



# A Primer on Regenerative Agriculture

**D**uring the last year, regenerative agriculture has grabbed headlines and attention as never before. For good reason. It is a systems approach that ultimately serves the business interests of farmers and ranchers, while working to reverse the deleterious effects of climate change.

Agriculture is both threatened by the climate crisis and a major cause of it. According to Dr. Rattan Lal, recipient of the 2020 World Food Prize, agriculture produces roughly 30% of all greenhouse gas (GHG) emissions globally. In the U.S., the EPA estimates that agriculture contributes about 10% of the nation's total GHG. The UN's Intergovernmental Panel on Climate Change (IPCC) and the National Oceanic and Atmospheric Administration (NOAA) have confirmed that we will never meet the goals of the Paris Climate Accord by reducing emissions alone. Rather, we must also draw down legacy carbon through various "natural solutions." Regenerative agriculture holds promise as one of the most cost-effective and immediate of these solutions. Ten major studies over the past two decades show that agriculture, done right, could draw down as much as 4 to 5 Gt CO<sub>2</sub>/year—that's equivalent to 15% of current GHG emissions. AFT research even suggests that widespread adoption of regenerative practices across the nation could draw down more carbon than US agriculture produces.

At its most basic, regenerative agriculture is a holistic approach to farming and the food system that results in improved ecological, social, and economic conditions. Specifically, regenerative agriculture:

- Enhances soil health and soil biological life, often reducing input costs and boosting farmer income
- Sequesters carbon, helping fight climate change, and creating opportunities for farmers to sell carbon credits
- Improves air and water quality, and water storage and availability

- Supports diverse systems that enhance wildlife
- Builds resilience to climate change impacts, such as increased droughts, excess rain, and increased pest pressures
- Increases global food security ultimately reducing global healthcare costs
- Supports the economic, social, and cultural health of those who own, manage, and work on farms, enhancing rural and some urban livelihoods.

Regenerative agriculture is directly related to other movements, including organic farming and sustainable farming. They are all focused on wisely using our land and water resources, but regenerative agriculture is about creating a *system* where a toolbox of practices is utilized depending on what is being produced, soil conditions, and the local climate. It is about utilizing practices that improve the ecological and economic conditions of the farm or ranch—with an emphasis on sequestering carbon. By combining on-farm practices such as reduced till, cover crops, diverse crop rotations, including perennial crops, and livestock rotational grazing, we build resilient, productive systems that help heal the planet.

## Farming Is Our Future!

For American farmers, transitioning to regenerative farming practices can decrease input costs, improve yields, and stabilize operations—all while providing essential environment services, including carbon sequestration. Beyond this, global food companies are looking to build supply chains with ingredients grown with regenerative practices. Yet despite these realities, very little of America's farmland is managed regeneratively—for instance, only 6% of cropland is in cover crops. There are reasons for this, which AFT is working hard to overcome.

## About American Farmland Trust

AFT launched the agriculture conservation movement. For 40 years, we've worked to protect farmland, advance better farming practices, and support America's farmers and ranchers. Our work has never been more important. AFT is committed to widespread adoption of regenerative farming practices that are essential to both producing food and healing our planet. But for AFT, that goal is directly related to permanently protecting more farmland, because the carbon capture that comes with regenerative agriculture evaporates if the land is developed. We also focus on supporting farmers and ranchers, because we need operators who can succeed financially while following the right practices if we have any hope of widespread adoption. AFT is the only national organization that takes this holistic approach.



AFT pursues its mission through advocacy, demonstration projects, technical assistance, and research.

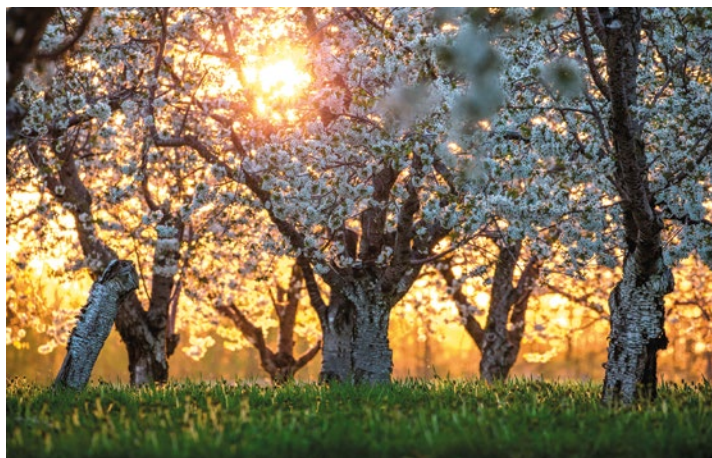
AFT operates a national Climate Initiative, working to advance regenerative agriculture in multiple regions and states, through programming currently totaling over \$17 million. In addition, AFT advises state administrations on regenerative practices through the US Climate Alliance. AFT recently released CarPE,<sup>™</sup> a powerful new tool developed in collaboration with USDA that provides net estimates of GHG emission reductions and carbon sequestration potential at regional levels. Learn more at [farmland.org](http://farmland.org).

If you are interested in supporting AFT's work with regenerative agriculture, please contact Shawn Shepherd, Director of Development and Strategic Engagement at [sshepherd@farmland.org](mailto:sshepherd@farmland.org).

**Farmland is our planet's protection. Without enough farmland, we can't apply regenerative practices at the scale needed to heal the earth. Food will always be fundamental. But we need farmland and the farmers and ranchers who steward that land for much more.**

**JOHN PIOTTI**

President, American Farmland Trust



## Recommended Additional Resources

Other organizations working in the U.S. to support regenerative agriculture:

- Kiss the Ground
- National Farmers Union
- RegenAg
- Rodale Institute
- Savory Network
- Soil Capital
- Soil Foodweb Institute
- Soil Health Institute
- The Carbon Underground
- The Ecological Farming Association (EcoFarm)
- The Environmental Services Market Coalition
- The Land Institute
- The Traditional Native American Farmers Association
- US Farmers and Ranchers Alliance

Great books to learn more:

- Anderson, Stephanie. *One Size Fits None: A Farm Girl's Search for the Promise of Regenerative Agriculture.*
- Brown, Gabe. *Dirt to Soil: One Family's Journey into Regenerative Agriculture.*
- Harwood, Richard B. *Enough Food: Achieving Food Security Through Regenerative Agriculture.*
- Kempf, John. *Quality Agriculture: Conversations about Regenerative Agronomy with Innovative Scientists and Growers.*
- Perkins, Richard. *Regenerative Agriculture.*
- Pretty, Jules. *Regenerating Agriculture: Policies and Practice for Sustainability and Self-Reliance.*
- Schwartz, Judith. *Cows Save the Planet: And Other Improbable Ways of Restoring Soil to Heal the Earth.*
- Shepard, Mark. *Restoration Agriculture.*
- Toensmeier, Eric. *The Carbon Farming Solution: A Global Toolkit of Perennial Crops and Regenerative Agriculture Practices for Climate Change Mitigation and Food Security.*