Measuring Soil Carbon in Managed Northern Forests: Preliminary Results from a Regional Study. (S07-hoover080942-Oral)

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Abstract:

We are conducting a regional study encompassing seven experimental forests in six states to assess the effects of varied thinning practices on forest carbon stocks. This study is superimposed on continuing thinning studies at each location; replicate control and treated plots are sampled systematically, and soils are analyzed by dry combustion and pyrolysis molecular beam mass spectrometry (py-MBMS). Results from the first year of sampling include data from the following forests: Kane Experimental Forest (PA), Argonne Experimental Forest (WI), Bartlett Experimental Forest (NH), and the Penobscot Experimental Forest (ME). In managed plots, soil carbon content to 20 cm depth ranged from about 28 t C/ha to 57 t C/ha. Soil carbon in control plots ranged from 27-61 t C/ha. There was no consistent response to management activities across all four forests; each forest responded in a slightly different manner. Soil carbon content and concentration between management treatments was generally not statistically significant. Soil carbon content in the control plots was significantly different across the four forests.

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