



Gulf Coast Research and Education Center ENewsletter for July 9, 2021



The Florida Ag Expo is Back Thursday November 18th

We are thrilled to partner with AgNet Media again this year for our annual Florida Ag Expo. We're in the process of working up an agenda that will certainly garner a lot of interest as it will be featuring discussions and guests working on AI Technology. The vendor show will be in full force along with field tours and more. Watch for registration details in the near future.

Vendors can visit <a href="https://floridaagexpo.net/exhibit/">https://floridaagexpo.net/exhibit/</a>. See you in November!

# UF/IFAS appoints visionary leader as director of Fort Lauderdale Research and Education Center by Lourdes Mederos



DAVIE, Fla. – Jack Rechcigl has been appointed center director of the <u>University</u> of Florida's Fort Lauderdale Research and Education Center (UF/IFAS FLREC), one of 12 research and education centers at the Institute of Food and Agriculture Sciences located around the state. This position is in addition to Rechcigl's existing job as director of the <u>Gulf Coast Research and Education Center (GCREC)</u>. His permanent appointment at FLREC is effective July 8, just 13 months after stepping in to oversee the operations and research at the Fort Lauderdale Center as interim director of the facility that had been led by retiring center director Robin Giblin-Davis.

"I am excited to be the new director and look forward to working with the amazing faculty and staff and continue to make this a world-renown research center focusing on urban issues" said Rechcigl. "I hope to inspire new ideas, partnerships with industry and stakeholders and collaboration among our UF/IFAS faculty and units.

Areas of research at FLREC include sustainable management for tropical and subtropical landscape systems. Scientists also aim to reduce the impact of invasive animals and plants on natural and highly urbanized habitats. Other areas of research include termite identification and distribution, wildlife ecology and conservation, palm production and maintenance, environmental horticulture, aquatic plant management, turfgrass science and sea-level resilience in South Florida.

"What distinguishes Dr. Rechcigl as a scientific leader is how hard he works to determine what science is most relevant to the people he serves." said Scott Angle, UF vice president of agriculture and natural

resources. "He sees community members as partners. I expect he will increase opportunities for stakeholders to contribute to a vision for FLREC's future."

Among Rechcigl's accomplishments over the last year at FLREC, he has secured funding for the last year at FLREC, he has secured funding for major renovations of the center's exterior, has hired new faculty focusing on palms horticulture in the fight against palm diseases, and is currently in process of hiring additional faculty to tackle invasive species and nematology issues. Rechcigl, who describes himself as open-minded and optimistic, has a vision and mission for his next steps at FLREC.

"I plan to establish an advisory committee for the center composed of stakeholders and local government officials. The purpose of this committee is to provide input and assist the center in developing short- and long-term goals to meet the on-going needs of the Florida agricultural industry," said Rechcigl. "With input from the new advisory committee as well as the faculty and staff of the center, I will develop a strategic plan to determine the future direction of the center."

As an internationally recognized professor in the soil and water sciences department at UF/IFAS for the past 34 years, Rechcigl served as the lead architect of the programs and is already the center director of GCREC in Balm, Florida. The state-of-the-art GCREC operates from two sites. The 475-acre main facility in Balm, located in southern Hillsborough County, hosts most of the center's research activities, including laboratories, field and greenhouse studies, a diagnostic lab, faculty offices and graduate student housing. The other site is home to the GCREC teaching program



(UF/IFAS CALS), based at Hillsborough Community College's Plant City campus. He oversees 200 employees at the Hillsborough County facilities. They include faculty, biological scientists, staff, undergraduate and graduate students and international interns. Historically, GCREC has been recognized as a premier research site with efforts since the mid-1920s in tomatoes, strawberries, vegetables, ornamentals and landscape crops.

For 21 years, Rechcigl has led the charge with faculty members in making substantial contributions for the continued production and health of these industries, as well as exploring new opportunities and alternative crops for the region that include pomegranate, blackberry, industrial hemp and hops. Rechcigl has established the highly successful Florida Agricultural Expo, which is attended by 1,000 farmers, politicians, government and university officials from around the country each year.

Research at GREC has also been focused on improving sustainability through the development of precision agricultural technology. Some examples include tractor software that can distinguish crops like tomatoes and strawberries from weeds for precise herbicide application and the use of ultraviolet light to treat and prevent Powdery mildew (*Sphaerotheca macularis*) on strawberries. Before joining the GCREC in February 2000 (then housed in Bradenton and Dover), Rechcigl was stationed at the UF/IFAS Range Cattle Research and Education Center at Ona. At the Ona center, he conducted research on the fertilizer requirements of pasture grasses and the effects of fertilizer on surface and ground water quality. This work led to the revision of fertility recommendations and the development of BMP's for pasture management, resulting in both economic and environmental benefits.

Rechcigl received his bachelor's degree in plant and soil science from the University of Delaware in 1982. He completed his master's and doctoral degrees in soil, crops and environmental sciences at Virginia Polytechnic Institute and State University in 1983 and 1986, respectively. He joined the UF/IFAS faculty in 1986 as assistant professor, in 1991 was promoted to associate professor, and in 1996 attained full professorship. In 1999, he was named University of Florida Research Foundation Professor. He is a Fellow of the American Society of Agronomy (1998) and Fellow of the Soil Science Society of America (1999). Rechcigl has

authored over 300 publications and is recognized nationally for his work in the fields of soil fertility, environmental quality, and water pollution. His research has been supported by research grants totaling over \$3 million from both private sources and government agencies. He is currently editor-in- chief of the *Agriculture and Environment Book Series*, as well as having served as associate editor of the *Journal of Environmental Quality*. Rechcigl has been the recipient of numerous awards, including the Sigma Xi Research Award, University of Florida Research Honor Award, University of Florida Research Achievement Award, University of Delaware presidential Citation for Outstanding Achievement Award. Fellow of the Czechoslovak Society of Arts and Sciences and the recipient of Honorary Professorship from the Czech Agricultural University in Prague.

### **GCPSA** to Resume Seminar Series in August

The Gulf Coast PostDoc and Student Association is excited to resume the in-person and online seminar presentations. The seminars take place biweekly starting in early August through the fall. Each presenter may take an estimate of 30 minutes. Presenters from all academic fields, industry, and beyond are welcome to present.

REMEMBER...The Best Way to be Heard in Science is by getting your Research to be Heard.

Email: <u>ifas-gcrec-gcpsa@ifas.ufl.edu</u> if you're interested in securing a slot to present your research.

### **GCPSA** Announces Winners of Virtual Contest

Please to present news from Student/PostDoc Association, GCPSA, in regards to the GCREC Virtual Poster/Presentation Student Competition. Thanks to all the judges for their support and commitment in evaluating the material of the students. We also thank all the students that participated in the competition for their great work.

Information on the grading process: The evaluation was carried out by selected internal and external Professors, post-docs as well as extension agents. Each student material was evaluated by 5 judges who were randomly selected, and the average score was calculated for each student.

### Congratulations to the Winners



Poster Presentation

1st Place: [\$250] Joseph Dean Montemayor

Faculty Advisor: Dr. Sriyanka Lahiri

Research focus: I am studying ultraviolet C (UVC) radiation and how it can be used as an integrated pest management strategy. Currently, I am investigating the effects of UVC on arthropod pests of strawberry and predatory mites used for biological control.



2nd Place: [\$150] Carolina Suguinoshita Rebello

Faculty Advisor: Dr. Natalia Peres

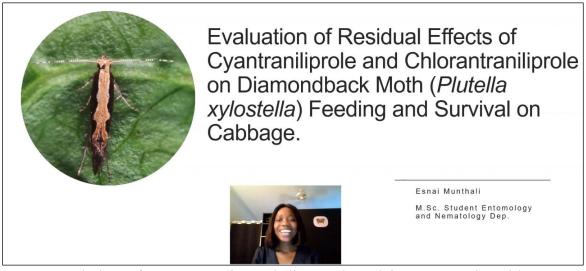
*Research focus:* Searching for fungicide alternatives for control of strawberry Anthracnose fruit rot and Pestalotia fruit rot, caused by Colletotrichum acutatum and Neopestalotiopsis spp. Developing molecular diagnostic technique for identification and differentiation of Neopestalotiopsis spp.

*Undergraduate category* 

Winner: [\$200] Rebeca McGuin with Dr. Natalia Peres' lab.



Graduate category: 5-Minute Oral Presentation
1st Place: [\$250] William Cas Willborn – Faculty Advisor: Dr. Seonghee Lee



2nd Place: [\$150] Esnai Munthali - Faculty Advisor: Dr. Hugh Smith

Thank you to the judges: Lisa Hickey, Manatee Co. Ext. Agent; Jessica Chitwood-Brown, GCREC PostDoc Hutton Lab; Fahiem El-Borai Kora, GCREC Research Assistant Scientist; Sriyanka Lahiri, GCREC Asst. Professor; Mary Lusk, GCREC Asst. Professor; Hung Xuan Bui, GCREC PostDoc Desaeger Lab; Jonathan O'Hearn, GCREC PostDoc Lahiri Lab; Michelle Oliveira, Former GCREC PhD Student Peres Lab; Sujeet Verma, GCREC Bio Scientist II Whitaker Lab; Bruno Rossitto De March, GCREC PostDoc Smith Lab; Joseph Carrillo, GCREC PostDoc Vallad Lab; Nan-Yi Wang, GCREC Research Assistant Scientist.

# MEWS

## GCREC in the News

UF/IFAS engaged in breeding and growing pomegranates in Florida

- https://www.freshplaza.com/article/9334333/uf-ifasstill-engaged-in-breeding-and-growing-pomegranates-inflorida/
- https://fruitgrowersnews.com/news/uf-ifas-plowsforward-to-breed-and-grow-a-superfood-thepomegranate/

Superfood success: UF researcher studying pomegranates' future in Florida

- https://vscnews.com/florida-pomegranates-researchfuture/
- https://www.tampafp.com/uf-ifas-plows-forward-tobreed-and-grow-a-superfood-the-pomegranate/
- https://www.morningagclips.com/uf-ifas-plows-forwardto-breed-and-grow-a-superfood-the-pomegranate/

Gator Pale Ale becomes first beer brewed using hops grown only in Florida

- https://www.fox13news.com/news/gator-pale-ale-madewith-lakeland-grown-hops
- https://www.abcactionnews.com/news/regionhillsborough/uf-scientists-brewing-up-a-new-crop-forflorida-famers



Assistance Helps Farmers and Ranchers Conserve Natural Resources - Application for financial assistant is Sept. 1.

GAINESVILLE, Fla., June 21, 2021 — Florida farmers, ranchers, and forest owners can apply until Sept. 1 for financial and technical assistance from USDA's Natural Resources Conservation Service (NRCS) Environmental Quality Incentives Program (EQIP) for the fiscal year 2022 funding. Although applications are accepted on a continuous basis for all programs, funding selections are typically made once a year. Through EOIP, agricultural landowners may receive financial and technical assistance to improve soil, water, air, plants, animals, and related resources. Eligible land includes cropland, rangeland, pastureland, private non-industrial forestland, and other farm or ranch lands. The application deadline also applies to the following EQIP-funded initiatives: Organic, On-farm, Energy, Longleaf Pine, Working Lands for Wildlife, Strikeforce. Applications will be evaluated for funding based on local, state, and nationally developed criteria to optimize environmental benefits. Applications ranking highest in a funding category will be funded according to

District Conservationist Israel Vega-Marrero israel.vega-marrero@usda.gov

priority and is subject to the availability of program funds. Visit your local NRCS field office to learn more or contact our

## Our Beautiful Landscape



Our Farm Manger, Jose Moreno, got a lot of grief when he proposed we plant perennial peanut to enhance our landscape. But who has the last laugh now?

The perennial peanut evolved in tropical conditions and is adapted to subtropical and warm

temperate climates. In the northern hemisphere, this would include locations below 32 degrees north latitude (Florida-Georgia state line) having a long, warm growing season. Perennial peanut was first introduced from Brazil in 1936 and since that time no insect, disease, or nematode pests have been identified that cause economic loss. Since its introduction, it has not spread into natural areas or become a nuisance plant in unimproved properties. Rhizomal perennial peanut does not reproduce by seed; therefore, it can't be carried by birds or wildlife or transported in plant material to unintended areas. Perennial peanut has recently shown promise as an ornamental groundcover due to its high resistance to drought, nematodes, and pathogens and its minimal fertilizer needs. This translates into savings in water, energy, dollars, and reduced impacts to the environment. It is not only beneficial to the environment since it requires no supplemental nitrogen or phosphorus fertilization or pest control, but it also is aesthetically pleasing, can be walked on, and has edible, peanut-flavoured flowers.





# Manatee County Extension Service is seeking a Commercial Horticulture Agent.

The position is open for applications and closes July 20. Please share with anyone you know who may be interested.

https://hr.ifas.ufl.edu/careers/county-extension-faculty/



Virtual Training:
Core, Private, and
Ag Row Crop
Pesticide Exam
Prep / CEU
opportunities!

General Standards / Core Pesticide Applicator Exam Prep (or CEUs) Thursday, July 15th, 9 am - 11:30 am \$30 registration fee

Private and Ag Row Crop Pesticide Applicator Exam Prep (or CEUs) Thursday, July 15th, 1 pm - 3:30 pm \$30 registration fee

CEUs available:

General Standards / Core -

2 Core CEUs for each Chapter 482 and Chapter 487 Private and Ag Row -

2 each of Private, Ag Row Crop, Demo & Research, Ag Tree Crop, Forest, O&T, and 1 CORE (chapter 482 & 487) 3 maximum.

General Standards / Core Registration
Private and Ag Row Registration

## GCREC Interviewing Candidates for Artificial Intelligence Faculty Positions

Faculty and staff have already met two of the five candidates that will fill two positions at GCREC in the very near future. We're so excite to have been presented this is opportunity to advance our research into the future!

Assistant Professor: Phenomics for Plant Breeding Applications: The successful candidate will develop a nationally and internationally recognized, externally funded research program focused on phenomics applications in plant breeding using Al. The acquisition of images and other data from sensors is becoming commonplace in precision agriculture, and the use of such data in plant breeding is accelerating. The main challenge is no longer acquiring data but extracting useful information from this data in an automated fashion and making it available and useful to breeders. Therefore, maximize the potential of sensor-based phenotyping in plant genetic improvement, the extraction and analysis of information from images and other sensor networks must be custom-designed for each crop and context. The use of artificial intelligence (Al) modeling will be integral to this process.

Assistant/Associate Professor: Precision Agriculture in Specialty Crops: The faculty member in this position will develop a successful and nationally recognized research and extension program focused on: Al-based precision agricultural technology, Al-based mechanical harvesting technology for strawberry, fresh-market vegetables and other specialty crops, and/or Al-based machine vision for mechanical harvesting, automated scouting, and/or precision application of agrochemical inputs. Integration of Al with geographic information systems and remote sensing. The extension component will include development of a successful educational program to facilitate commercial adoption and evaluation of state-of-the-art mechanical harvesting and/or other precision agriculture technology with the goal of improving the profitability and environmental sustainability of Florida's fruit and vegetable industry.

# 96 Years of Serviceto Florida Growers



University of Florida/IFAS

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Like us on Facebook and check out our YouTube Channel

Give Back - Want to support Gulf Coast Research and Education Center? Consider making an online gift today! Questions can be directed to Cody Helmer at (352) 392-1975 or chelmer@ufl.edu.

### Hops Update - Dr. Shinsuke Agehara's Lab

Spring hops harvest is finished! The remaining stems were pruned back to the ground level immediately after the harvest, and new shoots are emerging rapidly now. The fall season already started!





### **GCREC Publications:**

Acosta-Rangel, A., J. Rechcigl, S. Bollin, Z. Deng, and S. Agehara.
 2021. Hop (Humulus lupulus L.) phenology, growth, and yield under subtropical climatic conditions: Effects of cultivars and crop management. Aust. J. Crop Sci. 15:764-772. doi: 10.21475/ajcs.21.15.05.p3192

### **Facebook Updates:**

Horticultural Crop Physiology Lab updates <a href="https://www.facebook.com/UFHortLab">https://www.facebook.com/UFHortLab</a> <a href="https://www.facebook.com/UFHops">https://www.facebook.com/UFHops</a>

#### YouTube Videos:

Monthly Hopyard Tour (2021-07-02), https://youtu.be/TBlz9D5aZAM