



Vermont Vegetable and Berry News –April 3, 2018
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REPORTS FROM THE FIELD

(Burlington) After 15 year of unheated winter spinach, I haven't seen widespread frost damage before, but it looks like we are suffering that now. Nothing showed until a week ago. We've been leaving our spinach uncovered as much as possible, even during midwinter, but perhaps it is more important to cover during the wild swings of March, when we have zero degrees shortly on the heels of 60-70 degrees in the tunnels. Good news is zero downy mildew so far.

Had successful control of lettuce powdery mildew in our winter lettuce with only two applications of potassium bicarbonate late October and mid-November. Last spring PM I have ever seen in the tunnel.

I'm all in for dry autumns from here on out: our cabbage is still incredibly tidy out of storage, and our butternut was beautiful until we moved the last of it two weeks ago.

(Grand Isle) Island Blueberries. Started pruning. Rabbit damage appears more than previous years. Designing new net support system to allow switch over from bird net to insect exclusion netting.

(Orwell) Hard to believe it is April, with the snow just gone, leaving behind a sappy earth. However, our high tunnel crops are on schedule, although some look a little leggy from cloudy weather earlier in March. We are upgrading ventilation and heating systems, re-covering houses, grafting in small batches, and still trying to fit in a canoe trip while the rivers are high. Sent in high tunnel soil samples and we are amending soon to avoid problems we had last year of fertilizing too close to planting time.

We are knocking back winter aphids on our spinach with batches of lady bugs, which we will follow with *Aphidius* once the populations drop. Surprised to see that some greens we thought very dead from the early winter (kale and chard) are growing again, with tender sweet sideshoots. A yummy household harvest treat.

(Shrewsbury) We're making the transition from our fall-planted mustard greens to the first round of greens direct-seeded in early February. Cilantro isn't a high volume crop in our tunnel, but it's impressively productive harvesting bunches in the winter by picking leaves, and in March as a cut and come again crop. It pencils out to be our most profitable winter tunnel space.

Salanova and other 1-cut lettuces overwintered poorly from crown rot. Ann diagnosed Rhizoctonia and Thielaviopsis as a primary root infection, and Botrytis and Fusarium as secondary crown pathogens that infected already dead tissue. We harvested once in December, but then had about 70% mortality overwinter from disease. We saw higher disease mortality at the edges of tunnels, which suggests to me that preventing tissue damage from extreme cold may reduce secondary crown infection.

Spinach downy mildew was diagnosed on Escalade, but it is spreading very slowly and does not affect marketable yield. No sign of spinach DM on Scorpius, Violin, or spring-planted kohlrabi. Mustard greens stayed healthy overwinter with minimal disease pressure.

(Charlotte) Adam's Berry Farm. Now that all the snow has melted we have been able to start pruning blueberries. We are seeing a lot more winter damage and die back due to this year's extreme cold stretch and erratic temperatures. Summer and fall raspberries are all pruned. We will uncover strawberries this week as weather and winds permit. The crop appears to have fared the winter well based on initial glances under the landscape fabric. As soon as we are able, we will begin prepping fields for planting the 2019 strawberry crop. Sketching out fertilizer and cover crop plans for the year. Excited to get going. Realizing the farm has grown to a scale that we need more hands than just the two of us in the early spring.

(Norwich) Did a first real walkabout of our production fields yesterday and found some unusual conditions: for one thing, there has been very little freezing below the snow. (I took some soil samples in early March right through the snow!) The snow is melting and going right into the ground. Several locations are dry enough to start field work and I plan to start seeding pea/oats and hay stands in the next few days.

Large plantings of over-wintered, uncovered spinach are nearly perfect, with no winter-kill even for tiny plants seeded in early and mid-October. I will spread some Chilean tomorrow and get some wide row covers on. Even some cilantro made it. A few thousand feet of carrots that never got harvested last fall are hardly damaged at all, and delicious! On the other hand, September-seeded vetch is totally dead, even down into the ground! Maybe the warm soil surface contributed to vetch rotting? A funny spring, but looking real good so far for an early start. Hey, it's Vermont. No such thing as a normal Spring.

(Hinesburg) Harvesting overwintered hoop house spinach, kale, and claytonia. Some overwintered Salanova looks great, but many heads dying off?

(Berlin) Perfect Circle Farm. All our nut and fruit seed are ready to plant out, the chestnut and Prunus seed is sprouting in the fridge. The potted tree and shrubs in the root cellar are all breaking bud. The greenhouse heat will be turned on this week in support of moving everything into the sun, etiolation is no fun to overcome. Hopefully the snow is soon gone and I can plant.

(Plainfield NH) This past week it felt as though the worst of the winter is behind us as the sun is burning holes in the snow fields. Our H2A guys are booked, but we are struggling to get locals for retail and greenhouse help. Still, we have a good core group of returnees and we are keeping up with the transplanting of ornamentals and seeding of vegetables. Pest problems in the greenhouses are subdued at the moment but some tropical plants showed up with mealy bug and scale. They subsequently went out the door, but cuttings from them may be infected.

Two spotted mite seems suppressed by applications of Venerate and releases of Persimilis, but still worried they might "blossom" in the heat of May. Intend to be vigilant with Neoseiulus fallacis mite predator on bean leaves this year as well as with the peppers while they are still in the transplant tray.

Tomato plants have been in ground in the greenhouse for two weeks and are looking fine except for an outbreak of powdery mildew, the second time in 30 years of greenhouse tomatoes for us, never this early on the farm. They were grafted plants we purchased. Usually we struggle with leaf mold on the heirlooms, but this is a new thing for us. Will start with pruning and applying Milstop, and then ask what conventional materials are best suited.

Hope to be mulching and fertilizing raspberries in two weeks. I said hoping...

(Little Compton RI) We did our yearly test of our wire cables that we suspend our tomatoes from in our greenhouses. (Two of us hang and bounce on the cables at the same time). This is the time of year to check these. You don't want to walk into your greenhouse in August and see a whole row of tomatoes on the floor smashed with broken stems, etc.

Home Depot has 1/8" galvanized cable 500' spools for \$135. We get about three years out of them. We have bought thicker thinking they would last longer but once rust starts it is a gamble as to when they finally let go, which is usually at the ends where they wrap around the wall anchors.

Heard about some folks getting powdery mildew already from some bought in grafts. We are not waiting to find out for ourselves and will start with Stylet Oil and Milstop tomorrow on everything tomato in our houses. Last year when the cat got out the bag it was a season long infection we were chasing the entire season. We alternated with Oxidate but not sure if it really helped.

One thing that does help is a good electric power sprayer to atomize the applications and cover all the tops and bottoms of leaves. When the plants are over five feet tall a backpack sprayer just won't cut it and trying to get into tight rows is near impossible. Seibring (the greenhouse heater manufacturing company) sell a fabulous self-contained sprayer with a tank and electric retrievable 125' hose. It is called The Fox and costs \$1500 but given the cost of a lost tomato crop, small change.

Winter greens: keeping aphids at bay with spot delivery of ladybugs on weekly basis. White Rust is taking down our spinach. Next year I'll install Irrometer ground moisture probes to help us get a handle on winter soil moisture levels. We have let certain houses get way to dry and it's cost us growth, coloring and premature bolting issues.

Starting bok chois and Salanovas every month all winter has been a great production protocol. First Peas are in the ground. We now presoak our early peas at least for 7 hours and plant by hand. Pays back with more even stands.

(Craftsbury) Last year we had a lot of powdery mildew in greenhouse tomatoes. To manage it we now use a Maruyama gas powered mist duster. It seems to give a very fine coverage and enough power to spray 15 feet in the air. Sulfur (Microthiol Disperss) was by far the most effective organic control option, I did not find that the stilet oil worked very well (or anything else for that matter). Since we don't overhead irrigate in the greenhouses, the sulfur did not wash off and it remained an effective deterrent. The major downside of sulfur is leaving a residue on the fruits. I think in the future the best plan of management would be to spray the plants before fruiting if there's any sign of powdery mildew on the farm. Subsequently spraying the new growth only.

(Ange-Gardien, Quebec) Things grow well especially with that 10 days of sun we had (that's over 12000 joules/cm²). We had to reseed some crop because we had frost damage on March 17 on some crops that overwintered. It's interesting to see that the new growth was not as frost hardy than the rest of the planting. Trying to keep up with the winter/spring projects so they are functional asap. Produce easy to sell. We had issue with tip burn on spinach although we ventilated and irrigated as much as we can. but when humidity is high outside, you're done. Will need to keep calcium in stock all the time.

(Saratoga Springs NY) Green Jeans Market Farm. Have a lot of lettuce that needs to go into the ground. Direct seeded some into the tunnel hoping to have on the market table in a month. Filling up my 14' cold frame very quickly and hoping my tarps can thaw out my ground soon. Temp is a little low yet though so I'll be waiting until my soil warms before I plant anything outside the tunnel. It's my first season and planting into what was perennial grass last fall, so in my cold frame it's a job trying to stay ahead of the weeds. Forum sets in the cold frame range between 4-8 inch leaves. Same seeding outside shows no growth yet.

(Argyle NY) Pleasant Valley Farm. The lack of sun is still holding good growth back from all the lettuce transplants in the high and low tunnels, and newly seeded crops, but our weekly harvests have been good for markets, with about 350# of greens (salad mix, braising, kale, chard, spinach, arugula, Asian greens, etc.) harvested this past week, in addition to a 500# spinach wholesale order. The parsley has also been producing well this winter as well as a small patch of cilantro.

There has been no sign of any mildews on any greens, and the little bit of crown spinach mite we had was eliminated awhile back by a neem product (Azadirect) and we have distributed lady bugs several times over the past month and there are no/few aphids. The biggest disease issue was Alternaria on the arugula, and we thought maybe it was coming on the seed, as we have never had it before, so we attempted to hot water treat the seed. It was a complete failure so don't try that! They turn into a jelly mass! We are not sure if they could be steam treated but would be just nice to know that we can get disease-free seed from all companies.

Last week we ran the disks over the raised late fall beds and that incorporated the Bio360 biodegradable plastic really well, as we find it will blow around and it's important to get it turned under preferably in the fall, or early spring. On April 2 we were able to till one of our fields and get a small direct-seeded planting of radishes, herbs, and brassicas in. Too cold in the forecast to do much so we will be patient.

The over-wintered onions are looking good after fertilizing, cultivating and irrigating. We have orchestrated a special Electric red overwintering onion seed order from Holland via Johnny's and if you would like to pre-order any (all orders will be handled through Johnny's after we reach our minimum for the order), please go to this survey and input info, seed in 1000 increments at \$3.15 per 1000): goo.gl/8J6QRL. We enjoy the overwintered onions, both Forum sets, and red and yellow onions that we start in the Greenhouse the end of August, and they start producing in late May. Some local farms do well with Walla-Walla onions and we will be adding them to our mix this fall.

UPDATE FROM THE UVM PLANT DIAGNOSTIC CLINIC

(Ann Hazelrigg)

Most of our recent calls and samples have been of nuisance insects invading homes. Lots of Asian lady beetles <https://entomology.ca.uky.edu/ef416>, Western conifer seed bugs <http://ento.psu.edu/extension/factsheets/western-conifer-seedbug> and some brown marmorated stink bugs (BMSB). Of the three, BMSB is the only one that causes crop damage but it is more common in the mid-Atlantic states. Great recent article on this bug (that invaded someone's home by the thousands!) in a recent New Yorker <https://www.newyorker.com/magazine/2018/03/12/when-twenty-six-thousand-stinkbugs-invade-your-home>.

Carrot rust fly tunneling damage found in stored carrots.
<http://smallfarms.oregonstate.edu/sfn/su08carrotrust>

Spinach downy mildew found on Escalade, Corvair and Violin.
<https://ag.umass.edu/vegetable/fact-sheets/spinach-downy-mildew> Spinach leaf collapse seen in pictures from a grower and a recent high tunnel visit. It was only sections of mature leaves and there was a distinct margin between healthy and living tissue. The affected tissue looked translucent.

I am guessing the damage was from cold or other abiotic issue. New growth was good in the live sample I saw which is a clue that the damage is caused by something non-infectious.

Salinova lettuce was diagnosed with collapse caused by a root and crown rot due to tow soil borne fungi- Rhizoctonia and Theilaviopsis. These are in all soils and become a problem when conditions are cold and wet. The grower may try a little more heat to dry soil. It is tough to get all the covers on and off to regulate/minimize humidity and wetness with fluctuating temps in the spring.

Stored Rutabaga samples were exhibiting hollow centers most likely a result of Boron deficiency. <https://ag.umass.edu/vegetable/fact-sheets/boron-deficiency>
<https://pnwhandbooks.org/plantdisease/host-disease/turnip-rutabaga-brassica-sp-boron-deficiency>

Be sure your soil tests are current and you add enough Boron in your brassica crops. Turnip, cauliflower and rutabaga are very sensitive.

As always, we are happy to look at pictures or samples. <https://www.uvm.edu/extension/pdc>

Anyone wanting their VT Pesticide Applicator License: we are having 2 workshops on April 25 (White River Junction) and April 26 (Burlington). We will go over Core manual materials in the morning and offer the test after lunch. <http://pss.uvm.edu/pesp/?Page=trainingCORE.html>

GOLDEBERRY ON-FARM RESEARCH PROJECT

Would you like to grow goldenberries this summer? You are invited to participate in a USDA Northeast SARE (Sustainable Agriculture Research and Education) project aimed at promoting Goldenberries as a new fruit for CSAs and farmers' markets. Goldenberries are related to tomatillos and are similar to ground cherries. They grow to 5 feet and produce many cherry-size golden fruit with a tropical flavor combination of pineapple, strawberry and cherry. They need a long growing season to mature, so they are planted at the same time as tomatoes or peppers and benefit from mulched, raised beds. They can be trellised much like tomatoes, but it is not required. While ground cherries fall from the plant when ripe, making them difficult to harvest, goldenberries do not.

As a project participant you will receive: 25 seeds each of two superior goldenberry selections for evaluation, detailed instructions on germination, transplanting and field care and access to a MOOC (Massive Open Online Course) course beginning December 2018 which includes unlimited e-mail support for production related questions. Participation in this project is free, all we ask is that you provide feedback regarding your experience with this new fruit. If you wish to participate, please send me your farm phone, email and mailing contact information, and feel free to ask questions. Edward Durner, RutgersUniversity. Call 848-932-6366 or email durner@sebs.rutgers.edu

VT AGENCY OF AGRICULTURE DIRECT MARKETING SURVEY

The Vermont Agency of Agriculture is partnering with NOFA-VT to conduct our annual Direct-to-Consumer Market Survey for Vermont Producers. Your voluntary participation will help us understand the interests and needs of Vermont producers serving direct markets. It will allow us to update our Vermont farm stand, CSA, and farmer's market directory, and to better facilitate consumer awareness of opportunities to purchase Vermont produce. All respondents will be entered into a drawing for a chance to win a 2019 NOVA-VT Winter Conference Registration. Please note, any sales and economic data will only be shared in aggregate form in reports and publications, individual responses will NOT be shared publicly. If you have any questions email alissa.matthews@vermont.gov or call 802-505-166. Please take 15 minutes to complete the survey by April 15 by going to: <https://www.surveymonkey.com/r/2018directmarketproducer>

VT TILE DRAINAGE SURVEY

Tile drainage is a hot topic these days. A short survey has been developed to help us better understand the views of Vermont farmers sought on the agronomic, economic, and environmental benefits/risks associated with subsurface tile drainage. It is voluntary and you are free to not answer any questions or withdraw at any time. All information collected will be kept anonymous. If you have questions contact Heather Darby, UVM Extension, at (802) 524-6501. Please take the survey at: <https://www.surveymonkey.com/r/UVMTileDrainage>

VT OPEN FARM WEEK AUGUST 13-19

Join us for the 4th annual Vermont Open Farm Week, which is a great way to engage with customers and your community. At this point, we want to make sure that you have the week on your calendars so you can start planning. You can choose any day during the week to host an event, or have events on multiple days. Registration for farm participation is on DigInVT.com and will run until July 2nd. Visit www.diginvt.com/blog/openfarmweekforfarmers/ to register. Questions? Erin Buckwalter at erin@nofavt.org or 802-434-4122.

FARMER FEEDBACK NEEDED PRODUCE SAFETY REGS

The New England Produce Safety Coalition (NEPSC) is seeking small and medium-scale produce growers to participate in an interview about the impact of new produce safety regulations, including the cost of implementing best practices. Feedback from growers will help shape future produce safety informational materials to help with adaptation; you will receive a \$25 gas card as thanks for participating. To schedule a 45-minute interview (phone or in-person), please contact UVM research assistant Alisha Utter at autter@uvm.edu