



Vermont Vegetable and Berry News – March 13, 2012
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REPORTS FROM THE FIELD

(Jericho) Is it spring or is that 2 foot snowstorm still coming? We are already ventilating the overwintered low tunnels which were still encased in snow this time last year. Kale, scallions and spinach are coming through great in low tunnels, as is the chickweed. Tried various covers for overwintered spinach outside since we didn't have any snow cover to protect plants, and found a layer of Covertan directly over the beds did best and was simplest to put on/off. Harvested deliciously sweet baby pac choi in mid-February from overwintered crop just before it thought about bolting. Now converting and reseeding the first high tunnel beds after finishing last harvest of overwintered mesclun and arugula that is bolting. Lots of other cold hardy transplants going in. Time to soil test the high tunnels.

(Westminster West) We have spinach just starting out in one unheated hoop house and arugula and broccoli raab and lettuce in another unheated hoop house. Trying to get it raised and cut before those houses turn into tomato tunnels. Darn near 60 degrees right now. Dreaming of a better strawberry year than last when that week of rain in June took 50-60% of the berries. So, I planted 3 times as much for this season. It's always a gamble.

(Westminster West -2) Whatever little snow we had is gone now. I expect our garlic to start poking up very soon and then we will begin to top dress the beds with nitrogen. Busy this week with new hires, always is a bit chaotic with training new people, while keeping existing crew busy. Very busy seeding trays and transplanting plugs into pots. We were going to do some early veggies in a couple of tunnels but just too busy with our regular spring annuals and veggie pacs to deal with anything else. The bio controls we learned about from the Extension workshops are being tried out and so far having real success using green bean plants as traps for thrips. Also using banker plants and releases of assorted predators, which seem to be doing a great job. So happy I don't have to spray anything, even if it was an "organic" spray!

Using less fuel this season due to the milder winter, let's hope it stays that way for a bit longer. We have allowed for an expansion of sales this year in all area of the business and hope that the economic recovery continues for everyone.

(Starksboro) Right now it's looking kind of dry, might be a case of be careful what you wish for.

(Norwich) First 400 grafted tomatoes may go in end of the week. Overwinter spinach looks surprisingly good even with open winter, might try hoops and covers if the ground softens up. Also surprised with how good row covered plastic berries look, just worried they may start to grow way too soon and get bit in a cold snap. Hope to frost seed sweet clover into rye if the ground hardens up again. Was able to get thirty tons of lime spread couple weeks ago with open ground hard as a rock and almost no snow. Never did that before! Likewise had six tractor trailer loads of dairy manure dumped just where needed in fields, and nobody got stuck. Got some fields all ready to go in the fall and if this weather keeps up, may get something in the ground real soon. Greenhouses beginning to fill up with bedding plants and starting our scouting, sticky cards, and bug releases. Helpful cash coming in from our much appreciated CSA members. Great crew, it's going to be a good season!

(Plainfield NH) The big question here is should we uncover strawberries? The coming week looks to be high 50's, and after an open winter they could regenerate quite a bit with a long cool sunny spring. We'll have a lot of sleepless nights with frost control, anyway. Meanwhile, greenhouse season is in high gear with ornamental liners pouring in and seeding to be done. Maybe late this week we will start planting GH tomatoes. Grafting is going well for us, so far. Over wintered populations of foxglove aphids and thrips in the ornamentals spiked a couple of weeks ago, but looks like the tide has been stemmed by spot spraying of biorationals and beneficial releases, so we are breathing easier now. Little more pruning of blues to finish up. At a meeting I heard Alan Eaton (NH Ext. entomologist) suggest that spotted wing drosophila was less likely to be a problem in tomatoes, marginally so in strawberries but it looks grim with blues and raspberries. Farmers in southern NH got a really rude surprise last fall. Alan said SWD will work its way north into Canada, and easily overwinter. Looks like another Bad Boy is moving into town for good.

(Argyle NY) Not sure if we ever had winter, but it seems like May right now and we will break ground next week for our third and final (hopefully) high tunnel (34x144). Greens in the other tunnels are growing tremendously and we've been harvesting about 200 pounds out of the 2 tunnels each week. Swiss chard and kale increasing in production and the trial of 24 varieties of spinach is generating good data, with Space, Lombardia, Donkey, Giant Winter,

Reflect all near the top for yields. Some Cladosporium and mites but Actinovate and Azadirect seemed to eradicate those issues, and we may put down more beneficial mites now that the soil is warm as they seemed to help for most of the winter. Just saw our first aphids so will release lady bugs. The greenhouse is filling up already and we've recently replaced overwintered Asian Greens in the tunnels with newly transplanted Asian Greens and Happy Rich. Forum onion sets and Bridger onion plants look good in the low tunnel. Having to do lots of irrigation and finding time to complete projects; our 19.2 kW PV solar system just became operational so we should be generating electricity from now on! Markets are very busy already and we are planning for our busier season fast approaching.

DISSEASE AND INSECT ISSUES IN OVERWINTERED GREENS

Ann Hazelrigg, UVM Plant Diagnostic Clinic

Crown mites in overwintered spinach are tiny, almost transparent mites with prominent long hairs. They are soil and leaf dwelling. Above ground, they live deep in the crown of the spinach plant. Crown mite eggs are transparent and spherical and are laid in the innermost parts of the plant. Immatures are similar to adults except smaller in size. They can damage germinating seeds, seedlings and older plants. The mites feed mainly on the new, expanding leaves at the center of the plant. As the plants get larger and grow more rapidly, damage may be less. The damage I saw in the clinic due to these mites included stunting of the plants and off color, looking almost like a nutrient deficiency. With a hand lens, and pulling apart the crown you should be able to see these clear/whitish mites that are much more bulbous or rounded than 2 spotted spider mites. Also, these mites have long hairs or setae visible with a hand lens. Damage by these mites is usually associated with soils high in organic matter and cool wet conditions. They will build up if repeated cropping occurs all winter. Destroy crop residues as soon as you are finished harvesting and try to break the cycle by not immediately replanting to the same crop. For more info and images: <http://www.ipm.ucdavis.edu/PMG/r732400111.html> and <http://www.ipm.ucdavis.edu/PMG/GARDEN/VEGES/PESTS/spbulbmites.html>

Downy Mildew in spinach is a fungus-like organism that causes light green to yellow spots on leaves with purplish spores on the undersides of the leaves making the leaves unmarketable. The spores can germinate in four to six hours to infect plants in 12 to 24 hours during cool, wet conditions. There are several races of the pathogen that cause disease with new races appearing in recent years. The pathogen can be seed borne, so hot water treatment of seed along with selection of resistant varieties and management of air circulation and decreasing humidity are the main management strategies. Also, turning under spinach debris is important to eliminate a "green bridge" leading to infection of the next spinach crop.

SPOTTED WING DROSOPHILA ADVICE

I attended a meeting about this pest with researchers and extension at the CT Agricultural Experiment Station last week, where Dr. Richard Cowles has a variety of lab studies underway to better understand SWD behavior. There is much we do not yet know about this pest and how to manage it. With that in mind, here is some advice:

1. Familiarize yourself with this pest sooner rather than later. It arrived in New England last year, it attacks many types of firm ripe fruit, is winter hardy, and it can build up very, very fast as it lays a lot of eggs and has a short lifecycle. Visit the web sites listed below. SWD is not hard to identify but you must be able to tell it apart from other fruit flies.
2. Set up some traps to monitor for arrival of SWD. Traps with various baits including apple cider vinegar are easy to make (see sites below) but they will be much more effective when not competing with ripe fruit, so set them up before fruit crops start to turn color. Other regions of the country found SWD populations did not build up until early summer, and then it was abundant into fall. Fall raspberries, day-neutral strawberries, grapes and blueberries may be our most vulnerable crops. I think it is worth monitoring in June bearing strawberries, too.
3. Know what and when to spray. If SWD arrives and you need to spray for it, materials with best efficacy appear to be: spinosad (Entrust), spinetoram (Delegate), malathion, advanced generation pyrethroids (Warrior II) and Lannate. There will be considerable selection for resistance if materials like Entrust (OMRI approved) are used too often, so organic growers take note. Surround WP is both insecticidal (it acts as a desiccant) and a deterrent to SWD. It may be suitable for use on blueberries and wine grapes.

It will be important to time the first application of any insecticide to when SWD are known to be present and fruits are just starting to ripen. Work is underway to reduce insecticide rates or improve their efficacy by adding sugar and/or salt to the spray mix to stimulate SWD feeding. Stay tuned for experimental results.

4. Consider netting. On small scale, high value, high risk plantings (e.g. fall raspberries) it may be possible to exclude SWD with netting that has a mesh opening less than 1 mm. The only one I can find is ProtekNet Standard Plus which has a 1.0 x .85 mm mesh, weighs 80 g/m² has 80% porosity, 83% light transmission and lifespan of 7 years. Cost is \$287 for 6.5' x 328' or \$575 for 13' x 328' from Dubois Agrinovation. <http://www.duboisag.com> or 800-463-9999.

5. Use post-harvest practices to reduce overwintering populations. Clean up and remove as much unharvested fruit from the field as possible. It may also be possible to 'trap out' a lot of SWD once all fruit has been harvested, since the flies are active into very late fall. Use a lot of monitoring traps or try buckets with an inch of cider vinegar in the bottom, changed frequently.

For more information:

Penn State

<http://extension.psu.edu/ipm/agriculture/fruits/spotted-wing-drosophila>

Michigan State

<http://www.ipm.msu.edu/swd.htm>

Oregon State

<http://groups.hort.oregonstate.edu/group/spotted-wing-drosophila>

NC Small Fruit & Specialty Crop IPM – how to make SWD traps

<http://ncsmallfruitsipm.blogspot.com/2011/06/do-it-yourself-spotted-wing-drosophila.html>

SURVEY OF LOCAL FOOD INFRASTRUCTURE

NOFA-VT and VT-FEED are conducting a survey to understand local fruit, vegetable and egg aggregation, storage, processing, and distribution for institutions-- in VT and up to 30 miles from the border. This data is needed to understand how food is moving across the state and to inform the State's Farm to Plate strategic plan that is being developed. Your participation is very important regardless of the scale of your involvement in the activities listed above.

Responses received by March 14th will be entered into a raffle for one of ten \$75 gift certificates to a locally owned restaurant of YOUR choice. Please visit this link to take the survey: <http://www.surveymonkey.com/s/973NG8Z>. Questions? erin@nofavt.org

UPCOMING EVENTS, see: <http://www.uvm.edu/vtvegandberry/meetings/meetlist.html>

March 15 – Greenhouse Energy Efficiency, Dummerston

March 20 – Direct Market Pricing, Rutland

March 26 - Garlic School. Albany NY

April 10 – Practical Food Safety, Richmond

April 17 – Heating Greenhouses with Wood Pellets, Fairfax

April 18 - Initial Pesticide Applicator Training, Randolph Center

May 16 – Diversified Vegetable Production, Jericho