

Research Priority Committee Report

Research Priorities Committee Charges

Identify and evaluate research needed in the Southern Region to accomplish soil surveys

1. Gypseous soils
 - a. Develop and test standards for:
 1. physical properties
 2. chemical properties
 3. morphology
 4. terms and horizon designations
 - b. Taxonomy – be sure we have soils and data before taxonomic classes are proposed

2. The “new soil survey” needs sampling requirements for dynamic soil properties. Identify existing data sets in the Southern Region that can be used to determine the spatial variability of near surface dynamic soil properties.
 - a. Obtain dynamic soil properties at the same time when a soil is sampled for characterization
 - b. Total C, N and P data should be obtained for all horizons

3. Identify known elements of ground water Spodosols formation and develop model to predict their occurrence in landscapes
 - a. Form a task force with specific charges in order to develop a model or research the water table and spodic horizon relationships – this may lead to specific research projects such as water table /spodic horizon identification and monitoring

4. Evaluate and identify ways to integrate soil spectroscopy tool into soil survey activities
 - a. Past and current research has/is addressing this charge

5. Plinthite

a. States in which plinthite occur should cooperate to:

1. understand the processes associated with: i. landforms, ii. root restriction (chemical and/or physical), and iii. water movement relationships (K_{sat})

b. re-evaluate the slaking procedure and cementation criteria (do you create an abnormal condition when you dry the sample)

c. review past literature and evaluate current data in order to develop classes and criteria (do not follow WRB just to be the same)

6. Anthropogenic soils (reclaimed mine soils both lignite and phosphatic soils)
 - a. Reclaimed lignite soils, descriptions and classification have been addressed and publications are available
 - b. Phosphatic soils have not been addressed and some consideration of their characteristics and classification should be addressed

7. PI's should contact the Soil Survey Lab (Larry West) and request that the lab become a cooperator of their project, such that the lab could provide analyses for the proposed project. This cooperation is viewed as a positive by CSREES and NSF as it can substantially reduce cost. PI's can use this cost as matching funds.

The committee should continue

Wayne H. Hudnall, Texas Tech University,
chairman

David Wiendorf, Louisiana State
University, co-chairman