Oregon farmers and farmlands are part of the climate solution.

Here's how.


Oregon farmers (Photo by NRCS)

Helping farmers be part of the climate solution is a low-cost, near-term, and untapped opportunity. Oregon can mitigate climate change with programs that help more farmers transition more acres to climate-smart systems of practices. These practices save farmers money, build resilience to extreme weather, and sequester carbon in the soil—all while also improving water quality and wildlife habitat.

TOOLS FOR CLIMATE-SMART FARMING

Soil health management systems and climate-smart farming are approaches that include a suite of practices such as **cover crops, diverse crop rotations, and livestock integration,** among others. These practices minimize soil disturbance and maximize soil cover, biodiversity, and living roots as part of a holistic systems approach that also adapts technology as well as nutrient, pest, and manure management. These systems help farmers adapt to and mitigate climate change and they also benefit water quality.

Alfalfa can be used to diversify an Oregon crop rotation with wheat. (Photo by NRCS)

TOWARDS A NET ZERO OREGON AG SECTOR THROUGH SOIL HEALTH

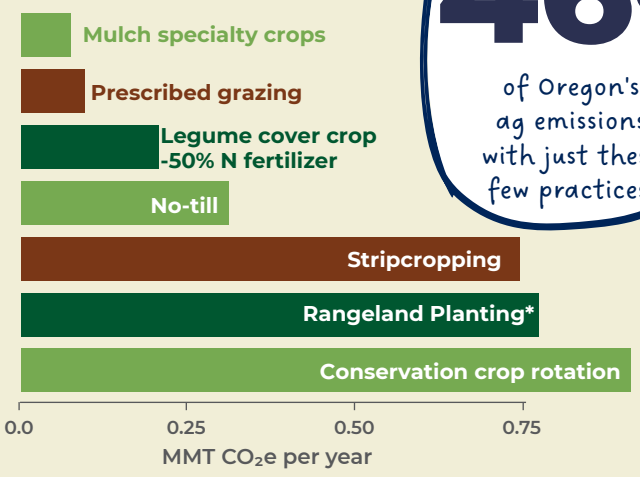
Agriculture contributes

6.7 **MMT CO_2e per year, or about 34% of Oregon's net GHG emissions**

BUT if farmers successfully adopted the below systems of practices on 80% of farmland, Oregon could mitigate a total of

3.0 **MMT CO_2e per year for 20 years**

That's about **46%** of Oregon's ag emissions with just these few practices.



*Plantings on 20% of rangeland.

MMT CO_2e stands for million metric tonnes of CO_2 equivalents, indicating for example, how much carbon is stored or greenhouse gas (GHG) emissions are reduced due to a practice.

How farmers benefit

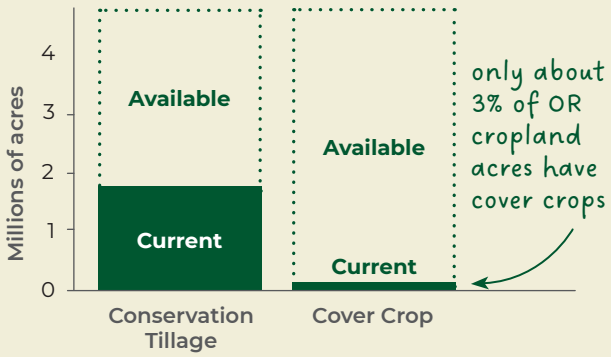
Climate-smart agriculture doesn't just benefit society. It helps farmers, too.

Farmers in Oregon are already facing more extreme wet and dry periods due to climate change.

Soil health practices rebuild soil structure and soil organic matter. These two characteristics **improve soil infiltration** and drainage during wet weather and **water storage** for crop use during dry weather. This also helps protect **water quality** and mitigate downstream **flood risk.**

Farmers benefit economically, too. According to partial budget analysis conducted by AFT on ten family farms growing row crops across the US (average size 1,100 acres), transitioning to cover crops and no-till **improved their bottom line between $4 and $59 per acre per year, a ROI of 7 to 343%.** Learn more here.

Oregon has much greater potential for climate benefits from agriculture



A farmer growing winter wheat used a neighbor's cattle to terminate his diverse cover crop in Oregon. (Photo by NRCS)

Policy Recommendations

Oregon state leaders, agencies, and elected officials can increase adoption of soil health practices by **channeling federal, state, and private funding** to:

- **Develop and Support soil health programs** that have a strategic plan and adequate agency staffing
- **Increase fina cial assistance for farmers,** including grants for farm resilience, carbon sequestration, infrastructure, and support for transitional costs
- Bolster locally relevant **technical assistance,** including peer-to-peer farmer networks

County-level estimates for potential C sequestration from soil health practices are available from CaRPE Tool™ (carpe.shinyapps.io/CarpeTool).

How will your state achieve resilient, climate-smart agriculture?

Read more about these carbon estimates at farmland.org/carpe-results. **Partner with us to achieve climate mitigation goals by empowering the agricultural community.** Contact us: climate@farmland.org.

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www.farmlandinfo.org/publications/carpe-results