 17th, The Board of Directors from **Florida Farm Bureau Federation** visited UF/IFAS Tropical Research and Education Center to discuss the potential of Industrial Hemp Pilot Project as a crop for the State of Florida. **Dr. Zachary Brym** provided an overview of the work and proceeded to take them to the field in the TREC tram. The group also visited the Plant Diagnostic Clinic, and **Dr. Romina Gazis** explained how she is assisting the agricultural community in diagnosing pests, diseases and fertilizing issues.
- 
- **Dr. Mustafa Jibrin** (Postdoc at Dr's Zhang lab) presented "So much love in sharing: Recombination and Global Diversification of a Bacterial Plant Pathogen" at the **TREC seminar series** on September 5, 2019.
  - **Dr. Shouan Zhang** was invited to present "Plant diseases and their management" at the **UF/IFAS Extension Sustainable Urban Agriculture Short Course**, Session 4: Best Management Practices in Urban Agriculture: Composting, Nutrient and Disease Management. UF/IFAS Broward County Extension, Davie, FL.
  - **Dr. Brym** received approval from the USDA/NIFA for his Hatch Multistate REEport project titled "**Industrial Hemp Production, Processing, and Marketing in the U.S. (S1084)**".
  - **Dr. Alan Chambers** participated in the July 2019 **American Society for Horticultural Sciences Annual conference**, discussing the "culture, postharvest physiology, and processing of tropical fruits and plants" held in Las Vegas, Nevada
  - TREC hosted another well attended "**Remote Pilot License Training Course**" on Sept 26 organized by **Dr. Bayabil**.
-





**Plans for the Future: Graduate Student Investment**

The University of Florida College of Agriculture and Life Sciences has one of the largest graduate student programs in the country. UF IFAS Tropical Research & Education Center (TREC) faculty are approved by the university for its graduate student research programs. Working with a TREC faculty member ensures the student's research is focused on tropical and subtropical fruit crops, medicinal and tropical vegetables, tropical ornamental crops, agronomic crops and natural resources in the warm subtropics.

Due to the region's humid subtropical climate, TREC is the only state university research and education center in the continental U.S. focusing on a large number of tropical and subtropical crops while situated at the gateway to Latin America and the Caribbean. The research conducted by these students and applied to agricultural producers. Additionally, TREC provides some assistance to students with tuition waivers and stipends to invest their master's living expenses.



Rendering of the proposed TREC proposed dormitory building.

The lack of appropriate housing inhibits TREC's ability to recruit qualified graduate students who are crucial to advancing agricultural research at the center. By offering an increased amount of safe onsite housing, the center's overall research programs is greatly enhanced.

The proposed graduate student dormitory will consist of eight bedrooms, four bathrooms, along with a common kitchen and living area. This new dormitory will provide lodging for an additional eight graduate students. There are no state or federal funds available for this dormitory, thus the reason for private fundraising.

## TREC Dormitory Building Fund

The TREC campaign to build an onsite dormitory at the cost of \$600,000 has been initiated in coordination with our 90th Anniversary. On-site housing will enhance our ability to recruit qualified graduate students who are crucial to advancing our research. **Please consider making a gift** to enhance the future of student life on our campus in Homestead, FL.

Information: [www.uff.ufl.edu/give/trecon19/](http://www.uff.ufl.edu/give/trecon19/)

---

## Upcoming Events



## One Night in the Tropics

This year, TREC marks 90 years of committed work to our community. Our One Night in the Tropics fundraising gala event will be held **October 26th at the Coral Gables Country Club** to celebrate this milestone. Funds raised at the event will go towards TREC's capital campaign for the construction of a modern residence facility to accommodate our growing number of students and visiting researchers.

For sponsorship opportunities and to buy tickets follow:

[www.tinyurl.com/one19](http://www.tinyurl.com/one19)

- 
- On October 16th, IFAS' Upper Administration will be at TREC conducting the three-year unit review:
    - Associate Vice President, **Dr. Jeanna Mastrodicasa**
    - Dean for Research, **Dr. Robert Gilbert**
    - Dean for Extension, **Dr. Nick Place**
    - Dean for Academics, **Dr. Elaine Turner**
  - **Dr. Zack Brym** will participate as a speaker at the Florida Ag Expo (Nov 21st, 2019 Wimauma, FL), Master Gardeners Conference (October 22nd Orlando, FL) and Crop Science Society of America (Nov 11th, 2019, San Antonio, TX).
  - On December 4th, **TREC** will have an open house and BBQ to celebrate its **90th anniversary** with students, faculty, staff, and the community. Stay tuned for details.

- Upcoming Seminars open to the public - TREC - See our calendar for details [Link](#)
    - **“Sex and Crime: A Brief History of Orchids”**. October 10 - Dr. Wagner Vendrame, Professor - TREC -
    - **" First Season of the Hemp Pilot Project's Variety trial at TREC"** November 7 - Dr. William Wadlington, Postdoc - TREC -
    - **"What? Cactus gets sick too? Pitahaya diseases in South Florida"**. November 21st - Dr. Cheng Fang, Postdoc - TREC -
    - **"The Electronic Logging Device Mandate and Possible Implications for Fresh Produce Transportation"**. December 5 - Dr. Tara Wade, Assistant Professor - SFREC
- 

## ***Successful Events:***