

# **Southern Region Report**

# Research Priorities Committee Charge

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 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

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 CRESSE and NSF as it can substantially reduce cost. PI's can use this cost as matching funds

# Standards and Taxonomy Committee

**1. Normal Years (NSSC Proposal) -- Statement added: “When evaluating precipitation data to determine if the criterion for the presence of aquic conditions, or number of days that the moisture control section is moist, or number of days that some part of the soil is saturated has been met, it is permissible to include data from periods with below normal rainfall. Accepted**

**2. Clarification of the Clay Content Requirement for Paleustalfs, Palexeralfs, and Palexerolls (NSSC) – The clay content criteria listed for the Paleustalfs (p. 59 of the Keys), Palexeralfs (p. 71), and Palexerolls (p. 224) refers to various clayey particle-size classes being present in the upper part of the argillic horizon. The intent is to require 35% or more clay in the upper part (as written for the Paleustolls, page 209). The use of particle-size class terms in this context is technically incorrect, because these soils do not have to be in a clayey family to meet the criterion.**

Accepted

**3. Paleudults - Presently, soils in the Paleudults great group that meet the feature criteria for the “Aquic” subgroup and are also grossarenic, key as “Aquic Arenic” Paleudults. Soils that meet the feature criteria for the “Oxyaquic” subgroup and are also grossarenic, key as “Oxyaquic” Paleudults. Soils that meet the feature criteria for the “Arenic” and “Plinthic” subgroup and are also oxyaquic, key as “Arenic Plinthic” Paleudults. It is proposed the Paleudults great group be revised by: 1) adding “*Aquic Grossarenic,*” “*Grossarenic Oxyaquic,*” and “*Arenic Plinthic Oxyaquic*” subgroups to the Paleudult great group, and 2) rearranging the subgroup order of Paleudults as to allow soils to key similarly to Kandiudults.**

Accepted

**Plinthic Horizon).** Soil scientists who work in regions with soils that contain iron concentrations historically have struggled to consistently and accurately describe and quantify these materials. Local or regional application of concepts have added to the complexity of consistent soil correlation from county-to-county, state-to-state, and region-to-region. With the implementation of the major land resource area (MLRA) soil survey approach, it has become imperative to develop concepts and conventions that may be uniformly applied.

Excellent presentation by John Kelley

## Plinthite recommendations

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 (Ksat)

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)

# UNIVERSITY COOPERATOR GROUP MEETING REPORT

- a) Continue to recruit students for summer and full time positions at the regional and national soil contests. Personnel representing the NRCS should be on-hand during the contest week to visit with students about opportunities.
  
- b) Include recruitment at the spring soil judging contest sponsored by NACTA (National Association of College Teachers in Agriculture) which includes many of the smaller colleges/universities and some of the schools that participate in the regional contests in the fall but did not qualify to participate in the national contest.

c) For summer employment of students, begin the interview process in December or January, even if money and authorization for hiring are not in line. Students who are interested will hold off decisions until they hear that the position is not going to be available. If one waits until April to begin identifying students, most will have already taken summer internships or employment.