A comparison to soil survey data and an estimate of the variability in field and laboratory data of a hillslope transect crossing two mapping units of a Ultic Hapludalf and a Typic Hapludult. (S05-drohan075515-Poster)

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Abstract:

Examining soil variability in different landscape positions has long been a topic of research to soil scientists. Many soil scientists acknowledge that there are predictable patterns of change at various positions of slope, however being able to forecast these changes with accuracy and consistency remains a struggle. We explore the variability of soil properties at different positions along a slope and estimate the accuracy of the corresponding soil survey mapping unit descriptions for this hill-slope location. Exchangeable Fe, Mn, and K; pH; horizon structure, depth and thickness; and soil hue, value, and chroma in the Ap and first B horizon are examined. Significant differences were only found in soil pH between soil survey mapping units. A field estimated map unit boundary was established and its discernability increased as one moved more than 2.1 meters from the boundary into the mapping unit. However, the soil survey mapping unit boundary could not be discerned at the approximate location. This may suggest that the soil landscape at this site is highly variable, and only a small portion of that variability is represented in the county soil survey report for this site.

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