Quantifying Soil Carbon Sequestration from Conservation Practices in Iowa, Indiana and Nebraska. (S11-brenner140946-Oral)

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Abstract:

Land managers have long known the importance of soil organic matter in maintaining the productivity and sustainability of agricultural land. More recently, interest has developed in the potential for using conservation practices that increase stocks of carbon in soil organic matter and vegetation to sequester C and mitigate increasing atmospheric CO2. To help answer these questions, studies using the Century Soil Organic Matter Model were done in all 284 counties in Iowa, Indiana and Nebraska. Existing soil, climate, land use databases, long-term experiments and a new county level management survey were used to provide inputs for the Century model. We show how local land mangers were able to provide previously unavailable historical and land use details needed to refine the model to the sub-county scale. Century SOM estimates for the soils and crop/tillage combinations now available in the CarbOn Management Evaluation Tool (COMET) databases for each state.

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