



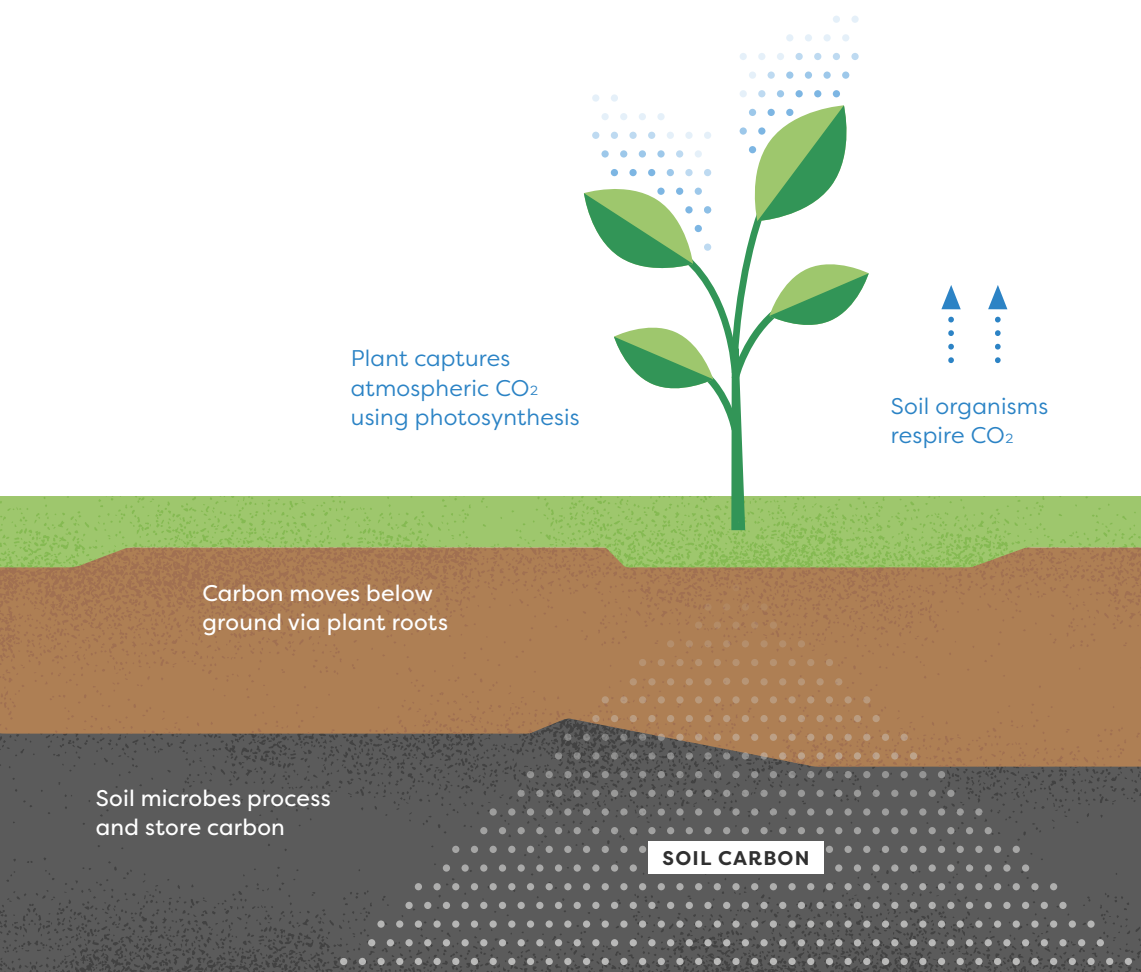
Soil carbon storage

Carbon is naturally stored in soils over time, where it nourishes plants and crops. Over the past couple of centuries, agriculture and land use change have depleted soil carbon globally and in the United States.

Luckily, there are several land management practices that can increase soil carbon, presenting a huge climate, economic, and agricultural opportunity. US agricultural soils alone have the capacity to sequester up to 13% of domestic greenhouse gas emissions annually for as little as \$10 per ton, varying by region, practices, and ecosystem.

Economic and environmental benefits

Farmers and ranchers who implement management practices that make for carbon-rich soils lower their reliance on fertilizers, increase their crop yields, enhance land and water resources, and build greater resilience to climate impacts, all while removing carbon.



OUR RELATED WORK

Soil Carbon Moonshot

A coordinated, interagency program to support both farmers and the environment.

Leading with Soil Initiative

A partnership program increasing access to soil carbon practices for farmers and ranchers in the Rocky Mountain states.

Building A New Carbon Economy: An Innovation Plan

From a coalition of researchers across the country, a technical review of carbon removal solutions, identification of research gaps, and recommendations for future action.

Opportunities for Federal Action Report

Policy strategies for driving carbon removal action, including to help restore agricultural soils, improve farm economics, and protect the environment.

THE ROLE OF MONITORING, REPORTING, AND VERIFICATION (MRV)

MRV is necessary to track the effectiveness of carbon-storing practices and develop guidelines for the range of geographies across the US. However, knowledge gaps and a lack of practice standards hinders data collection.

Today, farmers must take physical samples from their land and mail them to a lab for carbon analysis — an arduous and costly process, especially for smaller farms and those operating on thin margins. Moreover, existing models that predict soil carbon are often informed by insufficient data.

If we can invest in reliable and scalable MRV, we can ensure that future incentives are grounded in science and farmers are able to accurately report on-farm carbon benefits.

To learn more about the importance of robust MRV and the role of agricultural research, read our [*Soil Carbon Moonshot*](#) report.

REFERENCES

[Soil Carbon Sequestration](#), CDR Primer

[Building A New Carbon Economy](#), Carbon180

[Economics of Sequestering Carbon in the US Agriculture Sector](#), USDA

[Opportunities for Federal Action Report](#), Carbon180

Managed grazing promotes natural fertilization and plant regrowth.



Current policy support

USDA has signaled growing interest in agriculture as a climate solution with a number of programs. The Partnerships for Climate-Smart Commodities Program, for example, is investing over \$3.1 billion in pilot projects to create markets for products grown using climate-smart practices, and the Conservation Reserve Program is funded at \$10 million for soil carbon monitoring.

A handful of bills introduced in Congress also work to improve agricultural conservation, incentive, and research programs to support soil health and carbon sequestration. H.R. 2803/S. 1337, the Agriculture Resilience Act, expands existing USDA programs to bolster regional agricultural research and de-risk soil health practices for producers through financial incentives. H.R. 2534/S. 1072, the Climate Stewardship Act of 2021, supports voluntary stewardship practices on over 100 million acres of farmland through dedicated conservation program funding.

Additionally, S. 1356, the Healthy Soils Healthy Climate Act of 2021, creates a permanent soil health and carbon monitoring program through the existing Environmental Quality Incentive Program and a new Soil Health and Carbon Science Research Program. And H.R. 9667, the Sustainable Agriculture Research and Education Modernization Act, makes critical updates to the program's scope and increases funding for farmer-led and -driven research across the US.

Explore today's federal support for soil carbon with the [Carbon Removal Policy Tracker](#).

Learn more, donate, and subscribe at carbon180.org

