



Quarterly

# FSHS Newsletter

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## Greetings from New FSHS President

*By Mark Ritenour*

Greetings! I am Mark Ritenour and honored to be serving as this year's President of the Florida State Horticultural Society (FSHS). I grew up in the central valley of California, completing my Bachelor's in Botany at California State University, Fresno, and my Master's and Ph.D. at UC Davis, in Vegetable Crops and Integrated Plant and Crop Physiology, respectively. I also completed two postdoctoral research associate assignments working with kiwifruit, stone fruit, and grapes in California's central valley, and working with apples in Washington State. In 1998, I arrived at the University of Florida where my extension, research, and teaching programs all relate to post-harvest biology and handling of fresh horticultural commodities (esp. citrus).

I have been active with FSHS since arriving in Florida and truly enjoy the people making up the society and the opportunity FSHS provides to interact with individuals involved in all aspects of horticulture and natural resources throughout the state (and beyond). A focal point of the society is the annual meeting and proceedings. This year's meeting will be held from June 4<sup>th</sup> to 6<sup>th</sup> at the lovely Westin Tampa Harbour Island. Visit the FSHS website (<http://www.fshs.org/>) for details and to see the call for abstracts.

Improvements to the society over recent years now allow members to publish refereed papers (through ASHS) in the proceedings, as well as non-refereed papers. The meetings are also a great venue for students to obtain experience giving presentations, writing both refereed and non-refereed papers, and networking with others with similar interests throughout the state. Through generous donations to the society, FSHS has provided a number of student travel scholarships to the meetings and student competitions for best presentation and paper have been popular activities at the annual meetings. These are in addition to the excellent guest speakers, receptions, horticultural crops breakfast, and sessions covering all six sections of the society! There is always much to experience!

Also, do NOT forget to renew your membership dues, as membership runs from Jan. 1 to Dec. 31 of each year. Members have access to all FSHS Proceedings (non-members do not have access to the most recent three years), receive the newsletter, and enjoy registration for the annual meetings at a reduced rate.

Looking forward to a FANTASTIC 2017!



Dr. Tatiana Sanchez  
Commercial Horticulture Agent  
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## Greetings From the Editor

*By Tatiana Sanchez*

In this issue we have a new look in our newsletter that we hope everybody will enjoy. We want to thank Kathy Snyder for her service to the society and for her collaboration with the graphic design of the past issues of the FSHS newsletter.

Giving the newsletter a new look its been a project that has taken longer than anticipated. I want to thank our Marketing & Webmaster Coordinator, Steve Rogers, who has provided me and my assistant, Margaret Vanyo, with all the technical assistance needed to develop the setup that you will see in the upcoming issues.

We are open to feedback so don't hesitate to contact me with suggestions and articles for the newsletter.

On a different note, we welcome Mark Ritenour as the new president of the society and wish him good luck with his endeavors.

Finally, we bring you interesting articles that give us a summary of water conservation efforts by watermelon growers, a head's up for pests and diseases in vegetable production and new faculty coming into UF/IFAS to help in the development of new varieties for the ornamental industry.

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## FSHS Board of Directors Members 2016 - 2017

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### FSHS 2016 - 2017 Board of Directors

**Board Chair:** Chris Oswalt  
**President:** Mark Ritenour  
**President Elect:** Eric Simonne  
**Board Member-at-Large:** Gene McAvoy  
**Board Member-at-Large:** Cecilia Nunes



### FSHS 2016 - 2017 Sectional Vice Presidents

**Citrus:**  
Vice President: Tripti Vashisth  
**Ornamentals, Garden & Landscape:**  
Vice President: Matthew Orwat  
**Handling & Processing:**  
Vice-President: Amy Simonne

**Krome Memorial:**  
Vice President: Noris Ledesma  
**Vegetable:**  
Vice-President: Matt Lollar  
**Natural Resources:**  
Vice President: Lisa Hickey



Steve Rogers  
FSHS Marketing Coordinator  
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## By Steve Rogers

A brand or identity is your first impression of a membership organization like the Florida State Horticultural Society. A brand conveys professionalism, values, purpose, strengths and passions (Kolowich, 2015). On the web, new members partly base a decision to join on website quality. One definition of a brand is that it is the use of layout, type, and color to identify one's goods or services. The crafting of a brand is not always as easy as it sounds. And it can take time to arrive at a good one. Our professional network at FSHS and rich collection of Proceedings dating back to 1888 are two of our main strengths. Our brand helps us market these strengths and values to others. Then, how did the current FSHS brand come about?

It started with a logo update back in 2007. This wasn't a new design. Rather, it was an update in format from analog to digital. The old logo was in a rough JPG format. As you may know, JPG imagery causes problems when scaling to different sizes and media (e.g., jagged edges). We also knew the logo would in the future appear in new print and web media. So, we decided to re-render the logo as a vector image to preserve resolution regardless of size. We did this using

## Marketing Coordinator's Corner

Adobe® Illustrator®'s Live Trace feature. Live Trace detects the edges in an image, then traces those edges using curves. The resulting logo scales to any size and looks good in both color and black and white (Fig. 1).



Fig. 1. The FSHS logo in various forms. We designed the logo to show up well in both color and black and white formats.

Then around 2013, we began work on a new website. Website color has meaning, and this impacts how visitors perceive a site (Chapman, 2010). FSHS has ties to nature and plants, so themes with bold, saturated, psychedelic colors wouldn't have worked well. More subdued, earthy, natural colors are better. After testing at least 20 combinations, we arrived at the barley/chalet green colors used on fshs.org now. We also carefully selected other compatible colors for highlights and accents (Fig. 2).



Fig. 2. The FSHS color palette includes barley, chalet green and other colors for highlights and accents.

For press releases, announcements and similar media, we needed a couple of flexible typefaces. FSHS is an information-intensive organization, so the two we selected are especially suited for "information design". Proxi-

ma Nova is a sans serif type family containing three widths: regular, condensed and extra condensed. Each of those contains 48 fonts and hundreds of glyphs, with a range of weights and styles from thin to extra bold. As a complement, we use the serif typeface, Minion Pro, which also has many weights and styles (Fig 3). That collection of fonts provides a lot of flexibility depending on content and available space.

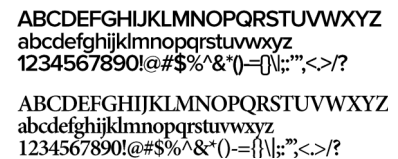


Fig. 3. The FSHS typographic standard includes Proxima Nova (upper) and Minion Pro (lower). Both are shown in semibold.

For consistency, fonts used in web pages are similar to those two typefaces above. Depending on the venue, though, exact type matches are sometimes difficult. For example, we use the Georgia family in email announcements to work in more email clients. And we use Times Roman in the Proceedings for historical and other reasons. Some work remains to extend the FSHS brand across all our media. But even so, the online brand you see today has proven to be an excellent fit for FSHS communications.

\* Adobe and Illustrator are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.

### References

Chapman, C. 2010. Color theory for designers. Retrieved January 22, 2017, from smashingmagazine.com.  
Kolowich, L. 2015. The marketer's guide to developing a strong corporate and brand identity. Retrieved January 22, 2017, from blog.hubspot.com.

# FSHS Proceedings Editors' Report

By Mary Lamberts and George Fitzpatrick

Section	Presented	To be published in		Not submitted	Unknown
		FSHS only	ASHS + FSHS		
Citrus	24 + 1 (2015)	13 <sup>z</sup>	3	9	
Handling & Processing	24 + 2 (2015)	8 <sup>z</sup>	8 <sup>y</sup>	8	2 <sup>x</sup>
Krome	19	14	1	2	2 <sup>x</sup>
Natural Resources	6	3		3	
Ornamentals, Garden & Landscape	27 + 2 (2015)	16 <sup>z</sup>	3	11	
Vegetable	31	12	2	11	1 <sup>x</sup> + 5 <sup>y</sup>
Poster	12	12	0	0	
<b>Total (2016)</b>	<b>145</b>	<b>75</b>	<b>17</b>	<b>44</b>	<b>5 + 5</b>

<sup>z</sup> Includes papers presented in 2015

<sup>y</sup> Includes papers to be published in 2017

<sup>x</sup> Includes papers where authors have not responded to requests from the Editors

When you receive your proof, please return it to ASHS as soon as possible so the Proceedings can be published in a timely manner.

The Program Coordinator and the Editors are changing the formats for the Author's Agreements and the Abstracts. Please read all instructions carefully. Make sure you send a copy of the Author's Agreement to [editors@fshs.org](mailto:editors@fshs.org). If you have questions, please email them to [editors@fshs.org](mailto:editors@fshs.org).

As you prepare your paper(s), please consult the website for the Instructions to Authors. The format for papers has changed to be similar to the one used by HortTechnology. Before you submit your paper, please have someone proofread it for you.

Remember that manuscripts are due **at the end** of the annual meeting. **Please email them directly to [editors@fshs.org](mailto:editors@fshs.org)**. You should also copy the sectional vice president for the section in which your paper(s) was (were) presented.



Drs. Mary Lamberts & George Fitzpatrick

## Secretary/Treasurer's Report

By Lynn Barber

At the last Board of Directors' Meeting on January 13, 2017, the following information was shared regarding Annual Meeting Registration and Membership numbers.

Total registration at the Annual Meeting in 2016 was 200, 190 in 2015 and 171 in 2014.

Membership in 2016 was 215, 236 in 2015 and 229 in 2014. While more people are attending the Annual Meeting, the outstanding page charges total \$2,220, which is slightly less than half of the amount reported in the last Newsletter. We hope to see you at the 130th Annual Meeting in Tampa, June 4-6, 2017.



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## CRISPR and Breeding Expertise coming to Strengthen UF/IFAS horticulture programs



Dr. Jack Payne, Senior Vice President for Agriculture and Natural Resources, UF/IFAS  
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**By Jack Payne**

@JackPayneIFAS

Dr. Heqiang “Alfred” Huo is a new breed of plant breeder who will soon join the accomplished team at the University of Florida’s Institute of Food and Agricultural Sciences.

He’s among the select few who will be using the revolutionary technology known as CRISPR and applying it to lilies and orchids. This biotechnology technique could be a shortcut to creating the new varieties of ornamental plants that the Florida horticulture industry depends upon.

UF/IFAS already ranks among the top three land-grant universities nationally in numbers of plant breeders, cultivars developed, and cultivars licensed for commercial propagation. Royalties from these new cultivars are six times what they were less than a decade ago, and UF/IFAS re-invest much of it into innovation to address industry challenges.

Now UF/IFAS is getting even stronger. Just in time, too, because Florida needs a new generation of ornamen-

tals, fruits, vegetables, and trees. Our plants face stresses that weren’t as evident 30 years ago – increased heat, sea-level rise that can lead to saltwater intrusion, migrating diseases, and a new pest arriving in Florida every month on average.

Industry responses to these challenges may include more water, more nutrients, and more pesticides, all of which mean more money. But IFAS aims to save you money, time, energy, and environmental impact by breeding plants that stand up to these stresses.

Thanks in part to the tremendous support we’ve received from FNGLA and its members, UF/IFAS has received funding to hire dozens of new research faculty. Instead of carving up this cluster of new scientists by giving each academic department a quota, we’re hiring them in teams assigned to chase a big idea.

One of those big ideas is to take UF to the next level in tropical and subtropical plant breeding. In addition to bringing Huo to our Mid-Florida Research and Education Center in Apopka, we’ve brought on new talent in Homestead, Balm, and other locations. They’ll bring even more cutting-edge science to improving the plants that Florida producers already grow and to creating Florida versions of plants traditionally grown elsewhere.

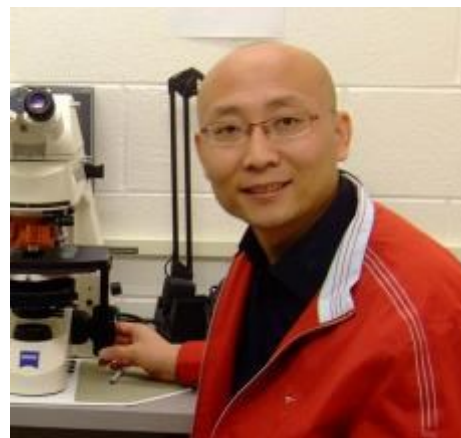
Huo moved to the U.S. from Hong Kong and is currently finishing up work at the Seed Biotechnology Center at the University of California, Davis. He brings with him a working knowledge of CRISPR, a gene-editing technique that since its invention in 2012 has been applied to animal health, medicine, engineering new antimicrobials, controlling disease-carrying insects, and, at UF/IFAS, crop breeding.

CRISPR allows scientists to essentially trick a plant into sending itself instructions to snip out gene sequences that welcome disease into its cells, for example. And because it doesn’t involve inserting genes from other species, its creations are non-GMO, which could make them much more acceptable to consumers who are still wary of biotechnology. CRISPR was briefly introduced by FSHS speaker Dr. David Clark at the 2016 Annual meeting of the society.

Part of what sold Huo on UF/IFAS was the emphasis that our plant pathology department chairwoman, Rosemary Loria, put on making scientists available to growers. Huo says that connection to industry helps guide breeders like himself to generate varieties with specific goals. In other words, they help him form the question that his research will answer.

That, combined with industry support for UF/IFAS breeding efforts, made this what Huo called “my dream place for my future research career.”

May his dreams, and yours, come true.



Dr. Heqiang “Alfred” Huo  
New faculty at the Horticultural Sciences Department at University of Florida.

# Trouble Ahead for Vegetable Producers?

By Josh Freeman, Mathews Paret, Xavier Martini

As I sit in my office at the North Florida Research and Education Center (NFREC) in Quincy and write this article on January 11, we have had seven official freeze events. We did not receive a killing frost until January 8 and we do not have another freeze event forecasted for the next 15 days. On January 7 there were still tomatoes growing in open field production, most of which were infested with whiteflies and *Tomato Yellow Leaf Curl Virus* (TYLCV) (Fig 1). During the fall of 2016 vegetable producers in North Florida and South Georgia saw unbelievable numbers of whiteflies, luckily all B biotype that we know of. Fall cucurbit and bean producers were plagued with *Cucurbit Leaf Crumple Virus* (CuLCrV) and tomato producers with TYLCV, both whitefly-transmitted viruses.

Spring tomato producers with susceptible cultivars saw more *Tomato Spotted Wilt Virus* (TSWV), a virus transmitted by thrips, than has been present in the last 5-10 years. Neither CuLCrV (Fig 2) nor TYLCV are perennial problems in this part of the U.S. but will they be in the future? If winter continues as forecasted we will have two consecutive mild winters. Can we expect increased insect pressure in spring 2017 and certainly in fall 2017 after a mild winter? Significant numbers of whiteflies were reported nearly two months earlier last fall. We normally have a crop-free period in this part of the world to “clean” the system and allow us to start fresh in the following crop, its called winter. It appears that the “reset” may not be as strong as it has been in the past.

We have several concerns in vegetable crops going into spring 2017; insect pests, CuLCrV, TSWV, and TYLCV. Most tomato producers utilize cultivars resistant to TSWV but do not commonly deploy resistance to TYLCV. Unfortunately, it is too late to make variety decisions for spring production but if this weather pattern persists it may be highly advisable to use TYLCV resistant tomatoes for fall 2017 production. There are cultural and chemical strategies that can be used to manage both of these virus diseases in tomato and these may be recommended this spring. Cucurbit and bean producers face a different problem; there is no available varietal resistance to CuLCrV. Multiple fall watermelon producers reported widespread, severe fruit quality problems that

(Continued on page 7)



Fig. 1. *Tomato Yellow Leaf Curl Virus* (TYLCV) symptoms on tomato Credit: M. Paret



Fig 2. *Cucurbit Leaf Crumple Virus* (CuLCrV ) symptoms on seedless watermelon. Credit: M. Paret



Fig 3. Seedless watermelon fruit quality observed in north Florida during fall 2016. Credit: M. Paret



*(Trouble Ahead for Vegetable Producers? Continued from page 6)*

limited the marketability of fruit (Fig 3). The cause of these issues remains unclear.

CuLCrV was found in all fields that exhibited fruit quality problems but was also found in fields with no fruit quality problems. Also, not all watermelon varieties exhibited fruit quality problems. CuLCrV is not reported to negatively affect fruit quality so this is currently just an association be-

tween the two.

Will producers be plagued by abnormally high insect populations and viral diseases that they don't normally contend with or will the fall of 2016 just be an anomaly? Time will tell. We ask extension faculty and producers to remain vigilant in the coming season, especially with watermelon.

Faculty at NFREC are interested in investigating any CuLCrV or fruit quality problems in watermelon.

## Water Conservation by Watermelon Growers



Dr. Kevin Athearn, Agribusiness Development RSA.  
UF - Suwannee Valley Agricultural Extension Center

**By Dr. Kevin R. Athearn and Robert C. Hochmuth**

Florida fruit and vegetable growers have made major changes over the years in the way crops are grown. As in other industries, farmers must adapt to remain competitive. They must adapt to changes in market demand, rising input prices, pest and disease pressures, and changing weather patterns. With assistance from new technologies, UF/IFAS Extension programs, government agencies and cost-share programs, farmers have adopted best management practices (BMPs) and become more efficient.

Greater efficiency not only helps farmers stay in business, it helps conserve our natural resources. With support from a BMP mini-grant by the Florida Department of Agriculture and Consumer Services (FDACS), we documented changes in the Suwannee Valley watermelon industry and estimated the magnitude of resource conservation. In spring 2016 we reviewed prior studies and conducted semi-structured interviews with nine Suwannee Valley watermelon growers.

Nearly one-third of all Florida watermelons are grown in the Suwannee Valley, and these growers have made significant changes over the past 25-30 years.



Fig 1. Seedless mini-watermelon fruit.

Growers described the transition to seedless watermelons in the 1990s, driven primarily by market demand for



Fig 2. Watermelon production set-up with raised beds, plastic mulch and drip irrigation.

*(Water Conservation by Watermelon Growers, Continued from page 7)*

Those changes allow them to harvest earlier and access a more favorable market window. Prior to 1990 watermelon growers used overhead irrigation systems, such as traveling volume guns. During the 1990s growers began to change irrigation systems, and by the early 2000s all the growers we interviewed were using drip irrigation for their watermelon fields. Along with changes in irrigation came changes in row spacing and fertilization practices. Recently some growers have started using plant nutrient testing (Fig 3) and soil moisture sensors to fine tune their fertilizer and irrigation scheduling (Fig 4).

Watermelon growers in the Suwannee Valley have reduced fuel and fertilizer use, as well as conserving water and reducing the possibility of leaching into our water bodies. In particular, the transition to drip irrigation under plastic mulch has led to dramatic savings in water and fuel. Among the nine growers we interviewed, estimates of water savings ranged from 50% to 80% and estimates of fuel savings ranged from 50% to 86% as a result of changes made since the early 1990s. The growers we interviewed believed that changes made by other growers were similar to theirs.

To appreciate the magnitude of these changes for the region, we estimated the total amount of water saved. An average reduction in water pumped for irrigation of 65% amounts to an estimated water savings of 344,177 gallons per acre per season. On 6,000 acres of watermelon fields in the Suwannee Valley region, that amounts to more than 2 billion gallons of water saved each year. With the average Florida resident consuming about 31,000 gallons of water per year for household use, 2 billion gallons could supply about 65,000 Florida residents. The irrigation changes made by Suwannee Valley watermelon growers have made a remarkable contribution to water conservation.



Fig 3. Mace Bauer, Columbia County Extension Agent, performing petiole sap testing for in-season fertilizer tune-up based on plant needs.



Fig 4. Dr. Eric Simonne indicating water movement through a sandy soil's profile indicated by the use of blue dye in water scheduling studies.

## Upcoming Events

**March 22nd:** What's Wrong with my Palm Tree? (Kissimmee) - Learn about disorders and diseases of ornamental palms. Other topics include nutrient deficiencies, fertilization, pruning and evil weevils. Register at <http://tinyurl.com/zxvk22e>.

**March 22nd:** Soil Microbial Amendment and Rootstocks Field Day at DUDA (LaBelle) - Soil Amendment experiment on 11 year-old Valencia/Swingle trees to evaluate the ability of 5 soil microbe amendment products to promote tree health in the presence of citrus greening. More information at <http://tinyurl.com/zb7vgws>.

**April 4th:** Considerations for Transitioning Perennial Production to Organic (Online) - Webinar that addresses the challenges and opportunities for producers of perennial crops who are interested in transitioning to organic production. No pre-registration needed. Visit: <http://tinyurl.com/zzybytek>.

**May 20<sup>th</sup>:** Ag Fest & Master Gardener Plant Sale (Gainesville) - Vegetable, fruit trees, herbs and ornamentals plants on sale. In addition, booths from the Department of Agriculture, IFAS bookstore, Florida Nutrition Program and more will be on site from 8:00 to noon at the [UF/IFAS Alachua County Extension Office](http://tinyurl.com/zzybytek).