

Welcome to our 2023 season weekly issue of our UF/IFAS Extension Suwannee Valley Watermelon Crop Update. These updates will be summarized by Bob Hochmuth, Regional Specialized Extension Agent- Vegetable Crops, with input from Suwannee Valley Extension Agents: Mark Warren (Levy), Tyler Pittman (Gilchrist), Tatiana Sanchez (Alachua), Luke Harlow (Bradford), Jay Capasso (Columbia), Dan Fenneman (Madison), Keith Wynn (Hamilton), Emily Beach (Lafayette), Jim Devalerio (Union), De'Anthony Price (Jefferson), Bob Hochmuth (for vacant Suwannee position), 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.

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. **Sponsors of this program in 2023 to date include Harrell's, TriEst Ag, Gowan USA, and Syngenta Crop Protection. Those reps interested in sponsoring can contact Bob Hochmuth at bobhoch@ufl.edu or 386-288-6301.**

Hail Reports:

Unfortunately, the Suwannee Valley region is not an area void of the risk of hail during the peak of watermelon season. In fact, most watermelon production regions in the US have some risk of hail. I know this pain all too well growing up on a watermelon and other vegetables farm on the Eastern Shore of Maryland, when back in the late 1970s our farm got hit with major hailstorms in back-to-back years at the peak of watermelon and cantaloupe season. So, this week "hit home" for me. We pray for those experiencing this incident and we want to help those however we can. Reports in the region indicate there were three consecutive evenings (Wednesday- Friday) with hail reported somewhere in the region. Most watermelon fields that were hit reported small hail and damage to the leaves and stems mostly, and some minor damage to the fruit. However, a few fields report devastating damage to the leaves and more significant scarring and damage to some of the fruit. There are a couple primary considerations for fields with hail damage; one is to protect the damaged foliage with fungicides and the second is to protect the now, exposed fruit from risk of sunburn. As far as protecting the damaged foliage from disease, it is recommended to use a broad-spectrum material such as mancozeb (Manzate, Penncozeb, 5-day preharvest interval), or even Inspire Super (7-day preharvest interval), or Aprovia Top (0-day preharvest interval), especially if these fungicides are due in the spray schedule anyway. It may also be useful to add a low rate of copper for secondary bacterial infections on the foliage and stems, but good coverage will be necessary. I would also caution against any mid-daytime sprays in these fields due to higher risks of burn. Often after hail has damaged the leaf canopy, the fruit will suddenly be very exposed and more vulnerable to sunburn, so applications of materials like kaolin clay and other sun-shielding materials will be advised, however, these materials should not be sprayed with fungicides, or other chemicals. Spray with water only and according to label directions. The coatings may need to be significant to protect the exposed fruit. Further consideration may be needed regarding fertilizer management in these fields. This is a harder one to call because of the wide variation in fields this time of year. However, consider the plants may have lost a lot of leaves and photosynthesis capacity, so we

may need to try to keep the plants growing to produce new foliage, depending on the age of the crop and the extent of damage. It is likely fertigation will be needed in the range of 2.0- 2.5 lbs of N per acre per day. Note, watermelon plants can't use more than the rate of about 2.5 lbs per acre per day, so don't push them harder than they can respond. The bottom line is that if the fruit is still marketable, the crops have a chance to be repaired and get those fruit to market, but time is of the essence. The final recommendation here is to take good notes on what happened and when it happened. Take many photos to document things and most importantly, report the incident immediately to those who need to know, local FSA office, crop insurance company, if insured, etc. (Bob Hochmuth)

Harvesting and Worker Health:

Many farms have started harvesting over the past 7-10 days and things are well under way. Strong demand is expected to continue, so we hope for the best in the upcoming weeks. Remember to keep the work force healthy and protected from dehydration and excessive sun exposure (water, sunscreen, hats, and clothing to protect the workers). UF/IFAS and UF Health Cancer Center have educational programming in place should you want additional information on worker health. Contact your County Extension Agent for further information on this program. (Bob Hochmuth)

Foliar Fertilizer Cautions:

When we have strong market prices, it is more common to hear or get questions regarding all kinds of foliar nutrition recommendations. I feel like I need to communicate a cautionary tale here. In my long career, I assure you that I have seen more problems with significant burn as a result of unwise foliar fertilizer applications than I have ever seen as good. That being said, I am not saying foliar nutrition is never needed! However, we have so much technology and sampling information available to us today, we can make educated sensible decisions based on knowledge specifically for your farm. We have excellent guides for leaf tissue nutrient levels for all vegetable crops and this information has proven to be an excellent guide (<https://edis.ifas.ufl.edu/publication/EP081>). Also, my preference is usually to fertigate, not spray, in most instances when a specific nutrient is needed. A "shotgun" approach to foliar feeding the crop is almost assured to be not only costly, but unwise and risky for burn, especially when mixed in a tank with other chemicals. Macronutrients such as nitrogen, phosphorus, potassium, magnesium, sulfur, etc. if needed to correct a deficiency, are needed in greater quantities than what leaves can typically absorb without first burning the foliage, so be very careful there. Of course nitrogen and potassium are the two we typically fertigate anyway. The other macronutrient to discuss is calcium which is in very high levels in our water (60-80 ppm Ca) because we are pulling from a limestone aquifer full of calcium. That source of calcium in this region is very important because calcium is picked up by root tips and transported in the water stream. It is very difficult to correct a calcium deficiency with foliar applications because the leaves do not move calcium very well to other parts of the plant such as the fruit. If calcium is needed in addition to the calcium supplied in our water, lime, etc., then calcium nitrate as part of our liquid fertigation solution is a far better source than spray applications, but use your leaf tissue data to guide your decisions. Some micronutrients like manganese and zinc are ingredients in some of our commonly used fungicides, such as mancozeb, so your regular fungicide programs often cover you with these two micronutrients. As we have covered before, copper can be toxic to watermelons, but our applications of copper for bacterial diseases early in the season generally give us more copper than we will ever need. The final micronutrient to note here is boron. The micronutrient, boron, is very important in root tip growth and during bloom including pollen tube development. This is

where regular leaf tissue analysis also can be very helpful, especially early in the season. Boron levels should be in the range of 20 ppm or higher and if higher than 20 ppm, the likelihood of any benefit from boron sprays is very small. Late season boron applications are even less likely to be needed. If boron is needed early in the season during the main bloom period, add it via fertigations at the recommended rate. You can have your supplier add boron to the 8-0-8 or other liquid solutions at a rate that will meet the crop needs. I go back here to my philosophy, if we know we are deficient in a specific nutrient, consider adding it via fertigations, not as part of a “shotgun” spray and definitely not in a “cocktail” of several chemicals. Remember, in all of this discussion, I have not said additional nutrient applications are never needed, but I have suggested here to use information available to you to make educated and wise decisions, AND, reduce the risk of unnecessary burn to the crop. (Bob Hochmuth)