

## Soil Survey Investigations and Soil Survey Laboratory

- Functionally integrate the missions of the two staffs.
- Work closely with interpretations staff.
- Increase efficiency and relevance of the laboratory data.
- Rebuild the cooperator network to meet needs of today and tomorrow.
- Integrate the relevant cooperator data.



## Historical Structure of Cooperator Network

- Cooperate with field soil survey
- Technical support – genesis and classification studies
- Laboratory support for state effort
- Student internships



## New Activities for Cooperator Network

- Cooperative research at process scales.
- Active student identification and recruitment.
- Proposal reviews.
- Model development and refinement (SoLIM, watersheds).
- Some assistance with routine analyses.
- Transfer of thesis/dissertation data.



## Investigations Staff Functions

- Continue to provide field assistance when requested.
- Work closely with interpretations and laboratory staffs.
- Build collaborative efforts with cooperators.
- Network more closely with State Soil Scientists.



## **Research Needs Committee**

- **National in scope**
- **Includes cooperating agencies at all levels.**
- **Develop projects which engage partners.**
- **Focus on needs for interpretations.**
- **Link with RFP process.**



## Current Major Long-Term Projects

- **Watershed studies (It's a soil and water survey).**
- **Trace/heavy metal geochemistry.**
- **Data base evaluation and completion.**
- **Soil carbon?**
- **Use-dependent soil properties.**
- **Gypsiferous soils.**



## Laboratory Functions

- Laboratory support – full chemical, mineralogical and physical.
- Continue to develop analytical methods – development and “vetting.”
- Maintain standards of quality assurance.
- Production and maintenance of methods manuals.
- Automated sample tracking (LIMS) and data base integration.



## Increasing Laboratory Efficiencies

- **Priorities relevant to needs**
- **Efficient sampling design**
- **Analytical Efficiency**
  - **Cross-training**
  - **Smooth flow**
  - **Automation**
- **Give technicians partnership in process**



## **Database committee**

- **Determine the quality of archived data.**
- **Determine the completeness of archived data.**
- **Design sampling strategy to complete data base.**
- **Coordinate integration of university/cooperator soil data bases in a systematic and consistent way.**



## Integrating Cooperator Data

- What's out there?
- How were the samples analyzed?
- Should we distinguish between those data and NRCS laboratory data?
- Transforming the data and getting them into the NRCS system.
  - who does it?
  - What are priorities?



## **Southern Region Needs?**

- **Gypsiferous soils**
- **Plinthite in coastal plains**
- **Cooperator data base**
- **Watershed study**



## Data rich – information poor

“ . . . statements . . . have come to be believed in for no other reason than that people have talked a great deal about them.” *Sir John Russell, 1912*

We really are data sporadic.

We need to be *data relevant* for existing and emerging interpretations needs.





How much does it vary?

When and where does it vary?

What causes the variation?

What are the consequences of variation for the intended  
land use?



