Policy Opportunities for Climate Smart Agriculture

Introduction

US growers are struggling to remain profitable, production expenses[1] have increased[2], government payouts to farmers are breaking records, and the acceleration of per acre productivity seen over the past century is slowing[3]. Simultaneously, soil health has declined, and extreme weather events are proliferating, exacerbating the negative impacts of climate change. Our climate and the economic resiliency of our rural communities are compromised. Farmers need ways to increase their profitability and resilience if they are to continue farming, feeding our population, and fueling our economy for decades to come. Climate smart agriculture presents an opportunity to leverage proven agricultural management practices to improve rural livelihoods via enhanced grower profitability, and to enhance environmental and economic security through restored and more resilient lands.

Despite growing interest from the voluntary carbon market, and decades of effort by government agencies, advocacy groups, and grower initiatives, adoption of climate smart agricultural practices remains limited. The federal government can play a critical role in catalyzing practice adoption and carbon market participation by instituting policies that:

- decrease barriers to adoption of climate smart practices, and amplify awareness and assistance;
- offset cost risk for growers via incentives, including transition payments and tax credits; and
- endorse rigorous standards for the measurement, verification, and monetization of on-farm carbon sequestration.

A variety of policy opportunities can be pursued, including endorsing quality criteria via the Growing Climate Solutions Act (GCSA), developing a carbon bank, supporting a price on carbon, expanding tax credits and low carbon fuel standards, modifying existing policies that currently impede widespread regenerative practice adoption, and supporting research and private-public sector work on soils, management practices, and carbon.

New policies that encourage climate smart activities on working lands can be implemented in a way that is compatible with existing programs that benefit farmers and ranchers. Conservation programs including CSP, EQIP, the grassland reserve program, the farmable wetlands program, and the conservation technical assistance program should continue to be funded. Working lands policies will complement established programs by allowing farmers to maintain productivity and profitability, while minimizing leakage.

The policies recommended here allow private markets and voluntary efforts to thrive, while avoiding the costs, consolidation, and burden associated with heavy-handed regulation. Regulation would inhibit the ability of individual producers and actors to make the decisions that are best suited for their unique circumstances, and would add costs via procedural requirements and administrative burden.

Given the array of policy opportunities and the importance of the US agricultural system for food, fuel, and its role as an economic engine in rural communities, agriculture presents an opportunity to advance meaningful policy instruments in a unified, bi-partisan manner.

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[1] https://downloads.usda.library.cornell.edu/usda-esmis/files/qz20ss48r/sj139q807/1v53kk18k/fpex0720.pdf
[2] https://data.ers.usda.gov/reports.aspx?ID=17833
[3] https://www.ncdc.noaa.gov/extremes/cei/introduction

Federal Policy Opportunities

Transition Payments, Technical Assistance, and Capacity Building

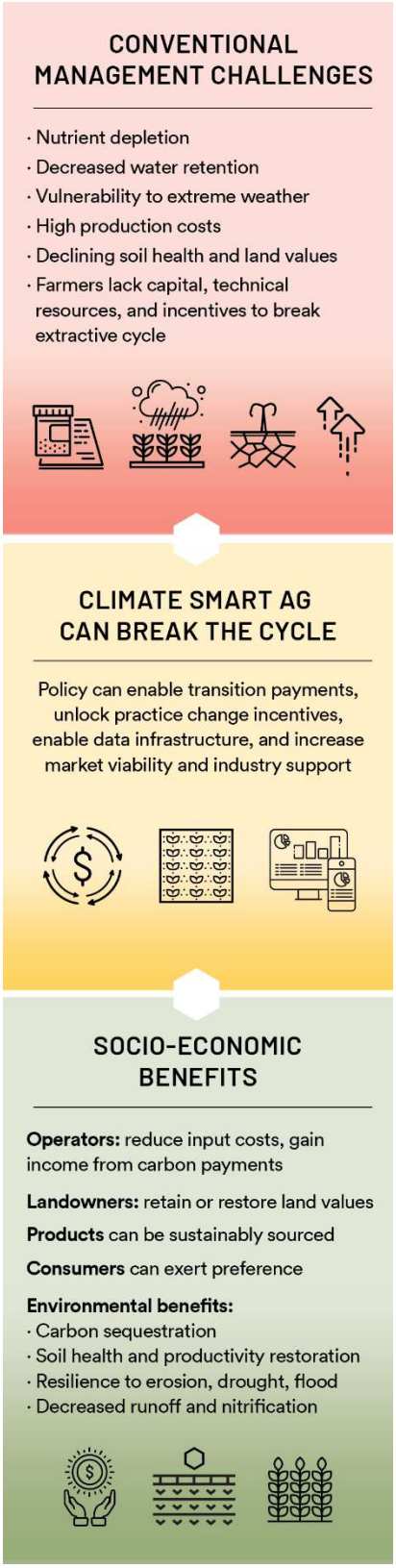
Climate smart agricultural practices can increase the environmental and economic resilience and sustainability of farming operations. However, a lack of capital, accessible technical assistance, and clarity around available supporting programs are fundamental barriers to widespread adoption. Though profitability can be increased in the mid- to long-term, adopting regenerative agricultural practices requires upfront capital, for example, to fund the purchase of cover crop seeds. Programs should be developed to provide transition payments to farmers adopting new, additional practices. Further, USDA staff resources could be harnessed to expand local technical assistance to ensure farmers across all regions have relevant and accessible guidance, enabling them to adopt the most effective and appropriate practices for their operations. Simultaneously, staff should be leveraged to inform farmers of offset opportunities and available working lands and conservation programs and could even support offset project verification requirements via site visits. Offset programs and technical assistance can be supported via the GCSA.

Growing Climate Solutions Act

The GCSA exemplifies the ability to find common ground across the aisle; this bipartisan bill would enable farmers to participate in agricultural carbon markets at scale. As proposed, the USDA would certify acceptable standards for the measurement and verification of soil carbon levels,[4] providing much needed clarity on new and innovative revenue streams for farmers. The proposed provision of technical assistance is critical if we aim to achieve widespread adoption of climate smart agricultural practices. Farmers across income levels and communities must have access to the knowledge and resources needed to enhance their operations and profitability, while addressing the climate crisis. Advancing the GCSA would be an historical step for climate policy, demonstrating the potential for party unity as the first bipartisan climate legislation from both Ag Committees.

Carbon Bank

Establishment of a Carbon Bank, developed under the Commodity Credit Corporation (CCC), would serve as a powerful incentive for growers, and market signal for financiers, that climate smart agricultural investments are viable and attractive. The Bank could function as a buyer for agricultural carbon credits, purchasing offsets that produce real, measurable,



[4] For more information on measurement, modeling, and standards, see our brief *Carbon Markets for Climate Smart Agricultural Practices – Why Rigorous Measurement, Modeling, and Scalability Matter to Farmers*

additional, and verifiable GHG benefits. A commitment to purchase agricultural carbon credits would send a strong price signal to the private offset market and provide stable demand to the supply-side, encouraging both farmers and project developers to invest in project implementation. USDA could also support permanence through the development of reserve pools or via insurance coverage for reversals. The USDA has the capacity to provide carbon market support, harness the extensive work done on credit requirements and quality, and ultimately certify services that verify agricultural carbon credits. Support for performance-based outcomes will ensure that taxpayer funds deliver tangible environmental benefits. This approach presents the opportunity for rapid approval and implementation via executive order in 2021, and can immediately catalyze positive market action, building on the global momentum prompted by covid-19 related economic recovery efforts, and the ambitious and collaborative energy leading up to COP26.

Tax Credits - 45Q

Nature-based tax-incentives provide another attractive approach to encouraging climate smart agricultural practices. A tax credit per ton of carbon sequestered in agricultural soils could be created and modeled on Section 45Q of the US Tax Code, simultaneously helping reduce on-farm greenhouse gas emissions, enhancing their lands and soil resilience, and sequestering carbon from the atmosphere.

Research Funding and Data Support

The USDA can be a centralizing force, encouraging alignment between existing and planned research on soils, the effects of management practices in specific agricultural contexts, and novel soil organic carbon quantification tools, including data needed for calibration and modeling. USDA does not need to lead on the development of supporting tools, but should support public private partnerships, especially those working towards developing products and services to coalesce and make accessible data between key stakeholders, including farmers, agronomists, offset project developers, verifiers, registries, and researchers. Further, funding for agricultural research should be expanded. This should by complemented by renewed and increased investment in the USDA NRCS' soil carbon monitoring system. If expanded, this system could provide a foundational opensource database that enables accurate and affordable soil carbon measurement at scale.

Aligned Crop Insurance

Federal crop insurance is critical for growers across the country. Certain insurance policy structures have the unintended consequence of inhibiting adoption of climate smart management practices. For example, requirements surrounding prevented plant and cover crops may disincentivize growers from covering their soils, especially after late planting periods of prevented crops. This is a perverse disincentive as cover cropping provides valuable soil armor, making soils less susceptible to erosion. Generally, the extent to which crop rotations are disincentivized should be considered. Insurance policy structures can be modified to eliminate disincentives for climate smart agricultural practices, which ultimately can increase the resilience of US agriculture and minimize the need for insurance payouts. Fields that combine no-till, cover cropping, and diverse crop rotations are better prepared to withstand extreme weather. Climate smart agricultural practices can insulate growers from risk, and, in turn, decrease the need for high insurance premiums.

Low Carbon Fuel Standards

Interest in Low Carbon Fuel Standards (LCFS) continues to increase, with more states expressing interest in the establishment or expansion of LCFS programs. The Federal Renewable Fuels Standard could be modified to allow crediting for field-based practices in ethanol production. Doing so would incentivize growers to adopt climate

smart agricultural practices, and ethanol producers to source their feedstock responsibly. Federal interest and expressed support for these regulations can catalyze and accelerate state- and regional-level efforts, as well.

Cross-Policy Considerations

Certain considerations must be kept in mind across all policies put forth. New policies implemented should be complementary and additive to existing incentivized voluntary conservation programs like the Conservation Reserve Program, Conservation Stewardship Program, and the Environmental Quality Incentives Program. Benefits provided by these programs, like cost-share assistance, should remain accessible to farmers and ranchers.

Any policies and programs created must promote adherence to the highest standards of greenhouse gas accounting, measurement, verification, and reporting. Existing standards, guidelines, and carbon program infrastructure should be used to ensure adoption of the most robust approaches, and to enable expediency while avoiding duplication of efforts. At the same time, care must be taken to avoid relaxing the standards in any dimension, lest the market experience a race to the bottom which would undermine the high-quality projects and devalue agricultural carbon without realizing the potential agronomic, economic, social, and climate benefits. This includes supporting efforts that are outcomes-based, rather than practice-based. Outcomes-based efforts ensure that the benefits of specific practices, like cover cropping, are not outweighed by other practices, such as an increase in herbicide use.

Education and information dissemination should be prioritized with any policy implementation. As new policies are adopted and/or incentives developed, information and training should be disseminated to growers and other relevant communities, ensuring inclusivity and accessibility. For example, the USDA could provide carbon market information and data training through existing channels, including NRCS extension services and universities[5]. Access to supporting resources and infrastructure should also be prioritized. Rural connectivity is a foremost concern as policies that enable climate smart agriculture rely heavily on data and reporting that is best facilitated using wireless networks designed for high bandwidth and reliability.

In the case that multiple policies are implemented, efforts should be made to ensure standardization and compatibility across policies. Policies should not inhibit each other. For example, if the USDA implements a technical assistance program and certifies standards for the measurement and verification of soil carbon levels, federal crop insurance policies should be rapidly adjusted to be compatible with the adoption of climate smart agricultural practices. Likewise, federal efforts should seek harmony with state and regional efforts to avoid overlap or contradiction.

In all efforts, legislators should strive for transparency and certainty. If a carbon bank is adopted or a price on carbon established, policy should support price transparency, which will enable market assurance and supply and demand stability. Regulatory certainty is needed to enable the long-term planning necessary to develop climate smart agriculture at scale.

As policies are implemented and related data are collected, legislators should push for common data collection standards and interoperability, as applicable. In doing so, federal policy could potentially reduce the data collection burden on growers; the USDA could be directed to harmonize its data efforts with the needs of the

[5] https://forainitiative.org/wp-content/uploads/Barriers-to-Adopt-Regnerative-Agriculture-Interactive.pdf

carbon market, or to make it easier for growers to connect anything they report to the government with their carbon program, perhaps via a secure connection layer.[6]

Finally, we encourage legislators to support a price on carbon, this can be done through a variety of policy mechanisms, including those aforementioned. A carbon price serves as a disincentive for emissions, and an incentive for removals and sequestration, which are acutely needed to draw down the legacy load of CO_2 already emitted. Trading schemes, if properly designed and implemented, have the potential to be the lowest-cost options for the economy overall. It is critical to ensure that any policy implemented does not disproportionately impact marginalized communities. As such, we suggest strong consideration of policy impacts and reinvestment of program/policy-related revenue into disadvantaged communities.

Ultimately, these recommendations are made to ensure every American farmer can continue to produce food and fuel in an economically and environmentally sustainable manner. Well-crafted, farmer-informed federal policy can de-risk climate smart agriculture and spark a more resilient and prosperous future for farmers.

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[6] For more information on data standards and interoperability, see our upcoming brief *Harnessing Agricultural Data with Standards and Interoperability*