

Getting to Zero: A Regional Climate Roundtable

Des Moines Roundtable – December 1-2, 2020

Key Takeaways

Overarching Themes

- Both soil health practices and biobased products can enhance the circularity of farm operations and create strong economic opportunities for Iowa.
- Collaboration across actors in the agricultural sector is challenging but essential to advance positive outcomes. Farmers should be engaged in shaping solutions.
- More research and coordination are needed to assess the carbon benefits of both soil health practices (using soil carbon measurements and models) and biobased products (using lifecycle assessments). Validating those assessments to a broad group of stakeholders will be a critical enabler of economic opportunity.
- Integrating soil health practices into the production of ethanol and biodiesel stands to further increase the carbon advantages of these biobased products while providing financial benefits to farmers.
- Stacking the benefits of soil conservation practices for carbon sequestration and water quality can integrate solutions for these outcomes and are essential to incentivizing farmers to implement them.

Session 1: Enhancing Soil Health for Profitability, Water Quality, and Carbon Sequestration

- State soil conservation cost-share programs work well, but need increased funding and outreach capacity to engage more farmers. Iowa is already working to leverage federal resources, engage new partners, and implement creative outreach strategies.
- More outreach is needed to increase farmer participation in the variety of state and federal programs available to assist them. Transaction costs including completing required paperwork and implementing changes in practice can be prohibitive for small farms.
- Farmers need more context-specific data on the efficacy, challenges, and benefits of various soil management practices.
- Increased federal funding of R&D for soil carbon monitoring technologies is needed to make this process more accurate and efficient.
- Ecosystem services market programs that stack benefits, to include water quality and carbon sequestration, are much more likely to be effective than markets for a single outcome, e.g., carbon-only markets. Single outcome programs are unlikely to provide payments sufficient to encourage the uptake of soil conservation practices, particularly among farmers new to these practices.
- Valuing outcomes, rather than specific practices, can reduce risk for purchasers in ecosystem services markets, and provide flexibility to farmers to choose practices to enhance soil carbon that work best for their specific land and context.
- More research needs to be done to understand the potential sequestration potential of agricultural lands, and ecosystem services market programs need to be realistic in setting expectations with farmers.

- Some large agricultural companies see themselves as enablers of soil health practices and are providing technical support and cost-share programs for farmers, as well as fostering peer-to-peer learning programs. They also want to pay farmers for outcomes, which helps them meet their public climate commitments. To do this, they need to be able to measure and verify carbon sequestration.
- Farmers see the support of agricultural companies as promising, but more companies need to pay farmers for soil health outcomes.

Session 2: Accelerating the Bioeconomy

- More robust domestic markets are needed for biofuels. State programs that value and purchase fuels with lower carbon intensity (like California's Low Carbon Fuel Standard) can help large agricultural companies share value with the farmers from which they source. More robust state programs could bring greater benefits to the whole supply chain, and possibly pave the way for a national renewable fuel standard.
- Investing in R&D and creating new markets for biobased products made with traditional commodity crops will help build momentum for using second-generation feedstocks down the line.
- Technical barriers and the over-supply of grain-based ethanol create a challenge for second-generation biofuels to achieve market penetration. Policy is needed to help spur growth in promising second-generation feedstocks.
- LCAs of biofuels often use outdated or inaccurate data. There is a need for baseline LCAs that are transparent and agreed upon by a variety of stakeholders. Several nonprofit groups are working to convene stakeholders on this issue. The federal government could play a key role in establishing LCA standards.
- Cover cropping produces additional inputs for anaerobic digesters that can increase the value of low-profitability acres for farmers. Digester outputs, which can be used as fertilizer, can increase soil carbon and the circularity of farm operations.
- Integrating solutions, e.g., co-locating digesters and ethanol plants, is a key opportunity. Ethanol plants can lower their carbon intensity scores by using biomethane and renewable natural gas in their processes rather than fossil-based methane and natural gas.
- Federal research and procurement programs at USDA, the Environmental Protection Agency, the Department of Energy, and the Treasury could be better aligned. Doing so would send stronger market signals that scale-up biobased businesses and the supply chain.
- USDA should create a roadmap for biogas opportunities, identify potential policy options like tax credits to drive the production of digester products, and better fund the Biomass Crop Assistance Program, which has helped to connect biomass crop producers with digester facilities.