



THINK GREEN



EAT GREEN

WHAT IS SOIL HEALTH?

Is soil just dirt? On the contrary, it is a vital, living and elegant **ecosystem**, teeming with billions of **microbes**. And the way that these microorganisms function in their complex ecosystem – *sustaining plants, animals, and humans* - is the actual definition of **Soil Health**.

Why does soil health matter to us?

We have learned how important the microbes inside our body are to human health. In the same way, soil health depends on bacteria and fungi. Healthy soils are the basis for healthy food production. The most widely recognized function of soil is its support for food production. It is the medium in which nearly all food-producing plants grow. It is the foundation for agriculture.

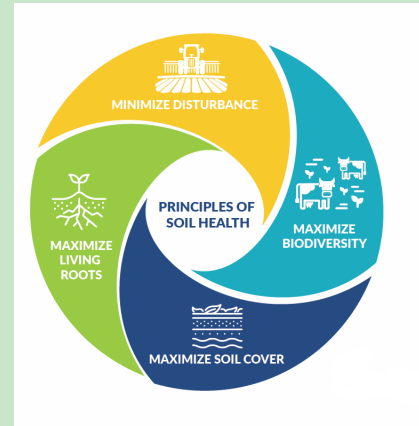


The US Department of Agriculture's Natural Resources Conservation Service (NRCS) has an extensive online [program](#) on soil management called "Unlock the Secrets in the Soil."

This program describes the essential role of

healthy soil, as well as the management principles farmers should use to improve soil function:

- **maximize** presence of living roots
- **minimize** disturbance
- **maximize** soil cover
- **maximize** biodiversity



An important function of healthy soil is its ability to sequester carbon, and one farming method that greatly aids this endeavor is **zero tillage**. No-till farming methods have the ability to maintain – or increase – the amount of carbon sequestered in soils. Carbon dioxide is absorbed by plants as they grow, and released when they are harvested. Keeping more organic matter in the soil will keep more carbon in the soil. Carbon sequestration is a significant effect of **regenerative agriculture**.

Those of us who participated in the Green Team's tour of Third Way Farm this week saw a no-till, diverse, regenerative farm in action.



Home gardeners can use these same principles to enhance their soil's ecosystem as well. University of Minnesota Extension provides this comprehensive [guide](#) to developing and maintaining healthy garden soil. One of the easiest and most effective ways to augment poor soil is with backyard composting. Decomposing organic matter contains the organisms essential to a living healthy soil ecosystem. One warning is to minimize the use of



chemicals on plants and soil, as they can kill these vital organisms along with garden pests.



This [report](#) from The Spruce describes the different types of soil and gives tips on how to improve each.

Lastly, we'll look at the benefits of planting perennials, especially perennial grasses. The American Society of Agronomy reported last year on a Canadian government study: Agriculture and Agri-Food Canada conducted a long-term study of the effects of different crop-growth systems. The study compared the soil supporting perennial grasses with the soil of conventionally-grown corn and soybeans. Not surprising, the *untilled pasture systems* had the healthiest soils, with an abundance of biological activity and diverse microbes and fungi.



Many scientists and organic farmers have long extolled the benefits of planting perennial grasses to build up soil ecosystems. Roughly 20% of US farmable acreage is planted with perennial grasses. Well-known poet and farmer Wendell Berry describes this as “wildly disproportionate,” and identifies the 80% of farmland planted in annual crops to be in a “state of emergency.”

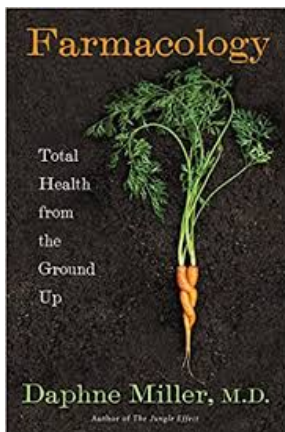
Food for thought.



PLEASE NOTE: The Green Team is moving its FREE bi-monthly environmental documentary series to the **Havre de Grace Opera House on September 29th.**

Our first film, “Kiss the Ground,” is all about soil health, regenerative agriculture, and the resultant biosequestration of carbon in our soils.

Please join us for a kickoff **social hour at 6 PM**, followed by this informative and compelling **film at 7 PM**, with discussion to follow.



AND the Green Team is initiating a bi-monthly **Book Discussion on October 26th at 7 PM** at Coakley’s Pub. Our first book will be *Farmacology: Total Health from the Ground Up* by Daphne Miller, MD. The book has previously been discussed in this newsletter. Miller bridges the traditional divide between agriculture and medicine, and explores the simple concept of “food as medicine,” weaving the experiences of her patients with her own experiences on various farms. (available through Harford County Public Library)

SOME GREEN THOUGHTS



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"The soil is, as a matter of fact, full of live organisms. It is essential to conceive of it as something pulsating with life, not as a dead or inert mass....."

- *Sir Albert Howard, named the father of organic agriculture*

"The nation that destroys its soil destroys itself."

- *Franklin D. Roosevelt, US President 1933-45*

"A nation that rebuilds its soils rebuilds itself."

- *RegenerateAmerica.com*

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