



## March 2020 Newsletter

### Looking into the Future

#### Until APRIL 2020 Farms and Woodlands Course

For landowners who want to get the most out of every acre of their land. The course consists of 12 self-paced modules offered online. Each module contains exercises and group discussions. Complete the work on your schedule, while still contributing to group learning. Interested landowners can learn more and register on the class webpage at [z.umn.edu/mwofarms](http://z.umn.edu/mwofarms). Registration/discount code questions: Emily Dombeck [edombeck@umn.edu](mailto:edombeck@umn.edu), 612-624-6709 Course content questions: Matt Russell, [russellm@umn.edu](mailto:russellm@umn.edu), 612-626-4280

#### 4/14 10-4 Soil Health Economics Forum

The objective for the forum is to collectively identify gaps in knowledge, and develop strategies and partnerships for improving understanding of the economics of managing for soil health. The event is intended for representatives of agricultural industry, farmers, farmer organizations, researchers, educators, and local, state, and federal government agencies. Participants will discuss the soil health economic information needs of their organization or operation. Agenda: [z.umn.edu/MOSH-econ-forum](http://z.umn.edu/MOSH-econ-forum) Register [HERE](#)

Find these events on our website

<https://mnsoilhealth.org/events/>

And Facebook

<https://www.facebook.com/mnsoilhealth/>

#### 6/23-6/25 Regenerative Farming and Ranching

Regenerative Farming and Ranching event is held on a Minnesota farm that has been employing soil health and regenerative practices for over 15. Experts from Understanding Ag including Gabe Brown and Shane New as well as farmers Dawn and Grant Breitreutz will provide effective information on:

- Principles of Soil Health & Adaptive Stewardship
- Making Grazing Highly Profitable & Desirable
- Successful Marketing: Strategies for Enhanced Net Margins
- Designing Cover Crop Mixes
- Nutrient Management
- How to Add Diversity to Row Crops
- Farm Economics and Whole Farm Planning

Soil Health Academy has acquired funding to offer scholarships toward tuition to attend a SHA school. Apply online at [www.soilhealthacademy.org/scholarships](http://www.soilhealthacademy.org/scholarships)

#### 7/22-7/23 Soil Health School

A two day training designed to provide an introduction and effective information on how to get started implementing soil health practices as well as a deeper look into management options and integrating regenerative practices. Classroom and field learning will be provided, hear from Minnesota farmers implementing soil health practices as well as technical experts from the state. Discussion sessions will be provided to hear and ask questions from farmers to learn about their successes and challenges as they've implemented soil health practices. Who Should Attend? Farmers, agronomists, technical staff, those interested in learning more Registration coming soon

## Soil Monitoring, Could it Become a Thing?

In the land of 10,000 lakes (technically 11,842 lakes), it is obvious why water testing is so critical. Funds are spent annually to test surface and ground water quality with recommendations, impairment listings, regulations, and laws resulting from these studies. This testing is imperative to understanding the conditions to keep our citizens and biological communities safe. How is soil monitoring or testing being completed around the state? Generally we are completing and relying on the traditional soil testing which provides us with the chemical analysis of our soils on private lands. Understanding that our soils are degraded and that many factors are impacted by the quality of our soils makes one wonder if more attention to soil monitoring would be beneficial. The condition of the soil directly impacts quantities and qualities of our waters as well as our crops, forests, and natural areas. Soil health testing has begun to be integrated in the last few years but isn't widespread and trained individuals aren't plentiful.

Soil testing/monitoring doesn't need to lead to rules and regulations but it can provide us with information to better manage the resource which will in turn provide benefits to our production, waters, and wildlife. The Natural Resources Conservation Service (NRCS) has been diligently training staff to understand the dynamics of soils and complete soil health testing. They understand that soil is our foundation and many benefits can be realized by improving our soil quality. Completing the standard soil tests will provide you information about the chemical components of your soils but what about your compaction, infiltration, structure, and biology?

Soils are comprised of 3 systems - chemical, physical, and biological. All 3 components work together to make your soil what it is. We have been focusing on the chemical component for production and are realizing to include physical and biological in our understanding. The Coalition farmer mentors can help you with testing your soils this fall and select FFA students will be provided training and tools to complete this assessment. You can check with your local field office to see about borrowing an infiltration ring (6" metal ring).

How do we test our soils for their health? There are some fancy laboratory methods that can be used (Haney, Solvita, PFLA, aggregate stability, and more) but there are easy ways we can observe our soils.

### What you'll need:

- Shovel
- Thermometer
- Penetrometer or a wire flag
- 6" metal ring
- Block of wood
- Mallet
- A bottle of water
- Timer

### What to do:

(Test when the soils are fit for field work-not too wet, not too dry, during the growing season or after harvest)

Dig an area 12"x12"x12" and count worms, 0-1 low, 2-10 moderate, 10+ great

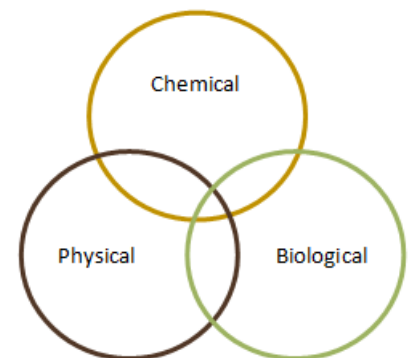
Put the thermometer 2" deep in exposed soil and soil with cover (residue/crop/cc)

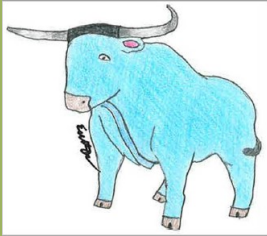
Use the penetrometer or flag to test compaction-what depths are easy to push in, where does it get harder? Does it coincide with tillage depth? Crop roots struggle to get through 275 psi

Use the wood block on top of the 6" metal ring and pound it half way into the ground with the mallet. Use a water bottle with 500mL of water (standard size), take a sip of the water, then start your timer while you have your hand over the ring and pour the water on your hand to brace the rush of water hitting the soil, this replicates an inch of rain. How long does it take to infiltrate? <5 min is great, 5-15 min good, 16-30 min decent, >30 min not so great

Look at the soil that was dug up to look for worms, does it resemble cottage cheese or does it come apart in angular chunks? Do you see a layer of compaction, does the soil break apart horizontally?

\*Soils vary across the landscape, don't compare with your neighbors, compare on your own fields on the same soil type with different management, you can test a field border as a comparison





# Babe's Country

## What Spring Brings in the Woods

The sun is stronger than a month ago, birds are singing, critters are moving about, spring is here! Our shrubs and trees are waking up but that's not the only vegetation ramping up in the woods! Minnesota has a variety of ecosystems including a variety of forest types. Each is unique and offers different opportunities. What are some things to look forward to in forests in the spring?

Morels

Wild leaks

Wild asparagus

Ostrich fern fiddleheads

Stinging nettle greens

Sorrel greens

Evening primrose root

Parsnip

Burdock root

Thistle root

Spring beauty roots and greens

Virginia waterleaf greens



Creator: Chris Bohnhoff  
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Do we really need another reason to go walking in the woods in spring while hearing and seeing new life emerge? No but foraging responsibly for food is a great way to get to know your forest better and to become aware of the diversity in the system. Nature will always strive for diversity, to have living roots, to keep the soil covered, not disturb the soil, have wildlife (livestock) flourish, and it's all within context. The soil health principles apply to all landscapes but understanding the context of the system allows us to utilize the specific tools for that system. We won't recommend no-tilling corn into a forest but utilizing trails, accesses, leaving snags and deadwood, not harvesting in wet conditions, etc to appropriately protect our soils.

There are excellent resources for responsibly foraging wild plants

[Minnesota Harvester Handbook](#)

[The Forager's Harvest](#)

[Edible Wild Plants - Peterson Field Guide](#)

## Garden Planning for 2020

Seed has been ordered, dreams of planting and tending to the garden are happening! While we patiently wait to get our gardens started this spring, it is a great time to solidify your plans. Are you planning on planting more this year to potentially combat low sources? Are you supplementing from sources such as farmers markets or CSA's? Whatever your intentions are there are methods to use to increase the success and enjoyment of gardening!

I planted red clover and oats a week ago in my garden to get a living root growing as soon as possible, feed the soil organisms, warm up the soil, add diversity, and fix some nitrogen. I'm also getting my plans ready for where to plant my veggies. I try to use every area of my garden for production to maximize the space I have and it provides benefits to my plants. Having long rows of a single crop with walkways between is how I grew up gardening but I've learned about companion cropping. This provides benefits including nutrients, pest control, weed control (how much fun is it to pull weeds?), and vigor of plants. I also utilize the square foot planting method to utilize the space I have effectively which significantly reduces weeding.

The soil health principles can absolutely be followed in a garden setting while providing benefits to your plants and your management.

So how do we know which species to plant next to others? Some plants get along better with each other than others, a great resources available is The Happy DIY Home in their article The Complete Beginner's Guide to Companion Cropping found at

<https://happydiyhome.com/companion-planting/>

### Context

**Reduce Disturbance**

**Keep a Living Root**

**Increase Diversity**

**Keep the Soil Covered**

**Integrate Livestock or Livestock Products**



My garden is covered all winter and below the residue, the oats are starting to emerge. The residue has protected my soils over the winter and during the spring rains. Having something growing early will warm up the soils faster than if nothing was growing. Now lets get some heat and plant our earlies!

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