

Lessons From the Weeds

From John

Picking up from last week's thread I want to revisit the idea of transitioning a farm to organic production and rejuvenating the soil and the life within it. An experienced and observant farmer can tell you a lot about the land just by looking at it, smelling it and even tasting it. There are the obvious things you can see such as the lay of the land, where the high spots, low spots, dry spots and wet spots are. These are important factors when thinking about how you want to manage different parts of the farm such as; what direction do you want to plow, or perhaps it shouldn't be plowed at all? Which fields will be better suited to early or late season production (warm or cool fields)? What is the risk of flooding? What is the best use of this land, veggies, orchard, pasture, hay or left alone? Most of these questions can be answered with doing little more than spending some hours walking the farm and getting a feel for it and maybe bringing a shovel along and digging a few holes to see what the soil looks like.

But there is much more specific information that can be gathered by investigating the farm fields. Smelling a handful of soil will tell you a lot about the amount of active biota in the soil. Or tasting a pinch of earth, while not fool proof, it can tell give you an idea about the soil's pH. Tart or slightly sour soils tend to have a pH below 7 (acidic) and sweet soil tends to be alkaline (above pH of 7). But there is one thing above all that can tell you what is happening to within the soil, and that is the plant species already growing, or weeds if you will. While plants are highly adaptable and able to survive in a broad range of climate, geographical, and conditions of fertility, they all have their favored conditions. Knowing your weeds, or at least being handy with a wildflower guide will allow the farmer to paint a picture of the farm in great detail. What you can learn about your farms fertility from the weeds is much more valuable than that of the

ON DECK

Some of the things that should have been ready some weeks ago should start producing. These include cabbage, garlic scapes, green garlic, kohlrabi and beets. By some miracle we may be able to start picking tomatoes and peppers in a few more weeks.

soil test (I will explain that next week) or at least put the soil test into better context. So this begs the question, what weeds did we find on this farm as we took over management last year. On this farm the main species I have found are redroot pigweed, lambs quarters, horseweed, giant ragweed, common ragweed, various thistles, shepherd's purse, penny cress, hoary alyssum, smart weed, wild mustard, curly dock and a nightshade that I need to key out yet. Most of these weeds are no mystery to most veggie farmers, some of these are sure to be found on just about every farm in the region. Because they are so adaptable to many environments, considering just one species doesn't necessarily tell you a whole lot about your soils fertility. However when you can take a look at many species side by side, you can learn a great deal. There is a quote that I think just about every organic farmer knows from Ralph Waldo Emerson "What is weed? A plant whose virtues have not yet been discovered." It is in this context we can appreciate not just what the weeds can tell us but what they can do for us as well. Some species like very poor soils, others prefer wet and anaerobic soils, some prefer acidic soil while others thrive in alkaline. We often refer to certain weed species as 'miners' as in a 'calcium miner' or 'phosphorus miner' indicating that that species specialized in extracting a specific mineral from deep within the soil that is otherwise unavailable. Some weeds can break up the hardpan. A hardpan being a layer of hard compacted soil made by farm equipment that roots and water have difficulty penetrating and can cause plants to suffer. By understanding the optimal conditions for the weeds on your farm you can gain even more detailed insights than the soil test alone. On this farm there are two main areas

from a geographical, hydrological and fertility perspective that are vastly different. We call them the uplands and the lowlands. We can make the following determination about the soil from the weeds and other previously mentioned observations in the uplands. The calcium levels are very low as are the phosphates while potassium, magnesium, sulfates and iron are quite high. The pH is low. There is conflicting evidence on the micro nutrients such as manganese, boron, selenium, zinc and so on, but it can be safe to assume that they are at low levels. Humus (stable organic matter) is low, as is soil bacteria (and we can also assume the same for fungi) though drainage is good. While on the lowlands we find almost the exact opposite to be true almost to the point of excess. This is most likely because the former farmer treated the land as a single piece of ground without understanding the different needs of the varying soil types having had plowed the entire farm from north to south year after year and almost certainly not adjusting the fertility program based on the specific needs of each soil type. This problem is inevitable as farms grow larger and larger. They become too large for the farmer to make keen observations, they may only look at the land twice a year, once when they plant and again while they harvest. Possibly not even that often if there is a 'hired man'. Farming more land than a farmer can get to know, to interact with, observe or care for leads to the attitude that it is just another piece of ground, nothing special nothing distinct and nothing to conserve. This attitude and trend in farming may be one of the largest threats to our farmlands sustainability and productivity. Next week I will tell you more about how everything we have learned and how we are using that information to restore the soils natural fertility, vitality and diversity of life.

News and Notes

- Have a happy and safe 4th of July weekend!
- Don't forget to sign up to volunteer at the farm, but have no fear, our volunteer coordinator will surely help you remember.
- The weather seems to at long last to have made the turn. Seasonably appropriate weather is a welcome change. Not only is it great for your farmers' mental health, it is great for the crops which are looking better every day!

Featured Item

You know summer has finally arrived when the zucchini and summer squash start rolling in. And with this fantastic weather for the holiday weekend, some grilled squash seems just about perfect. We try to pick our squash while they are still small and tender; before the seeds are able to develop very far. While the 'baseball bat' zucchini makes great bread it's the little stuff that's best on the grill, with roasted vegetables or in a ratatouille. It will store well in your fridge for about 5-7 days. It will still be good for a while after that but may start to get a bit rubbery and show bruising.

Recipe of the Week

GRILLED ZUCCHINI AND SUMMER SQUASH

Ingredients

- 3 medium yellow squash and/or green zucchini
- ¼ teaspoon salt
- ¼ teaspoon black pepper
- 2 extra-virgin olive oil
- 2 tablespoons fresh lemon juice
- ¾ teaspoons coarse-grain mustard
- ¼ teaspoon sugar

Preparation

Prepare grilled or indirect-heat cooking over medium-hot charcoal (high heat for gas).

Trim squash and/or zucchini and halve lengthwise, then toss with salt, pepper, and 2 tablespoons oil in a large bowl.

Oil grill rack, then grill vegetables directly over hottest part of coals, covered only if using a gas grill, turning over once, until grill marks appear, about 6 minutes total. Move vegetables to area of grill with no coals underneath and grill, covered, until tender, about 4 minutes more. Transfer to a platter.

While vegetables are grilling, whisk together lemon juice, mustard, sugar, and remaining 2 tablespoons oil in a small bowl. Pour dressing evenly over vegetables before serving.