

Summary: How U.S. Agriculture Can Be Part of the Climate Change Solution

WASHINGTON D.C. (May 2021) – A new report commissioned by Farm Journal Foundation examines how U.S. farmers could significantly reduce their greenhouse gas (GHG) emissions and help mitigate climate change. The report found:

- U.S. agriculture directly contributes about 10% of the total GHG emissions of the entire national economy. However, with the right incentives, farmers could reduce emissions further and sequester additional carbon on their land – turning the agricultural sector into a net carbon sink.
- Farmers are already feeling the consequences of climate change, and these effects will only intensify. A recent study in the journal *Climate* found that average U.S. corn, soybean, and rice yields could fall by up to 23%, 15%, and 4%, respectively, by 2100.
- There are many opportunities for U.S. farmers to reduce their carbon footprint. Examples include:
 - **Crops and Soils:** Healthy soils can be a natural sink for sequestering carbon. To improve sustainability, farmers could adopt strategies for increasing soil organic carbon, applying nitrogen, and reducing methane emissions from paddy rice.
 - **Livestock:** Grazing animals such as cattle produce methane as part of their digestion. Various changes to livestock diets can help reduce these emissions.
 - **Animal Waste:** Open manure storage creates conditions that release methane. However, methane is a main component of natural gas, and with the right equipment, it can be collected and used as an energy source.
 - **Energy:** Farms could reduce their carbon footprint by adopting more electric power or sustainably produced drop-in biofuels to replace fossil fuels. Adding wind turbines or solar panels can also create sustainable sources of energy.
- Farm businesses run on tight margins and are affected by volatile commodity markets, so farmers need incentives for sustainable investments to make financial sense. A number of government programs provide impactful financial and technical assistance for conservation, such as USDA's Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP).
- Current U.S. efforts still remain inadequate, as the farming sector continues to generate significant GHG emissions. To help reverse this trend, policymakers should:
 - Increase funding for programs that help farmers reduce emissions.
 - Increase funding for agricultural research to enable farmers to adapt to and mitigate climate change.
 - Reintroduce and pass the Growing Climate Solutions Act to help landowners generate carbon credits through improved agricultural and forestry practices.
 - Make it more affordable for farmers to adopt more radical – and highly impactful – interventions to improve their energy efficiency.

The report was co-authored by Dr. John Reilly of MIT's Joint Program on the Science and Policy of Global Change, and Dr. Stephanie Mercier, Senior Policy Adviser at Farm Journal Foundation.