Greater Cincinnati Regional
Food Policy Council

Healthy Soil, Healthy Food, Healthy Planet

"Soil health" generally refers to the functioning of soils and interactions between the living and non-living portions of a soil. Healthy soils hold more water, protect water quality through reduction of run off, produce healthier crops, sequester carbon, and provide a positive return on investment.

In this document, we aim to:

1. Provide information about why soil health is important to consider
2. Identify practices that can be beneficial for soil health
3. Compile state, federal, and regional resources that can help farmers improve the health of their soils
4. Draw attention to any resource gaps that are not currently addressed with policies

We are lucky to have so many farmers and researchers in our area focused on soil health. Jim Linne, of White Clover Farm in Highland County, rotationally grazes cattle for grass fed beef and is a self-educated, first-generation farmer. Each day he drives from Anderson Township to take care of the land:

> "The soil is an ecosystem teaming with billions of living microorganisms. Just like us, they need air, water, food, and shelter. Their food source is the sugars exuded from the plant roots. No plants, no food."

Healthy soil and land will bring in more wildlife and result in a balanced ecosystem that can also result in financial gain for the farmer. A study by the **American Farmland Trust** showed when Tim Lyden of Lyden Farms put in place a 320-acre crop rotation of corn, soybean, and wheat, his Return on Investment (ROI) saw an increase of 158%.

> "When you look out to those fields in the fall, and they're bare, those creatures are dying, that soil is dead. That's not a healthy soil, you need a living root in the ground year round." (Jim Linne)

Plants have to get their water and nutrients from somewhere, and that is soil. Having a healthy soil will grow more nutrient dense foods that are beneficial for all of our health.

Improving Soil Health

Reduced Tillage

- Tillage breaks up soil, resulting in damages to the structure of the soil and more rapid breakdown of soil organic matter. It is also time and energy intensive.
- Reducing tillage therefore can save time and money, improve soil structure and limit erosion, and sequester organic matter in soils, which helps to store water and nutrients where plants can access them.

Cover Crops

- When crops are not growing on the landscape, soil is exposed and more likely to suffer erosional and nutrient losses.
- Cover crops are typically planted outside of the main crop growing season. They help to hold soil in place when crops are absent, build up soil organic matter, scavenge soluble nutrients, and create channels in the soil for improved water movement.

Soil Amendments

- Adding organic matter and biochar to soils can increase the water and nutrient retention of soils while also improving soil structure and feeding soil organisms that are important for long-term soil and plant health.

Crop Rotation and Biodiversity

- Rotating crops and creating natural plantings near agricultural fields can limit pests and diseases and promote soil health by encouraging a variety of microorganisms that perform different beneficial processes in soil.
- With skillful crop rotation, it is possible to eliminate virtually all pesticides and soluble fertilizers.

Rotational grazing

- Managing livestock by rotating them around the landscape helps to return nutrients and organic matter to the soil.

Resources for farmers wanting to improve their soil health:

Federal Resources

The Natural Resources Conservation Service (NRCS) offers several grants and other programs and resources to assist farmers with building and maintaining soil health.

One is the Environmental Quality Incentives Program (EQIP). EQIP provides technical and financial support to producers for soil health practices. Practices supported by the program include cover crops, biochar amendments, filter strips, grassed waterways, residue and tillage management, and annual forages for grazing systems. For more information, contact **your local NRCS office.**

Ohio State Resources

- **OEFFA soil health week one pager**
- **Ohio Soil Health Initiative (OSHI)**
- **H2Ohio Statewide Program**
- **OEFFA Sustainable Agriculture Educators** (give them a call!)
- **Ohio No-Till Council**, run by farmers for farmers
- Nutrient management plans

Regional and County Resources

Several counties offer a cost-share program for cover crops:

- Campbell County, KY, offers a 75% reimbursement for cover crops up to $1,000. They also provide cost share funding to reduce soil erosion in livestock areas known as heavy use areas. These areas include animal trails and walkways.
- Grant County, KY, provide agricultural scholarships for graduating high schoolers and non-traditional students.
- Clermont County, OH: **Cover crop farmers of Southwest Ohio**
- Many counties partner with university extension offices (University of Kentucky, The Ohio State University, Central State University, Purdue University) to offer soil fertility testing and compost/manure analyses for proper nutrient management.
- Counties in some cases also offer cost share funding for agricultural practices that are not typically included in State and Federal Cost Share programs. These include the growing of fruits and vegetables and the raising of animals such as rabbits, poultry, sheep, and goats. Funding is also available in some cases to improve pasture condition and hay production.

Contact your county extension office for details.

Future Resource Gaps to Address

- **Statewide initiatives that bring agencies and farmers together to invest in soil health.** This is currently in process through the Ohio **soil health task force bill at the statehouse**.
- **State assistance for soil health.** This has been a long-fought federal program to support states with funding for soil health initiatives. There may be a chance that this will show up in the next farm bill but are currently fighting for it to have dedicated funding that doesn't take away from other conservation efforts.
- **Dedicated funding for small farms.** There is so much competition for grants and conservation-based grants are extremely oversubscribed. Smaller farms tend to get the last bite of grants.
- **Multi-scalar policy.** Our Food Policy Council's Farms and Land Use Committee plans to continue working on policy-based solutions for meeting remaining resource gaps, aligned across levels of government: municipal, county, state, regional, and federal.

Selected Sources

- **https://www.soilpolicynetwork.org/**
- **https://action.oeffa.com/wp-content/uploads/2021/01/OHSI-flyer-2021.pdf**
- **https://action.oeffa.com/wp-content/uploads/2024/03/Ohio-Soil-Health-Week-One-Pager.pdf**

Created by the Farm and Land Use Committee of the Greater Cincinnati Regional Food Policy Council, Green Umbrella, Summer 2024. Learn more at **https://greenumbrella.org/fpc/**.

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