

Virginia farmers and farmlands are part of the climate solution.

Here's how.



Greene County producer and participant in AFT's Sustainable Grazing Project. (Photo by Rebecca Drobis for AFT)

Helping farmers be part of the climate solution is a low-cost, near-term, and untapped opportunity. Virginia 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 regenerative 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.




COVER CROPS

A farmer with her diverse cover crop in Rappahannock County, VA (Photo by Rebecca Drobis for AFT)

A CLIMATE-SMART VIRGINIA AG SECTOR THROUGH SOIL HEALTH

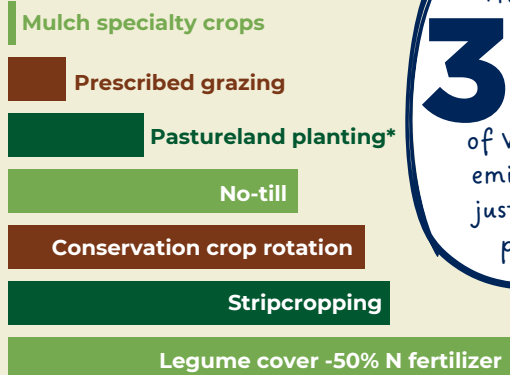
Agriculture contributes

6.8 MMT CO₂e per year, or about **9%** of Virginia's net GHG emissions

BUT

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

2.6 MMT CO₂e per year for 20 years



0.0 0.2 0.4 0.6
MMT CO₂e per year

*Pastureland plantings on 20% of pastureland.

MMT CO₂e stands for million metric tonnes of CO₂ equivalents, meaning here how much carbon is stored or greenhouse gas emissions are reduced due to a practice.

That's about
39%
of Virginia's ag emissions with just these few practices.

How farmers benefit

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

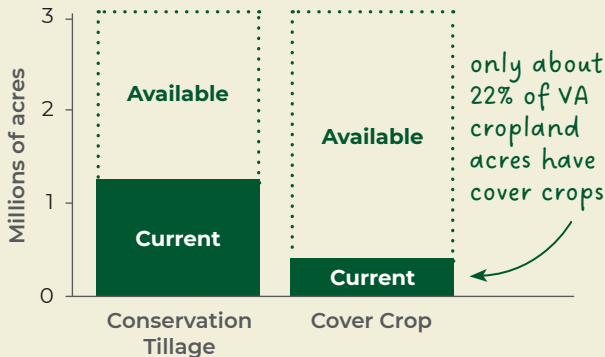


Farmers in Virginia are already facing more extreme wet and dry periods due to climate change.

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, altogether supporting more **consistent crop yields**. This also helps protect **water quality** and mitigate downstream **flood risk**.

Farmers benefit economically, too. By transitioning to cover crops and no-till, the net income of a 360 acre family farm in eastern Pennsylvania **rose by \$20 per acre per year, a 42% ROI**. Learn more [here](#).

Virginia has much greater potential for climate benefits from agriculture



ROTATIONAL GRAZING

A livestock producer with his cattle in Fauquier County, VA. (Photo by Rebecca Drobis for AFT)



Virginia state leaders, agencies, and elected officials can increase adoption of climate-smart practices by channeling federal, state, and private funding to:

- ▶ Increase farmer access to consistent, locally relevant **technical and financial assistance** and peer to peer farmer networks that help them transition to climate-smart production, ensuring that this assistance gets to **farmers of all backgrounds** and farms of all sizes and production systems.
- ▶ **Permanently protect more farmland** and advance adoption of climate-smart practices on that protected farmland
- ▶ **Build local and regional markets** for products grown and raised in climate-smart ways
- ▶ Support the **Virginia Soil Health Coalition**

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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