

# HEALTHY SOIL, CLEAN WATER

Soil health and water quality go hand in hand. Healthy soil contains an ecosystem of bacteria, fungi, and microbes that help plants to thrive. These organic components create pores, allowing the soil to soak up water like a sponge.

Soil health suffers when it is plowed, sprayed, fed a steady diet of chemical fertilizer, or limited to just one or two crops. When soil health is threatened, water quality is too.



**Luckily,  
there are  
solutions!**

Read on to discover some of the conservation practices that improve water quality, reduce water pollution, enrich soil health, and benefit farmers.

## LOW OR NO TILL

Tilling can destroy beneficial fungi and increase erosion. "No-till" and conservation tillage leave plant material on the surface to protect the soil from erosion, improve water retention, and feed soil microbes.

## COVER CROPS

Cover crops nourish microbes, soak up nutrients, and hold the soil in place when it would otherwise be bare after crops are harvested. Farmers who use cover crops enjoy improved soil health, decreased soil compaction and erosion, and up to 50% reduction in nitrogen runoff.

## EXTENDED CROP ROTATION

Planting additional crops beyond just one or two helps to feed a diversity of soil fungi and bacteria and break up pest and disease cycles. Like cover crops, extended rotation retains soil and nutrients on the field, all while increasing yields and making a profit.

The Izaak Walton League advocates for policies and programs that improve water quality for all Americans by helping farmers and ranchers restore the health of their soils.

To learn more about this work, visit [iwla.org/soil](https://www.iwla.org/soil).



## PRAIRIE STRIPS & BUFFERS

Taking a small amount of land out of production can have huge benefits for farmers and the environment. Prairie strips in fields and grass buffers along streams drastically reduce soil erosion and nutrient loss, lessening nitrate runoff by as much as 84%. They also provide valuable habitat for wildlife.

## WETLANDS

Wetlands are incredibly effective at preventing nutrient runoff, acting as natural filters for nitrogen and phosphorus. They also reduce flooding, recharge groundwater supply, provide wildlife habitat, and create opportunities for outdoor recreation.

## INTEGRATED PEST MANAGEMENT (IPM)

IPM is an environmentally sensitive approach to pest management that minimizes the use of pesticides, herbicides, and fungicides, all of which are harmful to soil life. IPM employs methods like pest scouting, spot spraying, biological controls, and non-chemical methods to better deal with pests and disease.



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Visit [www.nitratewatch.org](http://www.nitratewatch.org) to learn more about nutrient pollution and how you can advocate to protect clean water and improve soil health in your community!

## INTEGRATING LIVESTOCK

Rotational grazing of cattle, sheep, and other livestock improves grasslands, reducing erosion and providing habitat for wildlife. Livestock can also graze cover crops, supercharging soil biology and reducing the need for fertilizer.

Want to know when key soil health and water quality issues need your help?  
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