We're starting to see fruit color up, so it won't be long until picking season begins! As harvest roles around, keep in mind food safety practices play a major role, whether you're a grower, packer, or harvester. One major component to a food safety plan (and audit) is the need for a worker training prior to harvest. Don't overlook this training, as it's not only an opportunity to educate workers on how to reduce food safety risks but it's also a great opportunity to train workers on how to properly harvest and handle fruit to best maintain its quality. Proper handling during harvest and postharvest handling will play a role in fruit quality.

Come January, we will have a new member of our team, Dr. Muhammad Shahid, the new UF/IFAS North Florida Research and Education Center’s Horticulture Sciences Professor! We're excited for
Dr. Shahid to be on board as his research and extension program will help support the cold hardy citrus region tremendously. In case you missed the Citrus Expo in Fort Myers, the educational presentations can be found here: 2021 Citrus Expo Presentations. In addition to that, the 2021-2022 Florida Citrus Production Guides are now available at Extension Offices in Florida and Georgia. Check with your local office. Please don’t hesitate to contact our team if we can help in any way!

**Freeze Protection Considerations**

*By: Clay Olson, UF/IFAS Emeritus Extension Agent IV*

When growing citrus for commercial production in North Florida or South Georgia, freeze protection and the water requirement you need, should be one of the very first things in your grove planning process that you think about because it will determine your well size, power unit requirements, tree spacing, and gallons of water per hour, per tree you plan for. In general, 9 to 25 gallons/hour is a common range.

So, once you’ve taken into consideration the slope of the land your grove is to be planted on, the natural wind breaks available, (north and west sides in particular), soil type and drainage, you can better decide on trees per acre, rootstock selection, and emitter type and tip pattern.

Young trees planted late in the growing season (August or later) are more susceptible to being killed by freezes. The older the trees are, (round wood vs angular wood) with proper management, the more resistant they are to major freeze damage or being killed by a freeze.

Windy freezes along with trees not cold acclimated (actively growing) always makes freeze damage worse.
Freeze Protection Tips
1. Place emitters upwind of the tree to the northwest focus spray to graft and remove any leaves or branch that impedes water from getting to graft.
2. Start water before freezing temps so spaghetti lines don’t freeze.
3. Inspect and flush system before use, replace stopped up emitters etc.
4. Plan for backup power for electric pump power outage.
5. As freeze event subsides, don’t turn off protection until air temps > 39F.

Additional protection can be achieved by using, tree wraps, tree defenders, tree teepees, or individual freeze protection sacks made of spun polyester (row cover material).

Forecast freeze information sources include – local TV weather, Weather Channel, Accuweather, Florida Automated Weather Network (FAWN).

Citrus Cover Crops & Reflective Mulch Survey
Researchers at the University of Florida, Southwest Florida Research and Education Center and the Food and Resource Economics Department would like to bring your attention to the following survey regarding the use of cover crops and reflective mulch in citrus production. These systems are being investigated as potential means to improve soil health and reduce pest pressure from Asian psyllids, the primary carrier of HLB. We are also interested in understanding the efficacy and adoption of these systems as conservation practices. We are aware that these systems are not widely used in citrus production, so we need your input on the feasibility of the practices. Your responses will help us measure the general willingness to adopt cover crops or reflective mulch and provide the information needed to explore potential means of promoting implementation, such as cost-share programs.

Your participation is appreciated regardless of farm size, farming experience, or familiarity with these practices. A higher response rate will ensure we obtain quality information that accurately answers the research objectives, which will enable us to help producers. Be assured that all information you provide will be kept confidential: no names or statistics (including minimums, medians, and maximum) that could be used to identify your operation will be published.

Click the link to complete the survey or use the QR code: https://ufl.qualtrics.com/jfe/form/SV_eWCyZMi7tbEBhRQ

For more information, contact Dr. Shourish Chakravarty at shourish@ufl.edu or (352) 215-5057.
It has been a struggle the last month or so to keep fruit off the ground because of the heavy fruit load. Fruit touching the ground will rot and fall off which is not good because we are measuring the fruit each tree produces to see what the maximum yields are for each rootstock. It is also a food safety issue as soil is splashed onto the low fruit. We skirted and pruned the trees at the beginning of February last year to make sure major limbs were near two feet off the ground trying to prevent this problem (Fig 1). Below is the same tree (Fig. 2) tree loaded with fruit. Some limbs that are four feet off the ground are so bent over we are having to prop them up. I have been using metal H-shaped sign braces to keep limbs and fruit off the ground (I can reuse these each year and they store easily). With such heavy fruit loads the overall size of the fruit is smaller and there will be less cull fruit than last year. This is a good thing. Some of the upper limbs have broken due to the fruit load but it could be worse if we were to have stormy weather. Hopefully that will not happen before we harvest. It's amazing how the trees will snap back after removing all the fruit. We will be skirting the trees up even higher next year and remove or prune long lower branches to reduce this problem next year. This will also help miticides penetrate the canopy better. A raised canopy and applying more volume will help control those rust mites next year.
Upcoming Grower Meetings

Citrus Nutrition Day: October 26
UF/IFAS Citrus Research & Education Center, Lake Alfred, FL
Click Here to Register

Citrus Variety Development Field Day: October 29
2801 Hull Rd. Gainesville FL 32608 (South of the new Baseball Stadium)
Time: 10:30 AM
Grove tour, presentations about the breeding program, fruit sampling. Please RSVP for lunch to Peter Chaires at pchaires@nvdmc.org

CREC Open House/Field Day: November 16
UF/IFAS Citrus Research & Education Center; Lake Alfred, FL
Click Here to Register

Winter Weather & Citrus Zoom Webinar: November 17
Winter weather watch, ag weather forecasts, freeze protection, Florida Automated Weather Network (FAWN), cold protection and irrigation tools.
Click Here to Register

Southeastern Fruit & Vegetable Conference: Jan. 6–9
Savannah, GA
Click Here to Register

Produce Safety Alliance Grower Training: January 19
UF/IFAS Jefferson County Extension Office, Monticello, FL
Click Here to Register
There are three things a fast food restaurant looks for when they are looking to build a new facility:

**LOCATION, LOCATION, LOCATION**

What does that have to do with Cold Hardy Citrus?

Very simply, since we are building a citrus industry in North Florida and South Georgia, we have one chance to do it right. And there are three things we cannot compromise on:

**QUALITY, QUALITY, QUALITY**

There is plenty of fruit being sold from other areas of the globe that just does not impress retail buyers or consumers. Poor internal quality, fruit rot in the package, fruit not mature, and poor packaging all are potential hazards that can ruin what we all dream of:

**A STELLAR REPUTATION FOR HIGH QUALITY FRUIT**

Fruit is beginning to color up and before the next issue of this newsletter, most of us will be finished harvesting. Please do your part in helping build our reputation of high quality fruit. You may ask:

**How can I as a grower help?**

1. Keep your spray schedule on time.
2. Rust mites can really damage fruit so especially scout for them.
3. Pull sunspot fruit well ahead of first harvest date.
4. When harvesting, spot pick color and maturity.
5. Handle fruit with care! In the field, on the trailer, and in the packing shed.

With everyone concentrating on producing high quality fruit, we can offer what consumers are looking for. Do your part!!