







(Burlington) Mild and sunny winters sure show up in the tunnel crops. Spinach is fast approaching runaway growth, and the lettuce came through the winter with very little cold damage. Things are actually green again. I'm really looking forward to our second cut red Russian kale this spring, complete with delicate and delicious flower buds; our CSA members will be so happy.

The paperpot transplanter seems like it has some real benefits in getting lots of spinach transplants closer together than we'd ever consider hand transplanting; we are thinking about going to a 2" x 6" spacing next year, after hand transplanting on a 6" x 6" grid.

Storage crops are holding well, reminding me that all of our investments in high quality storage infrastructure really do make a difference, and also reinforcing that a warmer, drier autumn also makes a huge difference, excellent storage notwithstanding.

After having poor establishment of our tunnel cucumber transplants the second week of May we are going to try to raise the soil temps with clear poly laid on the soil surface a couple of week prior to planting, with the hope that higher soil temperatures will reduce our problems.

I am really appreciating the good work of breeders out there working on high performing and delicious tunnel tomatoes; one of these days I am going to love growing and eating the same tomato cultivar!

(Dummerston) Still lots of carrots and parsnips in the root cellar, hoping to sell them soon. The

Spring blueberry work will be re-mulching all 500

The project will pay for soil tests at the UMaine lab and provide customized fertilizer recommendations for your tunnel(s). Growers must agree to grow at least one bed of red, indeterminate slicing tomatoes, follow the soil test recommendations, and track yields. If interested, please contact Becky Maden with questions or to sign up (802) 773.3349 x 277 or [rebecca.maden@uvm.edu](mailto:rebecca.maden@uvm.edu).

## **TUNNEL SPINACH UPDATES**

Ann Hazelrigg, UVM Plant Diagnostic Clinic

We re seeing a lot of leaf edge scorch on high tunnel/row covered spinach. Anytime you see a clear definition between brown/dead tissue right next to green and healthy, it is usually abiotic. We chalk it up to either earlier cold damage, or a scorch issue with bright sun/warm temps. The older leaves were likely the cold injury; new leaves would probably be the latter.

Several samples of spinach crown mite have come in. These teeny arthropods feed way down in the center of the crown and are very hard to see without a dissecting scope. They cause stunting

he damage. The damage is generally associated with soils that are high in organic matter and cool, wet conditions. Cleaning up the crop when it is finished may help reduce mite populations. Effectiveness of rotations with non-host crops is unknown. Spot treating with azadirachtin should work. See <https://plant-pest-advisory.rutgers.edu/might-be-mites/>

Also saw one symphylan in a spinach sample that had crown mite. Mature symphylans are white, slightly less than 1/4-inch in length, with 12 pairs of legs and a pair of long-beaded antennae. Their entire life is spent in the soil. Their life span is probably 1 to 2 years. <https://ento.psu.edu/extension/factsheets/garden-symphylan-as-a-pest-of-field-crops>

These pests can build up in high organic matter soils and feed mainly on decaying organic matter but they can feed on roots and cause damage and stunting of plants. Not sure if this will work in tunnels, but the Penn State info said to test for symphylans in the field by turning over at least 10 shovels of soil with the threshold for a problem would be 1 symphylan/shovel. An Oregon State study cited here suggested baiting with potato slices, covering and checking 24-36 hrs later and counting symphylans. A total of 75/slice would indicate substantial damage. This was used in garden soils. <https://www2.ipm.ucanr.edu/agriculture/lettuce/Garden-Symphylans/>

Saw Cladosporium on Flamingo spinach

One grower sent pics of downy mildew infected spinach, cultivar Verdil. Yellowing on the tops of the leaves with brown/purple sporulation under the leaf. Be sure to look at both sides of the leaf when you suspect a problem. <https://ag.umass.edu/vegetable/fact-sheets/spinach-downy-mildew>. A sample is being sent to be race typed. Let us know if you see any more and we can

