



# Quarterly FSHS Newsletter

November 2019 • Volume 28 Issue 4

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## Be Social...with FSHS!

*By Alicia Lamborn, FSHS Newsletter Editor*



Attention FSHS Members,

To maintain an active, engaging, thought-provoking social network page where members can learn new ideas and network with peers, the Board would like to invite all members to like, follow and contribute to the [Florida State Horticultural Society \(FSHS\) Facebook Page!](#)

Please feel free to share photos, news, announcements, articles, research and anything else that may be of interest to the group. If you have trouble posting to the site, please message the FSHS Facebook Team through the Facebook page, or send an email to Alicia Lamborn at [alamborn@ufl.edu](mailto:alamborn@ufl.edu).



# Proceedings Editor's Report

*By Dr. Mary Lamberts, FSHS Proceedings Editor*

As of 14 November 2019, 59 out of 150 presented papers have been submitted, 59 to FSHS and 6 directly to ASHS. For the two sections highlighted in green, ANR and Krome, over half the papers presented at the meeting have been submitted; almost half the OGL papers have been submitted. To date, ONE paper has been submitted to either the Editor or ASHS by H & P authors; only 3 other authors from H & P have responded after a reminder from the Editor.

Section	total # in program	total # presented	# received by FSHS	Scientific Notes	# submitted directly to ASHS	missing	Notes
ANR	15	15	6	5		3	1 to another journal
Citrus	23	23	5	5	1 HS	12	
H & P	21	21	0 – 3 due Nov/Dec	1		20	1 to HT
Krome	26	23	13	1		9	2 withdrawn; 1 in Poster session; 2 to ASHS?
OGL	24	21	6	3	1 HT	11	1 in Poster session, 2 withdrawn
Vegetable	37	37	6	10	1 HS, 2 HT	17	1 to HT + 1 to HS; 1 to another journal; 1 presented, but withdrawn
Poster	9	10	7	1	1 HT; 1 to be sent later	0	2 listed elsewhere in the program; 2 to ASHS
Totals	155	150	39	20	6	72	

The “missing” column should explain to those of you who have already submitted your paper(s) why our publication is not available in a timely manner after the conference. This is not the first year this has happened. If you are an author whose paper is in the **missing** column, please let the Editor know immediately ([editors@fshs.org](mailto:editors@fshs.org)) your intent to either publish a paper this year, when you will be submitting it, and where you will submit it. As a reminder, we now have a 700-word (including everything – that means your **complete** mailing address), which is just under 3 double spaced pages in Times New Roman 12 pt.

Please send your paper in Word and consult the author instructions on the website <https://fshs.org/author-instructions/> before you email your paper. If you are writing a Scientific Note, those instructions are on the same webpage on the right-hand side. There are a couple of parts to the style manual (everything you need to know to write a paper in the correct format), one of which is examples for the **Literature Cited**. Some of you are casual about your approach to citing papers, please take the time to check to make sure (1) all papers cited in the body of the paper are also listed in the Literature Cited and (2) all papers listed in the Literature Cited have actually been cited in the paper. Some of you are very good about this, but others are not, which costs one of the editors (either with FSHS or with ASHS) a lot of time.

**Note:** In one section, some authors told their Sectional VP to have the Editor “use abstract as submitted.” As the Editor, with the approval of the Executive Committee, I will **not** be accepting this unilateral decision on the part of these authors. When you agreed to present a paper at the FSHS meeting, part of that agreement included publishing a paper. This year we expanded options to include a 700-word Scientific Note. If you are one of the authors who fall into the “use abstract as submitted” category, please take the time to convert your abstract into this 700-word Scientific Note or be prepared to have your abstract rejected.



## The Lettuce Breeding Program at the University of Florida

*By Dr. Germán Sandoya-Miranda and Team*

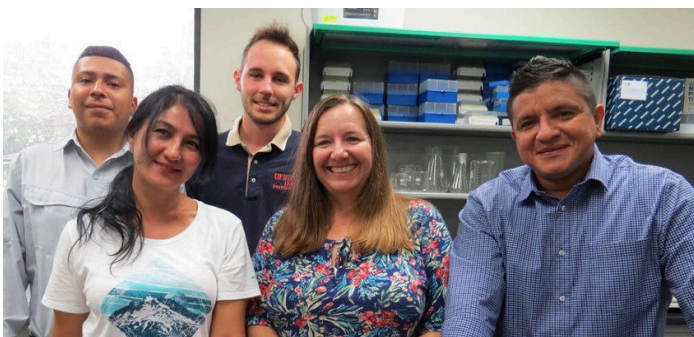
The breeding of lettuce in Florida started in the 1940's with the arrival of Dr. Victor Guzman (who recently passed away) to the University of Florida who developed impactful cultivars now used in breeding programs worldwide. The program continued the development of lettuce germplasm adapted to Florida's unique environmental conditions.

It has not been long since Dr. Germán Sandoya-Miranda joined the University of Florida's faculty team at the Everglades Research and Education Center (EREC) in Belle Glade, FL to take the lead of this program and continue to provide improved lettuce to Florida's stakeholders of the leafy vegetable industry. He joined the EREC faculty team at UF the fall of 2016 moving from the University of California, Davis where he worked in lettuce breeding and genetics.

Dr. Sandoya-Miranda is an assistant professor with tenure track in the Horticultural Sciences Department, one of the largest departments at UF and host to several breeders. His program includes the breeding of resistances mainly to diseases such as Bacterial Leaf Spot (BLS), Fusarium Wilt of Lettuce (FWL) and others that are important to the industry in the state; traits such as heat tolerance, nutrient use efficiency and postharvest are part of his breeding program as well.

He is currently the sectional Vice President of vegetables for the Florida Society of Horticultural Sciences (FSHS) and President-elect of the Vegetable Breeding Working Group of the American Society of Horticultural Sciences (ASHS).

Meet Dr. Germán Sandoya-Miranda's group:  
The University of Florida Lettuce Breeding Team



### Efficiency to nutrients will be key in current and future plant improvement



My name is Gustavo Kreutz and I am a second year Ph.D. student in the Horticultural Sciences Department at the University of Florida. I work under the supervision of Dr. Germán Sandoya-Miranda, at the Everglades Research and Education Center (EREC), in Belle Glade.

Current demands in breeding aim to develop lettuce cultivars that will efficiently use water and nutrients in changing environments. The overall aim of my project is to identify lettuce genotypes adaptive to low phosphorus (P) conditions and to study the genetic architecture of phosphorus use efficiency (PUE) in lettuce.

P is an essential nutrient for plant growth. In soils with low availability of P, plants tend to show reduced biomass, poor seed development, and other abnormalities. As a result, farmers often face high costs associated with fertilizer application.

We are currently screening a set of genotypes from our breeding program and crossing potential candidates to develop mapping populations that will be eventually used in genetic studies.

We hope to locate specific genome regions that are responsible for controlling PUE in lettuce. Eventually we will breed lettuce cultivars that will require less P.

*(Continued on page 4)*



## Lettuce Breeding Program... continued from page 3

### Years and years of experience unifies a multi-disciplinary team in lettuce breeding

My name is Amanda Carroll. I am currently a Biological Scientist II in the Lettuce Breeding program. I have been working at the Everglades Research and Education Center in Belle Glade for over 20 years. In 1999 I started in the Plant Pathology department under the direction of Dr. Kenneth Pernezny (professor emeritus) working with diseases in vegetable crops. Our main focus was on diseases of tomatoes and peppers caused by *Xanthomonas* sp. By 2003, I made the transition to turf breeding led by Dr. Russell Nagata. We were working on the development of a St. Augustine turfgrass that would grow more slowly, therefore, requiring less maintenance for homeowners.

Now I am working with Dr. Germán Sandoya-Miranda. We are developing new lettuce cultivars to be used by commercial growers in our area and beyond. We need new cultivars that are adapted to growing in our changing climate. We have a diverse group of students and interns from all over the world working with us on many different projects. We have two PhD students in the group. One is screening different lines for phosphorus use efficiency. The other is studying postharvest quality of lettuce. We have a visiting Fulbright Scholar working on lettuce pathogens. We are testing our germplasm collection for use on sandy soils and in hydroponics. We are also screening our germplasm collection and plant introductions from the USDA for new opportunities for resistance to various diseases, including lettuce downy mildew, bacterial leaf spot, and lettuce fusarium wilt.



On a typical day, I could be working in the laboratory, greenhouse, and in the field. I like the variety and not being tied to a desk. I enjoy working as a biologist at the EREC and look forward to the next ten years.

### Many miles apart with a common goal: battle diseases

Gulnoza Hismutdinova is one of the thousands of Fulbright Scholars that came to the US to get training this year. She is working on understanding several aspects of a newly identified disease for lettuce growers in the state, Fusarium Wilt of Lettuce.



Originally from Tajikistan, near the centers of origin of *Lactuca* (the genus from which cultivated lettuce belongs), she moved to the US for a 10-month internship period in Dr. Sandoya-Miranda's laboratory. Her aim is to work in several aspects of an Integrated Disease Management plan that later can be applied to her home country where the disease is also problematic in several vegetables.



# Secretary's Report

*By Jamie Burrow, Past Secretary*

The annual meeting is a great time to learn, reconnect, and celebrate accomplishments. Several awards were given to members and students. Congratulations to all the award recipients!

Best Paper Sectional Awards	
Citrus	<p><b>Huanglongbing-related Responses of 'Valencia' Sweet Orange on Eight Citrus Rootstocks during Greenhouse Trials</b> Ed Stover, David G. Hall, Jude Grosser, Barrett Gruber, and Gloria A. Moore</p>
Handling & Processing Section	<p><b>Lactic Acid Bacteria Incorporated into Edible Coatings to Control Fungal Growth and Maintain Postharvest Quality of Grapes</b> Anna Marín, Anne Plotto, Lorena Atares, Amparo Chiralt</p>
Krome Memorial Institute	<p><b>First Year Results of a Trial of 'Tahiti' Lime and Three Lime-hybrid Scions Grafted to Five Citrus Rootstocks Established at TREC</b> Jonathan H. Crane, Daniel Carrillo, Romina Gazis, Edward Evans, Jude Grosser, Kim D. Bowman, James Colee, and David Herbella</p>
Ornamental, Garden & Landscape Section	<p><b>Progress in Genetic Sterilization of <i>Lantana camara</i> through Ploidy Manipulation</b> Jianjian Xu and Zhanao Deng</p>
Vegetable Section	<p><b>Metalized-striped Plastic Mulch Reduces Root-zone Temperatures during Establishment and Increases Early-season Yields of Annual Winter Strawberry</b> Stephen S. Deschamps and Shinsuke Agehara</p>
Agroecology & Natural Resources	<p><b>Greenhouse Production of Native Aquatic Plants</b> Lyn A. Gettys, Kimberly A. Moore</p>
Florida Tomato Research Award	<p><b>Research Update on Tomato Chlorotic Spot Tosspovirus in South Florida from 2017 to 2018</b> Rafia A. Khan, Dakshina R. Seal, and Shouan Zhang</p>
Best Student Papers	
First Place	Syuan-You Lin
Second Place	Kenneth Sweeney
Meritorious Service Awards	
Friends of Extension	Ted Winsburg and Gene Albrigo
2019 Patron Members:	
	Eric Simonne and Anne Plotto

# Mastering the Science of the Unexpected

By Wagner Vendrame

Dr. Wagner Vendrame  
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In the Fall of 2017, Cassandre Feuille arrived in Gainesville to start her Master of Science degree with mixed feelings of excitement and fear, and the experience of a new country, language and culture looming ahead. She was one of the 25 students awarded a scholarship to study in the US through a rigorous selection process by the Feed the Future Haiti AREA project. Managed by the University of Florida's Institute of Food and Agricultural Sciences (IFAS) through an award from the U.S. Agency for International Development (USAID) and under the leadership of Dr. Rosalie Koenig, the project focused on building capacity to improve agriculture in Haiti.

Cassandre spent her first semester fulfilling her credit requirements and taking diverse classes in Environmental Horticulture and Horticultural Sciences in Gainesville. She improved her English and quickly adapted, learning a new culture, making friends and enjoying campus life. In the summer of 2018, she transferred to the Tropical Research and Education Center (TREC), in Homestead, ready to start her research project. Her initial research proposal involved the production of bananas using micropropagation in a temporary immersion bioreactor system. The objective was to develop a low-cost system for large scale mass in vitro clonal propagation of banana, a major staple food crop for Haiti, and therefore addressing one of the major goals for the Feed the Future AREA project. Our bioreactors had been previously tested and validated for banana production and showed excellent preliminary results, thus creating the path for a successful project. Everything looked good for Cassandre and she was set to go...or so she thought.

The University of Florida has always been instrumental in promoting strong international programs, whether it is to facilitate international experiences for our undergraduate and graduate students, or to bring visiting research scholars from a diverse group of countries. The UF International Center (UFIC) indicates that for the period of 2018-2019, over 2,600 UF students had the opportunity to participate in programs to study abroad, through collaborative agree-

ments with partner institutions in 66 countries. During the same period, the UFIC also provided support to thousands of international trips for research, teaching and collaboration, engaging with over 6,600 international students and over 1,600 international visiting scholars. Over 3,900 UF faculty and staff have traveled to 143 countries. These are quite impressive numbers, which extend to the participation of IFAS by the recent creation of the IFAS International Support Team (IIST), with the purpose of facilitating and managing international programs. Currently IFAS IIST manages two large international projects. The first one is the Feed the Future Innovation Lab for Livestock Systems. And the second project is the Feed the Future Haiti Appui à la Recherche et au Développement Agricole (AREA), to which Cassandre belongs.

So, what happened to Cassandre? Unexpectedly, the bioreactors started failing due to a malfunction in the programmable control unit. Technical stuff that would require some time for fixing. With no time to waste, we had to move to plan B. But...what was plan B? Not losing sight of her initial objective, adversity opened the way to critical thinking, fostering creativity. This led Cassandre to consider the use of low cost and low consumption energy lights, such as light emitting diodes (LEDs) for in vitro banana production using traditional micropropagation techniques. That meant no bioreactors, but not a big deal. Her objectives were still be aligned with her project, to develop a production system that would be low cost and at the same time amenable to the frequent power surges and unreliable power grid in Haiti. Oui, c'est plan B! She was back on track!

However, it was not easy for Cassandre to handle the stress of finding a new path for her research project while at the same time the hardship of being away from her family. This was particularly hard during Christmas of 2018, when she was not able to join her family. But she had deadlines and a short time to complete her project. I understand and have strong empathy for international students. Been there, done that!

*(Continued on page 7)*



*Mastering the Science of the Unexpected... continued from page 6*

Still, this created an opportunity for Cassandre to grow. In the beginning of 2019, she was on a roll. She advanced significantly on data collection and analysis and started writing her thesis. On June 10th, 2019 she presented the results of her research project at the FSHS Annual Conference held in Orlando, drawing very positive comments from attendants. Later that same month, Cassandre defended her thesis with a masterful presentation, showing confidence and knowledge of her subject. But she did not stop there. Later in July she delivered two additional presentations, first at the South Florida Graduate Research Symposium, in Homestead, together with other 52 graduate students, and once again in August during the AREA-USAID Research Forum in Gainesville, which gathered all students from the AREA Haiti project.

On August 10th, 2019, I had the honor to attend the Commencement Ceremony, together with my wife and son. The Cassandre whom I saw walking down the orange carpet in the Arena at the O'Connell Center was not the same girl who had arrived in Gainesville a couple of years earlier. She was a happy, confident and determined woman prepared to excel in her career, to be a global citizen, and a leader to help her country improve food security, as well as its livelihood: "Now I feel more equipped to help". Yes, indeed! We will miss her.



*Wagner Vendrame is a professor in the Environmental Horticulture Department, University of Florida, working on ornamental plant production at the Tropical Research and Education Center of the Institute of Food and Agricultural Sciences, in Homestead, FL.*

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