

REGENERATIVE AGRICULTURE *and the* SOIL CARBON SOLUTION

Summary

In 2019, the United Nations International Panel on Climate Change identified agricultural activities as responsible for nearly a quarter (24%) of global greenhouse gas emissions. It's clear: we need to change our agricultural system in order to stop the climate crisis. But what if farming could go from contributing to the climate crisis, to the solution?

“Regenerative Agriculture and the Soil Carbon Solution” is a new white paper published by Rodale Institute, the global leader in regenerative agriculture, outlining this powerful potential. Building upon landmark research first published by Rodale Institute in 2014, this new white paper compiles the explosive amount of new science around soil carbon sequestration to identify regenerative agriculture as a path towards a new climate future.

This paper identifies the potential of regenerative agricultural practices to sequester carbon, improve soil health, and feed the world, as well as actionable steps for eaters, farmers, and policymakers to take to increase the adoption of regenerative food and farming and mitigate the climate crisis.

Key Findings

Shifting both crop and pasture management globally to regenerative systems is a powerful combination that could drawdown more than 100% of annual CO₂ emissions, pulling carbon from the atmosphere and storing it in the soil.

- With appropriate grazing management, livestock can increase carbon sequestered in the soil that more than offsets their greenhouse gas emissions.
- Crop yields in regenerative systems have been shown to outcompete conventional yields for almost all food crops, proving that regenerative farming can feed the world while stabilizing the climate, regenerating ecosystems, restoring biodiversity and enhancing rural communities.
- Eaters, farmers, and policymakers can make a difference in the climate crisis fight by:
 - Supporting and implementing regenerative practices
 - Encouraging adoption of regenerative systems by peers and governments
 - Divesting from systems that destroy soil health

“ If we converted all global croplands and pastures to regenerative agriculture, we could sequester more than 100% of current annual CO₂ emissions. ”

What is regenerative agriculture?

Regenerative agriculture is a system of farming principles that rehabilitates the entire ecosystem and enhances natural resources, rather than depleting them.

Using practices to grow food that work with nature instead of against it, regenerative agriculture improves the health of the soil, the welfare of animals, and the wellbeing of farmworkers, all while trapping carbon underground using the unique properties of healthy soil and plants.

What is carbon sequestration?

Carbon sequestration, the scientific term for capturing carbon from the atmosphere and storing it in a medium like soil, is a critical tool in the fight against climate change.

During photosynthesis, plants use the energy of the sun to extract sugar from atmospheric carbon dioxide. Those sugars travel through the plant's roots to feed bacteria and fungi in the surrounding soil. The consumption of carbon by these bacteria and fungi convert the carbon into more stable materials, allowing it to be trapped underground.

Industrial agriculture has disrupted this process, through practices like tilling, which disrupts the soil and allows carbon to escape, or chemical use that strips the soil of the bacteria, microbes, and fungi critical to the sequestration process. Protecting the soil with regenerative farming practices is essential to maintaining soil's ability to store carbon and fight the climate crisis.

Citing The Paper: "Regenerative Agriculture and the Soil Carbon Solution." Rodale Institute, 2020.

REGENERATIVE AGRICULTURE

Regenerative practices create biodiversity above and below ground and can include:

- Compost
- Cover Crops & Green Manure
- Crop Rotations
- Rotational Grazing/Integrated Livestock Management
- Reduced Tillage
- No Synthetic Chemicals & Fertilizers



TAKE ACTION

What Can Eaters Do? Put the Pressure On!

- Put pressure on brands and supply chains
- Give policymakers hope
- Start a conversation
- Buy regenerative

What Can Farmers Do? Grow This Movement!

- Grow the community
- Experiment, observe, share
- Measure outcomes

What Can Policymakers Do? Defund Soil Destruction!

- Learn from constituents
- Support regenerative, organic, and regenerative organic agriculture



RODALE
INSTITUTE™



For more info on how to take action in your community check out our Climate Action Toolkit at RodaleInstitute.org/Climate2020.

Media Contact: For all press and media inquiries, please contact Margaret Wilson, Margaret.Wilson@RodaleInstitute.org.