UF IFAS UNIVERSITY of FLORIDA

Gulf Coast Research and Education Center
ENewsletter for November 1, 2021

FLORIDAAGEXPO

The Florida Ag Expo is *Thursday November 18th* ***Registration is now Open!*** Registration and Vendor details can be found here: https://floridaagexpo.net.

Don't miss out – This year's event includes: AI/Robotics Session, Pest Management Session, BMP Session, Field Tours, Lunch provided by Little Habana Café in Riverview, Student Poster Contest, and Massive Vendor Show. CEUs will be available.

UF/IFAS Faculty Visit Tallahassee Government Officials

Dr. Saqib Mukhtar, Associate Dean for Extension, and Dr. Nathan Boyd, Professor/Assoc. Center Director for GCREC, made a presentation last month to legislatures on the outlook and plans for incorporating artificial intelligence into the world of Florida agriculture. GCREC is seeking funding for an AI Hub to be located at the Wimauma/Balm location and to serve all of Florida. As the future of labor in the state continues to be uncertain, it will be imperative for UF/IFAS to take the lead in AI research to benefit Florida growers in the years to come

Hops Field Day Sparks Interest among Local Brew Masters and the Media

The 2021 Fall Hops Field Day brought a nice crowd to GCREC on October 19th including several media outlets. Since the beginning of this project, local craft breweries have been watching closely at the progress of this alternative crop for Florida. Bringing a local flavor to their brew is a big draw for the brew masters and beer consumers with the farm to table, or in this case farm to growler, still making a huge impact with local outlets throughout the area.

Dr. Mary Lusk Participates in News Production on Women in STEM

The news story will air on Fox 13 News morning show, November 10.

Despite making up nearly half of the U.S. workforce, women are still vastly underrepresented in the science, technology, engineering and math (STEM) workforce. Women made gains – from 8% of STEM workers in 1970 to 27% in 2019 – but men still dominated the field. Men made up 52% of all U.S. workers but 73% of all STEM workers.

We appreciate Dr. Lusk's dedication to inspire young women to consider careers in science.

GCREC Recognizes Maintenance and Farm Crew

Dr. Jack Rechcigl, Center Director, along with faculty and staff held a spontaneous breakfast meeting with the maintenance and farm crew last month to thank them for the dedication during the last two years. These fine men and women held the center together while many of the faculty and staff worked from home during the first year of the pandemic. Without their help, many research trials would have gone by the wayside. And of course, as the building and grounds were still in operation during the shutdown, maintenance was still on the job making sure the center was running smoothly. Dr. Rechcigl also made a special presentation to Jose Moreno, farm manager, who has been with UF/IFAS for 30 years. His service and loyalty to not only UF/IFAS GCREC, but to Florida agriculture as well, has been invaluable.

Pictured above – Dr. Jack Rechcigl, Joe Pelletier and Brian Lapsley with maintenance. In front of them is Jean Coggins, housekeeping. The farm crew includes (back row): Tyler Leonard, Joseph Laich, Matt Brown, Katie Yanuzzelli, Tim Rauh with farm managers, Jeb Cofer and Jose Moreno. In the front we have Eric Autrey, Jose Rubino and Jeremy Sutliff.

GCREC will be closed Thursday November 11th in honor of Veteran's Day.

Remembering those who sacrificed so much to give us the freedom to live, love, and prosper.

Drought Stress and Artificial Defoliation Synchronize Pomegranate Flowering and Advance Fruit Maturity Time – Results from the First Year of Trials in Florida

Alexander Schaller and Zhanao Deng, University of Florida, IFAS, Department of Environmental Horticulture, Gulf Coast Research and Education Center
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Pomegranate has emerged as an alternative specialty crop in Florida and several other southeast states of the U.S. Our early trials have shown that the largest problem facing pomegranate production in Florida is the fungal pressure brought on by the rainy season. In previous years, pomegranate plants grown in our trials struggled to produce fruit even with numerous fungicide sprays. This year we tested a new approach to produce pomegranate in Florida. This new approach involved stressing and defoliating plants in fall to force uniform blooming in spring and advance fruit development and harvest before heavy fruit rotting occurred. In India this defoliation treatment, known as bahar treatments, has been used to time the pomegranate production around the availability of water, market demand, and pest and disease pressure. Here in Florida, we hope to utilize this practice to advance pomegranate fruit development so that fruit can ripen before the summer rainy season, which is when the fungal disease pressure is the highest. In order to correctly time this, we began by drought stressing the plants starting in October 2020 and defoliated the plants with the plant growth regulator ethephon in mid-December 2020. For many pomegranate varieties, new leaves began to appear 18-24 days after defoliation and the first flowers began appearing 64-78 days after defoliant was applied, or in mid-February 2021 (Figure 1). This time frame, over the span of late February through June 2021, allowed the fruit to develop during Florida's dry months and the early rainy season to reach its maturity for harvest in early to mid-July (Figure 2). A large harvest occurred this year during the week of July 4th days before Hurricane Elsa was forecast to pass the area. In previous years, the peak of the flowering had occurred during the early summer months and the fruit developed during the rainy season (Figure 1). Consequently, most fruit severely rotted and dropped, leaving few or none to be harvested in September. This year, many of the pomegranate varieties in the trials produced large quantities of fruit. Among the best producers were Girkanets, Vkusnyi, Christina, Ambrosia, Eversweet, Vietnam Treehouse, and Azadi (Figure 3). This year's trials were conducted without the use of any fungicides and some of the fruit rot-susceptible cultivars (Vkusnyi, Girkanets, and Ambrosia) began to be affected by fruit rot starting in late June, thereby dramatically reducing the number of harvestable fruit (Figure 4). Nevertheless, multiple varieties including Christina, Eversweet, and Azadi were able to produce quality fruit by the time of harvest.

While this is only one year of trials, the data collected seem to show good promise for the future of growing and producing pomegranates here in Florida. This trial will be repeated in 2022. To further advance the fruit harvest time, we plan to defoliate the pomegranate plants two weeks earlier this year than last year and expect the harvest to occur during late June 2022. We also plan to conduct some defoliation trials with local growers to determine if this type of defoliation treatment would help growers produce a high-quality harvestable pomegranate in late June to early July.

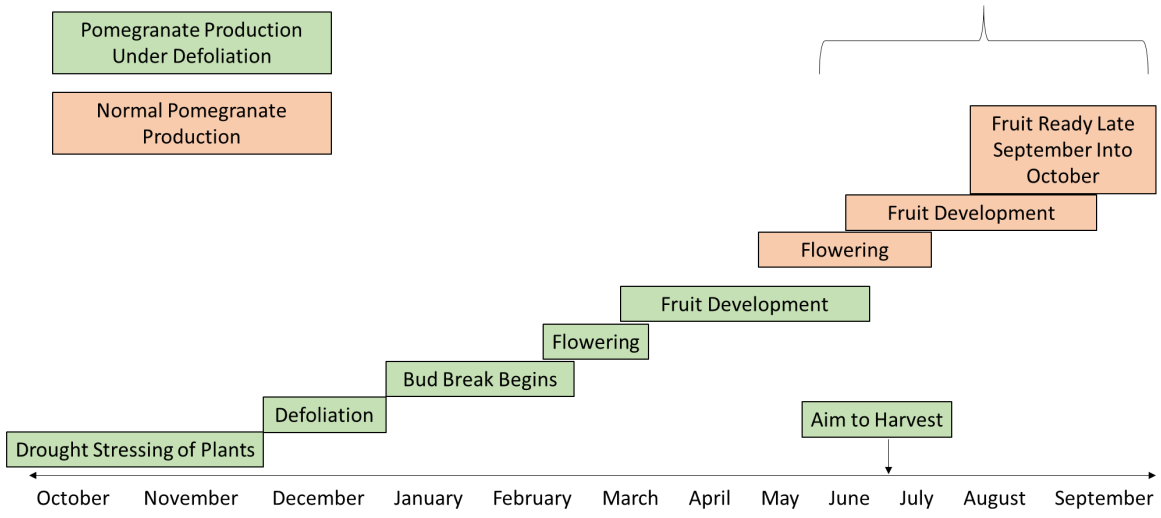

Figure 1. Comparison of pomegranate growth stages or phenology under artificial defoliation or no artificial defoliation (normal production).

Figure 2. By mid-June 2021, many pomegranate trees had large fruit that began to ripen on the tree (left). By late June to early July and after multiple days of rains, many of the fruit began to show signs of fruit rot and the trees began to show severe leaf spot (right).

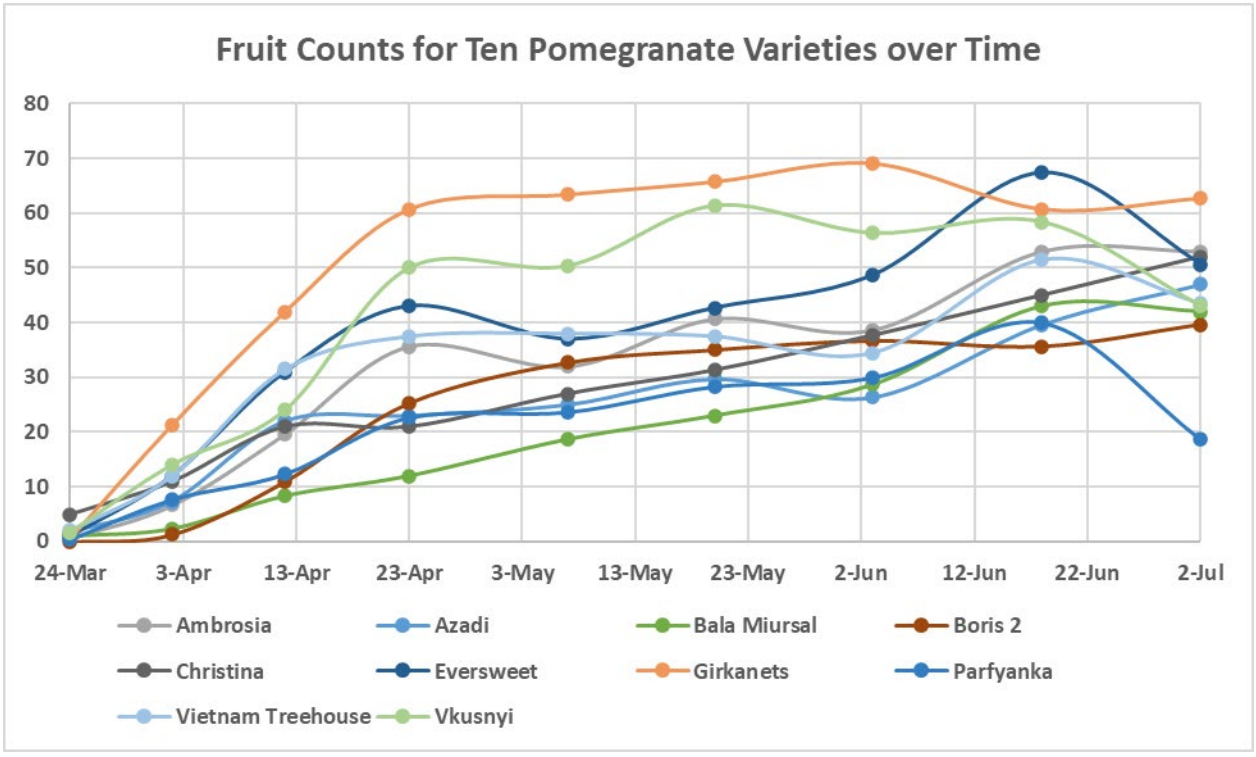

Figure 3. Fruit count (per tree) for the top 10 producing pomegranate varieties over the span of March 24 to July 2, 2021. Among the top-producing varieties were Girkanets, Vkusnyi, and Christina, Ambrosia, Eversweet, Vietnam Treehouse, and Azadi. Starting in mid-June when the fungal disease pressure increased, some of the more susceptible varieties began to drop fruit due to severe fruit rot. In this year's trials, no fungicides were applied to the trees, so as to maintain high disease pressures to varieties in evaluation. In growers' production labeled fungicides can be applied to reduce fruit rot and increase crop yield.

Proud Parents Jose and Cecilia (Munez) Moreno Celebrate their Son Jaime's promotion to Naval Commander.

One day he was mowing the lawn at the Dover Strawberry Lab, and the next day he is flying fighter jets all over the world, marries and has a beautiful daughter. Jaime Moreno, son of GCREC Farm Manager, Jose Moreno, is now a Commander for the U.S. Navy. This inspiring young man has been laser focused on his goals and career since he was young. Photos below show him being sworn in and then along side his parents, Jose and Cecilia, lovely wife, Lynn, adorable baby daughter Anna, and his sister Maria Moreno. Such a proud moment for his family and for those of us who have watched this amazing young man become a relevant leader for our country. Best wishes to the Moreno Family and stay tuned for more news as Jaime and Lynn are expecting another baby in early 2022!

Blast from the Past - Bradenton

Gulf Coast REC Dedication 1960's

GCREC in the News

UF growing high quality cascade hops in Bay Area
https://www.baynews9.com/fl/tampa/news/2021/10/19/cascade-hops-acid-wimauma?web=1&wdLOR=c36FCCDD7-1C89-4099-B19C-2EE0147B740B
https://www.fox13news.com/news/farmers-brewers-toast-successful-florida-hop-harvest.amp

Interest continues to brew for hops grown Fresh from Florida.
https://www.growingproduce.com/farm-management/interest-continues-to-brew-for-hops-grown-fresh-from-florida/

As strawberry planting season nears, here are tips from an expert (Ed. Note: Vance Whitaker's name is misspelled in the text)
https://news.wgcu.org/2021-10-05/as-strawberry-planting-season-nears-here-are-tips-from-an-expert

Neopestalotiopsis disease in strawberry a growing concern
(Column by Juliana S. Baggio and Natalia A. Peres of UF/IFAS-Gulf Coast Research and Education Center)
https://vegetablegrowersnews.com/news/neopestalotiopsis-disease-in-strawberry-a-growing-concern/

Local corn maze created by Geomatics students
https://www.youtube.com/watch?v=Fl7zQY9Wlqk

Spotlight: Strawberry season is coming and so are the nematodes
https://vscnews.com/florida-strawberry-nematodes/

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Like us on Facebook
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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.

Publications

Lusk, Mary G., and Kylie Chapman. 2021. "Chemical Fractionation of Sediment Phosphorus in Residential Urban Stormwater Ponds in Florida, USA" *Urban Science* 5, no. 4: 81. https://doi.org/10.3390/urbansci5040081

UF/IFAS Vegetable Production Handbook in Stock for Florida Producers
https://vscnews.com/vegetable-production-florida-uf-ifas-handbook/

Handbooks are now available at UF/IFAS Gulf Coast Research Center and will be on hand at the Florida Ag Expo Thursday, 11/18/2021.