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The First Legal Step for an Agricultural Carbon Market is in the Growing Climate Solutions Act of 2021

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Executive Summary

The Growing Climate Solutions Act of 2021 has wide bipartisan and industry support and yet has had little discussion in either the popular press or academic discussion of carbon markets. Although seemingly straightforward, the bill creates the necessary steps toward establishing an agricultural carbon market and may in hindsight be viewed as an essential step in such a market's viability.

Background

During his campaign, President Biden pledged to reach net zero greenhouse gas emissions by no later than 2050.^{1,2} During the April 22, 2021, Leaders Climate Summit, attended virtually by 40 global leaders, the President unveiled a new promise—to reduce America’s greenhouse gas emissions by 50%–52% below 2005 levels by 2030. To achieve these aggressive goals, the administration is exploring many options, including unspecified “enforcement mechanisms” and investments in clean energy and climate research. President Biden’s first legislative proposal to implement climate policy is the American Jobs Plan, proposed March 31, 2021. Although no more than a fact sheet, this \$2.7 trillion infrastructure plan seeks to “address the climate crisis and build a sustainable infrastructure.”³ Congress is negotiating the details.

Certifying the Certifiers

As President Biden begins rolling out his ambitious climate agenda, many in agriculture are concerned about the impact. Will there be costly new compliance measures? Will it affect production? A recent bill proposed by a bi-partisan group of senators could pave the way to financially rewarding farmers, ranchers, and private forest landowners for becoming part of the climate solution and taking meaningful steps to reduce greenhouse gases. Thus, we consider the **Growing Climate Solutions Act of 2021** and its likely importance in laying the foundation for future USDA environmental programs.

Agriculture and Climate Policy

Agricultural producers are integral to new climate policy. In addition to considering the expansion of traditional conservation programs, USDA has been weighing the creation of a “carbon bank” that uses the Commodity Credit Corporation to “finance large-scale climate smart agriculture and forestry.”⁴ Such a bank would financially reward farmers who sequester carbon in soils through practices such as planting cover crops and eliminating tillage. The bank could also fund the protection of wetlands, grasslands, and forests. Some have suggested that a USDA carbon bank could serve to aggregate contributions from small-to-medium sized farms to ensure equal access to voluntary carbon markets.

On March 16, 2021, USDA published a notice requesting public comment on suggestions for “climate-smart agriculture and forestry strategy.”⁵ One question asked how USDA could help support emerging markets for carbon and greenhouse gases where agriculture and forestry can supply carbon benefits. Although voluntary carbon credit markets have existed for some time, they are not particularly well-tailored for agricultural producers. Generally, one carbon credit is equivalent to the removal of one ton of carbon dioxide from the atmosphere. Companies wishing to offset the impact of their carbon-generating activities can purchase credits, created and sold

¹ Increasing atmospheric concentrations of greenhouse gases such as carbon dioxide, methane, and nitrous oxide cause changes in temperature and climate.

² The President memorialized this promise with his January 27, 2021, Executive Order on Tackling the Climate Crisis at Home and Abroad.

³ <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/31/fact-sheet-the-american-jobs-plan/>

⁴ https://climate21.org/documents/C21_USDA.pdf.

⁵ <https://www.govinfo.gov/content/pkg/FR-2021-03-16/html/2021-05287.htm> (Questions are designed to answer, “How should USDA utilize programs, funding and financing capacities, and other authorities, to encourage the voluntary adoption of climate-smart agricultural and forestry practices on working farms, ranches, and forest lands?”)

by the entity that is implementing the carbon-removal practice, through these private markets. However, entry into the private carbon market has been difficult for farmers and agricultural landowners—there are no common definitions or standards for the creation of credits; and, likewise, no standard verification procedures. Many farmers are concerned that participating in the current market is not cost effective, and others are concerned about the difficulty of maintaining compliance. USDA officials have suggested that there may be a role for USDA to bring research, stability, and access to the existing private market and to ensure that producers have the information they need to participate.

Growing Climate Solutions Act of 2021

Congress could soon open the door for more landowner involvement. On April 20, 2021, a bipartisan group of senators introduced the Growing Climate Solutions Act of 2021.^{6,7} The intent of the bill—a reintroduction of proposed legislation first unveiled in June of 2020—is to reduce entry barriers into voluntary environmental credit markets for farmers, ranchers, and private forest landowners. Specifically, the legislation would create a “Greenhouse Gas Technical Assistance Provider and Third-Party Verifier Certification Program” designed to accomplish the following:

- allow for the participation of farmers, ranchers, and private forest landowners in voluntary environmental credit markets;
- provide technical assistance to farmers, ranchers, and private forest landowners in overcoming barriers to entry into voluntary environmental credit markets;
- certify technical assistance providers and third-party verifiers under the Program; and,
- establish an advisory council to advise USDA with the Program.

Through the Program, the USDA would establish a “certification program” for:

1. providers of “technical assistance” to farmers, ranchers, or private forest landowners in carrying out sustainable land use management practices that prevent, reduce, or mitigate greenhouse gas emissions or sequester carbon and
2. “third-party verifiers” who determine whether activities actually prevent, reduce, or mitigate greenhouse gas emissions or sequester carbon. These activities may include:
 - (A) land or soil carbon sequestration;
 - (B) emissions reductions derived from fuel choice or reduced fuel use;
 - (C) livestock emissions reductions, including emissions reductions achieved through—
 - (i) feeds, feed additives, and the use of byproducts as feed sources; or
 - (ii) manure management practices;
 - (D) on-farm energy generation;

⁶ Primary sponsors include U.S. Senator Mike Braun (R-IN), Senator Debbie Stabenow (D-MI), Senator Lindsey Graham (R-SC), and Senator Sheldon Whitehouse (D-RI). Co-sponsors include Ranking Member John Boozman (R-AR) and Senators Marco Rubio (R-FL), Amy Klobuchar (D-MN), Mitt Romney (R-UT), Michael Bennet (D-CO), Bill Cassidy (R-LA), Tina Smith (D-MN), Susan Collins (R-ME), Chris Coons (D-DE), Mike Crapo (R-ID), Angus King (I-ME), Joni Ernst (R-IA), Jacky Rosen (D-NV), Deb Fischer (R-NE), Chuck Grassley (R-IA), Lisa Murkowski (R-AK), John Thune (R-SD), Todd Young (R-IN), Sherrod Brown (D-OH), John Hoeven (R-ND), Jeanne Shaheen (D-NH), Martin Heinrich (D-NM), Bill Cassidy (R-LA), Dianne Feinstein (D-CA), Tom Carper (D-DE), Ron Wyden (R-OR), Ben Ray Lujan (D-NM), Cindy Hyde-Smith (R-MS), Tammy Baldwin (D-WI), Raphael Warnock (D-GA), and Cynthia Lummis (R-WY).

⁷ The bill (S.1251) advanced out of the U.S. Senate Committee on Agriculture, Nutrition, and Forestry on April 22, 2021.

- (E) energy feedstock production;
- (F) fertilizer or nutrient use emissions reductions;
- (G) reforestation;
- (H) forest management, including improving harvesting practices and thinning diseased trees;
- (I) prevention of the conversion of forests, grasslands, and wetlands;
- (J) restoration of wetlands or grasslands;
- (K) grassland management, including prescribed grazing;
- (L) current practices associated with private land conservation programs administered by the Secretary; and
- (M) such other activities, or combinations of activities, that the Secretary, in consultation with the Advisory Council, determines to be appropriate.

What is Going On?

In addition to the coalition of bi-partisan senators, the bill has backing from prominent farm groups as well as prominent environmental groups. What is going on?

On its face, the bill may not appear significant—it directs the Secretary of Agriculture to create definitions to use in carbon markets and to certify private (third-party) firms that wish to participate in those markets. Furthermore, it also directs the Secretary of Agriculture and the Department of Agriculture to establish an online platform where participants can gather information about carbon markets, and it lowers barriers to entry for farmers, foresters, and other firms to participate in carbon markets. The bill does not define how those markets are established, who will participate, how they will run, the price of carbon, how certification of carbon credits will occur, or anything else that one might expect from a carbon market. Essentially, what it does, however, is instruct the Secretary of Agriculture to come up with the necessary definitions for those markets so that all participants use the same language, and it instructs the Secretary to establish how certification will occur and establish the rules for who can be certified to participate in the market.

“Well, so what? Somebody has to verify the carbon markets,” one might think. But, one could argue it should be left to the private sector to figure out, why get government involved at all?

We think there is good reason to examine this bill and we want to explain the wide support for it. While the Biden administration and Congress look to debate a host of environmental proposals, without this bill, many of the proposals that involve agriculture simply cannot move ahead. We will go as far as to say this bill is as significant as any other proposal, and it is a little surprising the popular press is not paying as much attention to it as it is things like “The Green New Deal,” which is not even in the form of a bill.

The bill creates a certification program for third-party certifiers and, just as importantly, establishes the U.S. Secretary of Agriculture as the one who certifies the certifiers. As such, this bill goes a long way to opening up carbon trading markets. While Congress debates whether to have carbon markets, cap-and-trade, and other ideas, this bill establishes that the Secretary can start thinking about the rules for the game as far as farming and forestry are concerned.

The unease over carbon markets that has been expressed by policy makers, researchers, farmers and agribusinesses can boil down to one question, “How can we trust the markets?” This bill

says that however those markets come about in agriculture, all participants will have to follow the same definitions and be certified eventually by USDA.

We have seen this before, and the effect of similar laws was significant.

It is worth recalling the years leading up to the organic boom. Congress passed, and then-President George H.W. Bush signed, the “Organic Food Production Act of 1990,” which, likewise, established the U.S. Secretary of Agriculture as the certifier of certifiers and instructed USDA to create definitions for organic foods; otherwise, the act left the organics industry alone to work within the guidelines USDA eventually set. The government does not run organic markets, but it does set the rules. The final national organic standards were set by 2002, and today you can find the “USDA Organic” green and white label on any food sold as organic in the United States. Today there are approximately 60 certifiers, both private and state (USDA 2019). While organic production is still a small percentage of all producers, that production has been steadily increasing—retail sales of organic products grew from about \$12 billion in 2005 to \$50 billion by 2019 (Statista 2021).

Prior to certifications and an establishment of standards, the organic food market struggled with consumers unwilling to pay the premium even though many consumers had a desire for the products. This is a classic example of solving what economists call a “lemons problem” in reference to Akerlof’s 1970 article about the used car market.⁸ Akerlof’s major contribution to economics from that article was showing that a lack of information will kill a market as much as a lack of buyers or sellers. If you do not know if a car is a lemon, you hedge your bid even if you would pay a lot more if you were certain of its quality. No matter how much the car dealer tells you it is a good car, you know the car dealer has an incentive to overstate the quality. Further, buyers infer that a market with no rules on what sellers can say will likely be overrun with low quality products advertised to be high quality. A third-party certifier that is not beholden to the buyer or to the seller creates the market when information is lacking. If that certifier has to be certified by someone else, even better; and, if all of the certifiers have to play by the same rules and use the same definitions it makes buyers and sellers willing to work together and trade unhindered by concerns that the product is not as advertised.

A marked increase in demand after standards are set is actually very common, especially in food and agricultural markets. We are used to USDA grades and standards on meats and dairy, for example, that certify the product was inspected by a third party. We forget that those industries originally petitioned Congress to develop the standards. Businesses know that unless buyers trust the information label on the product, they will not have a market. Without some of the uncertainty removed about what they are buying, buyers will not put their money toward claims of dolphin-free tuna, grass-fed beef, safe pork, organic tomatoes...or carbon credits regardless what a seller says. Economists actually know a lot about certification and how necessary it is for food markets in which there is a lack of information (Crespi and Marette 2003; 2005). This bill establishes how certification will unfold and it could prove to be a significant step toward the creation of a viable carbon market for agriculture.

⁸ Akerlof, G.A. 1970. "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism." *Quarterly Journal of Economics* 84:488-500.

References

- Crespi, J.M. and S. Marette. 2003. "Some Economic Implications of Public Labeling." *Journal of Food Distribution Research* 34: 83-94.
- Crespi, J.M. and S. Marette. 2005. "Ecolabeling Economics: Is Public Involvement Necessary?" in *Environment, Information and Consumer Behavior, New Horizons in Environmental Economics*. S. Krarup and C.S. Russell, eds. Edward Elgar Publishing, Northampton, MA: 93-109.
- Statista. 2021. Organic Food Sales in the United States from 2005 to 2019. <https://www.statista.com/statistics/196952/organic-food-sales-in-the-us-since-2000/>. Last accessed April 22, 2021.
- US Department of Agriculture, Economic Research Service. 2019. Organic Production: Documentation, September 30, 2019. <https://www.ers.usda.gov/data-products/organic-production/documentation.aspx>. Last accessed April 22, 2021.