**Vermont Vegetable and Berry News** –May 29, 2019

compiled by Vern Grubinger, University of Vermont Extension
(802) 257-7967 ext. 303, vernon.grubinger@uvm.edu
www.uvm.edu/vtvegandberry

**ON-FARM WORKSHOP: SAM MAZZA'S FARM MARKET AND GREENHOUSES.** June 10, 4-7pm. 277 Lavigne Rd., Colchester, VT. 05446.

This farm has one of the largest vegetable and ornamental greenhouse operations in the state. Join farm managers Gary and Laurie Bombard and greenhouse manager Neil Comstock for a tour of multiple greenhouses growing tomatoes, bedding plants and other ornamentals. Margaret Skinner and Cheryl Frank Sullivan of the UVM Entomology Lab will be on hand to describe monitoring, use of bio-controls and other IPM strategies for greenhouse pest control. Ann Hazelrigg will cover greenhouse diseases, Vern Grubinger will lead discussion of tunnel tomato production.

The UVM Extension vegetable and berry team and the VVBGA have put together nine workshops across the state, from June through November. Attendance at these events is free for members of the Vermont Vegetable and Berry Growers Association. The cost is $10 per-person for non-members, payable on-site. Refreshments will be served. To view all workshops go to:
http://www.uvm.edu/vtvegandberry/meetings/2019VegandBerryFarmWorkshops4-16-19.pdf

**ON-FARM COMPOSTING WORKSHOP**
June 3, 6:30- 8:00pm. Strafford Village Farm 375 Justin Morrill Highway, Strafford VT

Join Cat Buxton for an explanation of how food scraps from Newton School are composted on this diversified livestock and vegetable farm. Learn how to increase the productivity of your farm compost, manage piles for pathogen kill and organic certification, and boost the microbial inoculum to improve fertility in farm fields. This outdoor class will take place at the compost pile. FREE! Rain or shine, may be muddy.

**REPORTS FROM THE FIELD**

(Burlington) A slow start on all fronts this year: while this is working for our salad greens and likely leaving us with better than usual quality June spinach, lettuce, and broccoli, it is vexing us in the tunnels and crops in wetter locations. Water is complicating our field prep and planting, though the germination of direct-seeded crops and transplant establishment has been great with the frequent rainfall.

We had a large number of our tunnel cucumbers give it up to Pythium etc. probably as a result of cold wet soil, this was an early May planting that usually isn't all that cold and wet in our unheated tunnels. Maybe prophylactic Rootshield next year, or planting a week later will help.

Really appreciating our full-bed flamer as a hedge for stale seedbed prep in wet conditions; we may end up using it to flame our entire potato crop pre-emergence if the soil doesn't dry up enough for the flex-tine weeder very shortly.

(Norwich) Corn plants transplanted into clear plastic and covered on May 8 had a hard time getting going with the cold, but greened up and took off with better weather. Direct seeded corn into clear plastic with our co-owned PolyPlanter popped right up and took off under new covers. Rain and cold has been a drag, but temps under clear plastic have been several degrees above bare ground even on dark days. Looks like it's a great year for clear plastic mulch. Corn is not organic and we use an herbicide, but why growers (including organic) still use black plastic on cucurbits instead of clear is a complete mystery to me.

Greenhouses: Last Saturday was our best day in nearly forty years for plant sales. However, as nice as that seems, the reason is most likely because nobody has been able to get into their gardens until now, but the cash flow is welcome! Aphids: This year we have been very methodical is putting out banker grass pots with grass aphids and Aphidius every two weeks. The results have been very positive and interesting. We have had no aphids of any kind in any greenhouses including the tomatoes, and the grass aphids have attracted a huge number of various syrphid flies, who jump on the grass pots as soon as they go out, and start laying eggs. Seems to me that all you winter growers with aphid problems should try this out. Aphidius seems pretty well adapted to low light periods, and once established are very efficient at getting after aphids.

(Hinesburg) Lots of aphids on spinach. Two rounds of lady bugs, extra irrigation, and some patience, and they are all but gone. Hoop house greens growing and selling well. Outdoor radishes and salad turnips as well. Outdoor spinach stunted. Other outdoor greens coming slowly.

(Craftsbury) Spring is slowly crawling north, on wet feet and cold hands. Despite a solid snow cover for a full 6 months, we found only a few large blueberry bushes that looked like a squashed spider. These are slowly getting back up. No other signs of damage. The full-field pruning we did last year has resulted in a very heavy blossom bloom this spring with lots of air able to flow through the previously thick plants. Getting on the field with equipment to mow has been hampered by lots of rain and poor drying conditions. The threat of frost is always a late-May concern after blossoming, with a low of 35 degrees on May 27 grabbing our attention. Like every other grower, we are hopeful for warm and dry days ahead.

(Westminster West) Seems like every year we say what a terrible spring it's been, but really, it's been a terrible spring! Now that it's drying out, I'm working double-time to plow and get fields ready for planting. Onions all in, better late than never! All the winter squash is up as plugs in greenhouses and I'm rushing to prepare fields before rain returns. Interesting to see the effects that drain tiles and deep sub soiling have made. I couldn't see much effect last year, but this year I'm really seeing the benefit of fields drying out.

Plant sales are holding their own in the 4 state region we deliver to. Farmers' market has been ahead due to adding CBD hemp plants and flowers for sale this year.

Tractor safety! For 47 years of farming I have avoided killing myself on a tractor, but that almost changed yesterday; while plowing, I noticed I had snagged a drip line header pipe and was dragging it in the field, so I put the Kubota into neutral, and climbed down to untangle the plow, which was still in the soil. After a few minutes of pulling the tubing out, I realized I needed to raise the plow a bit so I stood up from my crouching position behind the tractor and as soon as I took a step back, the tractor reengaged into reverse and started going backwards! I know I'm not supposed to jump on a moving tractor but instinct took over and I pulled myself up into the seat and slid it back into neutral. Raised the plow, shut the tractor and engaged the brake and finished the untangling job. Lesson learned: I will always engage the brake before getting down, and shut the tractor off as well. We get up and down so often while doing field work, it's easy to cut corners, and get hurt. Practice safe farming please!

(Shrewsbury) The blessing of the wet spring and periods of torrential rain is that it's pushed us to make changes to our fields that I think will ultimately increase our farm's resilience to heavy rain and periods of prolonged wet weather. This year we'll begin transitioning our fields from beds with sod pathways to 40-ft wide blocks that can be tarped, surrounded by 10' sod alleyways. We're taking a laser level to our fields to pitch the sod alleyways to move water downhill, rather than giving runoff the opportunity to run downhill across an entire field. For the 40-ft wide tarps, we use Ultraweb fabric. It's a woven fabric similar to landscape fabric but lighter weight. It doesn't pool water like silage tarps, is more durable, lighter weight, and comparable in price. We have some that are 5 years old now and are in good condition. You can get them from Nolt's Greenhouse Supply, but you have to specifically ask for the larger sizes.

We've noticed the beginnings of Botrytis in our tomato tunnel so are trying to prune it out, keep humidity down, and spray Actinovate and Regalia to keep it under control. Mycotrol and Pyganic are keeping aphids at bay. It's worked really well for us this year to interplant the tomatoes in our heated tunnel with lettuce, cilantro, bok choi, radish, and hakurei turnips. These grow so quickly and have been the backbone of our harvest in the transition from winter to summer production.

(Ange-Gardien, Quebec) Lack of sun for optimal growth in the greenhouses. Soil working windows are short but everything is in the ground as planned waiting for heat to grow. Organic field crop soybean planted, always a challenge to get proper seeding rate. Hopefully will get windows to weed! Market not as strong, hard time to sell lettuce mix, they want whole heads but I make way more money with multiple cuts. Busy operating while I should be planning 3 big projects: new greenhouse, new artesian well and renovation in packing shed. I need 30 hours a day!

(Plainfield NH) The cool damp spring has suppressed greenhouse ornamental and veg plant sales, although this past weekend was very strong. Nice to see some open space in the greenhouse, and the cooler temps have made watering a little easier during the busy sales rushes for a staff that is already a little thin.

In the field the strawberries look lousy for this time of year. Pretty sure we are looking at winter injury. Blues and black raspberries look good, but winter injury on the summer raspberries is significant. We are pretty current on our field planting, although no row covers on anything as a result of not enough bodies available. This would be a good year to have rowcovers on to push growth. Transplanting on the sandy ground has been a breeze with the incessant showers-no irrigation pipe set anywhere. Feels like we are farming precariously again.

(Argyle NY) It's been a challenging two months with the weather but use of silage tarps has helped with weed control and helped keep some areas dry so that we can keep some field seedings and transplants on schedule. We are learning how long it actually takes to get the weeds under control; we also doing some flaming if the tarp is only down for a few weeks.

Tunnels are transitioned to summer crops, with some crops like tomatoes planted into the middle of the kale beds so we can still harvest kale a while. One high tunnel will go out of production and be cover-cropped for the summer.

Markets have been up and down, with our weekday one being very poor, but with strawberries starting soon that will bring in customers for sure! Head lettuce has been ready for a week. Spinach is transitioning to Banjo and Seaside as our standard summer varieties. Pea stands are mostly great and flowering, will be ready early this year.

Potatoes are all planted, with trials of several red and yellow varieties, and the sweet potatoes came in yesterday so we just need a drier day to plant in the plastic/straw mulch which is ready for them. Cultivation with the Lely tine-weeder is critical weekly to assist with weed control, as well as our quick hand cultivation/fertilizer incorporation with the wire weeders/push hoes. We enjoy and value all our monitoring equipment to keep tabs on our storage areas for temp, and for monitoring farm activity through the cameras.

**UPDATE FROM THE UVM PLANT DIAGNOSTIC CLINIC**
Ann Hazelrigg

Seeing a lot of pictures/samples of Botrytis gray mold in tomato, spinach and bedding plants. This is a weak fungal pathogen associated with high humidity and usually attacks dying tissues, but with humidity over 85%, it can become aggressive and even cause cankers in tomatoes. It is typically found low in the plant where air circulation was poorest. It is easy to diagnose: you can see the gray fuzzy spores on the tissue. Sometimes gray mold can be confused with downy mildew in spinach so it never hurts to send in a sample to make sure. Increasing air circulation and reducing humidity is the best management.

Curling/twisting of foliage caused by ethylene can be common this time of year when heaters may still be turned on. Always check first for cracked or poorly vented heaters. Typically, the symptoms would show up in the entire greenhouse but tomatoes are especially vulnerable so check that crop first. Virus diseases can also cause stunting, curling and twisting, but this would be more hit or miss in a greenhouse rather than all the plants being affected at once.

Contaminated compost due to persistent pesticides also causes severe curling and twisting especially in tomatoes and beans but would be unlikely in a greenhouse unless you used horse manure in your potting mix. Pesticide drift from 2, 4-D herbicides can move some distance and could definitely cause problems in a high tunnel if sides are up. Broad mites are very small mites that are often brought in on ornamentals and can cause severe curling and twisting and russetting of fruit. These may be present early in the season but don't become noticeable until later in the season when you see russetting on pepper or tomato fruits.

Edema may be a problem in some crops. This disorder occurs when plants take up water but don't transpire it due to cool cloudy weather. The water builds up in cells and then bursts, causing corky lesions on the leaf undersides, often along the veins. Raised blister-like bumps may also be common on the leaf surface. Damage is usually not too severe and the plants recover.

Poor leaf out in blueberries may be due to Fusicoccum and/or Phomopsis canker. Check bushes for the telltale symptoms or send samples to the clinic. Prune out any damaged twigs and destroy. See:
https://cpb-us-e1.wpmucdn.com/blogs.cornell.edu/dist/0/7265/files/2017/01/BB-canker-fast-fact-26jbmk6.pdf

If you have a problem, start with a picture to ann.hazelrigg@uvm.edu and/or send samples to PDC, Jeffords Hall, 63 Carrigan Dr., Burlington, VT 05405.

## UVM AG ENGINEERING BLOG POST: BACKFLOW PREVENTION

The intentional, directional, and reliable flow of water is important to ensure agricultural water is “safe and of adequate sanitary quality.” This post provides information on the importance of backflow prevention and some common practices that help mitigate the risk of backflow: go.uvm.edu/backflow