Oregon farmers and farmlands are part of the climate solution.

Here's how.

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.

TOWARDS A NET ZERO OREGON AG SECTOR THROUGH SOIL HEALTH

Agriculture contributes 6.7 MMT CO₂e 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 CO₂e per year for 20 years

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

DIVERSE CROP ROTATION

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

MMT CO₂e per year for 20 years

- Mulch specialty crops
- Prescribed grazing
- Legume cover crop -50% N fertilizer
- No-till
- Stripcropping
- Rangeland Planting*
- Conservation crop rotation

*Plantings on 20% of rangeland.

MMT CO₂e stands for million metric tonnes of CO₂ 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

Only about 3% of OR cropland acres have cover crops.

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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