

Joint Meeting NCR-13, NEC-67 & SERA-IEG-6
Mahoney State Park, Nebraska

Sept. 11, 2000

Administrative Larry Cihacek

Spectro Analytical

Update on Washington - Dr. Ray Knight

Dr. Knight discussed the following topics

- Still do not have a Federal Budget for 2001.
- There are some differences between the two bills.
- Some of the NRI money is going to special grants.
- Agricultural Risk Mitigation
- Comprehensive Nutrient Management plans

NAPT (North American Proficiency Testing Program) Bob Miller,
Coordinator

Discussion of Data Correlations and Precision

Environmental Impact of P Dr. Doug Beagle

- Soil Test Evaluation Based on Crop Response
- AFO Strategy
- Threshold Method Calibration of high P level that is polluting;
Relationship between -M-3 P and Dissolved P, Where is the critical
Level?
- 1 ppm Sewage treatment plant level
- Eutrofication Level 0.01 - 0.1 mg/L
- What soil test should we use to do this?
- Depth of sampling; can we use the common soil test sampling
depth?
- Source and Transport Method
- Identify critical source areas.
- Phosphorus Extractant Index Transport factors, Source factors
- N and P States Alabama, Alaska, Arizona, Colorado, Louisiana,
Maine Massachusetts

Update on M-3 Correlation Work Antonio Mallarino

Comparisons of M-3, Bray-1, and Olsen

Get 10-12 ppm higher P values with M-3 ICP

The colorimetric M-3 is similar to Bray-1 in neutral or acid soils

Correlation of P Methods Ray Tucker

Water Soluble P Hailin Zhang

- Water- soluble P is better correlated to runoff P
- Water to soil ratio is important
- Shaking time is important
- Deionized water vs. CaCl_2
- Extract more P with longer shaking times and greater amounts of water in the solution
- Correlations for water extractable P and M-3 extractable P are different for different pHs
- 11 ratio and shaking for 10 minutes are convenient and practical for soil test laboratories.
- Extract less P with calcium chloride than deionized water.

SERA 17 Activities Report Doug Beagle

- Discussed the following topics during annual meeting
- Phosphorus Source Reduction
- Effects of BMPs
- Reducing amounts of P in Manure
- Scaling issues in moving research to practical level
- P-Index concept
- New publication available

SERA-IEG-6 Meeting

September 12, 2000

Participants (see web list)

Administration

Scott Smith

James Supak

Comments from Scott

- Discussion of efforts to continue research and extension cooperation.
- Southern Directors are reviewing all of the SERA committees.
- We were last reviewed 3 years ago.

-We will be asked to provide information to regulators in the future.
Ray Campbell will make sure that administrative advisors get copies of the minutes.

Publication Reports

- Ray Campbell reported that the new publication "Sufficiency Ranges for Plant Analysis in the Southern Region of the United States" has been completed and is on the Web.
- Need to keep methods publication (190) updated annually.
- Need a subcommittee to evaluate need for changes and updates. Kathy will appoint.
- Charlie Mitchell and Glen Harris gave a progress report on "Research Based Soil Testing and Nutrient Recommendations for Cotton on Coastal Plains Soils"; Hope to have first draft by next year's meeting.
- Bill Baker is putting together a similar paper for the west.
- Bill Baker is also responsible for a QAQC publication for the region.

Other Business

- Jerry Kidder provided a copy of Historical Information on SERA-6 formation by an unknown author.
- Gary Lessman will put together a report indicating laboratory cost and determinations by state and put it on the web.

State Reports

Alabama

- Alabama is on a fast track toward the construction of a new lab. It will include diagnostic labs similar to Clemson.
- Farmers have now been offered free soil testing service because of the extended drought.
- Sample numbers are down but specialty samples are up
- Looking for a minority candidate to help out in the lab.

Arkansas

- There have been few changes since Dr. Wayne Sabbe's retirement - Interviews will soon begin to fill the position with an Assist/Assoc Professor in Soil Fertility - No sample cost - Trying to find money for a new ICP - The Eastern Arkansas Soil Test Laboratory analyzed 95,520 soil samples, 13,847 Plant samples, and 7,689 cotton petiole samples. - The Agriculture Diagnostic Laboratory analyzed 1,385 feed samples, 1,910 manure samples, 11,400 plant samples, 3,500 soil samples, and 11,000 partially prepared research samples. - E-mailing most reports using EXCELL.

Florida

- Improvements in equipment and personnel since last year - Were without an ICP part of the year - Sample numbers were about 15,000 for extension and 150,000 for research (low because of ICP breakdown. Actual research anticipated > 200,000.) - Now have a QA officer in the lab - Now looking at ppb levels for P - Have linked forms to the SERA web site - Have created a procedures document and put it on the web. - Working towards developing one publication for all standardized nutrient recommendations on the web. All the recommendations have to be approved by an Oversight Committee.
- Have a new position in nutrient management. Send candidates.

Georgia

- Wayne Jordan retired at the end of May. - Poultry Federation passed a resolution that producers would take litter samples voluntarily. The samples will be run free of charge. This program has been well funded. - With the drought there has been increased need for nitrate samples. - Analyzed 99,109 soil samples, 2,319 plant samples, 986 feed samples, 3,981 water samples, and 3,778 misc.

University of Kentucky

- Numbers - analyzed 52,000 samples including 39,000 soil plus others - Trying to get a permanent computer programmer position. - Have a new data base program that moves results to extension offices. - Spending a lot of time on nutrient management. - Developed an environmental threshold for P. Were then asked for an environmental N threshold but we could not provide it. - An extension note has been put together to educate clientele concerning the

relationship of soil test determinations and environmental impact. -
Have one new faculty member in soil chemistry

Louisiana

- Lost four full time professors last year. Jim Wang came on board to replace John Kovar. - Have a new Spectro ICP. There is a savings in gas. - 15,000 samples last year of which 4000 were research, 210 irrigation water samples last year due to drought.

Mississippi

- There were several personnel changes over the year - Heavily involved in 590 process - Cooperating with NRCS on developing regulations - Doing series of training sessions for NRCS - Clients can now get soil test results over the web - In the process of purchasing a new ICP - Increase in numbers of samples this year.

North Carolina

- Looking at robotics for pH determination. - Ray Campbell retired last year from the Plant, Waste, and Solution Lab. Dr. Bobby Walls has taken his place. - Developing a new shipping container. - Soil sampling history (handout attached) - Ray Campbell holds an adjunct appointment in the Soil Science Department at NCSU and plans to stay active in the SERA-IEG-6 group.

Oklahoma

- No personnel changes this year. - Have purchased a new ICP - Purchased a Leco N analyzer to do total N on soil - Completed a 5 year soil sample summary - Developed interactive program to allow users to obtain fertilizer or animal manure recommendations for

major crops based on soil test results.

South Carolina

- Have a new chemist - Currently working with a programmer to get reporting system on the web - Currently are doing pH data collection by hand but are working to automate this phase. - DHEC is concerned about discharge lagoon and we are planning to get a combustion N analyzer to address the issue. - Have been addressing air quality in the lab. Now have a new air-handling unit for the lab. - Total samples soil 33,000, plant 3,200, feed 2,000, water 400, animal waste 700, other 600.

Tennessee

- Have a number of new personnel in the University - Research, extension and teaching now combined into one department. - Forage Analysis has now been moved to Knoxville. - 30,000 soil samples ran last year, which is about the same as previous years. - Now on the web with sample results.

Virginia

- Soil numbers are up significantly this year. - Added LOI as standard organic matter test. - Moving to a server based system for report generation - Have two ICP instruments. Are planning to do a \$60,000 upgrade to extend life - We are on a 7-8 year replacement for ICPs.

Next Meeting Discussion

- Scheduled for Arkansas. Nancy will check with Dean for approval. - Campbell will check with David Sotomayor concerning the possibility of a future meeting in Puerto Rico. - 2001 meeting date - June 10,

11, and 12th,

New Officers

- Dr. Hugh Savoy accepted the position of Secretary for next two years. - Kathy Moore will be Chairman for the next two years. - Ray Campbell will be Chairman-Elect. - Topics for next years meeting should be forwarded to Kathy. Educational role of laboratories (should we develop a policy statement?), Phosphorus, computer processing of lab results - Mission Statement. Should it be expanded? It is on the web for review. - Send individual web site addresses to Kathy for posting on SERA web site. - Will make an effort to get publications on the SERA web site.

JOINT MEETING SEPT. 13, 2000

Phosphorus Discussion

- EPA wants a universal threshold number for limiting phosphorus application - Transport and soil P levels are important - Do we need to send a letter to appropriate administrators and others such as SERA-6 did last year to indicate our current opinion on the P index issue? Feeling is that this would have been helpful earlier but may be too late for impact now. There are current deadlines (May 2001) for EPA to have a P assessment index. Concern is that once a number or system is set, it will be difficult to make a change.

Manure Methods Manual John Peters

- Status of regional publication 4 yrs in process but not finished to date. Will be adding a chapter on sample handling. Sampling chapter is in good shape. Dry matter analysis chapter is in good shape. Methods chapter is in progress and needs more work.

Managing the risks associated with manure analysis Kathy Moore

- Review of manual available from Kathy Moore. Manual outlines pathogens of concern and protective measures necessary for a safe working environment.

Delaware's Nutrient Management Law Greg Binford

- Overview of new legislation to regulate nutrient application. Includes rules on who must comply and training necessary to apply nutrients or sell nutrients.

QAQC Manual Concerns Manjula Nathan

- Becoming more important due to interest in precision agriculture and environmental programs. - Each region is working on a manual collectively. - Targeting to complete the manual by next year.

Minutes of the Joint Meeting of NCR-13, SERAIEG-6, & NEC-67
September 11-13, 2000

Respectfully Submitted Dr. C. Ray Campbell, Secretary