Evaluating the Spatial Variability of Soil Properties in the North Alabama Mesonet. (S06-golson165207-Poster)

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Abstract:

Assessment of soil property variability is essential for the continued efficient use of our soils. Soil properties, such as texture, structure, and organic matter content directly affect the processes that occur in a soil system. For these reasons, evaluation of soil properties and their spatial variability is pertinent to the maintenance of healthy soils. Applications like Geographic Information Systems (GIS) provide newly advanced methods for evaluating soil properties. The study sites, which are located throughout Northern Alabama, constitute five of the meteorological stations that make up the Alabama Mesonet. The purpose of this study was to assess the soil properties of these respective sites and to use GIS as a method for assessing soil property variability. In order to characterize the soil properties of these areas, analysis were performed to determine properties like, pH and percent sand, silt, and clay. Results indicated that there were significant differences observed for the soil properties by site location and soil depth, but not by sampling position.

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