Science Societies

Carbon markets and the societies

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October 27, 2021



With carbon markets, farmers can get paid for adopting practices we know are related to carbon sequestration like using cover crops. Photo courtesy of Gurbir Singh.

At our joint ASA, CSSA, and SSSA Board of Directors meeting in September, the three Boards engaged in a discussion of carbon markets and the potential roles that our Societies could play. We had three speakers who shared their perspectives on carbon markets and unmet research needs.

Carson Reeling, Assistant Professor in the Department of Agricultural Economics at Purdue University, started the conversation with a brief description of carbon markets and some of the obstacles facing the adoption of voluntary markets. For a review of the basic economics and considerations of carbon sequestration policies by agricultural producers, see the white paper and YouTube presentation at **https://bit.ly/3APbNHT**. More on Dr. Reeling can be found on his homepage at **https://ag.purdue.edu/commercialag/home/team/carson-reeling**.

David Antonioli, CEO of Verra, a non-profit that develops and manages standards including those in the carbon market (**https://verra.org/**), spoke next about the need for verified carbon units (VCUs) and how his organization was founded to meet the need for greater quality assurance in voluntary carbon markets.

Finally, one of our own SSSA members, Chris Harbourt, Global Head of Carbon at Indigo Ag (**www.indigoag.com/team/chris-harbourt**), mentioned some of the biogeochemical models currently in use to predict soil carbon sequestration capability. He specifically cited the need for high quality, peer-reviewed, scientific papers to improve model predictions and carbon management strategies in soils from all regions, particularly in western states practicing grazing on large tracts of land. Meta-analysis of the research is needed and would be facilitated by having unified datasets and standardized measurements.

All three presenters highlighted the need for standardized principles, frameworks, and measurable indicators and metrics for quantifying and tracking carbon. These are important conversations that will impact how carbon markets will perform in developed and developing economies around the world.

What Is the Role of Our Societies?

There are a number of roles that ASA, CSSA, and SSSA could provide, including educational programs, facilitation of networking and collaboration, and hosting specialized meetings leading to open access publications and accessible datasets to improve models. As members and certified professionals (e.g., CCAs, CSSPs), do you see yourself working in this arena? How could your Society support you in these efforts? Feel free to email any of us with ideas. For more information, see these helpful resources and watch for announcements of upcoming webinars, publications, and specialty groups being formed:

- **Creating Valid and Transparent Carbon Markets** (web story from our Sustainable Agronomy Conference): **www.soils.org/news/science-news/creating-valid-and-transparent-carbon-markets**
- **Offsets, Insets, Carbon Markets: Incentivizing Farmers to Improve Soil Health, Sequester Carbon** (feature article in the September *CSA News* magazine): **https://doi.org/10.1002/csan.20562**
- **Voluntary Versus State-Based Compliance Markets in the United States** (by Dave Clay and colleagues): **www.essoar.org/doi/abs/10.1002/essoar.10507653.2**
- **Opportunities and Challenges Associated with "Carbon Farming" for U.S. Row-Crop Producers** (by Carson Reeling and colleagues): **https://bit.ly/3nYcNp**

Giving Thanks

We have been fortunate to have had many experts share their knowledge of soil health, carbon markets, sustainable agriculture, open-access publishing, and other subjects through a variety of well-attended webinars this year. Our Societies are designed and positioned to provide unbiased, science-based information on many topics of interest to researchers, policymakers, and practitioners in the field.

As we write this, our 2021 Annual Meeting is still scheduled to be in person, but we have learned that our federal government members and many others will not be able to travel due to COVID restrictions, so we want to thank all of you who prerecorded your presentations and submitted them for the virtual component of our meeting. ASA, CSSA, and SSSA have very unusual and distinct meetings that don't lend themselves easily to a hybrid arrangement, so we appreciate that many of you made the effort to submit virtual presentations in lieu of traveling and meeting in person. We also want to thank all of our staff who continued to work tirelessly throughout the year even while health and economic conditions kept changing.

A final thanks and shout-out to our military veterans and the families and friends of veterans. We know that this year has been a particularly challenging one for anyone involved with the military. The recent incidents around the world (e.g., Afghanistan, Haiti) have caused extra stress on military families. Working with plants and soil in agriculture, gardening, or just observing nature, has a calming, healing effect for many of us, and we're glad that you are members of the Societies. Don't forget to enjoy some "dirt and plant therapy," and consider joining the ASA, CSSA, and SSSA Military Veterans of Agriculture Specialty Group (**www.soils.org/membership/specialty-groups**) and becoming involved in the group's Discussion Board to get to know a broader network of veterans within your scientific Society. We appreciate your sacrifice and thank you for your membership in the Societies.

Happy Thanksgiving to all of you, and stay healthy and well until we meet again.

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