Development of a Geographic Information System for Published Soil Data. (S05-dharmasri095733-Oral)

Authors:

- L.C.Dharmasri - *Syngenta Crop Protection, Inc.*

Abstract:

Digital soil survey data (i.e., STATSGO and SSURGO) are useful in mapping soil types and soil characteristics. However, the database structure limits the ability to accurately locate sites with specific soil characteristics. Published journal articles are useful source of information that can be geo-referenced. Research articles contain soil characteristics with at least relative positions, in addition to research findings. Currently, positional data are recorded more accurately using GPS, and would enable geo-referencing the study or sampling sites within a GIS. A GIS-based relational database has been developed using the positional information from the published articles. This geodatabase will enable one to locate sites with specific soil characteristics as well as to spatially query for studies conducted on a particular soil or location. In addition to the soils data, the geodatabase could provide the metadata such as information on analytical methods, personnel contacts, and related bibliography through the links to the articles. The database development process, it's utility, and issues related to spatial aspects, attributes, and metadata will be discussed.

Corresponding Author Information:

Cecil Dharmasri
Syngenta Crop Protection, Inc.
410 - swing Road
Greensboro, NC 27409

phone: 336-632-2088
fax: 336-632-7846
e-mail: cecil.dharmasri@syngenta.com

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