WHY CARBON MARKETS WON'T WORK FOR AGRICULTURE

Despite their poor track record, carbon markets have become the default recommendation for many climate policy proposals at the state and national level. These markets have not led to real, sustainable greenhouse gas (GHG) emissions reductions, pose direct risks to the health and economic security of communities and distract from stronger policies that better reflect the urgency of the climate crisis. Family farmers struggling with sinking incomes, low prices and increasing climate disruptions need a strong, stable policy framework that supports long-term climate and economic resilience. As agriculture is increasingly integrated into climate proposals, we must ensure that it does not get tied to risky carbon markets.

WHAT IS A CARBON MARKET?

A carbon market sets a cap on allowable GHG emissions with that cap declining as the years go on to gradually meet emissions reduction goals. The government issues emissions credits that add up to the cap on emissions. Covered entities can buy and sell emissions credits as necessary, creating a financial incentive for them to pollute less. In practice, these markets are full of loopholes that allow polluters to continue to pollute.

WHY CARBON MARKETS DON'T WORK

Emission credit prices are too low

A World Bank Report[1] estimates that to meet the climate goals set out in the Paris Agreement, emission credit prices need to be between $40-80 by 2020. By comparison, credits in the Regional Greenhouse Gas Initiative (RGGI), a carbon market encompassing nine northeastern states, sold for between $5-6 for all of 2019, and the California carbon market's credits sold for around $17 throughout 2019. These prices are far too low to drive down emissions. A recent analysis[2] found that oil and gas company emissions in California have gone up in the period the California carbon market has been active. Polluters benefit when carbon credits are cheap and abundant and have even succeeded in getting most of their credits for free.[3]

Leakage and offsets

Leakage is a phenomenon where covered entities move their operations outside of the market's area to areas with less stringent climate rules. This makes it appear as though the market has reduced emissions even though overall emissions rise. Many carbon markets allow offsetting, where a reduction in GHG emissions in one sector is allowed to compensate for emissions elsewhere. Frequently, offsets are not additional (new practices) or permanent, thereby failing

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to meaningfully reduce GHG emissions while allowing polluters to continue polluting. Some carbon markets, including California's, allow offsets from outside the market's boundaries and sometimes from outside the country. This leads to even less accountability, and in many cases, fraud.[4,5]

Environmental justice impacts

Many rural communities oppose carbon markets because they disproportionately impact low-income, minority and other disadvantaged communities. One company can buy up a large amount of credits to continue emitting or even increase their emissions, thus shirking responsibilities to address localized impacts from pollution. Because most power plants and polluting industries are situated in or near low-income communities and communities of color, the continuing or even increased pollution in certain locations will harm those communities disproportionately.[6] Internationally, carbon credit projects have long been linked to land grabbing and exploitation of small-scale farmers and rural communities.[7,8]

WHY AGRICULTURE SHOULDN'T BE PART OF A CARBON MARKET

Inadequate measurement tools

The tools to measure soil carbon to the degree of accuracy and reliability that a market would require do not currently exist. A recent study showed that three commonly-used measurement tools for soil carbon all yielded different results.[9] Other studies show that focusing on the top 6 to 12 inches of the soil profile may overestimate the amount of carbon sequestered through no-till.[10] Another challenge is how much soil carbon stocks differ geographically. Even in apparently uniform fields, soil carbon content may vary by as much as fivefold.[11] Without measurement tools that are accurate, quantifying soil carbon to use in a carbon market is a guessing game and does not guarantee actual emissions reductions.

Impermanence

Soil carbon offsets allow carbon sequestered in the soil to count as mitigation for emissions elsewhere. The problem is that soil carbon storage is extremely impermanent; any carbon sequestered in the soil can be released with a change in land management practices or through severe weather events. Much of the carbon sequestered from no-till aggregates near the soil surface, where it's vulnerable to rapid oxidation after even a single tillage pass.[12] Most no-till farmers till once every several years to deal with weeds, which releases much of the carbon stored. Even long-term contracts that bind land managers to use certain practices do not ensure permanence since the carbon stored can be released back into the atmosphere as soon as the contract is up if the land manager returns to less climate-friendly practices.

Volatile prices

Under these programs, farmers are responsible for implementing land management practices to sequester carbon. Transitioning to conservation practices such as cover crops, no-till and diversified rotations can require different equipment, inputs and knowledge. Historically, carbon credit prices have been far too low to fairly incentivize such large-scale land management changes.[13] While public resources should support farmers to integrate conservation practices into their operations, they should not be tied to a volatile market that could make farming more economically unstable.

Carbon markets undermine more effective and holistic agricultural practices

Paying farmers for soil carbon offsets treats agricultural land narrowly as a carbon sink. Production for local food systems becomes a secondary function of farmland, bringing with it a range of social, economic and food justice concerns, particularly in areas where corporate retailers are divesting from rural communities.[14] There are multiple benefits of a climate-friendly agricultural system, including healthier soils, clean water, wildlife habitat, and farm resilience to drought and flooding. Research shows that integrated systems of practices based on sound agroecological principles have the greatest potential to mitigate agricultural GHG emissions, sequester and stabilize soil carbon, and attain the full measure of a productive and resilient agricultural system.[15,16,17] Practices designed primarily to generate carbon credits will not lead to such innovative and comprehensive approaches. Furthermore, offset projects in a carbon market tend to work best for large-scale farms, raising concerns that corporate investment in carbon markets will contribute to further consolidation of agricultural land and disadvantage small to mid-sized farmers. Focusing on resilient agroecological systems rather than on the amount of carbon sequestered can benefit farmers of all sizes.

HOW TO MOVE FORWARD

The urgency of the climate crisis and the systemic economic challenges facing rural America require us to advance policies that result in real GHG reductions while prioritizing the needs and interests of rural, frontline and farming communities most impacted by climate change. We need proven regulatory approaches that hold big polluters accountable.

To complement necessary regulatory approaches, we need programs that support climate-friendly agricultural and land management practices and improve farm profitability for those living on and working the land. Examples of predictable public funding for farmers to build resilient operations exist. Federal farm conservation programs including the Conservation Stewardship Program and the Environmental Quality Incentives Program provide cost-share for farmers who want to use conservation practices. These programs are regularly over-enrolled and need increased funding to allow more farmers to access them. In addition, some states are creating their own programs to address the challenge. The cover crop program through the Maryland Department of Agriculture significantly improved water quality in the Chesapeake Bay area by paying farmers to plant cover crops. The California Healthy Soils Program provides financial assistance for implementing conservation practices that improve soil health and sequester carbon. These state programs are successful examples of supporting climate-friendly agriculture outside of an offset market.

Corporate control of our food and agriculture system is antithetical to efforts to address the climate crisis. Expanding farmer conservation programs must be linked to strong antitrust enforcement, checks on corporate power and limitations on industry access to public programs targeted for family farmers. Examples include using supply management to raise farmgate prices while limiting over-production of commodity crops, addressing corporate concentration in the agriculture sector,[18] strengthening the rights of contract farmers in animal agriculture[19] and limiting corporate ownership of agricultural land, particularly in communities of color.[20]

Addressing the climate crisis and ensuring a just transition will take forward-thinking public investment combined with strong regulation. Carbon markets will not get us there. They let big polluters off the hook, fail the needs of the family farming sector and ignore innovative community-based approaches. If Congress wants to maximize soil carbon sequestration and reduce emissions from agriculture, it should take proactive efforts to scale-up public resources for conservation practices while enacting common-sense checks on corporate concentration in the agriculture sector.

ABOUT IATP AND NFFC

THE INSTITUTE FOR AGRICULTURE AND TRADE POLICY (IATP) works locally and globally at the intersection of policy and practice to ensure fair and sustainable food, farm and trade systems. Since 1986, IATP has pursued cutting edge solutions that benefit family farmers, rural communities and the planet. IATP's work extends from advocating for more democratic and economically just trade agreements to advocating for stronger public health protections in chemical policy to spearheading Farm to Head Start programs. Connecting the dots makes IATP unique in matching high-level research and analysis with on-the-ground engagement to bring policies to fruition. Learn more at iatp.org.

NATIONAL FAMILY FARM COALITION (NFFC) is an alliance of grassroots farmer- and advocate-led groups representing the rights and interests of independent family farmers, ranchers and fishermen in Washington, DC since 1986. Today, NFFC's 42-state membership comprises over 30 state and regional farm and rural organizations. Our diverse membership is bound by a common belief that communities have the right to determine how their food is grown and harvested; that everyone in the food system should receive fair prices or wages and have equitable access to credit, land, seeds, water, markets and other resources; and that our food system must support sustainable farming, ranching and fishing practices. Learn more at nffc.net.

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