What is soil health?
Soil health describes how well a soil system supports plants, animals, and humans. The term health also recognizes the living nature of soils and the importance of soil microorganisms. Healthy soil:

- Provides wildlife habitat.
- Supports biodiversity.
- Reduces the effects of climate change.
- Filters air and water.
- Increases crop productivity and food security.
- Ensures thriving rural economies.

Washington Soil Health Initiative

The Washington Soil Health Initiative is a partnership between the Washington State Department of Agriculture, Washington State University, and the Washington State Conservation Commission. The initiative establishes a coordinated approach to healthy soil in Washington. Partners provide science-based technical assistance and policy support for increasing soil health across Washington’s diverse regions and cropping systems.

Through research, outreach and education, and funding opportunities, the initiative offers a win-win-win opportunity for farmers, the environment, and the people of Washington.

Interested in learning more or getting involved?

Visit the WSDA website, agr.wa.gov, and type soil health in the “Let’s Find It” search box. Or contact:

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Soil Health Roadmap

What is the health of Washington’s soil? What do we want it to be? How can we get there?

To answer these questions, initiative partners interviewed agricultural stakeholders using extensive surveys, listening sessions, and focus groups.

The resulting Soil Health Roadmap described the following needs:

- Quick, cost-effective methods to assess soil health.
- Information on translating soil health knowledge into practical management decisions.
- An approach that acknowledges differences in soil health across regions and cropping systems.
- A better understanding of soil biology.
- Resources for growers to experiment with soil health practices on their land.

The Washington Soil Health Initiative will focus on addressing these needs in the years to come.

To read the full roadmap, visit soilhealth.wsu.edu

State of the Soils Assessment

Soil samples from agricultural fields provide a data-based understanding of soil health across Washington. To date, the initiative has collected samples from nearly 400 fields planted in 24 different crops, as well as from rangelands and undisturbed lands. These samples are the first in a long-term program called the State of the Soils Assessment, which will track soil health over time.

Soil samples are being used to develop Washington-specific soil health scoring curves, and to determine which soil health measurements are most useful for our state’s soils and crops. The initiative is also creating a soil health database that will map soil health across the state, and provide a baseline assessment of Washington soils.

Network of long-term soil health research sites

Long-term research is needed to measure the effects of agricultural management on soil health, crop productivity, and economic outcomes, over time and in a changing climate.

The first Long-term Agroecological Research and Extension (LTARE) site within the Washington Soil Health Initiative was established in 2020 at WSU’s Northwestern Washington Research and Extension Center in Mount Vernon. This site represents five Washington crop types and four management systems across a range of soil disturbance and organic matter inputs.

Additional LTAREs are planned for a Wenatchee tree fruit system and in Othello potato production. These sites will be the first in a large LTARE network across Washington, to be managed in perpetuity.

Soil health, economics, and climate change

The initiative’s research data will help develop metrics for the Sustainable Farms and Fields grant program, which will make it easier and more affordable for farmers and ranchers to increase climate-smart practices. Grants will be provided for practices that increase carbon sequestration in soil and vegetation, reduce greenhouse gas emissions, and improve soil health.