

ONE COUNTRY

RURAL ROADMAP: CARBON SEQUESTRATION

Background:

Farmers and ranchers have been on the frontlines of the climate crisis for decades. They've experienced unpredictable weather events, flooded fields, and severe droughts that ruined crops and harmed business.

Fortunately, the agriculture industry has a great opportunity to be a part of the solution to climate change. The industry is currently responsible for 10 percent of U.S. greenhouse gas emissions. By adopting carbon sequestration practices on their land, farmers and ranchers can take control of the climate challenge and use their knowledge and skills to reap immediate economic benefits and safeguard future harvests by reducing their own carbon emissions.

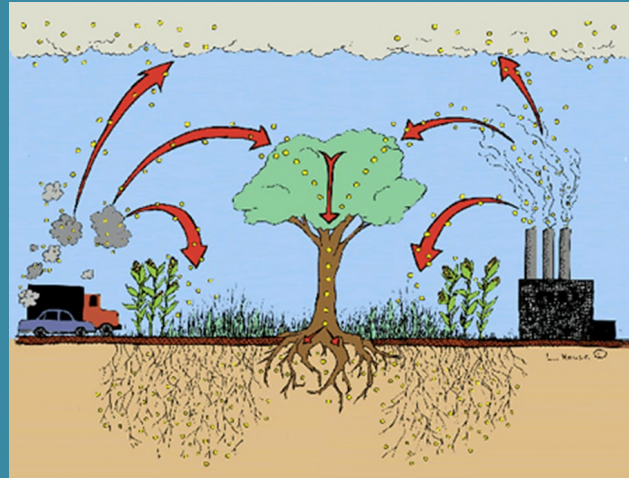
Benefits of Carbon Sequestration:

The benefits of carbon sequestration and sustainable agriculture practice are three-fold:

- 1** The soil health on farmland improves, yielding better crops
- 2** Farmers and ranchers can benefit economically through carbon markets and increased yield
- 3** Carbon emissions are reduced, and the damaging effects of climate change are mitigated.

Climate Benefits:

- Carbon sequestration is accomplished through agricultural practices that enhance the natural storage of carbon in land or reduce natural carbon emissions.
- Greenhouse gases in the air directly cause climate change, so by storing these gases in the soil, farmers are mitigating the effects of climate change.



Source: ERS/USDA

Soil Health Benefits:

- Carbon is critical to soil function and productivity and is a main component of healthy soil conditions.
 - Soil with higher organic carbon levels tends to yield strong crops for farmers, as it improves soil aeration and water drainage and retention, and reduces the risk of erosion and nutrient leaching.
- In short, carbon sequestration practices bring more carbon to the soil, which is good for soil health and crop yield.

Economic Benefits:

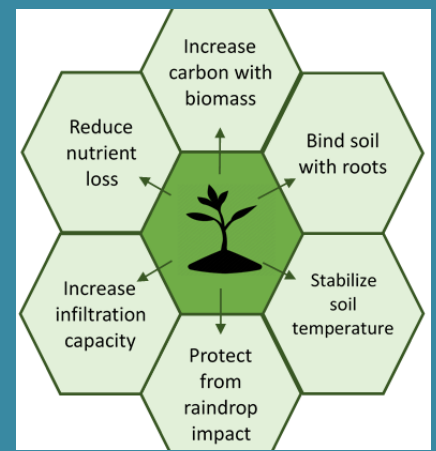
- In addition to making more money through better crops, they can bring in additional income just by using climate-smart practices.
- Farmers can enter the carbon credit market where they could sell credits to companies looking to reduce their own carbon footprints.
- Across the country, farmers have already started reaping the economic benefits of sustainable agriculture. Smart, targeted policies can help even more small, family-owned farms experience the benefits, too.

What are Carbon Sequestration Practices?

Some of the most feasible and cost-effective ways to address climate change are through natural climate solutions that pull and store carbon from the atmosphere. Farmers across the world can sequester enough carbon through agriculture to avert the worst impacts of climate change. The following agricultural practices reduce greenhouse gas emissions by enhancing carbon storage in soil:

- **No-Till Farming:** Farmers reduce the soil turnover and erosion by letting residue from previous crops stay on the field, allowing the soil to retain nutrients and sequester more carbon.

- **Cover Crops:** Farmers plant specific plants (like peas, beans, wheat, and rye) to slow erosion, improve soil health, increase biodiversity, and ultimately sequester more carbon.



Source: University of Nebraska

- **Crop Rotation:** Rotating different crops over several years helps replenish the nutrients in the soil and increases the ability of the soil to sequester carbon from the air.
- **Managed Grazing:** Farmers and ranchers move livestock to different pastures to graze on different plants, preventing plant diversity and mixing manure into soil which improves soil health.

Policy Solutions:

Agriculture clearly plays a big role in the solution to climate change, and rural America stands to reap huge benefits by participating. So, it's critical for Congress to pass legislation to make it easier and more affordable for farmers to adopt these new practices and succeed. A few examples of current legislation include:

- **Growing Climate Solutions Act:** This bill would create a voluntary USDA program to lower the barrier to entry for farmers to adopt sustainable farming practices and participate in carbon credit markets.
- **Sustainable Agriculture Research Act:** This bill would authorize the Agriculture Advanced Research and Development Authority to add goals to explicitly address carbon sequestration and reduction of emissions.
- **Naturally Offsetting Emissions by Managing and Implement Tillage Strategies Act:** This bill would create a program to provide payments and technical assistance to producers to adopt soil health cropping systems to increase farm productivity, optimize carbon sequestration, and reduce emissions.



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