



Vermont Vegetable and Berry News –October 30, 2018
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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 decent year.

Value-added sales have been strong, especially during foliage which was busier than we have ever experienced it and this was likewise the report we got from farms and businesses up and down route 100. Vermont is rightly seen as a place of relative sanity and serenity in an increasingly crazy world and we think people are drawn here to be a part of that. It augurs well for tourist traffic in the future we think, important for us a PYO operation.

(Huntington) When hearing tales of drought in one month, monsoon the next, I feel grateful that we had dry-yet-manageable weather for most the year. It definitely pushed me to new extremes for irrigating in our rainy valley, but we were able to stay on top of it for the most part. Local wholesale markets have been strong all season.

Our local deer population seems larger than usual and we saw pressure on some crops that we typically don't experience (sweet potatoes, spinach mostly). While drilling rye one night a few weeks ago, there was even a herd of them chomping sweet potato culls within 25' of the tractor, casually walking a few feet every now and then to get out of the way of the oncoming tractor. I felt like I was in the NYC suburbs.

(Plainfield) After heavy pruning of my acre of blueberries for a couple of years, production is still down from several years ago. Also, I got some mummy berry for the first time this year. I have mulch stockpiled and am trying to figure out when is the best time to put an inch or two under the plants to cover the fallen mummies. (Vern tells me to do it before forsythias flower in spring, using 2-4" of mulch.)

As soon as I saw the first signs of SWD I cut my price to 5 quarts for price of 4. People picked berries just when they ripened. I researched the use of Entrust, and other spinosads. It scares me that this is becoming a ubiquitous organic pesticide. What I really do not like about this class of pesticides is that it is highly toxic to pollinators like bees and butterflies. Canada and Europe require spraying spinosads 2 hours AFTER sunset, but this is not so in the US. I decided that I did not want to kill my pollinators or use something that has never been tested for toxicity to children (most pesticides are not), with all the kids running around my place.

I also have a two-tiered price system that works well. People get a price reduction for spreading mulch or weeding, and the place looks great, 95% of the people help out. My price is \$5 a quart if you help weed (10 weeds per quart, and I keep sleds around for people to dump weeds in) or if you drag a sled-load of mulch on top of a bare spot. \$8 a quart if you don't help. Eating is encouraged always. People bring their own containers. My goal is to pay my property taxes and provide good food. I also have a "kids deal" where they pick a quart for my freezer and can eat a quart and take a quart home. I have daycare centers that routinely fill my freezer every year. It is great for all. Everything is honor system. I decided not to try to herd feral cats. It works amazingly well. The lower price and eating encouragement means that people feel kind of invested/ownership with the place.

(Elmore) Great plum harvest, raspberry harvest and northern kiwiberry harvest. Lower yields on apples, black walnuts, blueberries and pears. Much too cold too early for so many fall farm tasks, and now all this rain and snow. In 40 years of farming I never remember it being so cold in mid-October. Grateful for our high tunnel that allows us some work area out of the weather. Literal armies of red squirrels eating everything in sight this August and September. Not sure where they are coming from, but hoping they jump into the sea like lemmings when they get above a certain population.

Garlic sprouted from all the rain before harvesting, could be the key is never to have drip irrigation in our garlic bed, and/or to harvest it earlier. Planting hazelnuts through 3 inches of snow on October 14. Go figure.

(Westminster West) Besides a few Gilfeather turnips in the field and a few bushels of squash in the barn, along with our black garlic and hemp, we are done with harvesting for the year and sales are essentially over, a month earlier than last year. Doing the numbers for this year, onions not so good, garlic did fine. Good squash crop and strong sales and first time I didn't need to have a sale on butternuts to move the crop. All squash went for full price all season long.

Starting to plan next season and start on greenhouse cleanup and repairs as soon as the garlic crop is in. The entire crop was on white plastic mulch this year, after using black for 30 years, the hotter summers have convinced me to use white for cooler soils and larger bulbs.

Farmers' markets ended on a cold and wet note, sales are down a bit from last year due to a bunch of rainy days. Starting pop-up downtown marketing next few Saturdays. See you all at the upcoming meetings!

(Newburyport MA) Arrowhead Farm. Still harvesting high quality field crops: cabbages, Asian greens, arugula, bok choy, broccoli raab, leeks, green onions, plenty of Winterbor kale, and radishes. Holding off harvesting winter roots to allow them to put on weight. We never have enough watermelon radish so we are allowing this crop in particular to size up as long as we can.

We tripled our beef production and doubled our pork production this year, but still can't keep up with demand for steaks, bacon, and sausages at our markets. Prices are strong. Livestock production and meat sales are not as affected by weather as vegetable, flower, and fruit crops are.

We are making significant changes to our operation this coming season, so we are trying to get a handle on new budgets--our least favorite, but most important, job on the Farm. Also planning, and ordering trees for, a new pear orchard planting in the spring.

Cover crops went in early and look great. Spreading compost to get a leg up on spring work. Winter farmer's markets off to a strong start. A lot of tough weather this season, but we still had a decent year. Already looking forward to next year.

(Winchester NH) Picadilly Farm. We are too wet around here, and have been all fall; our field crops have suffered. Fingers are crossed that we can bring in the remaining leeks, carrots, and parsnips. Hoophouse greens are coming along, hopefully will carry the December CSA boxes.

We successfully experienced an "On-Farm-Readiness-Review," for FSMA compliance, from which we came away surprised how much uncertainty and subjectivity still permeates the rule. For next year, hoping that one improvement will be the way we grow fall brassica transplants in the heat of summer.

(Plainfield NH) Crew continues to thin out. Farmstand is cleaned and shuttered for the season. The remaining farmstand crew moved into cleaning ornamental greenhouses, as soon as we finished topping onions. Potatoes are all in, still a pile of carrots to lift as well as parsnips, beets, and turnips. Finished pruning summer raspberries, but as of yet haven't gotten to the blues. Fields are well along in clean up

Wholesale accounts doing well. Trying to imagine how to continue doing this in the future in an era of diminishing local labor, and it looks like we will be looking to develop housing for two more H2A workers this winter, given our experiences this past year.

My nephew hosted a well-attended cover crop meeting targeted for dairy farms, and I attended because I am part of the NH Cover Crop Team. I was impressed with the two cover crop mixes that our state NRCS and team came up with. The drilled mix of vetch, crimson clover, turnip, oats and rye exhibited good growth, with hopes for good biomass in the spring. The legumes were pre-inoculated and though small, the nodulation was impressive. These new developments are exciting steps towards better stewardship and soil health, and we are rethinking our current systems of cover cropping.

(Argyle NY) Fall started overly warm and has ended overly cold. Tunnels were mostly planted on time. Early harvest of sweet potatoes, potatoes, beets, and cabbage went well. Carrots are another story with delays of cold, rain, and lack of help. Might finish up by end of week but not holding our breath! The quality and amounts of the roots is very good.

Our killing frost was 26 degrees last week. The cold hasn't bothered the greens in the fields as everything has row cover on it and is well adjusted. Kale, Swiss chard, and Asian greens in the high tunnel are growing great, and the salad mix tunnel also looks good. The spinach tunnel has low germ in the oldest tunnel (12 years) possibly from salts accumulating on the surface from the early years of adding amendments. We are running soil tests.

Transplanting spinach is on the docket to get a good harvest this winter, as we typically seed flats anticipating some fill-in. We still have to plant the overwintering onions, which will be done on steamed tunnel beds this week. The winter markets start Saturday and we will move inside once again, anticipating continued good customer support.

On a sad note, a special friend and a person who left an incredible legacy to agriculture, Chris Blanchard, passed away Sunday after several years of battling cancer. He is best known for his Farmer to Farmer podcast that farmers all over treasured. Chris will be missed by hundreds of farmers, including us. See <https://www.thankyouchris.com/thankyou>.

Please consider a donation in his honor to the fund that helps farmers attend the MOSES Conference in WI, which Chris was instrumental in organizing. Thank you. Paul and Sandy Arnold. <https://mosesorganic.salsalabs.org/donationformpd20170328/index.html>

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 improves heat 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-sheets/boron-deficiency>

Spinach- Crown mite was suspected in a recent photo from a grower. This small pest is not very easily seen since it burrows way down in the crown, but their feeding can cause stunting and deformities in the new foliage. Many times the damage is hit or miss so you can spot treat with Aza-direct/Neem. <http://ipm.uconn.edu/documents/raw2/html/754.php?aid=754>.

As temps cool off I suspect we will see more incidence of leafspot diseases (Cladosporium, usually) and downy mildew. Please let us know if you see any downy mildew, we would like to track cultivars. See;

<https://ag.umass.edu/vegetable/fact-sheets/spinach-downy-mildew>

<https://nevegetable.org/crops/disease-control-21>

Beets-lots of Cercospora leafspots once the fall rain, fogs, and dews started. The small spots with a purple border can cause a lot of loss. Avoid planting succession crops next to each other and rotate.

<https://ag.umass.edu/vegetable/fact-sheets/cercospora-leaf-spot-of-swiss-chard-beets-spinach>

Celery-Received a sample with Black Heart symptoms. This physiological disorder is caused by Calcium deficiency much like blossom end rot in tomato- more of an issue with soil moisture fluctuation common this year. <https://vegcropshotline.org/article/blackheart-of-celery/>
<https://nevegetable.org/crops/physiological-disorders-0>

As always, send a picture, email or mail us a sample if you are seeing a problem:
ann.hazelrigg@uvm.edu, 802-656-0493, or PDC, 63 Carrigan Drive, Burlington, VT 05405.

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>