



**Vermont Vegetable and Berry News – April 28, 2017**  
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[www.uvm.edu/vtvegandberry](http://www.uvm.edu/vtvegandberry)

## **REPORTS FROM THE FIELD**

(Charlotte) I first tilled last year on April 18th; I still haven't tilled this year and doesn't look like I'll be able to for at least another week. Fortunately, I prepped some beds last fall and covered with silage tarp so we're able to plant into those beds. Our clay soil just isn't drying out. Finally got the spinach and peas planted, kale, Salanova, and head lettuce transplanted. I'm waiting on onions because I can't till. I'm definitely going to do more of the silage tarp beds next season.

(Hinesburg) I normally have bad flea beetle damage on first Brassicas of the year. This year I have had no damage. Amended soil with Brix Blend Basalt rock dust last fall. Is the difference the dust? (Editor's note: leaving an untreated 'control' area helps answer such questions.)

(Rochester) According to the calendar, our spring preparations are on time or early, but we are nonetheless having to push hard to complete blueberry pruning before bud break. The winter was not hard, the ground thawed early and the spring weather has been mild and moist. Now comes a month of nail-biting over potential late frosts.

(Burlington) Cover crops coming back nicely. With the dry summer last year, we ended up irrigating 6 acres of rye-vetch for germination, a practice I have shunned, but am now reconsidering. We've often managed to get a decent stand of rye in dry conditions, but lose the expensive vetch. One round of irrigation guns did the trick in the fall and we now have an excellent vetch-rich cover crop. Looking forward to plowing down in later May for some excellent nitrogen.

Turning around the tunnels to tomatoes and peppers, we were favorably impressed with the hardiness and production of Eazyleaf lettuces in our winter and spring tunnels: good production, hardiness, disease resistance, flavor and appearance.

(Huntington) Despite paranoia following multiple sub-zero nights and how much heat we were using in the propagation GH in March, we got on the ground around the same time we usually do (April 14), plowing rye ahead of onions on some light ground.

This was the year that the stars aligned and all the machines on the farm were due for full servicing at the same time, so I feel like all I've been doing is pulling drain plugs the last few weeks. I'm finally going to send in some trans-hyd fluid for analysis to see if our relatively easy tractor hours warrant factory fluid change intervals.

Proptek 242 plug trays purchased last winter have been great for onion transplants the last 2 years. 8-9 weeks old, plants look great, nothing root-bound, no fertilizer supplementing the Fort V and no signs of chlorosis. They're not the least brittle trays, so no recreational chucking. Compared to the standard \$1/each thermoformed 128, the 242 has 22% more plugs per sq. ft. with 23% more soil per plug.

(S. Burlington) Tilled new land on the new moon. Soil still a bit wet. Grateful for my Vermont native neighbor who lent me his tractor. A priceless offering. More than doubling production with the tractor access. Seedlings looking great in greenhouse! Some ready for transplanting already. Excited to start the first internship program on the farm. Harvesting dandelion. Eating wild greens. Watching all the perennials return. Feeling blessed. Incorporating herbal education for children on the farm. Great source of joy and income. Using black plastic mulch for the first time. Beginning to retrofit my greenhouse as a drying shed. Learning experiences continue to shape me as a new young woman farmer.

(Charlotte) We are busy planting new fields of brambles this year. Some of the fields are still too wet to get into. Seeing some bee activity which is great!

(Ange-Gardien Quebec) It is very wet here this spring. Could not enter fields up to now but hoping to do so by the end of the week. Cold and wet spring are good for me as I keep greenhouse for a longer period of time. No major issues with seedling so far. Succession planting in greenhouse work well so far, radishes are sold and carrot are up. I have to watch closely EC in greenhouse as it is rapidly increasing. It had some impact on seeded crops. Pythium did some damage too.

As work in the field increase I have to cut down the amount of time I spend managing greenhouse. Soil heating is great but I feel I am always couple of degrees behind. Thermal mass of deeper soil always pulling me back to 5C. On top of insulating sides, I consider insulating underneath too for next greenhouse. Maybe I should just cultivate in containers with permanent potting mix. I would be happy to discuss with anyone about this.

New this year, instead of ordering sweet potatoes slips to plant beginning of June I started my own so I am planning on transplanting rooted slips mid-May and take advantage of May and June sunlight which I think is the most important for northern regions.

(Plainfield NH) Banking some much-needed ground moisture in our area, whereas others would like a little less of the rain. Normal field tillage is underway: spading, harrowing, plowing and fertilizing. Raspberries came through the winter very well; a little early to tell how the strawberries did; blueberries seem to be budding up well with a good fruit load. Opened last week for ornamental sales but weather has not inspired home gardeners so sales are slow.

In the greenhouses I had to pull the plug on part of the beneficials program. After struggling with spider mites for the last 2 months it was determined that *Phytoseiulus persimilis* was not going to solve the problem, so I had to go in with Avid (abamectin), and it may take another application of something to get it under control. It is gut wrenching to spend a lot of money on beneficials, hoping things will balance out, but it usually results in a bigger problem by not admitting defeat earlier. Elsewhere the lacewings and *Aphidoletes aphidimyza* are dealing with the foxglove aphids, *Steinernema feltia* nematodes are suppressing thrips, and we are prophylactically releasing *Encarsia* so we don't get a white fly problem. That much is working well.

Have had a problem getting *Bombus* class C bumblebee hives for tomato pollination. In past years, orders have been same-day drop shipped. This year there's a back order problem so we have resorted to the old hand-held 6-volt pollinator.

(Stephentown NY) In early April I found quite a few newly-planted cherry tomatoes in a tunnel to be damaged or cut off entirely. Some at soil level, some up to 2 inches above ground. Not sure what is was but went out at night with flashlight to discover pill bugs, also known as sow bugs. I was so surprised to see that they would climb the plants!

I applied diatomaceous earth around each plant and was careful about collecting the pill bugs from the planting holes before planting more plants. I also mounded soil up around the injured area on other plants for them to put out additional roots. In total I lost about 5% of the plants. I don't graft the cherries, and I also planted them as plugs which I will probably avoid doing in the future. Grafted plants were big enough and stocky enough that they weren't affected.

(Newburyport MA) Arrowhead Farm. Cool and damp start in the field. Good year to have all these tunnels and greenhouses. Harvesting big crops of Asian greens, kale, spinach, and leeks under plastic. Tomatoes setting fruit extremely well. Picking Albion and Seascape strawberries from hanging baskets above greens and transplants. Planted February 25. Albion has better size and flavor. Retailing for \$6.75 half pint.

Running my more vigorous tunnel tomato cultivars with four leads strung up this year instead of two and increasing fertility accordingly. Same plant spacing. LOTS of twine in those two houses. Looks good so far---will see how it looks in October.

High quality transplants starting to go into the field. Increased all plug sizes this season for higher soil mix volumes and it's paying off in better transplants. Farmers' Markets sales are pretty good. CSA Share signups are running behind last year.

(Argyle NY) Depending on the soil type I'm either waiting for it to dry or irrigating to get the transplants or seeds watered in. Overwintered onions that were in a tunnel are starting to swell but the ones with just rowcover over the winter are lagging way behind. Interesting to see if it makes a difference in the end. Last year it didn't but they matured later (more weeding needed).

Strawberries are looking great with lots of blossoms coming on and crowns are multiplying with the heat. Tunnels are cranking out a lot of greens these days and markets are strong so balancing that with the transplanting/seeding schedule takes a good crew. Markets outdoors start next week, hopefully it stays warm. Soil steaming to eliminate weed seeds is our next venture. I will have more to report on that.

## **BALANCING VEGETATIVE AND REPRODUCTIVE GROWTH IN TOMATOES**

Vegetative growth favors development of roots and shoots for a strong plant structure and leaves for photosynthesis. Reproductive growth favors flowering and fruit formation for development of a marketable crop. A balance is needed between the two types of growth in order to sustain tomato plant growth and productivity. Reproductive growth is characterized by: flat, light green leaf, thin stems, dark yellow flowers on short trusses, and many large fruit that develop fast. Vegetative growth is characterized by: curled thick leaves, thick stems, pale yellow flowers, on long thin trusses, and fewer, smaller fruit that develop slowly.

Growers can 'steer' plants to be more vegetative or more reproductive by manipulating growing conditions. For example: increasing the difference between day and night temperatures, lowering relative humidity, irrigating less frequently for longer duration, increasing leaf pruning and decreasing fruit removal are all ways to steer tomato plants to become more reproductive. For more information on this topic, see:

<http://www.uvm.edu/vtvegandberry/factsheets/VegetativeReproductiveGHTomato.pdf>

## **FARM COOLER CHECKLIST NOW AVAILABLE**

Chris Callahan, Agricultural Engineer, UVM Extension

There is a lot of value at stake in the performance of your cold storage. Taking some time to keep that area clean and the cooling system functioning well reduces the risk of losses due to pathogens and sub-optimal environmental conditions. Download the Farm Cooler Checklist to help you complete key tasks for making sure your cold storage is performing optimally.

<http://blog.uvm.edu/cwcallah/files/2017/04/Farm-Cooler-Checklist.pdf>

Highlights include: Cleaning, sanitizing and inspection of surfaces. Checking the envelope. Inspecting refrigeration equipment inside and out. Checking over a CoolBot™. Checking thermostats. Confirming drainage. Reviewing and possibly upgrading lighting. Considering energy efficiency upgrades.

## **UPDATE FROM THE UVM PLANT DIAGNOSTIC CLINIC**

Ann Hazelrigg, Plant Pathologist, UVM Extension

Things are waking up! We have had two samples of downy mildew on high tunnel spinach and we also have seen two samples of powdery mildew on greenhouse tomatoes. Potassium bicarbonate (Milstop, etc.) seems to be the organic material of choice to manage that disease. I have also looked at several pictures of cold damage on young tomatoes, where portions of the leaves have light-colored dead tissue after cells collapse.

I have had a few emails from growers on the ID of liverworts in the greenhouse and on compost. Liverworts (and mosses) in greenhouses like low UV light, moist conditions and high fertility. The flat growth of these plants can result in thick mats on floors and under benches and can cover soil in pots, impeding water flow. Liverworts don't have flowers, instead they have female and male sex organs on different plants. Male "antheridiophores" look like an umbrella while the female "achegoniophores" have finger-like projections. For management options check out links: <http://www.greenhousemag.com/article/gm1214-liverworts-mosses-disease-management/> and <http://horticulture.oregonstate.edu/content/liverwort-0>. Anything you can do to decrease humidity and fertility will help reduce these problems.

The PDC is here to help commercial growers ID problems. You can email pictures but be aware you may only be able to send one at a time: [ann.hazelrigg@uvm.edu](mailto:ann.hazelrigg@uvm.edu), or snail mail to (or drop samples at) 201 Jeffords Hall, 63 Carrigan Drive, UVM, Burlington VT 05405. (802) 656-0493.

## **NEW ORGANIC FERTILIZER PRODUCTS**

According to Brad Lawes of Lawes Ag in Brandon, Chilean nitrate has been reformulated for 2017 as 15-0-2 (to avoid regulatory complications as an explosive) so they once again carry it. Lawes has also received samples of a new OMRI-approved P soil amendment called OrganoPhos 0-12-0 readily available P. It has 13% humic acid and 25% Ca. He hasn't ordered it yet since he would need to get a truck load. Cost is \$1100/ton, which works out to \$4.60 /lb. of phosphate. Contact Lawes directly if you would like to learn more: (802)247-6874. Links to suppliers of fertilizers, their nutrient content, and an updated calculator for nutrient management planning are at: <http://www.uvm.edu/vtvegandberry/NMPlinks.html>.

## **UPDATE ON PRODUCE SAFETY REGULATIONS**

Confused about whether you have to comply with FSMA? Wondering how that relates to GAPS and CAPS? Want to know who to contact for help? This 3-page fact sheet tries to sum it up: <http://www.uvm.edu/vtvegandberry/factsheets/ProduceSafetyRegulationsUpdate2017.pdf>

## **MAKE SURE YOUR FARM COUNTS IN THE CENSUS OF AG**

NASS conducts a census of all agricultural operations every five years. They need to know about all types of farm, of all sizes. The information you provide is kept confidential by law and will not be disclosed to any other government agency or private entity. However, the aggregate data is widely used to determine funding levels for important farm programs. You can complete the survey on-line at: <https://www.agcounts.usda.gov/cgi-bin/counts/>

## **SHARE YOUR THOUGHTS ON FSMA WITH THE VT AGENCY OF AGRICULTURE**

Emma Hanson, newly hired Produce Safety Outreach Coordinator at the Vermont Agency of Agriculture, would like to interview Vermont produce growers to learn what you know about the FSMA Produce Safety Rule, the best way to get information to you, and how the Agency can best offer support. She invites you to take part in a non-regulatory, informal interview either on your farm or over the phone, for about half an hour. If you would like to participate, please contact her: [Emma.Hanson@vermont.gov](mailto:Emma.Hanson@vermont.gov) or 802-522-3132. Your input is extremely valuable as the Agency does its best to serve you and keep you informed on updates to FSMA.

## **OPEN FARM WEEK AUGUST 14-20**

This annual event invites Vermonters and vacationers to build relationships with farmers and deepen their interest in the working landscape. Farmer sign-up is open now at:

<https://www.diginvt.com/blog/openfarmweekforfarmers/>

A limited number of farmers can receive technical support around their event planning.

Questions? [lisa.chase@uvm.edu](mailto:lisa.chase@uvm.edu) or 802-257-7967 x311.