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Cornhusker Economics

Growing Climate Solutions Act of 2021

On June 24, 2021, the U.S. Senate adopted S. 1251, the Growing Climate Solutions Act of 2021. Cosponsored by 54 senators, including Nebraska Senator Deb Fischer, S. 1251 seeks to make it easier for farmers and ranchers to participate in voluntary carbon credit markets and to get a fair share of the carbon credit revenue they generate. If adopted by the U.S. House of Representatives and signed into law by the President, S. 1251 would go a long way in facilitating effective producer participation in U.S. carbon markets.

If S. 1251 becomes law, one of the first things the U.S. Department of Agriculture would do is prepare, in cooperation with the U.S. Environmental Protection Agency, a thorough analysis of U.S. carbon markets. The study would (1) look at how voluntary carbon markets have operated over the past four years, including both the supply of and the demand for ag carbon credits, (2) project supply and demand for ag carbon credits for the next four years, (3) identify complications associated with measuring and verifying long term carbon sequestration and other activities that prevent, reduce or mitigate greenhouse gas (GHG) emissions in agriculture and forestry, (4) identify complications for small, beginning, and socially disadvantaged producers participating in carbon markets, (5) evaluate the potential USDA role for improving carbon reduction measurement technologies, (6) examine the extent to which existing carbon markets adequately take into account unique challenges facing ag producers regarding carbon credit verification, additionality, permanence and reporting, given regional variations and different ag business arrangements, and (7) analyze whether current carbon markets have sufficient flexibility to deal with disrupting those agricultural practices generating carbon credits due to unavoidable events including production challenges and natural disasters. This study will go a long way in identifying problems producers have when participating in exist-

ing carbon markets and how to improve those markets to benefit producers.

While preparing the carbon market study, the USDA also would establish an advisory committee to oversee the operation of the USDA program to certify GHG technical assistance providers and third-party verifiers. A majority of the advisory committee members must be farmers, ranchers or private forest landowners. Other committee members would represent carbon market verification experts, carbon market participants, and land grant universities. The heavy representation of farmers, ranchers and private forest landowners suggests that the certification program is likely to have a farmer-friendly tilt.

One of the main action activities under S. 1251 is the USDA certification of GHG technical assistance providers and third-party verifiers. Certification is voluntary, and producers of ag or forest carbon credits are not required to work with only certified technical assistance providers or third-party verifiers. The definitions of “technical assistance provider” and “third-party verifier” are quite broad, including basically anyone advising farmers and forest landowners how to increase soil sequestration, how to generate carbon credits, how to verify carbon credit generation (including GHG reductions), and how to participate in carbon credit markets. Currently, some or all of these activities are carried out by e.g. cooperative extension, private consultants, and private companies soliciting producers to market carbon credits through their company. Certification would be voluntary, and I would not expect many cooperative extension programs to seek certification.

The Act recognizes a wide range of activities as potentially generating carbon credits including: (1) land or soil carbon sequestration, (2) emissions reductions

resulting from fuel choice or reduced fuel use, (3) livestock emissions reductions, including emissions reductions achieved through (a) feeds, feed additives, and the use of byproducts as feed sources or (b) manure management practices, (4) on-farm energy generation, (5) energy feedstock production, (6) fertilizer or nutrient use emissions reductions, (7) reforestation, (8) forest management, including improving harvesting practices and thinning diseased trees, (9) preventing the conversion of forests, grasslands, and wetlands, (10) restoring wetlands or grasslands, (11) grassland management, including prescribed grazing, (12) current practices associated with private land conservation programs administered by the USDA Secretary, and (13) such other activities that the Secretary, in consultation with the Advisory Council, determines to be appropriate. Presumably in preparing carbon market protocols for measurement and verification, the USDA will prepare protocols for most or all of these activities. While nothing in the Act would make the USDA protocols mandatory in U.S. voluntary carbon markets, one would expect them to be very influential. In addition, the extent to which this wide range of agricultural activities has been used to generate carbon credits in the past would likely be analyzed in the USDA carbon market study.

Another USDA action that would greatly enhance carbon market transparency under the Act is the creation of a USDA website where certified technical assistance providers and third-party verifiers would be listed. This electronic list would likely be the first stop for most producers wishing to participate in U.S. carbon markets. This would make it likely that many if not most ag carbon market consultants and companies would become certified if only to be included on the online USDA carbon market list.

The Act has producer protection requirements that certified technical assistance providers and third-party verifiers would *to the maximum extent feasible* be required to follow. The providers and verifiers would be required to act in good faith, and to provide realistic estimates of costs and revenues relating to carbon saving activities and verification. Technical assistance providers would in addition be required to ensure *to the maximum extent feasible* that farmers and ranchers receive a fair distribution of revenues from the sale of ag carbon credits. In addition, the Act does not authorize the USDA to require a producer to participate in a transaction or project facilitated by a certified provider or verifier.

While S. 1251 has passed the U.S. Senate, the U.S. House of Representatives has yet to act on it. Politically the bill has an uphill political journey in the House because many Democrats are convinced that the whole concept of carbon credits detracts from actually reducing carbon emissions directly in the energy, transportation and industrial sectors. Under this view, if carbon credits allow emitters of GHG pollution to continue those emissions, that dynamic postpones moving

to a cleaner energy system. On the other hand, many environmental and conservation groups support S. 1251, so all is not lost. But likely opposition from some Democrats could slow its enactment.

S. 1251 addresses voluntary carbon markets; it does not address compliance markets directly, although the carbon market study should examine those compliance markets to see how they influence and are influenced by voluntary markets. Briefly, voluntary carbon markets supply carbon credits to individuals and companies who wish to reduce their carbon footprint for a variety of reasons but are not legally required to do so (e.g. individuals purchasing carbon offsets when they fly). Compliance markets, in contrast, allow companies whose carbon emissions are legally regulated to offset part of their regulated emissions by purchasing carbon credits. In the compliance carbon markets, **additionality** is very important – the carbon credits need to reflect the actual reduction in carbon emissions for the foreseeable future.

Some environmental groups are skeptical of carbon markets because they doubt that carbon credits can reliably reflect a relatively permanent reduction in carbon emissions. These groups would prefer regulated entities to actually invest in clean energy generation, etc. rather than purchase carbon offsets and continue their carbon pollution. Recent events illustrate how carbon credits can come up short in reducing real-world carbon emissions. Some of the forests being consumed in recent wildfires are linked to carbon credits sold on carbon markets years ago. These wildfire-destroyed forests will not be capturing carbon from the air through photosynthesis and the carbon credits the forests were projected to generate have literally gone up in smoke, although reforestation can at least partially reverse this. So, the question of additionality and how it should be treated in voluntary and compliance carbon markets is a very important – and controversial – and unresolved climate policy issue.

S. 1251 does not authorize the USDA or the federal government to regulate voluntary carbon markets, does not restrict who farmers or ranchers may work with when participating in carbon markets, and does not require carbon markets to become more farmer friendly. Rather, the Act would, if enacted into law, (1) establish voluntary USDA carbon saving measurement and verification protocols, (2) establish voluntary USDA certification requirements for entities (a) wishing to assist producers in participating in carbon markets and (b) providing measurement and verification of carbon savings, (3) establish a USDA website listing certified technical assistance providers and third party verifiers, and (4) establish fair producer treatment requirements

for certified technical assistance providers and third party verifiers. At a minimum, the Act will provide much greater transparency for producers interested in participating in carbon markets. Through the regulation of certified providers and verifiers and promulgation of carbon saving protocols, the Act in addition seeks to make the U.S. carbon markets fairer to producers and easier for producers to understand. If we are truly in an *all hands on deck* fight against global warming, we need S. 1251 or something very much like it to encourage increased soil carbon storage as part of our effort to reach U.S. net zero emissions by 2050.

Resources

There are many popular analyses of S. 1251; Rollins (2021) is more in depth. Crespi & Tidgren (2021) present a detailed argument about why something like S. 1251 is needed to establish a vibrant ag carbon market.

Aiken, J.D. "Ag Carbon Credits," Cornhusker Economics, UNL Department of Agricultural Economics. April 21, 2021. Overview of ag carbon market. <https://agecon.unl.edu/ag-carbon-credits>

Aiken, J.D. "Ag Carbon Offsets and the Carbon Bank" FARM Series 21-0312, UNL Department of Agricultural Economics. April 2, 2021. Provides introduction to ag credits as pollution offsets and to a possible USDA carbon bank, which is not part of S. 1251. <https://farm.unl.edu/policy-legal-finance/ag-carbon-offsets-and-carbon-bank/04022021-0956>

Crespi, John M. & Kristin A. Tidgren. "The First Legal Step for an Agricultural Carbon Market is in the Growing Climate Solutions Act of 2021." May 2021. Compares the proposed Growing Climate Solutions Act to USDA regulation of organic food. 5 page report. <https://www.card.iastate.edu/products/publications/synopsis/?p=1325>

Plastina, Alejandro & Oranuch Wongpiyabov. "How to Grow and Sell Carbon Credits in U.S. Agriculture. Iowa State University Extension & Outreach, July 2021. A Very helpful report comparing 11 private voluntary ag carbon programs across 26 factors. <https://www.extension.iastate.edu/agdm/crops/pdf/a1-76.pdf>

Rollins, Brigit. "Senate Advances Carbon Market Bill." National Agricultural Law Center, April 22, 2021. Good analysis of S. 1251. <https://nationalaglawcenter.org/senate-advances-carbon-market-bill/>

Sellers, Sarah and others. "What Questions Should Farmers Ask about Selling Carbon Credits?" *Farmdoc Daily* (11):59, Department of Agricultural and Consumer Economics, The University of Illinois at Urbana-Champaign, April 13, 2021. An excellent bulletin that estimates per acre revenue for several carbon saving ag activities. <https://farmdocdaily.illinois.edu/2021/04/what-questions-should-farmers-ask-about-selling-carbon-credits.html>

Swanson, Krista and others. "Growing Climate Solutions Act Impact on Farmers." *Farmdoc Daily* (11):66, Department of Agricultural and Consumer Economics, The University of Illinois at Urbana-Champaign, April 22, 2021. Overview of carbon markets; short discussion of the Growing Climate Solutions Act. 3-page newsletter. <https://farmdocdaily.illinois.edu/2021/04/growing-climate-solutions-act-impact-on-farmers.html>

U.S. Senate, 2021. S. 1251, the Growing Climate Solutions Act of 2021. <https://www.congress.gov/bill/117th-congress/senate-bill/1251>

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