

Introduction



Farmers could become a big part of the solution to climate change by adopting certain farming practices that can take carbon from the air and store it in the ground. Unfortunately, politicians on both sides of the aisle are embracing policies that, while purporting to enlist agriculture in reducing greenhouse gas emissions, are actually serving to entrench corporate power, increase the use of harmful chemicals, worsen social and racial inequities, and forestall meaningful reforms.

These policies involve the buying and selling of so-called “carbon-offset” credits. In its simplest form, the idea begins with granting credits to farmers who adopt certain practices, such as planting more trees and cover crops, that are supposed to remove carbon from the atmosphere. Farmers then receive compensation for their efforts by selling these credits to other entities, typically large corporations. These corporations, in turn, use their purchases of such credits to justify claims of environmental responsibility. Though they may still be emitting carbon dioxide and other greenhouse gases into the atmosphere, they claim to have “offset” these emissions by paying others to pollute less or actively sequester carbon, often to the point of asserting that they now have a “net-zero” climate impact. Demand for these offsets is growing. A fifth of the world’s largest corporations have publicly promised to reach a “net-zero” goal.¹

Carbon-offset programs have become a leading U.S. policy approach for mitigating agriculture’s climate impact. Politicians, agribusinesses, and environmental groups alike backed the Growing Climate Solutions Act,

which was included in the Fiscal Year 2023 Omnibus Appropriations Bill as the “Greenhouse Gas Technical Assistance Provider and Third-Party Verifier Program”. The provision would direct USDA to list private carbon market facilitators on its website and broadly list protocols for measuring carbon sequestration. Paying farmers for sequestering carbon got an indirect nod in President Biden’s signature climate legislation, the Inflation Reduction Act. Most recently, the U.S. Department of Agriculture announced that it will give over half a billion dollars in grants to projects advancing private carbon markets as a part of its larger climate-smart commodities initiative.² But behind this appealing market-based narrative lies a deeply concerning trail of uncertainties, fraud, and corporate exploitation.

First, unlike regulatory “cap-and-trade” markets designed to control other forms of pollution, such as sulphur dioxide emissions, these voluntary carbon-offset schemes do not put a cap on the total amount of pollution allowed. They are cap-and-trade programs without the cap. Without any mandated climate pollution limits, carbon-offset trading is unlikely to result in any actual net reduction in the amount of carbon in the atmosphere. Moreover, because polluters can, as we will see, buy credits from projects that overestimate carbon sequestration or fail to store carbon in the long term, these carbon-trading schemes run the risk of actually increasing carbon emissions.³

Even if these schemes did impose a cap on carbon emissions, applying a market-trading system to soil carbon would still be unworkable. Reliably and consistently measuring or modeling soil carbon is still very challenging, especially when it comes to quantifying changes in soil carbon year over year. Soil carbon samples taken from the same field can lead to very different results. Offset programs seek to pay farmers annually, but meaningfully increasing soil carbon

can take over a decade to succeed.⁴ What's more, soil carbon storage is very fickle. Carbon sequestered in the soil can be released with a change in land management practices or through severe weather events, therefore failing to sequester carbon long-term.⁵

Third-party certifiers aim to ease these concerns about soil carbon impermanence or measurability by claiming to provide verification of carbon sequestration. However, there are dozens of different certifiers using dozens of varied, unregulated standards. Most of these certifiers rely on theoretical modeling of carbon sequestration as opposed to actual soil measurements. Such fundamental uncertainties will lead to wildly variable carbon-offset prices. Without basic market fundamentals of information exchange and consistent commodities, selling and buying offsets is little more than speculation.

Thus, these carbon-offset schemes rest on yet developing science and are plagued with measurement problems that prevent them from being anything like a true market that limits climate change by putting a real price on carbon. Far from making polluters pay the price for the harm they cause to others, these schemes allow them to buy paper certificates, based on uncertain science, that they use as marketing tools to deceive the public and policymakers. The schemes allow corporations to make bold and misleading marketing claims about their contributions to reducing climate change, effectively giving polluters a way to "greenwash" their carbon footprints.

The schemes allow corporations to make bold and misleading marketing claims about their contributions to reducing climate change, effectively giving polluters a way to "greenwash" their carbon footprints.

To make matters worse, big agribusiness corporations are using the system to deepen their own monopolistic power. Programs run by corporations such as Cargill, Bayer, Nutrien, and Corteva pay farmers for adopting

specific farming practices that either depend on the companies' proprietary technologies or require farmers to use their digital agriculture platforms. For example, Bayer promotes using its glyphosate-based herbicides like Roundup to control weeds in lieu of tillage and to "knock down" cover crops.⁶ Bayer also requires farmers to upload data through its digital agriculture program, FieldView, to certify their credits, driving more farmers and their valuable information to the platform. Under these private carbon-offset programs, agribusiness giants define climate-smart agriculture and promote large-scale, monoculture, chemical-dependent farming methods that can harm the environment in the long run and further entrench their market power. By controlling the same private, unregulated carbon-offset markets in which they trade on their own account and set their own prices, they are also subject to massive conflicts of interest.

Finally, carbon-offset programs aggravate ongoing social injustices. Generally, only larger, mechanized farms will be able to earn enough from carbon offsets to cover the costs of implementing the required farm practices. Meanwhile, to the extent that the availability of carbon offsets inflate the price of farmland, this will make it still harder for people of modest means to become farmers.⁷ Moreover, these offsetting schemes fail to clean up the environment and may intensify pollution hotspots in low-wealth communities and communities of color in the U.S. and the Global South.⁸

There's no doubt that farmers should be supported in shifting to ecologically regenerative methods. But the evidence shows that using carbon offsets to do so is a counter-productive and inequitable approach that will let big polluters off the hook and fail the needs of family farmers. Congress and the USDA should not waste time and resources promoting this questionable and harmful approach. Policymakers have far more effective and proven tools already at their disposal to promote climate-friendly farming methods that do not exacerbate the liabilities and harms of private carbon-trading schemes.