

Recognizing Early Innovators

Recommendations for Maintaining and Expanding Climate-Smart Agricultural Practices

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Table of Contents

Foreword	3
Introduction	4
Issue Assessment	5
Recommendations	6
Conclusion	9

Although all the individuals formally affiliated with CFAD may not agree completely with every statement noted, they are committed to working together to find solutions to the challenges facing food and agriculture. CFAD members participated as individuals, not as official representatives of their organization.

Foreword

The **Climate, Food, and Agriculture Dialogue (CFAD)** is a group of climate, food, and agriculture interests advocating for ambitious and durable federal policy solutions on food systems and climate change. The Dialogue's long-term goal is to enact federal climate policy in line with our [guiding principles](#).

This paper provides insight and recommendations on the challenges facing “early innovators.” Early innovators are our leaders in conservation agriculture. They have tested and developed climate-smart practices, demonstrated the benefits, and paved the way for others to follow. Unfortunately, early innovators can be excluded from public and private conservation programs, which target incentives toward farmers who are new to the conservation space.

As public and private investments in climate-smart agriculture increase, we risk excluding the very leaders who blazed the trail for the expansion of climate-smart agriculture. Our goal should be to develop an agricultural system that encourages maintenance of existing climate-smart practices, continued innovation, and broader adoption of climate-smart practices by producers who have not yet been persuaded to adopt them. The recommendations within this paper were developed with that goal in mind.

We hope you find it to be a useful resource.

The AGree Climate, Food, and Agriculture Dialogue (CFAD)

Introduction

Expanding climate-smart agriculture is a central tenet of the Biden Administration's whole-of-government approach to address climate change, stimulate economic growth, and support agricultural productivity.¹

At the 26th United Nations Climate Change Conference of the Parties (COP 26), President Biden launched the [Agriculture Innovation Mission for Climate](#) in partnership with the United Arab Emirates, 31 other countries, and 48 NGOs, to mobilize \$8 billion in investments in climate-smart agriculture over the next year.

Pursuant to that goal, U.S. Secretary of Agriculture Tom Vilsack highlighted USDA's Climate-Smart Agriculture and Forestry Partnership Initiative as a key strategy for advancing climate-smart agriculture, saying:

"We're positioning U.S. farmers, ranchers, and forest landowners as leaders in addressing climate change, while at the same time creating new market opportunities for them through pilot projects that invest in science, monitoring, and verification to measure the benefits of climate-smart production practices. Unlocking these markets will be key to tapping into the incentives needed to adopt climate-smart practices on the ground."²

As programs are developed by both government and the private sector to address climate change by incentivizing adoption of climate-smart practices, many farmers and policymakers are asking how the contributions of the "early innovators" of these practices will be recognized and rewarded.

Early innovators are our leaders in conservation agriculture – they have tested and developed

new climate-smart practices, proved their efficacy and long-term profitability, and paved the way for others to follow. Although early innovators shouldered the risk and, in many cases, the cost of establishing climate-smart agricultural practices, newcomers to climate-smart agriculture are now better positioned to participate in programs looking for new carbon sequestration and emissions reductions ("additionality"). This puts the early innovators at a financial disadvantage to other producers, who have more room for improvement and will be able to stack greater income from ecosystem service payments. Early innovators should not be financially penalized going forward because they chose to take action sooner than others.

There is also concern that the challenge early innovators face in generating additional emissions reductions could create a moral hazard – the financial incentive to revert to conventional management to become eligible for private carbon markets. These concerns beg the question: **How do we create a system that ensures farmers who have transitioned to climate-smart agricultural practices will maintain practices over the long-term, while continuing to improve and innovate?**

The purpose of this paper is to outline a framework for understanding the early innovator issue and share CFAD's consensus recommendations.

¹ USDA is in the process of developing an official definition of "climate-smart agriculture." In this paper, we use the term to refer to integrated agricultural practices that maintain or increase productivity, enhance resilience, and reduce emissions (avoiding emissions or potentially removing them from the atmosphere) on U.S. working lands.

² United States Department of Agriculture. [Press Release 0239.21]. (2021, November). [USDA Underscores Commitment to Climate Action at COP26 | USDA](#)

Issue Assessment

Over the fall of 2021, CFAD convened panel discussions composed of private sector, government, and NGO experts to better understand the issue and develop a set of consensus policy recommendations. Based on these discussions, our assessment of the early innovator issue is as follows:

- **There is no single, agreed-upon definition of what makes producers “early innovators,”** which complicates discussions about how their contributions should be considered and recognized. “Early innovators” are generally referred to as producers who have implemented some number of conservation practices, and it is inferred that these practices likely have been in place for a significant amount of time (i.e., longer than just a few years). The reality is that the early innovator community is not a monolith—it includes crop and livestock producers who have implemented climate-smart practices on the entirety of their farm for decades, as well as those who have periodically implemented selected practices on just a portion of their operation for shorter durations. Furthermore, many producers who have adopted one or more conservation practice will still be eligible for carbon market programs if they agree to expand or add new practices. **Policy discussions should recognize that early innovators face varying degrees of difficulty in benefiting from carbon market programs**—including small and medium-sized, diversified, and BIPOC producers—depending on the breadth and duration of their conservation actions, the size of their operations, and geography and soil type.
- **We do not have a comprehensive assessment of how many early innovators exist and consequently do not understand the magnitude of the risk of losing their established conservation progress.** Estimates point to a relatively low number of farmers who would be *entirely* excluded from carbon markets. Data from the National Agricultural Statistics Service’s (NASS) 2017 Agricultural Census estimates that conversion to no-tillage systems has slowed in recent years, only expanding from 96.5 million acres to 104.5 million acres between 2012 and 2017. Increase in cover crop acreage has been more significant over that period; however, the total extent of cover crop adoption remained relatively low at only about 15 million acres in 2017.³ NASS also reports that there are 5.5 million acres in organic production as of 2019.⁴ These numbers can be interpreted either as a minor issue in the grand scheme of the climate crisis or as millions of acres of U.S. farmland potentially at risk of losing conservation practices due to perverse incentives.
- **Early innovators are an important group of producers—they represent conservation innovation, leadership, hard work, and risk-taking.** They have created conservation benefits that need to be recognized and maintained. Moreover, agricultural communities look to early innovators before investing in climate-smart and other conservation practices. Seeing unequal compensation for the same practices could alienate conservation leaders and disincentivize the teaching, promotion, and adoption of innovative, new climate-smart agricultural practices. **Our goal should be to develop an agricultural system that encourages maintenance of existing climate-smart practices, continued innovation by conservation leaders, and the adoption of climate-smart practices by producers who have not yet been persuaded to adopt them.**

³ National Agricultural Statistics Service. 2017. *Census of Agriculture Vol. 1, Chapter 1: U.S. National Level Data (Table 47: Land Use Practices by Size of Farm: 2012 and 2017)*. Retrieved from [st99_1_0047_0047.pdf \(usda.gov\)](https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/Organics/index.php)

⁴ National Agricultural Statistics Service. 2020. 2017 Census of Agriculture Vol. 3, Special Studies, Part 4: 2019 Organic Survey. Retrieved from https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/Organics/index.php

Recommendations

A range of incentives have been proposed to reward early innovators for past actions, including one-off, lump-sum payments and amending USDA conservation programs to reward conservation maintenance. However, CFAD proposes that the most sustainable and influential way to maintain and expand climate-smart agricultural practices is to build the business case for conservation adoption. This can be done by embedding incentives for the adoption and maintenance of climate-smart agricultural practices throughout agricultural markets, finance systems, regulatory processes, and insurance programs. These strategies will benefit both early innovators and those new to climate-smart agricultural practices.

Our recommendations for creating this system include the following:

- 1. The USDA Economic Research Service should conduct a literature review of existing research to understand the economics around producer motivations for implementing and maintaining climate-smart practices.** Research should answer the following questions, which can offer important lessons for current USDA efforts to promote conservation adoption:
 - How many early adopters exist and how many acres of U.S. farmland are currently in conservation practices? How many of them are unlikely to qualify for private carbon market contracts?
 - What are early innovators' motivations for implementing conservation practices and the current business case for practice maintenance? Many early innovators have been supported in their efforts by USDA conservation program funding and technical assistance. Once those programs have run their course, what is the bottom-line benefit to the producers to maintain their efforts?
 - How likely are early innovators to "undo" their current soil health practices to qualify for carbon market payments? Does the promise of a carbon market payment outweigh the soil health and other financial benefits of continued conservation?
 - How many early innovators have already received government payments for implementing climate-smart practices? Potential compensation of early innovators should take into account if they already received some sort of incentive based on other ecosystem benefits – e.g., soil erosion, water quality, habitat, etc.
 - In emerging markets where producers are able to stack payments for product with payments for ecosystem services, what is the extent of the financial disadvantage this creates for early innovators?
 - What has caused the stagnation of climate-smart practice adoption nationally?
- 2. The Federal Crop Insurance Program (FCIP) should recognize the risk-reducing benefits of conservation practices.** Expanding the good farming practices accepted by the FCIP to include NRCS-approved "good farming practices" that are proven to reduce risk is one cost-effective approach. Lowering the cost of crop insurance premiums for producers with a record of using climate-smart practices that reduce agricultural risk is another. There is actuarial evidence that certain conservation practices such as cover crops, reduced tillage, and crop rotation are effective risk-reducing strategies that include substantial climate benefits; these benefits should

be recognized through crop insurance premiums.⁵ For example, a new crop insurance endorsement for corn farmers called the [Post-Application Coverage Endorsement \(PACE\)](#) provides supplemental coverage for farmers who split-apply nitrogen, a practice that supports the nitrogen needs of corn at specific times in the crop's growth cycle. This endorsement incentivizes the efficient use of fertilizer and promotes cost savings for producers and has important environmental benefits by reducing nitrogen release into water and air. Private-sector opportunities to capture environmental and risk-reducing benefits by paying for insurance products such as PACE should also be explored.

- 3. Agricultural lenders should recognize the economic benefits of conservation practice adoption, including improved soil health and reduced agricultural risk, when offering loan terms to producers.** A growing body of evidence is demonstrating that, over the long term, conservation practices can reduce farmer costs and risk, increase asset value of farming operations, increase yield resilience, and diversify farm income streams – producing benefits for both farmers and their financial partners. These benefits should be quantified and incorporated into financial products offered to farmers who adopt climate-smart agricultural practices.⁶
- 4. USDA should continue to explore the development of climate-smart commodity markets that reward early innovators through new market mechanisms. Supporting markets that preference agricultural commodities produced using practices that reduce greenhouse gas emissions or sequester carbon would strengthen the business case for climate-smart agriculture.** This is a place where early innovators have a significant head start given their years of experience and can capitalize on their technical expertise. In addition, USDA should use existing authorities to develop infrastructure (e.g., drying technologies, composting systems, seeds stocks, etc.) that supports the implementation of new practices, commodities, and livestock and cropping systems.
- 5. Ecosystem markets that allow producers to generate both carbon credits and other ecosystem services credits from the same project should be explored to create stacked incentives to expand and maintain existing conservation practices.** When it comes to ecosystem services, the whole is greater than its parts—stacking payments is a way to recognize the greater value that more intact ecosystems provide. Such markets may allow early innovators to generate income from the full range of ecosystem services they create as well as increase the market incentives for conservation overall by providing multiple income streams. As ecosystem services markets take shape, it is critical they are inclusive of small- and medium-scale, diversified, and BIPOC producers.
- 6. Food and beverage companies should consider how early innovators can be included in supply chain sustainability programs to reduce scope 3 emissions.⁷ As companies work to reduce emissions and meet climate commitments, they should ensure early innovators are eligible for any incentives and programs to expand adoption of climate-smart practices.**

⁵ [The Case for Next Generation Crop Insurance](#), a white paper published by the AGree Economic and Environmental Risk (E2) Coalition, summarizes important takeaways to date from work done by the E2 Coalition's work on federal crop insurance and conservation.

⁶ The Environmental Defense Fund has released numerous studies and reports identifying how farmers and financial partners can quantify the financial benefits of conservation practices and incorporate that value into policies, products, and decision-making. These resources can be found [here](#).

⁷ Companies can assess and report their greenhouse gas emissions across three different "scopes" using the Greenhouse Gas Protocol. Scope 1 refers to greenhouse gas emissions from an organization's directly owned and controlled resources. Scope 2 refers to indirect emissions from the energy an organization purchases from a utility provider. Scope 3 includes indirect emissions from a company's supply chain—for example, the production of wheat or the transport of corn purchased by a food company. Carbon offsets can be applied to mitigate an organization's scope 1 and 2 emissions, while carbon insets can be applied to mitigate scope 3 activities. While protocols for measuring scope 1 and scope 2 are outlined in the Greenhouse Gas Protocol, protocols for measuring scope 3 emissions have not yet been finalized.

- 7. USDA and Congress should systematically work to expand and improve existing conservation programs, drawing on CFAD's recommendations for [investing in working lands conservation](#).** This includes making changes to expand enrollment, strengthen our network of technical assistance providers, and increase the accessibility of NRCS offices and resources to all producers. Adjusting programs to be more outcomes-based and reward producers based on the conservation benefits they have generated can also help maximize program impact. However, USDA should continue to build on recent investments to develop measuring, reporting, and verification tools that accurately quantify the ecosystem services of more diversified systems. This is critical to ensure that highly diversified systems are accurately rewarded for the complex ecosystem services they provide.

- 8. USDA should offer technical assistance to states that wish to create programs that give producers who adopt or have adopted climate-smart agricultural practices regulatory certainty on compliance with environmental safeguard policies** (e.g., Clean Water Act requirements, Endangered Species Act).⁸ Such programs benefit early innovators by providing regulatory certainty in exchange for the adoption and maintenance of climate-smart practices.

⁸ For example, the Minnesota Agricultural Water Quality Certification Program (MAWQCP) is a statewide program in Minnesota designed to recognize and reward agricultural stewards of water quality. Farmers and landowners who treat risks to water quality are certified under the program and deemed in compliance with any new water quality laws or rules for 10 years. Certification gives farmers greater certainty about regulatory standards and assures the public that Minnesota's farmers are doing their part to protect and improve water quality.

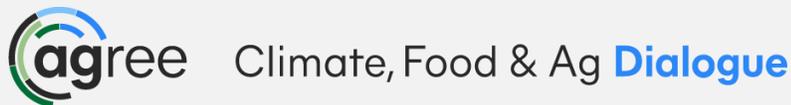
Conclusion

The primary goals of our national agriculture-climate policy should be to maintain the progress that early innovators have achieved by using climate-smart agricultural practices while actively engaging new growers in adopting and expanding use of these practices.

While carbon markets offer one pathway to reward innovators of climate-smart practices, there are many other tools, even in the face of limited resources, that can be utilized to recognize and reward the work of agriculture's conservation leaders. The added value and profitability of climate-smart operations should be systemically rewarded through reduced crop insurance rates, increased land values, climate-smart commodity markets, ecosystem service markets, as well as preferential treatment from USDA programs and regulatory agencies.⁹

We need to use a variety of tools and applications to reward climate-smart agriculture – no single tool will work for all producers and production systems. **Only by constructing an agricultural system that consistently rewards conservation adoption will we be successful in expanding climate-smart agriculture at the magnitude required to help mitigate climate change.**

⁹ We want to see climate action across U.S. working lands and would note a caution that USDA could inadvertently create additionality issues by paying for practices without producers being enrolled in markets. Past practices aren't eligible for credit generation so if producers take on new practices that could generate credits, they need to be enrolled to get market credit for those outcomes.



The AGree platform includes the AGree Climate, Food, and Ag Dialogue (CFAD) and the AGree Economic and Environmental Risk Coalition (AGree E2 Coalition).

THE AGREE CLIMATE, FOOD, AND AG DIALOGUE (CFAD)

includes farmers, ranchers, and foresters; environmental and conservation NGOs; food and agriculture companies; and former government officials. Members share a common view that climate change demands ambitious and durable federal policy solutions that are commensurate with the urgency and scale of the problem. CFAD sees the U.S. food, agriculture, and forestry sectors as a crucial source of solutions to climate change. Visit ClimateFoodAg.org to learn more about our work and read our guiding principles for federal climate policy solutions.

THE AGREE ECONOMIC AND ENVIRONMENTAL RISK COALITION (E2)

advocates for federal policy improvements to bridge the gap between the adoption of on-farm conservation practices and improved profitability for farmers and ranchers. Through collaboration and frank discussion, our work on crop insurance, agriculture data access, cover crops, and banking and finance is advancing the agricultural sector's movement toward a more resilient, profitable, and sustainable American agricultural system. Visit FoodandAgPolicy.org to learn more and join our effort to transform federal food and agriculture policy to meet the challenges of the future.