



*Diversity in research programs to meet the needs of the diverse agriculture in North Florida*

**UF | IFAS**  
UNIVERSITY of FLORIDA

North Florida Research and Education Center  
Quincy, Marianna and Live Oak

**99<sup>th</sup>** UF/IFAS  
NORTH FLORIDA  
RESEARCH &  
EDUCATION  
CENTER  
**Anniversary**  
1921-2020



*The Systems Research Center*

<https://nfrec.ifas.ufl.edu/>



### *From the Director's Desk*

The pandemic still has our extension activities curtailed and many of our staff employees are working remotely, but we still have been able to keep our research activities moving forward. We have developed a protocol to hold our annual Bull Sale at NFREC-Marianna on January 16th. The proposed protocol will follow CDC guidelines to maintain social distancing among attendees, but the in-person event remains tentative, particularly as we enter a surge of COVID-19. Bulls can also be purchased via video sales. Final details of the event will be announced on the NFREC webpage (<https://nfrec.ifas.ufl.edu/>).

I am pleased to inform you that NFREC has hired Ms. Penny Malone as our new Business Manager. She comes to us from Florida A&M University where she was the Senior Administrative Assistant to the Director of International Agriculture Programs, and prior to that she was the Office Manager for the College of Social Sciences, Art and Humanities. She is a welcomed addition to our NFREC staff.

#### UF/IFAS North Florida Research and Education Center

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It is with great sadness that I announce that NFREC-Quincy Farm Manager, Tom Bolton, passed away unexpectedly on November 5th. Tom was a long-time employee who had gained the respect and admiration of all employees and performed his job with great pride and hard work in getting our field research accomplished. Tom not only trained his employees, but he also served as a mentor to many of them. He also touched the lives of people in the community when he was an educator and coach at the Tallavana Christian School before becoming an NFREC employee. NFREC employees are proud to have co-hosted with the Bolton Family an outdoor service on November 15th at the Center to celebrate Tom's life.



We wish everybody to have a safe and happy holiday during these challenging times.

### *Updates for some of our individual research and extension programs*

## PLANT PATHOLOGY

The NFREC Plant Diagnostic Clinic is now open Monday through Friday from 8:00 am to 12:00 pm. The NFREC front gate is open during this time, but the May Building where the clinic is located remains closed to visitors. A cooler is placed next to the front gate.

Please call (875-850-7140) or e-mail ([fbiriarte@ufl.edu](mailto:fbiriarte@ufl.edu)) before submitting the sample. We prefer you send the sample by mail (FedEx, UPS and USPS deliver Monday – Friday at NFREC).

- Do not drop samples outside of hours of operation as your sample will deteriorate or get lost.
- Turnaround time might be longer than usual in some cases but no longer than 6-8 days. We appreciate your patience and understanding.
- Diagnostic results that require sequencing will not be available at this time.



*For additional information, contact Dr. Mathews Paret, Associate Professor of Plant Pathology at [paret@ufl.edu](mailto:paret@ufl.edu) or Dr. Fanny Iriarte, Plant Disease Diagnostician at [fbiriarte@ufl.edu](mailto:fbiriarte@ufl.edu).*

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## ANIMAL SCIENCE

*Use of basic and applied research to improve reproductive performance of the cow herd*

Dr. Angela Gonella is currently involved in several projects that combine applied and basic research. Her basic research is focused on discovering molecular markers to select animals with high reproductive efficiency and increased feed efficiency. These studies will allow the industry to choose the best and more profitable animals for the industry by using only information coming from blood samples. Her applied research program is to develop effective estrus synchronization programs to improve reproductive efficiency of Florida cow herds. Her research aims are to increase the proportion of pregnant cows and heifers in the first 30 days of the breeding season.



## HORTICULTURE

*NFREC Key Partner in New UF On-line Greenhouse Vegetable Certificate Course*

In 2020, Robert Hochmuth, NFREC Regional Extension Agent teamed with Dr. Paul Fisher, Professor in the Environmental Horticulture Department, to initiate a new UF/IFAS On-line greenhouse course ([greenhousetraining@ifas.ufl.edu](mailto:greenhousetraining@ifas.ufl.edu)). Team members included Dr. Tatiana Sanchez, Alachua County Extension; Wanda Laughlin and Kevin Athearn, NFREC; Celina Gomez, Environmental Horticulture; and Dan Fenneman, Madison County Extension. The lessons were bilingual, with Tatiana Sanchez taking the lead in Spanish language classes along with Dilcia Toro (NFREC), Pili Kinslow, Celina Gomez, and Paul Fisher (all in Environmental Horticulture Dept). The course has two lessons developed and taught by Cornell University colleagues Neil Mattson and Jonathan Allred. *(continued)*

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This team developed a plan for building and offering this new UF On-line greenhouse vegetable course for a registration fee of \$199 to be added to Dr. Fisher’s already, very successful series. Filming was initiated in February and March to use the crops set up at NFREC-SV for face-to-face trainings planned for early 2020. All planned videos were captured just as UF closed facilities to visitors in late March. All trainings planned for March and thereafter were cancelled, even though the greenhouse crops were in full swing. If it had not been for the videotaping done for the on-line course, all efforts in the greenhouses would have been lost. The on-line course launched in November 2020 with 182 students, and ~25% of those students are from outside the US. Of the 182 students, there are at least 20 County Extension Agents from Florida, Georgia and North Carolina. This is an interactive course with eight lessons over a four-week period, and every student is required to provide at least one question to the instructor team. The certificate for this class is earned by meeting all participation requirements, including passing both a mid-term and final exam.

## ENVIRONMENTAL HORTICULTURE

### *Gardens of the Big Bend: New Irrigation Installed in the Palm Garden*

A permanent in-ground irrigation system was installed in the one-acre Palm Garden located at UF/IFAS NFREC-Quincy. The Palm Garden is part of Gardens of the Big Bend (GBB), a botanic garden developed and maintained by NFREC and the nonprofit volunteer group, Gardening Friends of the Big Bend, Inc. (GFBB). GBB’s nine individually themed gardens and two nationally accredited plant collections are open year-round for the public to view and explore. Irrigation for the Palm Garden was funded in part by a generous grant from the Stanley Smith Horticultural Trust and additional funds were provided by GFBB.



The permanent irrigation system features pop-up rotary heads grouped into three zones based on plant type and irrigation requirements. One zone irrigates the turfgrass lawn in the middle of the garden; a second zone irrigates palms, and a third zone waters an evergreen tree and shrub border that screens the view of Pat Thomas Highway from the Palm Garden. A master timeclock allows us to tailor irrigation as needed to each zone.

The permanent irrigation system will increase plant survival and promote growth of the collection of more than 60 palms and palm-like plants representing 37 species or varieties. The Palm Garden displays cold hardy palms and serves to teach and inspire visitors about palms and how they can be used to lend a tropical appearance to north Florida gardens. Evergreen trees and shrubs and a collection of beautyberry species (*Callicarpa* spp.) are also included in this garden.

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Southern gardens are unique in that the gardening traditions of half a dozen countries and groups of people are reflected in the decorative elements used, gardening techniques and the placement of plantings and open spaces. Native American, Spanish, African American, French, German and English peoples have all made contributions to the southern garden. Southern heritage gardens showcase and preserve these gardening traditions while also highlighting culturally-important plants. Heritage gardens are essentially living exhibits, educating garden visitors about the horticultural history of an area and connecting them to their heritage. We are happy to announce that a formally-named North Florida heritage garden, the Robert and Elaine Woodward Heritage Garden, is set to break ground in 2021 at the UF/IFAS North Florida Research and Education Center in Quincy, Florida. This new garden will join a handful of other heritage gardens in the southern United States, including the Delta Heritage Garden of the Memphis Botanic Garden in Tennessee and the Column Courtyard and Southern Heritage Garden of the Huntsville Botanical Garden in Alabama.

The Robert and Elaine Woodward Heritage Garden will be the newest addition to the Gardens of the Big Bend (GGB). The GGB is a botanic garden located at the UF/IFAS North Florida Research and Education Center in Quincy, FL. The new North Florida heritage garden will honor the region’s horticultural heritage over the past 300 years, highlighting cherished plants, garden artifacts, and design elements unique to gardens found in the area. The Robert and Elaine Woodward Heritage garden will move from its planning stages into the construction phase by early 2021.

In association with this new garden, we are pleased to announce a fundraising drive in support of the GGB and the Robert and Elaine Woodward Heritage Garden. Gardening Friends of the Big Bend is now accepting orders for commemorative engraved bricks, which will be placed as a prominent feature of the Robert and Elaine Woodward Heritage Garden. The engraved bricks can be used to honor friends and family or simply express support for GGB and this garden. More information on ordering an engraved brick can be found at the end of this page. We will keep brick orders open at least through the end of January 2021 and then move forward with the engraving process. In the meantime, we hope to be able to open our gates to you as soon as safely possible so that you can visit the Gardens of the Big Bend and keep up with the development of the Robert and Elaine Woodward Heritage Garden. We are thankful for all our volunteers, fellow gardeners and garden supporters and will continue to keep in touch as things change and develop.

\*\* Each commemorative engraved brick costs \$100 and includes a 4x8-inch finished brick with up to three lines of customizable text, 18 characters per line including spaces and punctuation. Please visit our Square website to order a brick using a credit card and we will contact you shortly to gather information about your brick text. Another option is to mail a check for \$100 to “Gardening Friends of the Big Bend 155 Research Rd. Quincy, FL 32351” with your desired brick text included in the envelope.

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## *Awards and Honors*

- **Dr. Gary Knox (NFREC-Quincy)** was selected by the International Plant Propagators' Society to be their 2020 recipient of the Meadows Award. The award is in recognition of his outstanding contributions to the nursery industry and to plant propagation in the Southern Region of North America. It is the highest honor given by the Society.
- The UF International Center selected **Dr. Angela Gonella (NFREC-Marianna)** as a 2020/2021 Global Fellow. As part of this award, she will receive financial support for her program and will participate in a mentorship program and international leadership training.
- UF/IFAS selected **Dr. Jose Dubeux (NFREC-Marianna)** as their recipient of the 2020 International Fellow Award because of his career-long commitment to international research and collaboration. His research focus is developing sustainable livestock production systems, particularly nutrient cycling in forage production systems.
- UF/IFAS selected **Dr. Jose Dubeux (NFREC-Marianna)** for their 2020 High-Impact Research Publication Award for his co-authorship of the publication, "Grassland Management Affects Delivery of Regulating and Supporting Ecosystem Services."



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## *Announcements and Updates*

- ✓ The site is being prepared for the new greenhouse being constructed at NFREC-Quincy. The project should be completed in a few months.



- ✓ Construction of the conference pavilion at NFREC-Suwanee Valley is underway.



## *Events*

- Our NFREC-Marianna Bull Sale will be on January 16th. Details for meeting CDC requirements during the pandemic are in the process of being developed and will be announced shortly on the webpage (<https://nfrec.ifas.ufl.edu/>).
- Celebration of the 100-yr anniversary of the NFREC will be held at NFREC-Quincy on April 16th. Details will be announced at a future date.

I look forward to delivering future e-newsletters.

***Glen Aiken***  
***Center Director***

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