Written Testimony in Support of
Sec. 2307(c)(7): Soil Health Demonstration Trial

The American Coalition of Ethanol (ACE), Environmental Entrepreneurs (E2), National Corn Growers Association (NCGA), Natural Resources Defense Council (NRDC) and the Minnesota Farmers Union developed the concept and supported inclusion of the Soil Health Demonstration Trial included in Section 2307(c)(7)[1] of the Agriculture Improvement Act of 2018.[2]

We look forward to working with USDA to implement this important tool to encourage farmers to implement practices that improve soil health to increase drought resiliency, improve nutrient utilization, and enhance soil carbon sequestration. As envisioned, the Soil Health Demonstration Trial will advance climate resiliency, conservation, and producer participation in carbon markets by using NRCS incentives and partner assistance to plan, adopt and measure soil conservation practices that sequester carbon and reduce greenhouse gas emissions.

That soil organic carbon (SOC) mitigates climate change is well recognized by policymakers. USDA estimates that U.S. producers store 20 million metric tons of carbon per year, and further estimates that agriculture could potentially store an additional 180 million metric tons per year. These SOC sequestration benefits represent an estimated 12-14% of total U.S. carbon emissions annually. International policymakers similarly recognize these important benefits. In the 2015 Paris U.N. Climate Change Conference negotiators recognized the importance of SOC sequestration in the global response to climate change.

The demonstration trial will leverage federal and state research by providing NRCS conservation incentives to assist willing farmers in a diverse set of states to assess baseline SOC conditions, cost-share practices to improve SOC sequestration, and measure associated sequestration benefits.

Taken together, this demonstration trial will create new opportunities to improve the economic viability of agriculture and create significant co-benefits in soil health, water quality and conservation, habitat, air quality and climate change mitigation.

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[1] ''(7) SOIL HEALTH DEMONSTRATION TRIAL.—Using funds made available to carry out this subsection, the Secretary shall carry out a soil health demonstration trial under which the Secretary coordinates with eligible entities—

''(A) to provide incentives to producers to implement conservation practices that—

''(i) improve soil health;

''(ii) increase carbon levels in the soil; or

''(iii) meet the goals described in clauses (i) and (ii);

''(B) to establish protocols for measuring carbon levels in the soil and testing carbon levels on land where conservation practices described in subparagraph (A) were applied to evaluate gains in soil health as a result of the practices implemented by the producers in the soil health demonstration trial; and

''(C)(i) not later than September 30, 2020, to initiate a study regarding changes in soil health and, if feasible, economic outcomes, generated as a result of the conservation practices described in subparagraph (A) that were applied by producers through the soil health demonstration trial; and

''(ii) to submit to the Committee on Agriculture of the House of Representatives and the Committee on Agri- culture, Nutrition, and Forestry of the Senate annual reports on the progress and results of the study under clause (i).

[2] See attached support statement from July 16, 2018.

Specifically, we worked with our champions in Congress to include this demonstration trial in order to provide economic assistance to farmers to establish a SOC baseline, incentives to adopt conservation crop and soil management practices that sequester SOC, and economic assistance to complete full soil profile SOC measurement after practices have been instituted. Expanding practice adoption will accomplish NRCS national objectives of improving soil health, water quality, water quantity, air quality, habitat, energy and climate resiliency. By providing producers with financial assistance to document the changes in soil carbon sequestration, this trial will help quantify the SOC sequestration benefits for the project area, facilitate extrapolation over a larger region, and establish the necessary predicates for lucrative producer access to mandated low carbon fuel (LCF) markets (*e.g.,* CA, OR) and voluntary carbon markets.

This demonstration trial can help provide the scientific foundation for demonstrating the carbon sequestration benefits of crops under various conservation tillage and soil health practices and facilitate greater adoption of conservation tillage and soil health practices using low carbon markets as the driver.

The trial would also provide valuable information to USDA's Rapid Assessment of U.S. Soil Carbon (RaCA). This program was created by USDA-NRCS Soil Science Division in 2010 to develop quantitative estimates of distribution of carbon stocks for the nation's soils under different land cover and agricultural management practices. It is also designed to provide data to support models of soil carbon changes based upon land use and conservation practice changes. The demonstration trial can provide valuable data to RaCA through its focus on measuring existing SOC, extending agricultural management practices that would sequester carbon, and measuring and extrapolating the benefits of those practices.

The vision behind this provision of the Farm Bill is to facilitate the continued development of a Soil Organic Carbon Conservation Activity Plan (SOC CAP) embodying carbon sequestration measurement and modeling protocols accepted by climate market validators. Under the SOC CAP, producers would partner with NRCS to set SOC baselines, continue to refine recommended soil health practices that producers would be incented to adopt under existing EQIP practice codes, and measure SOC gains after deployment of these practices. We want to work with NRCS to develop ranking and scoring criteria reflecting NRCS's Greenhouse Gas and Carbon Sequestration Ranking Tool, prioritizing EQIP practice codes which score in the highest two sections of the tool (*e.g.*, delivering the best SOC benefits).

We look forward to working with NRCS to conduct producer outreach, the development of the SOC CAP and associated payment schedule, and the ranking/scoring criteria for those SOC CAPs. Further, per Congressional instruction, we look forward to working with NRCS to conduct a study regarding changes in soil health and economic outcomes generated as a result of the conservation practices incentivized by this provision.