

Vermont Vegetable and Berry News October 30, 2018
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www.uvm.edu/vtvegandberry

REPORTS FROM THE FIELD

(Jericho) Observed cabbage aphids in large numbers on our fall turnips, radishes, and kale this year. First time we'd seen such high numbers. Had the radish/turnips under row cover to keep out cabbage maggot. Aphid populations built up underneath. Once we pulled the cover off, the aphids were nearly gone within 10 days and we found many aphid "mummies" parasitized by predatory wasps. We had been considering our control options and were happy to find "the good bugs" had taken care of it before we had time to do anything about it.

Overall a great growing season despite the lack of rain as every storm skirted us north or south all through July and August. Powdery mildew in hoopouses put a damper on our tomato production, though didn't completely wipe us out. But it will certainly be a new challenge to manage for in future years, as having heard of increased incidence of it throughout our region I'm suspecting it will be a more common visitor from here on out.

Managed to fit in the building of two more hoopouses this summer and transition to winter greens went smoothly. First hoopouse harvest of greens ready for first week of November, just in time, as our first killing cold came to the fields the night of October 25. Great crew, great customers, lots of sun, lots of good food. On to the winter season!

(Rochester) With the picking season having been brought to an end by killing frosts last week and with the outdoor markets now done, we are enjoying a weekend of rest and relaxation. We have had a decent season: blueberry yield was up, raspberries were down but that how it goes sometimes. Interestingly, blueberry PYO was down due to the hot weather but we were fortunate to have more paid pickers this season and in the end we brought in more fruit overall than last year, which itself was a de(through)m]TJbe

TECHNICAL TIPS - FORCED AIR COOLING

The preservation of quality in fresh market and storage crops depends in part on the rapid reduction of pulp temperature prior to storage. One way to cool product rapidly is by pre-cooling, which involves flowing a controlled, chilled fluid (air or water) over the product. This improve heats transfer for rapid removal of field heat, depresses respiration rates of fresh produce, and initiates the cold chain. The UVM Ag Engineering blog has new resources about forced air cooling at: <http://go.uvm.edu/forcedaircooling>

Building plans for a pallet-sized forced air cooling unit are posted at <http://go.uvm.edu/palletcooler>. For the counter-top forced air cooler, go to <http://go.uvm.edu/countertopfac>.

This link takes you to a video of a field trial of a modified pallet-sized cooler: <https://youtu.be/Ccy5KxrVhPk>

LATE FALL IS A GOOD TIME TO SOIL TEST

This is a great time to take field soil samples, allowing you the winter to make a plan for next year and order amendments. Standard soil tests cost \$14 through the UVM testing lab. For instructions on sampling, see this fact sheet: http://pss.uvm.edu/ag_testing/How_to_Take_a_Soil_Sample.pdf

For more nutrient management planning materials for vegetable farms, visit: <http://www.uvm.edu/vtvegandberry/NMPlinks.html>.

If you'd like help understanding your soil test, creating a nutrient management plan, or if you have questions about the RAPs regulation, contact Becky Maden at rebecca.maden@uvm.edu or 802.773.3349 x277.

UPDATE FROM THE UVM PLANT DIAGNOSTIC CLINIC

Ann Hazelrigg, UVM Extension

Tomato-We dodged a bullet this year-no late blight! The hot dry summer definitely caused issues with powdery mildew, uneven ripening and blossom drop. We recently looked at two different high tunnel tomato samples with stress symptoms/scorch in the foliage that had no fine feeder roots and rattail-like primary roots. We ruled out any vascular browning (bacterial canker) and crown rot.

After putting the roots in the moist chamber we found the diagnostic little black fungal sclerotia (long term overwintering structures) of *Colletotrichum coccodes*, the pathogen responsible for black dot root rot (and anthracnose fruit rot) growing on the remaining roots. Both samples were un-grafted tomatoes and the tunnels had been in production for several years.

Hopefully, grafting on to more vigorous rootstocks in the future should help the plants withstand the disease. See:

<https://u.osu.edu/miller.769/2017/09/09/getting-to-the-root-of-the-matter-soilborne-diseases-of-tomato/>

Brassicas-We have had a few broccoli and cauliflower samples showing severe Alternaria (Black spots) <https://ag.umass.edu/vegetable/fact-sheets/brassicas-alternaria-leaf-spot> in the heads, on foliage and stems. I suspected the hot temps were causing uneven ripening/brown beading in the florets and the Alternaria was secondary, especially since it was not a rainy season. Bacterial soft rot probably moved in after the Alternaria. However, we just received a sample that did not have the hot temps and still had a lot of the uneven heads and Alternaria.

Boron deficiency could be an underlying cause. The sample had hollow stems which can be indicative of B deficiency but can be caused “by rapid growth due to wide plant spacing, excessive nitrogen or potassium applications, and high soil moisture.” See:

[https://ag.umass.edu/vegetable/fact-](https://ag.umass.edu/vegetable/fact-sheets/boron-deficiency)

UPCOMING EVENTS

Nov. 7-9. Northeast Greenhouse Conference. Boxborough, MA.
<https://www.negreenhouse.org/>

Dec. 3-4. High Tunnel Conference. Manchester NH.
<https://unh.app.box.com/s/caj5slibwsa7k2br8ygiy8psysa6v2rj>