

Video Farm Tours: Here is the first one, featuring Brandon Family Farm: <https://youtu.be/grMcQREJ0ks>
Would you like to show your farm to other RI growers? It isn't a beauty contest— it's a chance for you to show what you do and discuss any issues, your choice. If you are interested, contact ANDY— 401-256-7393

The Latest COVID-19 Resources: <https://web.uri.edu/coopext/coronavirus-resources/>

RIDEM Produce Safety Program: <https://mailchi.mp/46f6c8c54c77/psrri-gap-grower-training-december-5-6-register-now-8158952?e=adce649c0e>

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

Soil Tests provide very useful but inexact information. And that's OK.

If you are searching for precise test results that tell you exactly how much of each essential nutrient to add, then soil tests won't help you, not from any lab.



They can't provide recipe-like accuracy. But if you are managing land for agricultural production over the long term, it behooves you to build a record of soil tests over time. Comparisons from year-to-year are where you will find their value. It's important to know if you are succeeding in building a reserve of nutrient cations over time, or increasing organic matter, or CEC, or maintaining a desirable pH.

Making year-to-year comparisons works best if you always soil test at the same time of year. That doesn't mean that it should fall on the exact same week every year- but at least within the same month. This normalizes your annual or biannual test results, at least in terms of soil temperature. The months that are best for soil testing are from mid-fall to late winter. While moisture status is unpredictable in a given year, fall rains often keep soil uniformly moist for the duration of the cold weather months because of reduced evaporation from sunshine and lower transpiration rate (plants are like drinking straws that draw water up and out of soil) from cover crops. Fall often works better if pH is a concern. If you know that you will need lime in the fall, you can arrange for

Pest Spotlight

“Failure to thrive” is what the grower called it, like unhealthy babies. Germination was fine in the spinach and the arugula, the lettuce transplants were healthy... and then sections of beds started having lower leaves turning yellow, then wilting and dying. We walked around for quite some time, looking at many examples, and feeling



stumped. And the grower was pretty upset. We pulled out plants and observed some pretty elongated root crowns. I can't say I've pulled spinach plants out when they are this small and was surprised to see how they looked. Then I



remembered that in the spring of 2018, I had seen something similar and at once, I figured out the problem. I started digging underneath sickly plants and immediately found the culprits under each:

The grower said that Japanese beetles over-ran the place in 2020 for the first time in 20 years. These are their prog-



eny. The best treatment for these is *Bacillus thuringiensis galleriae* (BTG). It is another strain of B.t. that is effective on beetle larvae, at least some species. It's a granular that you put down with a lawn spreader and then water in. Used mainly on lawns, it is active on ALL species of grubs, unlike Milky Spore, which is only effective on Japanese Beetles, and apparently, is not very efficacious anymore. Also, the commercial product for the BTG is OMRI listed, so is allowable for use on certified organic farms. And you thought Japanese beetles were only trouble in July!

it to be delivered sometime from late fall to late winter. But the sooner you apply, the more time exists for it to react with your soil before next spring begins. If you are spreading it yourself, the opportunities may well arise to apply it section-by-section over the winter.

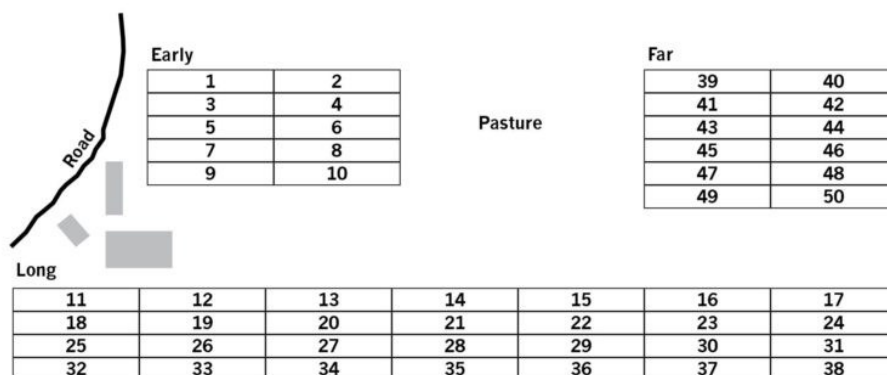
Soil testing goes hand-in-hand with good record keeping of applied soil amendments, including relatively accurate zone mapping records as well. The person who goes out to collect the samples should have a good idea of the zones under distinct management practices. Lower-situated, perennially moister areas typically are higher in organic matter because intermittently anaerobic conditions slows down oxidation and decomposition of organic matter by soil bacteria, so such areas can be considered units. [But please don't grow on these areas if they remain wet during much of the growing season

- avoid root rot diseases!] Sub-samples should be taken from within such zones and combined into a composite sample (made of subsamples), which should be well mixed in a bucket, and then about a pint removed for testing. Sample depth should be about 6" to 8",

and remember to knock off the top 1/2" of crop residue and organic matter. If cutting into sod, remove it before sampling soil. The best tools to use are either a **narrow** trowel (preferably with measurement marks on it) or a soil probe. Other physical management units could be high ground, or patches where you know it's much sandier than others, or a delineated field that has been managed as a unit for a very long time (generations, even). These are areas that you know have been treated uniformly for multiple seasons. And if you manage at a very fine scale, then it may be worth it to maintain testing records for specific beds that are used in a rotation. That can get expensive so

you may want to alternate years if you are using many, small management units.

Follow established nutrient supply recommendations, at least to begin with, which can be found in the New England Vegetable Management Guide. [We have the most updated version in hard copies for sale.] These recommendations are benchmarks, and you can adjust them as the need arises. This is important: just because you followed a published recommendation, it doesn't mean it's exactly on target for your soil, or this year's rainfall (or lack, thereof), or the particular variety you are growing, or for your cover crop regimen. Start with the benchmarks, but be ready to tweak. This can be done on the early side of mid-season through topdressing or fertigation. [The much-ballyhooed practice of foliar feeding is of questionable value.]



A very intensive management unit system. These units would be soil tested in a rotation.

In their fullest usage, soil tests were originally designed to work in conjunction with fertilizer recommendations developed for specific crops on specific soils. This is called calibration. Unfortunately, we do not have any calibration data for lining up soil tests with specific crop recommendations. Conducting these studies is time-consuming and expensive. So New England recommendations are ballpark.

And speaking of the original designing of soil testing, bear in mind that all methods come out of Land Grant institutions. Testing protocols were largely developed between the late 1940s to the 1970s. There

have been many modifications in the extraction solutions and protocols, and these are often linked to specific regional soil types. Testing services from other regions of the country do not use the methods used in most of New England. Our book recommendations line up with the Land Grant labs in New England (CT, MA, ME).

While they were originally a part of taxpayer funded services for the common good (supporting agricultural enterprises, the producers of food and fiber), most land grant soil testing services are now largely self-supporting. PLEASE USE your Land Grant institution testing labs! Not only do they offer broad ranges of services for decent prices, they are also backed up by research and teaching faculty who do not have any products or ideologies to sell. For supplemental read-

Your Input is Welcome

Please submit updates from your farm—a paragraph or two in an email is all it takes. Also, please submit suggestions for articles, meeting topics, and research needs from us at URI.

ing, take a look at this excellent paper put out by the Southern Extension and Research Activity Information Exchange Group 6 that explains the importance of the survival of Land Grant university analytical labs: [SERA-IEG-6](#) .

Stay tuned for a future installment: What do your soil test results mean?



The beautiful fall garden at Arcadian Fields, Barberville, RI