



Following a drone flight over a grove, the agricultural drone software Agrovion counts trees and groups them based on canopy area.



By Matt Smith

## Damage documentation tips for hurricane season

One of the things I like most about being an Extension agent is getting to work with new growers. Despite all odds, some of these growers are getting into citrus.

With hurricane season underway, it's good for new growers to know — and for established growers to refresh themselves on — how to prepare before a storm strikes the grove. While there are some great comprehensive guides that have been written by University of Florida Extension agents and research specialists (see Additional Resources sidebar), what I want to focus on is how to efficiently document damages.

Prompt and proper damage documentation is a very important aspect of storm preparation and recovery. While reporting periods will vary depending on your insurance provider, the Farm Service Agency asks that damages be reported within 15 days of the storm to be eligible for federal disaster aid. Immediately after a storm, county Extension agents work closely with state and federal agencies to obtain a picture of agricultural sector damage. Reported damages have a direct effect on the scale of disaster relief.

While your grove disaster plan should be in place before hurricane season begins in June, deciding when to put your plan into action can be a tough decision. Pausing what you're doing to begin intense recordkeeping is a delay no farmer wants to deal with.

The National Hurricane Center's official storm track forecast accuracy in 2022 beat out all

individual model runs except for a single model — the Hurricanes in a Multi-scale Ocean-coupled Non-hydrostatic Model (HMON) — at 60 and 72 hours. The HMON's average track forecast error for 72 hours out was a little less than 90 miles, and at 48 hours was only about 60 miles, both beating the previous 5-year average. Intensity forecasting is still difficult, but the average error in 2022 was 11 mph for 72 hours and only 9 mph for 48 hours, both also beating the previous 5-year average.

### WHAT TO DO BEFORE A STORM

While risk tolerances will vary between growers, if your grove is within the cone of uncertainty within the 3-day forecast, you stand a good chance of feeling impacts from the storm and should consider starting your documentation procedures.

Begin by taking inventory of your trees. Along with counts, identify which blocks or groves are most economically important so you can prioritize tending to them after the storm. Back up electronic business records on a flash drive and on cloud storage and print copies of your insurance policies along with relevant contact info. Take photographs of equipment, vehicles, infrastructure and trees. Be sure to document representative fruit set.

### SPEED UP THE PROCESS WITH DRONES

One way to speed up documenting the state of the grove before and after the storm is with the use of aerial drones. Drones map large sections of a

property by flying a pre-programmed route at a set altitude and automatically taking photographs as they fly. Specialized software then looks at each photo and stitches the images together into a single large image. A single consumer-grade quadcopter drone flying 400 feet above the ground can capture 200 acres of farmland in half an hour. Specialized agricultural drone software can even count trees with a striking degree of accuracy.

Since the route is stored on the software, you can easily produce an image of the grove after the storm that covers the exact same area. These before-and-after photos can greatly speed up the insurance claims process, not only with tree loss but infrastructure damage as well. Since it only takes one pilot to fly the drone, the rest of your workforce can handle other storm preparation procedures.

Drones are also able to get into the grove from a distance if roads are impassible after a storm. As long as you can maintain line of sight and there are no flight restrictions in place, you can check on the grove without having to wait for a helicopter flyover. Keep in mind that there will be more low-flying air traffic than usual following a storm.

Hurricane season can be extremely stressful for new and established growers alike, but by taking proactive steps you can give yourself and your farm the best chance for coming out strong on the other side. 🍊

*Matt Smith is a University of Florida Institute of Food and Agricultural Sciences Extension sustainable agriculture and food systems agent in Bushnell.*

## ADDITIONAL RESOURCES

National Hurricane Center  
Forecast Verification Report:  
2022 Hurricane Season  
[nhc.noaa.gov/verification](https://nhc.noaa.gov/verification)

Hurricane Preparedness for Citrus Groves  
[edis.ifas.ufl.edu/publication/CH178](https://edis.ifas.ufl.edu/publication/CH178)

Hurricane Preparation for Your Farm  
[nwdistrict.ifas.ufl.edu/phag/2018/10/08/hurricane-preparation-for-your-farm](https://nwdistrict.ifas.ufl.edu/phag/2018/10/08/hurricane-preparation-for-your-farm)

# Grow Your Citrus HLB Free!

U.S. Patent Nos. 11,122,752; 11,406,068; 11,497,176; and 11,503,777



We now offer custom composite stakes with attached caps. More economical and superior to PVC.

- Proven by University field trials to grow 100% greening **FREE** trees
- Shown increased growth rates with larger leaves and a fuller canopy
- Tree Defender provides a long-term return on investment
- Our product was created by growers for growers
- Four styles to choose from to fit any budget starting as low as **\$3.75**

863-439-2877  
5600 Lake Trask Rd. Dundee, FL 33838  
[www.thetreedefender.com](http://www.thetreedefender.com)



## FOUR GENERATIONS of FLORIDA CITRUS NURSERIES



WINTER GARDEN, FLORIDA

Now accepting orders for 2023/2024 delivery

**EXCLUSIVE LIFETIME REPLACEMENT POLICY.**  
Every tree is hand nurtured and inspected.  
We have all available greening tolerant rootstocks, UF varieties, USDA varieties as well as all old varieties.

Call Chris at (407) 404-0355

[www.blue-heron-nurseries.com](http://www.blue-heron-nurseries.com)



Reg. #48006420