

June 15, 2019

PEST ALERTS: On **onions**, a few **thrips** have been seen in MA, none so far in RI; on **beets, chard and spinach**, **leaf miner** activity has calmed down in RI, but the always-common **Cercospora leaf spot** is being seen; on **Brassic**as, flea beetles continue, imported cabbage worm larvae are doing damage- check center leaves for small green larvae on undersides; **Black Rot** (of Brassicas) was seen in a garden in CT already- this likes warm and wet conditions; **Striped cucumber beetles** are now very much out and about! Keep cucurbits covered or control immediately to avoid **bacterial wilt**, which they carry and spread through feeding; **cool soil** outdoors slows cucurbit root development- better soil conditions result with black mulch; we did see *Rhizoctonia* on high tunnel cucumbers growing in warm soil, though; **potato flea beetles** are attacking eggplants, potatoes, and tomatoes; and so are **Colorado potato beetles**- at URI, our CPBs have no qualms about destroying tomatoes; **three lined potato beetles** also seen on eggplant, ground cherry, and other *Physalis* delights; and lookout for **potato leafhoppers**, which should be arriving in abundance momentarily- they love potato, eggplant, beans, and dahlias; we saw *Rhizoctonia* and bacterial canker on tomatoes this past week; be on the lookout for *Botrytis* on all sorts of outside crops after all this rain (which makes lots of humidity from soil evaporation) as well as in the high tunnel tomatoes, especially on blossoms and leaf scars; four farms in RI have reported **bronzed lower leaves** on **Basil**- most likely this is **chilling injury**- many locations have had <45°F in the last few weeks, and this could be the reason; one report of **celery leaf curl (anthracnose)** on pretty small plants and pretty early- getting very hard to grow celery with this new disease; also a very heavy-duty infestation of **fungus gnat larvae** destroying **watermelon** roots in flats- compost-rich potting media is very attractive to them, and doesn't drain as well, which favors larval development;

--> **Need to discuss? Got something you need looked at? URI Extension: 401-874-2967/andy_radin@uri.edu, hfaubert@uri.edu**

Plan Your Fall Transplanting

As if you don't have enough to do, it's time to have your schedule ready and seeds in hand for those crops you will be transplanting, mainly your fall brassicas. You have a time window for all of these, and that can be adjusted by choosing varieties with diverse days-to-maturity. There is however, a window that *is* closing: Brussels sprouts. If you have not seeded them, do so *immediately*.

By this time, you probably need to be using varieties that are rated at under 90 days in order to produce decent-sized sprouts. This is a function of daylength. The longer plants have been established as the daylight wanes, the better chance for good sprouts. Growth is slow by late October, even if it's warm.

This nudge is going out to you because it is pretty common for people to plant their broccoli and cauliflower too far

into August, and then look at their 12" high plants in mid September with a bit of a wince and a lot of prayer. Fertilizer and water won't work at that point because daylength shrinks quickly.

Cabbages can be shorter or longer season- the longest referred to as "storage" cabbages. They can be beasts, and the plants can get very large. The need as much time as Brussels sprouts. Kale and collard, on the other hand can be transplanted until early September, since they don't produce a head or inflorescence and leaf size is up to your discretion.



Everything goes faster on the front end of fall transplanting. Whether you are raising seedlings in flats in a greenhouse or (as I urge people to try) in a garden nursery, germination and growth are rapid, as long as you pay close attention to them. That can sometimes be a problem since your harvest season will soon be kicking up



Left, *Alternaria* on lacinato kale; above, *Alternaria* on cabbage. Note "target" spots. At right, Black Rot on Cauliflower. Pathogen often infects leaves through edge pores (hydathodes), causing yellow wedges to form from leaf edges, inward.

Fall transplants, continued...

a notch. But cabbage butterflies and diamond-back moths can easily find their way into a wide-open summer greenhouse. And plants in cells dry out very quickly. (Not so in the nursery bed, though you do have to make sure they don't drown in weeds.)

Transplanting has to get prioritized to get a great fall crop. When you're busy being enslaved to your zucchini, young plants in cells can get old and woody fast, faster than in the spring. It may be worth it to skip a day of picking to get the transplants in. You can go back through and cut off the baseball bats.

Everything goes faster after summer transplanting as well, water permitting. Growth is (or should be) very rapid. And then one hot day you notice that the light has changed and realize it's September. Have those transplants grown enough to make a good crop? If you have the space, a way to hedge your bet is to start two or three rounds of transplants about a week and a half apart. In fact, it makes sense to have a steady succession of broccoli and cauliflower in peak condition over the middle to late fall. They are ever popular, and mid fall brassicas like these are exquisitely beautiful. Your customers must have them!

The initial six weeks after transplanting are critical, again, so that plants can get up to size by the time the days begin to shorten at a drastic rate. Like at the seedling stage, attention to their well being is so important. The moth and butterfly pests can slow them down, but this is easy to take care of with watchful eyes. Water is critical, particularly during our often drought-prone August. Brassicas don't love heat, but with enough water, they will grow quickly. Make sure that nutrients, particularly nitrogen, are available and plentiful. They will feed heavily, particularly large storage cabbages, and you will be rewarded for giving them what they will use. In warm soil of summer, mineralization of organic forms of N is rapid, as long as there is moisture in the soil.

It is tempting to use tight spacing, particularly if planting smaller varieties. This works well if there is no history of pathogens. Where there is, it is important to maintain an open-enough planting to allow rapid drying, else risk of infection is high for two common diseases that take off during warm, wet conditions. The bacteria *Xanthomonas campestris* causes Black Rot, which can infect all brassicas. There are two *Alternaria* species that cause the classic target spots that you also see on tomato leaves.

Report from Middletown

Come on, Summer! Or even Spring. We are still waiting for that magic warm spell here on Aquidneck Island. Five-day soil temperature average is 62.2 F, and only 374.5 GDD at Base 50 as of June 14th. Tomatoes have greened up since transplant but are more or less standing still. Fava beans are loving life, though, and no sign of black aphids on them yet.

We have had a curiously low level of pest pressure so far, and are waiting for the other shoe to drop. We've seen exactly one cucumber beetle and one Colorado potato beetle (CPB) so far; flea beetle pressure remains lower than previous years. We're not entomologists enough to say whether cooler temperatures are the cause, but we are always ready for CPB, which likes our eggplant even more than our potatoes. We have had really good luck with Trident spinosad for CPB at egg and larvae stage (it's not really rated for knockdown of adults). **[Editors note: Sadly, Certis USA, makers of Trident, have informed us that they have had production problems that resulted in a product that still worked but ended up (I'm guessing) stinking like mad. Reformulation means they will have to go through a new process with EPA.]**



If you're relatively small scale like us (5.6 acres), you might take a look at the Terrateck Manual Mulch Layer. This is a mulch and drip layer that two people walking in tandem roll across the field. We've put down about two miles of mulch and drip using the machine this year, and it's been great. It has a steep learning curve, and can be finicky about bed prep, but it has proven well worth the \$1100 investment. We hope everyone's prospering, and that your garlic is scaping nicely!

Why is this space EMPTY?

Because **YOU** haven't sent an update from your farm.

If you don't like writing, send **pictures** of your triumphs (disasters also welcome)

The following is a section of the New England Vegetable Management Guide authored by Andy Radin. Part 1 this week, Part 2 next time...

Additional Soil Fertility and Nutrient Amendments

There are many different types of commercially available soil amendments and plant nutrient sources on the market today. While some products contain detectable quantities of nutrients that become available to plants in the near term, other products may instead increase availability of existing plant nutrients in the soil. Many have not been well tested in controlled studies. There are many categories of such products available for purchase. Some, but not all, have been approved for organic production.

Organic Residuals

Organic by-products of industrial processes fall into this category. Note that the use of the word “organic” in this case refers to nature of the material itself, e.g. derived from biological sources. It does not necessarily indicate acceptability for certified organic production. Such materials included in this category are: processed slaughterhouse wastes, leather processing waste, biosolids, papermill sludge, and composts. In general, as these products decompose, plant nutrients are released. Many are sold with the nutrient analysis content listed, which is generally very low on a “percent-by-weight” basis. The greater benefits are usually for soil conditioning, and in some cases, liming activity. Not all of these products are acceptable for certified organic production, and acceptability for use in food production should be verified.

Foliar amendments

Foliar feeding has become a more common practice among some vegetable farmers. Many products are now available on the market, for use in both conventional and certified organic production. Foliar feeding is not recommended as a major source of nutrients for a growing crop, but it can be used for supplemental feeding under certain circumstances. Such circumstances include: 1) when soils are cold and N and P mineralization rates are low; 2) at the onset of nutrient deficiency symptoms in rapidly growing plants (verified by properly conducted leaf tissue testing); and 3) during periods of high nutrient demand, especially fruiting. Even so, nutrient deficiencies often result from indirect causes, such as water issues, soil compaction, pH, root diseases or even macronutrient (N, P or K) deficiencies that can be limiting micronutrient uptake or availability. Addressing these issues are likely a more time- and cost-effective and permanent way to ensure crop micronutrient needs are met.

New England soils are glacial in origin and are considered “young.” For this reason, our soils are not typically lacking in micronutrients. In soils with pH greater than 7, metal cations become less available to plant roots, and plants may show signs of deficiency. Most soils in New England are acidic, requiring periodic lime applications. Where soils are alkaline, the best way to correct deficiencies of Zn, Mn, Fe and Cu may be to apply foliar sprays of these nutrients in chelated form. Certified organic growers should ensure that they are using forms allowed under organic certification. In some cases, it may be necessary to lower soil pH using products such as elemental sulfur, aluminum sulfate or ammonium sulfate.