

SOIL HEALTH IN MONTANA

“Regenerative agriculture provides answers to the soil crisis, the food crisis, the health crisis, the climate crisis, and the crisis of democracy.”
- Vandana Shiva



Worms, roots, and smell are just a few signs of healthy soil.

Why Soil?

Healthy Plants and Animals

Soil isn't just a growing medium, it is home to billions of bacteria, fungi, and other organisms that create an intricate ecosystem. By paying attention to the entire soil ecosystem, you can have a much better idea of how to address issues you see above ground. The healthier this below-ground ecosystem is, the healthier your above-ground plants and animals will be, from better access to more nutrients from the soil.

Healthy Families

Eating more diverse and fresh foods that come from healthy soil provides individuals with a healthier diet. Additionally, just putting your hands into healthy soil with good microbes and bacteria can decrease rates of allergies and asthma, and make families more resistant to viruses.



Rancher, Steve Charter turns his compost pile before spreading across his land to increase soil organic matter.

Healthy Profits

Healthy soil provides myriad benefits for farmers and ranchers. Healthy soil can:

- Increase productivity
- Hold more water and carbon (1% Soil Organic Matter (SOM) can hold 20,000 gallons of water/acre, which amounts to 3/4 inches of rain for every 1%!)
- Increase nutrient density in crops and animals.
- Reduce inputs (e.g. pesticides, herbicides, fungicides, diesel).
- Reduce pests and disease.

Rural Economic Development: Wealth is leaving our communities

It is becoming increasingly clear that current monoculture systems which promote cheap crops to be exported are removing wealth from our rural communities. Expenses are outweighing the gains, middlemen are acting like monopolies, and farmers are being squeezed more and more tightly.

One principle of soil health is diversification: diverse plants, animals, and enterprises. That means farms are providing more diverse foods and resources to the local community.



Montana Soil Professionals

- Natural Resources Conservation Services (NRCS)
- Montana Soil and Water Conservation Society
- Montana Rangeland Partnership
- Montana Association of Conservation Districts and your local Conservation Districts
- Montana Department of Natural Resources and Conservation
- Montana Watershed Coordination Council

Keep informed!
Take action!
Join 

Northern Plains Resource Council is a conservation and family agriculture group that organizes Montana citizens to protect our water quality, family farms and ranches, and unique quality of life.

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Visit our website:
www.northernplains.org

More soil health resources:

Books

- *Dirt: The Erosion of Civilizations*, David Montgomery
- *The Soil Will Save Us*, Kristin Ohlson
- *Lentil Underground*, Liz Carlyle

Websites

- amazingcarbon.com/
- soilcarboncoalition.org/
- soilfoodweb.com/

Videos

- Carbon Cowboys: vimeo.com/80518559>
- Allan Savory: youtube.com/watch?v=vpTHi7O66pl>
- Courtney White: [Quivira Coalition youtube.com/watch?v=rKjX3UdVDFU](https://QuiviraCoalition.com/youtube.com/watch?v=rKjX3UdVDFU)
- Gabe Brown, ND youtube.com/watch?v=9yPjoh9YJMK

What can you do?

- Think about the soil first, with any decision you make.
- Dig a hole, and write down what you see (worms, holes, colors, roots, etc).
- Try something new on the land to increase the activity underground (biological stimulants like compost, or spreading diverse seeds, or adding animals)
- Measure your soil health now! (Professionals can help measure organic matter, bacteria, fungi, and the nutrient composition of your soil).



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