Engineers Get the Word

On 26 Jan. 1977, the current system of soil taxonomy used in the National Cooperative Soil Survey was unveiled to a large audience of engineers at the 56th annual meeting of the Transportation Board in Washington, D. C.

Bill Johnson of the Soil Conservation Service (SCS) gave an overview and the historical background of the development of soil taxonomy. Johnson explained that soil taxonomy differs from engineering classification systems in that it deals with undisturbed natural soil bodies (or their man-modified equivalent) and their related ecosystems.

Lindo Bartelli, an SCS retiree now with Michigan Technological University, followed with an explanation of diagnostic horizons and the implication of each for engineers.

Soil moisture and temperature regimes were discussed by S. W. Buol of North Carolina State University. Buol emphasized the simplicity of taxonomy nomenclature and described how an engineer can determine soil temperature, soil moisture, and flooding characteristics from a taxonomic name. He counseled the audience not to put off by the nomenclature noting that his students usually pick up the formative elements after only two hours of study.

Richard Handy of Iowa State University (and of "Screenings from the Soil Research Lab") spoke on particle size and mineralogy. He commented that soil taxonomy brings the particle size criteria of pedologists closer to particle size criteria used by engineers.

Don McCormack of SCS discussed soil series and their place in soil taxonomy. McCormack explained that the series is the lowest category in the system and that series criteria are mostly the same as those used for classes in other categories. The range permitted in one or more properties, however, is less than that permitted for a family. Series can be subdivided into phases to distinguish important characteristics significant to use and management.

Ed Fernau of the New York State Department of Transportation closed the symposium by describing how soil taxonomy can be applied to engineering. Fernau lauded the quantitative aspects of the classification system and also reminded users of the large quantity of data that can be inferred from series descriptions.

William Reybold
USDA-SCS
Hyattsville, Md.