A Comparison of Soil Sampling Methods for Carbon Sequestration Monitoring. (S05-cihacek153826-Oral)

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Abstract:

Monitoring carbon sequestration by soils should be readily accomplished by using tools and methods that are reltively simple with reproducible results. Commercial hand sampling devices that are available to most soil scientists were used in sampling a long-term small grain tillage study. The sampling devices included standard sampling tubes 1.9-cm and 3.2-cm in diameter, a 2.25-cm sampling tube with acetate liner, and a 2.2-cm by 7.6-cm rectangular turf sampler. Cores taken to a depth of 15 cm were composited, dried, crushed and and analyzed for organic carbon. Prior to drying, core bulk density was also determined. Carbon mass was calculated before comparing the sampling data. Sample data was compared to data obtained from 6.0-cm cores taken with a vehicle mounted hydraulic probe. Variability between sampling methods will be discussed.

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