



Historical Perspectives and Future Needs in the Development of the Soil Series Concept

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The soil series concept is an ever-evolving understanding of soil profile observations, their connection to the landscape, and functional limits on the range in characteristics that affect management. Historically, the soil series has played a pivotal role in the development of soil-landscape theory, modern soil survey methods, and concise delivery of soils information to the end-user— in other words, soil series is the palette from which soil survey reports are crafted. Over the last 20 years the soil series has received considerable criticism as a means of soil information organization (soil survey development) and delivery (end-user application of soil survey data), with increasing pressure (internal and external) to retire the soil series.

We propose that a modern re-examination of soil series information could help address several of the long-standing critiques of soil survey: consistency across survey vintage and political divisions and more robust estimates of soil properties and associated uncertainty. A new library of soil series data would include classic narratives describing morphology and management, quantitative descriptions of soil properties and their ranges, graphical depiction of the relationships between associated soil series, block diagrams illustrating soil-landscape models, maps of series distribution, and a probabilistic representation of a "typical" soil profile. These data would be derived from re-correlation of existing morphologic and characterization data informed by modern statistical methods and regional expertise.