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For Covid19 Update from UF and IFAS please visit these links:

http://www.ufl.edu/health-updates/

https://ifas.ufl.edu/covid19-information-updates/

As of today, November 6, 2020 GCREC remains closed to the public. Our research continues with a limited number of essential staff, and we are so grateful for their continued dedication. For information contact Christine Cooley ccooley@ufl.edu. Administrative staff is on site every day, so please call if you need assistance 813-419-6670.

20-Questions Faculty Profile

Meet Dr. Mary Lusk, Assistant Professor Soil and Water Science

This is a new feature for our ENewsletter to provide readers some insight both academically and personally on our amazing faculty. So let's get started – here are Dr. Mary Lusk's answers to our 20-Questions request.

Where were you born and what led you to Florida? *Charlotte, NC—came to Florida when my husband was hired as a professor at USF in Tampa.*

When did you first feel inspired to work in a science field? *After watching and noticing cool plants and animals around me and wanting to learn more about them.*

What was your first paying job? *Radio DJ for WAYN in Rockingham NC—we aired beach music and NASCAR!*

What's your perfect pizza? *Cheese, pepperoni, sausage, and hot pepper flakes (lots of hot pepper flakes).*

When you were a kid, what did you want to be when you grew up? *Detective.*

When you're not working on your research, what do you enjoy doing? *Hiking, watching British crime drama TV (more than I should.)*

What's your go-to breakfast food? *Granola and yogurt.*

Mountains or beach? *Mountains, preferably in NC or Utah.*

What are you most proud of? *My 3 boys and how they are friends to each other as well as brothers.*

A hobby we might not know about? *I'm an iNaturalist addict. I'm also into genealogy, which is tracing and studying your family tree. I have some lines I've gotten back to the 1400s or further.*

If you could back five years in your life, what advice would you give yourself? *Only try to do half of what you try to do now.*

What is your main research focus right now? *How urban landscape practices affect water quality.*

What is the best part about working at GCREC? *Collegiality and sincere team feeling.*

What do you believe is the greatest challenge facing Florida agriculture today? *Water supply and water quality, of course.*

How do you deal with negative emotions or stress? *Bottle it in until I explode. Go for a long walk and get out in nature until I feel happy again.*

PC or Mac? *PC*

What would you name the autobiography of your life? *"Get rid of it"—a nod to how I HATE clutter.*

What is the most significant development you see coming out of your research area in the coming years? *New knowledge on better ways to reuse wastewater and ways to use reclaimed water to build water security for Florida.*

If you could give just one piece of advice to GCREC students, what would it be? *Keep balance in your lives—make time for work, study, play, family, God, yourself. . . . .*

What is something you learned in the last week? *Been reading a biography of Alexander Hamilton—I learned that he loved to sit for long hours and study math equations.*

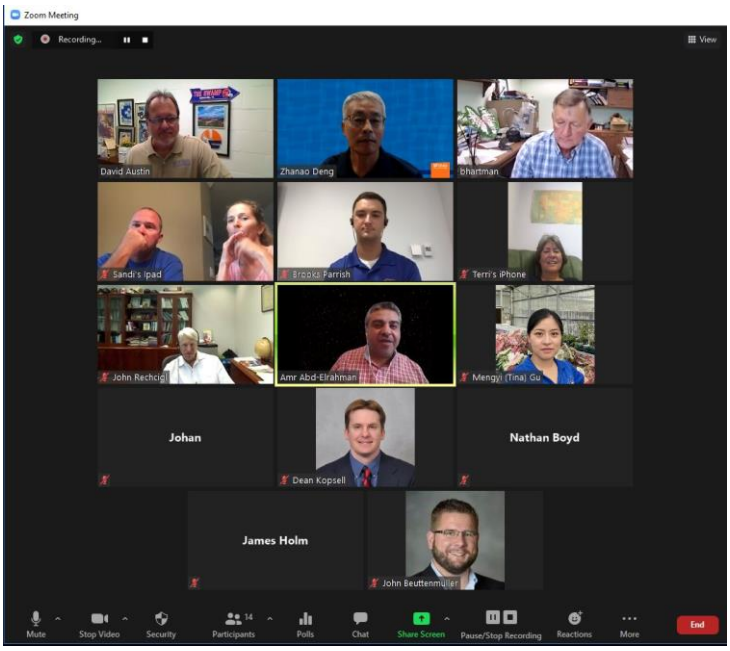
Here's more on Dr. Lusk's Research:

Current EDIS Publication: Septic Systems and Springs Water Quality: An Overview for Florida: https://edis.ifas.ufl.edu/pdffiles/SS/SS69300.pdf

New project funded by the UF Water Institute. The "Beneficial REuse of Wastewater (BREW): Overcoming Barriers and Identifying Opportunities " grant provides funding for 5 PhD students to work on interdisciplinary research to identify ways to increase water supply in Florida by reusing treating wastewater—for applications such as urban and agricultural irrigation and even drinking water.

2020 UF/IFAS Caladium Research Forum

The 2020 UF/IFAS Caladium Research Forum was held virtually on October 29, from 9:00 am to 12:15 pm. This forum was jointly organized by Dr. Zhanao Deng and Mr. David Austin (UF/IFAS Highland County Extension Services) for UF/IFAS research and extension faculty, staff and students to present their latest research results, discoveries and new cultivar releases to the Florida caladium industry that produces and supplies all the caladium tubers used across the U.S. and in the world. Dr. Jack Rechcigl (Center Director, GCREC) and Dr. Dean Kopsell (Department Chair, Environmental Horticulture Dept) welcomed the Florida caladium growers to this Forum, made opening remarks, and sent good wishes to the growers on behalf of UF/IFAS.

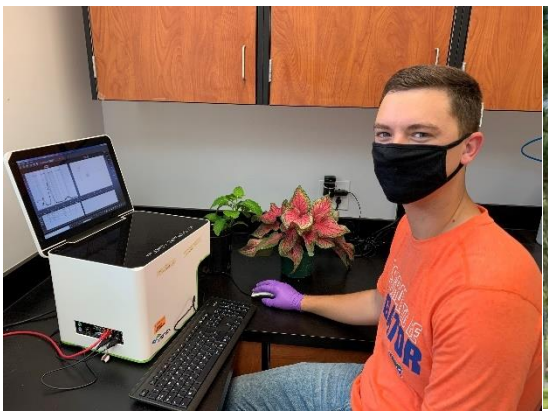


The half-day program was packed with very valuable information and new research findings from multiple research teams in UF/IFAS. Dr. Nathan Boyd reported his latest research results from herbicide trials

and made recommendations for managing tough weeds in caladium fields. Dr. Mengyi Gu and Dr. Johan Desaeger gave a broad introduction of nematodes that infect plants and presented their new findings from screening caladium cultivars and breeding lines for resistance to root-knot nematodes. On behalf of Dr. Natalia Peres, Ms. Teresa Seijo reported their latest results from screening several dozens of caladium cultivars and breeding lines for resistance to Fusarium

tuber rot and Pythium root rot and the identification of disease-resistant cultivars for the caladium industry. Dr. Zhanao Deng reported the releasing of five new caladium cultivars in response to growers' requests in 2020 and these new cultivars' crop yield potential and performance in research and growers' fields. Mr. Brooks Parrish (graduate student, Environmental Horticulture Department and Gulf Coast REC) presented his recent findings on chromosome number variation in caladium cultivars and breeding lines and effort to develop new types of caladiums (tetraploids and triploids). Dr. Amr Abd-Elrahman introduced remote sensing techniques and exciting applications of digital imagery and artificial intelligence for simulating plant growth. Growers enjoyed these talks and indicated that there were "lots of good information". A quote from one grower: "Makes me wish I was 20 again and could go back into research."

GCREC Grad Student, Brooks Parrish Wins Virtual Student Research Competition



Brooks Parrish, graduate student with Dr. Zhanao Deng's lab, won the Charlie Parkerson Virtual Student Research Competition. This news was announced at the International Plant Propagators' Society North American Summit last week (http://sna.ipps.org/). Brooks received his BS degree from Environmental Horticulture Department in December 2019 and began his graduate study

with that department Spring 2020. His presentation to the IPPS Southern Region of North America Charlie Parkerson Virtual Student Research Competition was "Morphological and cytological characterization of six porterweed (Stachytarpheta) selections." Great job Brooks!!

GCREC is in search of new farm crew members - a Teams position and several OPS positions to work with the farm crew. The ads can be found in UF Careers at:

Agricultural Assistant II: https://explore.jobs.ufl.edu/en-us/job/514980/agricultural-assistant-ii
OPS Farm Tech Operations: https://explore.jobs.ufl.edu/en-us/job/514925/ops-farm-operations-tech
Agricultural Assistant II 60752000 - AG-GCREC-FIELD OPERATIONS Hillsborough Closes: 12 Nov 2020 This position is in Hillsborough County and reports to the Farm Manager for farm operations at the UF Gulf Coast Research and Education Center in Wimauma, Florida. Responsibilities include assisting in the general agriculture production of research crops; operation of farm equipment used in the production, maintenance and harvesting of research crops; maintenance of any type of irrigation system; must obtain and maintain pesticide applicator license within six months of hire; must have an active FL driver's license; this position is 100% outside and the candidate must be able to work in all weather conditions.

OPS Farm Operations Tech 60752000 - AG-GCREC-FIELD OPERATIONS Hillsborough Closes: 6 Nov 2020 Responsibilities include assisting with general agriculture production of research crops, maintenance and harvesting of research crops, maintenance of the irrigation system, and field clean up. This position is a 100% outside position assisting with our farm and field.

Questions? Call 813-419-6670

GCREC in the News

University of Florida scientists make big stride toward greening-resistant citrus trees
https://www.freshplaza.com/article/9259055/university-of-florida-scientists-make-big-stride-toward-greening-resistant-citrus-trees/?edition=1

Sam Hutton, Associate Professor, Tomato Breeding
https://www.baynews9.com/fl/tampa/news/2020/10/27/hillsborough-grower---just-how-sweet-can-a-tomato-be--

GCREC Publications:

Upcoming EDIS pubs
Understanding Extension for School-Based Agricultural Education #3: FFA and 4-H—A Comparison AEC708
Debra Barry, Alyssa Shepherd, Jennifer Patton, and Stephen Gran

Understanding Extension for School-Based Agricultural Education #1: Extension 101 AEC709
Debra Barry, John Diaz, Alyssa Shepherd, Jennifer Patton, and Stephen Gran

Abrahamian, P., A. Sharma, J.B. Jones, and G.E. Vallad. 2020. Dynamics and spread of bacterial spot epidemics in tomato transplants grown for field production. Plant Disease. https://doi.org/10.1094/PDIS-05-20-0945-RE (in press)

Klein-Gordon, J., Y. Xing, K.A. Garrett, P. Abrahamian, M.L. Paret, G.V. Minsavage, A.L. Strayer-Scherer, J. Fulton, S. Timilsina, J.B. Jones, E.M. Goss, and G.E. Vallad. 2020. Assessing changes and associations in the Xanthomonas perforans population across Florida commercial tomato fields via a state-wide survey. Phytoplathology. https://doi.org/10.1094/PHYTO-09-20-0402-R (in press)

Klein, J.M., V.O. Stockwell, G.V. Minsavage, G.E. Vallad, E.M. Goss, and J.B. Jones. 2020. Improved deferred antagonism techniques for detecting antibiosis. Letters in Applied Microbiology 71:330-336.

Xavier, K.V. and G.E. Vallad. 2020. Efficacy of Biological and Conventional Fungicide Programs for Foliar Disease Management on Pomegranate (Punica granatum) in Florida. Plant Health Progress 21:199-204; https://doi.org/10.1094/PHP-02-20-0012-RS.

Xavier, K.V., A.N. KC, and G.E. Vallad. 2020. Fungicide application timing essential for the management of leaf spot and fruit rot on pomegranate (Punica granatum L.) in Florida. Plant Disease 104:1629-1637.

Xavier, K.V., X. Yu, and G.E. Vallad. 2020. First report of Neopestalotiopsis rosae causing foliar and fruit spots on pomegranate in Florida. Plant Disease https://doi.org/10.1094/PDIS-06-20-1282-PDN. (in press)

Grant Awards

2020 Florida Nursery, Growers and Landscape Association - Viburnum Foliar Disease Management: Downy Mildew & Cercospora Leaf Spot Management; G. Vallad, S. Stead, and W. Elwakil

2020 Florida Tomato Committee - Evaluation of Deep-Shank Telone Applications for Soilborne Disease and Nematode Management: Large-scale, On-Farm Efficacy Demonstrations; G. Vallad and J. Desaeger

2020 Florida Tomato Committee - Expansion of a tomato decision support system (DSS) to improve foliar disease management; P. Roberts, G. Vallad and I. Small

2020 USDA-NIFA Foundation grant – Pathogenomics-based development of crop-specific diagnostics tools for emerging and expanding fungal diseases in the U.S.; C. Swett (UC-Davis), G. Vallad (University of Florida), D. Geiser (The Pennsylvania State University), F. Martin (Agricultural Research
Service, Pacific West Area)

2020 USDA-NIFA Foundation grant – Using genome evolution to further epidemiological understanding of the tomato bacterial spot pathogen Xanthomonas perforans; E. Goss, J. Jones, G. Vallad, S. Timilsina, and M. Paret

Congrats to the Desaeger Lab for their Award-Winning Pumpkin

All the labs did a great job with the contest.
The Desaeger Lab won with 22% of the votes!