

Welcome to this week's 2022 season's weekly issue of our UF/IFAS Extension Suwannee Valley Watermelon Crop Update. These updates are summarized by Bob Hochmuth with input from Suwannee Valley Extension Agents: Mark Warren (Levy), Tyler Pittman (Gilchrist), Tatiana Sanchez (Alachua), Luke Harlow (Union), Jay Capasso (Columbia), Dan Fenneman (Madison), Keith Wynn (Hamilton), Danielle Sprague (Jefferson), Emily Beach (Lafayette), Amanda Phillips (Suwannee), Kevin Athearn (RSA-Agri- business), and Sudeep Sidhu (RSA- Water Resources).

If you know someone who wants to be added to this weekly notice, contact your Extension Agent or Mark Warren (352-949-8288) if you want to be added to the regional watermelon group text app.

Thank You to the 2022 Suwannee Valley Rapid Diagnostic Watermelon Program and Its Industry Sponsors:

We have initiated a more formal way to support our watermelon growers with a rapid diagnostics system through Suwannee Valley Regional and County Extension Agents. This industry-funded program allows Extension Agents to submit and pay for watermelon grower's plant disease and other diagnostic samples. This SV Rapid Diagnostic Watermelon Program will help us to get quicker diagnostic results, helping to give early alerts to everyone, and not have to charge the growers directly. Plant disease samples are typically \$40 and leaf tissue analyses are typically \$20. **We want to thank the 2022 sponsors of this program: Syngenta Crop Protection, Glades Crop Care, TriEst Ag Group, Gowan USA, Summit Agro-USA, and Harrell's Fertilizer for sponsoring this effort. Other industry reps interested in sponsoring this effort can contact Bob Hochmuth at bobhoch@ufl.edu or 386-288-6301.**

Freeze Damage Review:

Well, ... that was way too close for comfort! I think it is fair to say we averted an absolute disaster, but not without significant damage. Of course, we will have a much better picture of what needs to be done over the next day or so. But, for certain, nearly every uncovered field took a hit from the freeze, just a matter of how much damage was sustained. Most temperatures in the region were in the 29 to 32 F range and most places had temperatures below freezing for a few hours. Luckily, the predicted temperatures of 27-29 F were not achieved in this region. If those predicted temperatures were realized, or if the cold would have been here for another hour or so, there would have been a sure enough, disaster. As the Extension agents and I have collaborated on what we all saw Sunday, here is our summary from across the region:

If this region has 7,000 acres of watermelons to be planted, at least 5,000 acres were planted before this past weekend.

Of that established 5,000 acres, about 1,000 acres were covered with something including Styrafoam cups, paper plates anchored with soil, wax paper sheets anchored with soil, clumps of rye or oats, and soil only. All these methods were successful, yet expensive and labor intensive.

Of the remaining 4,000 acres or more, all sustained some level of damage. We most commonly saw moderate damage on the exposed leaves and little damage on the buds and newest growth near the crown of the plant. Occasionally we saw some severe damage and, on some acreage, only slight damage. We anticipate much of the acreage will recover if you see the new buds developing and expanding.

There were other practices deployed including early morning drip irrigation events, copper sprays, Vapor Guard sprays and other various cocktails. We are trying to evaluate the effectiveness of these strategies, but at first look, they appear to have little if any impact on this freeze event. Keep in mind, this was more of an actual freeze event with very cold air moving into the region in comparison to a radiation frost event.

We are collecting data on every aspect we can to try to put together a summary in the next few weeks. If you have something you want us to see or verify, please let us know. Bob Hochmuth, Mark Warren, and Tatiana Sanchez)

What should we do next? Considering fertilizer losses even under plastic:

Depending on your bed fertilization practices (amount applied, location in the bed, and whether it is a coated material (CRF)). Most fertigation programs under normal circumstances would recommend fertilizer injections to begin at or near week three.

Across the Suwannee Valley we estimate that 60-70% of the watermelon acres were planted prior to this past weekend. As we all know, the end of last week was brutal with prolonged, pounding winds, heavy rains, and ultimately a challenging freeze event that, while could have been worse, hit some of our fields pretty hard.

The question this week is what do we do next? Obviously, the next couple of days will tell us more on the most severely affected fields, but for the rest we must be sure that these plants have everything needed to be successful.

Many areas of the SV reported accumulated rainfall last week in excess of 7 inches; I even heard one report over 10 inches. Consider 7 inches accumulating and funneling into the holes around those transplants. Except for those few who use controlled release products, the rest have to consider that all fertilizer that was located under those holes is likely leached out of the rooting zone. This would include any applied as a transplant drench and any soluble bed fertilizer (N & K) in that area.

If irrigation was run much prior to planting or in response to the cold there is also a high likelihood that much or even most of the fertilizer under the plastic is gone.

While root systems are expanding rapidly to scavenge nutrients, we need to consider that there might not be much there for them to pick up. This would especially be the case for those most recently planted (small root systems). In consideration of this, I think it might be wise to start a lower level (approximately 0.5 to 1 lb of nitrogen and potash acre per day rate) fertigation ASAP or at least move your planned start date up by one week. (Mark Warren)

Disease management after the freeze:

It was a close call for many but now that the cold is gone, protecting crops from disease is a very important next step. As you monitor your fields for cold damage, scout for disease. Following a cold/rainy period, an outbreak of the bacteria, *Pseudomonas* (angular leaf spot) could be possible. Lesions start small and circular and become irregular in shape with a dark color as they progress. Luckily, temperatures are expected to slowly increase over the week which is not conducive for this bacterial disease to develop. If you suspect bacterial symptoms at your fields, we recommend

spraying with a low to medium rate of copper in combination with mancozeb (Manzate, Penncozeb, etc). Remember high rates of copper are toxic to watermelon plants and we don't want to use copper on recovering plants after a freeze unless absolutely needed. On the other hand, if bacterial diseases are not a concern, we recommend an application of chlorothalonil (Bravo, etc.) to prevent disease development that may arise from the long, wet periods experienced last week. If you observe any disease symptoms, please contact your local agent for prompt identification through our "Early Detection" program. (Tatiana Sanchez)