



## Soil Carbon Sequestration Update

July 2020

### New Tools, Resources and Developments

Check out these top 15 blog sites for regenerative agriculture.

[https://blog.feedspot.com/regenerative\\_agriculture\\_blogs/](https://blog.feedspot.com/regenerative_agriculture_blogs/)

IUCN promotes a global standard for nature based solutions to climate change.

<https://globalimpactnews.com/2020/07/23/new-iucn-global-standard-for-nature-based-solutions-welcomed/>

Young Farmers produce Racial Equity toolkit for farmers of color.

[https://www.youngfarmers.org/wp-content/uploads/2020/06/Racial\\_Equity\\_Toolkit.pdf](https://www.youngfarmers.org/wp-content/uploads/2020/06/Racial_Equity_Toolkit.pdf)

Dutch based DOEN Foundation has committed to support the young startup reNature. The purpose of the grant is to increase the foundation's work capacity to respond to the increasing demand for agroforestry. reNature develops and realizes regenerative agriculture projects worldwide.

<https://renature.pr.co/190516-doen-foundation-supporting-regenerative-agriculture-startup>

The global consulting and compliance organization Peterson Control Union Group launched a new platform on regenerative agriculture in June.

<https://www.regenagri.org/https://thepigsite.com/news/2020/05/regenerative-agriculture-platform-will-launch-at-virtual-conference>

Ranchers and beekeepers unite in support of regenerative practices.

<https://nfu.org/2020/06/30/regenerative-agriculture-unites-ranchers-and-beekeepers/>

Native American groups are working to regenerate their land with Bison.

<https://www.3blmedia.com/News/Regenerating-Land-and-Native-Communities-Bison>

In June, General Mills launched a new pilot dairy project focused on regenerative agriculture as part of its larger commitment to advancing the field.

<https://www.generalmills.com/en/Responsibility/Sustainability/Regenerative-agriculture>

Pure Advantage in New Zealand is promoting a new focus on capturing food waste as part of the regenerative agriculture program there.

<https://pureadvantage.org/news/2020/05/27/regenerative-agriculture-and-food-waste/>

Soil degradation poses a huge threat to human and planetary health.

<https://www.forbes.com/sites/daphneewingchow/2020/06/24/earths-rapidly-degrading-soil-is-bad-news-for-human-health/#5b3036167865>

Bayer announces a new regenerative agriculture initiative.

<https://www.agri-pulse.com/articles/14105-bayer-initiative-will-pay-farmers-to-keep-carbon-in-the-ground>

## **New Economies - Musings on Capitalism, the Pandemic, Racial Equity, Agroecology and Regenerative Agriculture**

Dr. Rattan Lal, winner of the World Food Prize, argues that soils should have rights.

<https://civileats.com/2020/07/15/the-world-food-prize-winner-says-soil-should-have-rights/>

Twelve organizations in Africa are promoting agroecological methods of farming to advance resilience in the wake of the pandemic.

<https://afsafrika.org/agroecology-the-real-deal-for-climate-crisis-in-africa/>

Michael Pollan wrote an article in *The New Yorker* about what the sickness in our food systems reveals about our economy. He describes how local, sustainable systems of production are thriving while industrial approaches are

failing. <https://michaelpollan.com/articles-archive/the-sickness-in-our-food-supply/>

Regional and local grain production businesses in the US are thriving while commodity grains are in trouble. This article suggests that some of the small grain producers are models for a new economy. <https://www.nytimes.com/2020/07/24/opinion/us-grain-industry.html>

Black Lives Matter and Black Farmers Matter.

<https://heartofthecity-farmersmar.squarespace.com/news/2020/7/22/blacklivesmatter-and-black-farmers-matter>

The United Nations Development Programme showcases model projects for transforming our food system in the wake of the pandemic.

<https://stories.undp.org/transforming-food-and-agriculture>

The Southern Ecosocial Pact is calling for major changes in Latin American economies, including a focus on food systems.

<https://www.resilience.org/stories/2020-06-17/for-a-social-ecological-economic-and-intercultural-pact-for-latin-america/>

These eighteen organizations are promoting transformation through agroecology.

<https://foodtank.com/news/2020/06/these-18-organizations-are-building-a-stronger-food-system-through-agroecology/>

The Heinrich Boll Foundation (Berlin) and Friends of the Earth (Brussels) released *Insect Atlas* with a call to end industrial agriculture that relies on chemical inputs and monocultures.

<https://www.commondreams.org/news/2020/06/09/save-insects-save-farmers-save-ourselves-new-global-report-calls-end-industrial>

**Danone's Eric Souberain reflects on a broken food system and the role of regenerative agriculture.**

<https://www.businessgreen.com/feature/4017243/danone-eric-soubeiran-regenerative-farming-fixing-broken-food>

**Polling suggests Europeans want major changes in the wake of Covid 19.**

<https://www.politico.com/news/2020/07/16/europe-change-coronavirus-pandemic-365636>

**The UN General Secretary calls for a new contract with nature** in order to protect our lands and the planet. <https://news.un.org/en/story/2020/06/1066472>

**The Global Alliance for the Future of Food issued a new vision and narrative** for transformation of our food systems.

<https://futureoffood.org/wp-content/uploads/2020/07/Global-Alliance-Health-Narrative-A4-format.pdf>

**Aha! Fake Trillions, Real Billions, Beecoin, and the Great American Do-Over by Woody Tasch** is being released chapter by chapter. This chapter looks at myth, money, food and thought in the time of a global pandemic and collapsing systems.

[http://beecoin.org/wp-content/uploads/2020/07/AHA\\_Prologue.pdf?goal=0\\_e9ca84a3ec-0d66aed260-81157169](http://beecoin.org/wp-content/uploads/2020/07/AHA_Prologue.pdf?goal=0_e9ca84a3ec-0d66aed260-81157169)

**The pandemic has disrupted our food systems** - a grave warning as climate change accelerates.

<https://insideclimatenews.org/news/06072020/coronavirus-agriculture-food-chain-future-climate-change>

**Diversifying crops grown in India will be essential for food security** in the wake of the pandemic. <https://www.natureasia.com/en/nindia/article/10.1038/nindia.2020.83>

**In contrast to those who want to bolster local diverse systems in response to the pandemic,** the World Economic Forum is promoting transformation through plant breeding, technology and efforts to boost yields, coupled with a focus on shifting diets.

<https://www.weforum.org/agenda/2020/06/the-pandemic-must-transform-global-agriculture/>

## **Summits and Conferences**

**UN Secretary-General António Guterres is convening a Food Systems Summit for 2021.**

According to the UN's website for the summit, "The Secretary General is calling for collective action of all citizens to radically change the way we produce, process, and consume food."

"The 2021 Food System Summit must be more than just a moment in time. It must offer a turning point in our efforts to deliver the 2030 Agenda and Sustainable Development Goals

(SDGs). We need broad participation to make that happen." For more details, click on this link: <https://www.un.org/sustainabledevelopment/food-systems-summit-2021/>

**The Soil Health Institute will hold a conference July 30 and 31** on regenerative agriculture and soil health.

<https://partnershipfarm.org/events/soil-health-the-foundation-for-regenerative-agriculture-virtual-meeting/>

**The Northeast Organic Farming Association has an online conference running** from now until August 9 with workshops on regenerative agriculture. <https://nofasummerconference.org/>

**Regeneration International is hosting numerous online workshops and events around the world** to help advance regenerative agriculture. See the calendar here.

<https://regenerationinternational.org/events-calendar/category/event/list/>

## **Policy Developments**

### **United States Congress**

**In February, 2020, Representative Chellie Pingree from Maine introduced the Agriculture Resilience Act**, HR 5861 in the House of Representatives in an effort to promote agriculture's role in addressing the climate threat. This blog from the Union of Concerned Scientists provides a quick overview of the bill's positive features. This bill has received broad support. The main work right now is focused on building Congressional cosponsors for the bill.

<https://sustainableagriculture.net/blog/agriculture-underscored-house-climate-committee-report/>

<https://blog.ucsusa.org/marcia-delonge/6-ways-the-agricultural-resilience-act-equips-farmers-to-fight-the-climate-crisis-with-science>

**In June, 2020, Senator Stabenow (D-MI) and Senator Braun (R-IN) introduced the bipartisan *Growing Climate Solutions Act* to break down barriers to farmers participating in carbon markets.** They were joined by Representatives Spanberger (D-VA) and Bacon (R-NE) in the House of Representatives. This bill would establish a certification program in the U.S. Department of Agriculture (USDA) to help solve technical entry barriers that prevent farmer and forest landowner participation in carbon credit markets. This bill is supported by a broad coalition of industry, environmental and farm groups and will probably move forward, but unless it is strengthened, it will be opposed by several progressive and sustainable farming, climate and environmental groups that have concerns about self-certification systems and the lack of any independent accreditation of actual practices being used on farms. There are also concerns about *who* will have access to the program and be able to benefit and how effective

the program can be at achieving *net* climate improvements (given the lack of focus on a requirement to do so.)

<https://www.reuters.com/article/us-usa-climatechange-agriculture-idUSKBN23B23J>

<https://www.agriculture.senate.gov/newsroom/dem/press/release/leaders-at-senate-ag-hearing-urge-passage-of-the-bipartisan-growing-climate-solutions-act->

**The House Select Committee on the Climate Crisis released a report on June 30** that includes recommendations for legislative action to build a clean energy economy that generates millions of new jobs, promotes environmental justice and advances bold climate action. The report includes a call for national climate adaptation programs that help farmers be resilient in the face of climate impacts and **a range of incentives to help farmers steward their farms and land** in ways that mitigate climate change. It includes efforts to promote carbon sequestration.

[https://climatecrisis.house.gov/sites/climatecrisis.house.gov/files/4%20Pager\\_compressed.pdf](https://climatecrisis.house.gov/sites/climatecrisis.house.gov/files/4%20Pager_compressed.pdf)

<https://climatecrisis.house.gov/report>

<https://sustainableagriculture.net/blog/agriculture-underscores-house-climate-committee-report/>

**Presidential candidate Joe Biden has an emerging platform and program on regenerative agriculture.** At the [Biden site](#), the key language seems to be in the bullet on *“Partnering with farmers to make American agriculture first in the world to achieve net-zero emissions, giving farmers new sources of income in the process.”*

The California Department of Food and Agriculture’s [Office of Environmental Farming and Innovation \(OEFI\)](#), in coordination with the agency’s [Environmental Farming Act Science Advisory Panel](#), is now accepting proposals for new soil carbon sequestration management practices for inclusion in its [Healthy Soils Program \(HSP\)](#). As part of program development, CDFA identified specific soil management practices eligible for funding through the HSP.

<https://www.counties.org/csac-bulletin-article/cdfa-accepting-proposals-healthy-soils-program>

## **Other Regions**

**Canadian farmers worry that soil carbon payments to US farmers might work against Canadian producers.**

<https://www.agcanada.com/2020/07/looking-for-carbon-sequestration-answers>

## **2020 Global Food Policy Report for Southeast Asia**

<https://www.ifpri.org/blog/2020-global-food-policy-report-emerging-challenges-building-inclusive-food-systems-south-asia>

**Southeast Asia looks at pandemic and food policies**

<http://www.fao.org/asiapacific/news/detail-events/en/c/1295300/>

**Greenpeace New Zealand releases policy agenda for regenerative agriculture**

<https://storage.googleapis.com/planet4-new-zealand-stateless/2020/05/3e54dd9c-govt-investment-in-regenerative-agriculture-greenpeace-nz.pdf>

**European actors explore good food, good farming practices and new policies**

<https://www.arc2020.eu/tag/regenerative-agriculture/>

**France's young farmers are primed to advance regenerative agriculture**

<https://medium.com/presencing-institute-blog/accelerating-the-transition-towards-regenerative-agriculture-in-france-e30976c1009d>

**The Alliance for a Green Revolution in Africa launches a 15 month pilot project with regenerative agriculture in Kenya.**

<https://iirr.org/regenerative-agriculture-in-kenya/>

**Soil health a huge priority in Odisha, India**

<https://www.cgiar.org/news-events/news/soil-health-key-priority-for-better-livelihoods-of-odisha-farmers>

## **New Science on Soil Carbon Sequestration**

**Scientists call for better understanding and new models of how soil carbon sequestration persists** over time with the complex interactions of sequestration and respiration.

<https://www.nature.com/articles/s41561-020-0612-3>

<https://news.cornell.edu/stories/2020/07/new-soil-models-may-ease-atmospheric-co2-climate-change>

**Efforts are underway to better understand each global region's carbon sequestration capacity.**

<https://phys.org/news/2020-07-jigsaw-puzzle-regional-carbon.html>

**Applying rock dust to croplands could remove 2 billion tons of CO<sub>2</sub> equivalents from the atmosphere for absorption in soil** -the equivalent of sequestering all current emissions from shipping and aviation combined or around half of Europe's current emissions. Professor David Beerling, Director of the Leverhulme Centre for Climate Change Mitigation at the University of Sheffield and lead author of the study, said: "Carbon dioxide drawdown strategies that can

scale up and are compatible with existing land uses are urgently required to combat climate change, alongside deep and sustained emissions cuts.

<https://drive.google.com/file/d/1XdDFTgA2PViSrttME2GixLvK83sIHTT3/view>

**Terrace farming is a type of farming that was invented by the Inca people who lived in the South American mountains.** This farming method has made cultivation of crops such as tea, rice, grapes, and coffee in hilly or mountainous regions possible. It is commonly used in China, Vietnam, Philippines, Indonesia and several Asian, European and Latin American countries. This major meta-analysis study based on 78 research studies points to significant soil carbon sequestration from older terraced landscapes.

<https://www.sciencedirect.com/science/article/pii/S0048969720312626>

**Northern peatlands are critical to our future and play a huge role in carbon storage.**

Peatlands currently store 30% of the world's soil carbon. This study found that adding woody litter to peatlands can have a huge positive impact on keeping soil carbon stable in peatlands.

<https://www.nature.com/articles/s41558-020-0727-y> (You'll need an academic friend to get past this commercial pay wall.)

**All soil carbon is not created equal.** This highly readable article by Colorado State scientists points to particulate organic matter versus mineral-associated organic matter and helps readers understand some of the complexity of sequestering carbon in soils.

<https://source.colostate.edu/soil-carbon-is-a-valuable-resource-but-all-soil-carbon-is-not-created-equal/>

**Argonne soil carbon research reduces uncertainties about climate impacts and soils.**

[https://www.eurekalert.org/pub\\_releases/2020-07/dnl-asc070920.php](https://www.eurekalert.org/pub_releases/2020-07/dnl-asc070920.php)

**Plant roots increase carbon emissions in permafrost soils**

<https://www.sciencedaily.com/releases/2020/07/200720112335.htm>

## Climate Impacts on Farmers

**East and Central Africa as well as parts of the Middle East and Asia are facing an existential threat from unprecedented swarms of locusts devouring crops.** Many speculate that the huge swarms are a result of changing weather patterns due to climate change. Over 12 million people in this region are food insecure.

<https://www.carbonbrief.org/qa-are-the-2019-20-locust-swarms-linked-to-climate-change>

## Ongoing Debate Over the Potential of Soil Carbon Sequestration

Here is a California perspective on the potential of soil carbon sequestration written in response to the WRI blog featured in our last update - a blog that provoked a strong rebuttal from the scientific community.

<https://calclimateag.org/regenerative-agricultures-climate-mitigation-potential-a-california-perspective/>

Leading scientists, including Mark Bradford (Yale) and Keith Paustian (Colorado State) argue that papers that criticize soil carbon sequestration have as many holes as those that advocate for it. This interesting article attempts to look at the potential limitations of soil carbon drawdown and carbon markets.

<https://www.greenbiz.com/article/carbon-sequestration-farms-actually-working-fight-climate-change>

*Prepared by Betsy Taylor, [Breakthrough Strategies and Solutions](#), Takoma Park, Maryland.  
To help someone new join our listserv on Soil Carbon Sequestration [click here](#).  
To submit suggested resources for the next update, please contact [Austin Badger](#).*