

Soil Health Key Points



What's critical about soil health now?

As world population and food production demands rise, keeping our soil healthy and productive is of paramount importance. By farming using soil health principles and systems that include no-till, cover cropping and diverse species and rotations, more and more farmers are actually increasing their soil's organic matter and improving microbial activity. As a result, farmers are sequestering more carbon, increasing water infiltration, improving wildlife and pollinator habitat—all while harvesting better profits and often better yields.

Soil health matters because:

1. Healthy soils are high-performing, productive soils.
2. Healthy soils can reduce production costs and improve profits.
3. Healthy soils protect natural resources on **and** off the farm.
4. Franklin Roosevelt's statement, "The nation that destroys its soil destroys itself," is as true today as it was 75 years ago.
5. Healthy soils can reduce nutrient loading and sediment runoff, increase efficiencies, and improve pollinator and wildlife habitat.

What are the benefits of healthy soil?

1. Healthy soil holds more water (by binding it to organic matter), and loses less water to runoff and evaporation.
2. Organic matter builds as tillage declines and plants and residue cover the soil. Organic matter holds 18-20 times its weight in water and recycles nutrients for plants to use.
3. One percent of organic matter in the top six inches of soil holds approximately 20,000 gallons of water per acre.
4. Most farmers can increase their soil organic matter in 3-5 years if they are motivated about adopting conservation practices to achieve this goal.

Follow four basic soil health principles to improve soil health and sustainability:

1. Use diverse species to increase diversity in the soil.
2. Manage soils more by disturbing them less.
3. Keep plants growing throughout the year to feed the soil.
4. Keep the soil covered as much as possible.

Develop a Soil Health Management Plan

A Soil Health Management Plan is a road map to soil health. It outlines a system of practices needed to enhance crop production and soil function, and improve or sustain water quality, air quality, energy efficiency and wildlife habitat.

Some of the recommended conservation practices include Conservation Crop Rotation, Cover Crops, No Till, Mulching, Nutrient Management, Planned Grazing and Pest Management.

Among their many benefits, soil health management systems help...

- ✓ Reduce sedimentation and nutrient run-off;
- ✓ Save energy by using less fuel for tillage, and maximizes nutrient cycling;
- ✓ Save water and increase drought tolerance by increasing infiltration and water holding capacity as soil organic matter increases;
- ✓ Reduce plant disease and pest problems;
- ✓ Improve nutrient cycling; and
- ✓ Improve farm and ranch profitability and resiliency.