



Vermont Vegetable and Berry News – January 30, 2014  
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## REPORTS FROM THE FIELD

(Montpelier) The great freeze of 2013-14 continues! Spinach is hanging in there with no remay. We go out to harvest (very little) and it is wilted and looking desiccated. The minute it hits the wash water it plumps right up and looks/tastes great! The silver lining is that the very cold temps are freezing my greenhouse soils for the first time in 10 years. Could be very beneficial by killing certain pests. Specifically the garden symphylans in one house. Waiting patiently for Feb. and the warmer more intense sun that comes with it. Wholesale winter accounts are waiting anxiously for spinach. Behind on planning and many other things, prospective employees have started looking for summer work; a lot to do this month.

(Starksboro) Crops are holding up well in storage. If all goes well, we should have potatoes right through June. My daily winter routine is to check each of 5 storage rooms each day. I splash some water around as needed and check the temperature. I keep a cello bag of carrots on the floor in the coldest corner as a canary in the cold mine. The condensation on the inside of the bag will freeze before anything else and let me know I'm about to have a problem. Chris Callahan, UVM Extension Ag Engineer, has helped me install temperature and humidity monitoring in all the storage rooms. Pretty slick! I still do my daily rounds checking each room.

(S. Royalton) It's been a challenge to harvest spinach with the cold weather, only a small window when it thaws enough to pick. Actually got our seed orders in already, potting soil coming this week. Looks like we'll be starting our first tomatoes next week. Farmers' market sales have been strong especially for greens. We have been digging Napoli carrots seeded from one of our high tunnels, seeded Aug. 4, they taste great and sell well but I think the return isn't as good compared to the same bed space planted to spinach.

(Little Compton RI) A tip to those of you doing grafted greenhouse tomatoes: take a good look at your Maxifort seed! Though it is an extremely vigorous plant, it is very sensitive delicate seed. We had some we got last year and thought would be fine (March germ test 95%) but it was barely 5%!

Plus on close examination, the seeds looked thin and not plump like most tomato seed does. Now we have a boatload of scions with no place to go. Suggestion: don't be afraid to send seed back if you don't think it looks right. The seed company did send us new ones. I have been starting seed from other companies this year and the Maxiforts are still only 92-95% germ; so over-plant them to make sure you have useful plants when it is time to graft! Also, this season's Maxiforts are coming up very fast. We seed them a day or so after the scions. On the farmers' market front much improved! Our biggest problem is dealing with management who does not understand the level of cheating going on at a number of the winter markets. We got them to agree to let the farmers monitor themselves and we have stemmed the tide of California greens, spinach etc. that has been stealing dollars out of our local markets! Now if the sun would just get a little higher and warmer we will be fine.

(Durham CT) In the next few days, we'll be approaching that magic moment when the amount of daylight goes above 10 hours, at least in CT; it will be a little bit longer for those of you to the north. Eliot Coleman refers to this dark time of year as the Persephone period (based on the wonderful Greek myth, check it out.) Things don't grow much till now, then every day from here on out we should see marked changes in our greens that have been sitting quietly since they were last harvested almost a month ago. For us these include claytonia, spinach, kale, arugula, yukina savoy and mache. Mizuna for us has been a poor choice, as it turned to mush with the cold and hasn't shown any signs of regenerating. Meanwhile we've been busy trying to understand how to utilize AgSquared, with some success, and have also assembled clips, rootstock and seed in anticipation of planting our first round of tomato plants. Our nursery should be up and running in 10 days. We've also started Swiss chard in the basement under lights; it is happy there. Outside we've got about 25 rows of low tunnels filled with kale, spinach, lettuce and early carrots. For us these low tunnels are part of our strategy of getting an early start on spring. Low tunnels can be a nuisance to get uncovered and then covered again so we've decided to plant them, leave them alone and see what comes out in March. It's worked so far. We've also got two new 30x96 hoop houses going up. Just waiting for a warm day to cover so that they remain tight when it gets cold. This is our 15th season of growing through the winter. Hardly seems possible, still so much more to learn.

(Argyle NY) We have not seen such a cold and non-sunny winter in our many years of growing. It is affecting the solar panel and high tunnel outputs. The high 34 x144 tunnels have never had frozen ground in the middle before, but do now. This has limited plant growth and we have lost many of the large Salanova lettuce heads. We will be assessing which ones fare better with these extreme cold temps which have gone down to 11 degrees under the three P-30 covers.

Spinach, Swiss chard, and Asian Greens are all in dormancy but we are still harvesting salad mix and kale. Root cellar crops are holding and selling well, including cabbages, carrots, potatoes, celeriac, kohlrabi, beets, radishes, turnips, rutabagas, etc. New seedlings of lettuce, Asian Greens and spinach are growing nicely in the greenhouse and will be renewing the tunnel greens in a month or so. We had one short day of being able to get some Tadorna leeks out of the ground, they were under 2 layers of row cover and looked great. They are popular at farmers' market, even with poor weather on market days. Seed orders are being placed for the next season and we look forward to warmer weather and more workers!

#### COST PER POUND OF NUTRIENTS AND THEIR AVAILABILITY IN ORGANIC FERTILIZERS

The 2014 NOFA-VT bulk order, which offers discounted prices for fertilizers and other supplies, must be mailed by February 7. The pick-up date is March 8 at sites around the state. See: <http://nofavt.org/annual-events/bulk-order>. You do not have to be a NOFA member to purchase, though there is a small charge for non-members. Before you order fertilizers from any source it makes sense to compare the cost of the nutrients they contain on a per pound basis, and to consider their relative availability.

If your soil test indicates that a field has adequate P and K, then you should avoid 'blended' fertilizers and only use those that are high in N content. But if you need multiple nutrients, i.e. N, P and/or K, then a blended fertilizer is often better value. For example, the custom 5-5-5 blend at \$22 per 50 lb bag (without-tax) contains 2.5 lb each of N, P, and K at a cost of \$8.80 per pound of each nutrient. CheepCheep composted poultry fertilizer, 4-3-3 at \$18.50 per 50 lb bag has a cost of \$9.25 per lb of N and \$12.33 per lb of both P and K. Many fields have adequate P but need N and K fertilization, so the custom 6-0-6 makes sense for those; at \$27 per 50 lb the cost is \$9 each per lb of N and K. Alfalfa meal (2.5-0.5-2.2) at \$28.50/50 lb has an N cost of \$22 per lb and a K cost of \$25.90/lb. For providing N only, blood meal (12-0-0) is relatively expensive, at \$77 per 50 lb the N costs almost \$13/lb. Peanut meal (8-1-0) at \$31.50 per 50 lb has an N cost of \$7.88/lb. Pro-Booster (10-0-0) at \$31.50 per 50 lb has an N cost of \$6.30/lb. Conventional soy meal (7-1-2 typically) if purchased at \$17 per 50 lb has an N cost of \$4.86/lb. If you only need K, then sulfate of potash (0-0-51) is the best deal, \$51 per 50 lb provides K at \$2/lb. Sul-po-mag, also called K-Mag, (0-0-22) at \$37 per 50 lb has a K cost of \$3.27/lb but it also supplies Mg, so if both K and Mg are low and you will not be liming with high-mag lime it may be a better value.

Keep in mind that nutrient availability varies among organic fertilizers! For example, 50 lb of greensand 0-1-7 costs \$17.50 so the price per lb of K is \$5.43 but most of this will not be available to plants in the short term, but will instead add to soil reserves. For N sources this gets a little complicated, as organic (carbon-containing) fertilizers release, or mineralize, N at different rates depending on environmental conditions and soil type. Highly soluble N fertilizers containing Chilean nitrate provide some PAN (plant available N) pretty much immediately and then steadily until they are used up or leached. The seed meals (peanut, soy, canola) and blood meal are more medium-release, mineralizing slowly for a few weeks and then peaking over the next two months (very roughly speaking). The composted products Giroux's and MooDoo release PAN at lower, steady levels. For more info on this, including graphs of organic fertilizer N release rates, see the slide presentation Dr. Heather Darby gave at the VVBGA meeting this past Monday. She explained the N cycle and described organic fertilizer N release rates: <http://www.uvm.edu/vtvegandberry/VVBGAMeeting2014Presentations.html>

#### LEAFY GREENS WASH WATER VIDEO

The results of our 2-year on-farm research into multiple rinsing and use of organically-allowed sanitizer are summarized in this 10-minute you tube video, starring yours truly. The goal was to see if E. coli in wash water could be reduced, to minimize potential for cross contamination. The answer is yes. <https://www.youtube.com/watch?v=9WaYu8jYkho>. See you at the Oscars, eh?