

MINUTES**SOUTHERN EXTENSION AND RESEARCH ACTIVITIES -
INFORMATION****EXCHANGE GROUP ON SOIL AND PLANT ANALYSIS****SERA-IEG-6****June 6-8, 1999****Orlando, Florida****PARTICIPANTS:**

Maurice Horton, USDA/CSREES Representative

George J. Kriz, NCARS-NCSU, Administrative Advisor

William Thom, University of Kentucky

Frank J. Sikora, University of Kentucky

Hailin Zhang, Oklahoma State University

Charles Mitchell, Auburn University

William C. Johnson, Jr., University of Georgia

C. Wayne Jordan, University of Georgia

Owen Plank, University of Georgia

Glen Harris, University of Georgia

Gerald Kidder, University of Florida

James Bartos, University of Florida

Gerald Kidder, University of Florida

Randy B. Brown, University of Florida

Rao Mylavarapu, University of Florida

Rodney Henderson, Louisiana State University

John L. Kovar, Louisiana State University

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Steven J. Donohue, Virginia Tech.

Kathy P. Moore, Clemson University

James R. Woodruff, U. S. Borax

Douglas Beegle, Pennsylvania State University

Steven Hodges, North Carolina State University

M. Ray Tucker, North Carolina Department of Agriculture &
Consumer Services

C. Ray Campbell, North Carolina Department of Agriculture &
Consumer Services

Fred R. Cox, North Carolina State University

Gary M. Lessman, University of Tennessee

Debbie Joines, University of Tennessee

Hugh Savoy, University of Tennessee

Tony Provin, Texas A & M University

J. Leon Young, Steven F. Austin State University, Texas

William H. Baker, University of Arkansas

Nancy Wolf, University of Arkansas

Bill Bake, University of Arkansas

Keith Crouse, Mississippi State University

Larry Oldham, Mississippi State University

David Sotomayor, University of Puerto Rico

AGENDA:

Monday, June 7, 1999

8:00 - 8:30 a.m. Welcome Dr. Randy Brown

8:00 - 9:30 a.m. Administrative Reports

Dr. George Kriz

Dr. Wayne Jordan

Dr. Maurice Horton

9:30 - 10:00 a.m. What's Ahead for SERA-IEG-6 in the P Arena?

Dr. Steve Hodges

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Dr. Charles Mitchell

Dr. J. Leon Young

Dr. Tony Provin

Dr. Bill Thom

11:30 - 12:00 p.m. Discussion and Proposed Action

1:15 - 5:00 p.m. Tour Research and Education Center, Lake Alfred

8:00 - 10:30 p.m. Discussion of Phosphorus and Proposed SERA-IEG- 6 Action

Tuesday, June 8, 1999

8:00 - 8:15 a.m. Review of Committee Reports:

Dr. Bill Thom, Review of Proposed Resolutions; Action of SERA-IEG-6 Concerning Phosphorus

Dr. Ray Campbell, Publication on Plant Analysis

8:15 - 8:45 a.m. Laboratory Report - Jim Bartos, University of Florida

8:45 - 9:15 a.m. Cu & Zn Accumulation on Waste Amended Soils -
Dr. Ray Tucker; Dr. Fred Cox

9:15 - 9:30 a.m. North Central Region Report - Dr. Doug Beegle

9:30 - 12:00 p.m. State Reports

ACTION ITEMS:

The SERA-IEG-6 passed resolutions concerning the misuse of soil test phosphorus for interpretation of environmental P impact to be sent to NRCS, Research and Extension Directors in the Southern Region, the Editor of *Agronomy News* and other appropriate journals and agencies as deemed appropriate by the Executive Committee. Dr. Bill Thom, current SERA-IEG-6 Chair, will follow through and send copies of the resolutions as directed.

SUMMARY OF DISCUSSIONS: See attached Summary of Discussions and Distributed Information. Attachments not included on the Web site can be obtained from the respective authors or Dr. Ray Campbell.

FUTURE MEETING PLANS: SERA IEG-6 will meet jointly with NCR-13, who will be responsible for planning and coordination. SERA-IEG-6 suggested the meeting be held between June and September at either Pennsylvania State University or Indianapolis, Indiana. Dr. Douglas Beegle will relate these suggestions to NCR-13 for

consideration. The SERA-IEG-6 meeting will be held in conjunction with the joint meeting. Dr. Bill Thom (KY) will continue to serve as Chairman; Dr. Cathy Moore (SC), as Vice-Chairman; and Dr. Ray Campbell, (NC), Secretary.

Respectfully submitted:

Dr. C. Ray Campbell, Secretary Date

Dr. Bill Thom, Chairman Date

Dr. George Kriz, Administrative Advisor Date

SUMMARY OF DISCUSSIONS

SERA-IEG-6 MEETING

June 6-8th, 1999

Orlando, Florida

Note: Attachments to the minutes are not placed on the Web. To obtain copies of this material, contact the author or Dr. Campbell, Secretary.

Monday, June 7, 1999

Welcome: Dr. Randy Brown, Chair of The Department of Soil and Water Science

Dr. Brown provided an overview of the geology and soils of Florida and the programs of the University of Florida. He discussed a research delivery model that is being used to secure adequate funding for research and extension programs. Funding Formula: $RDU = (DM \times DW) / 40$. Thrust areas of the University of Florida Soil and Water Science include the following: 1) Nutrient, Pest, and Water Management, 2) Soil landscape analysis, 3) Remediation of contaminated soils, water, and aquifers, 4) Wetland Systems, 5) Soil Quality and Ecological Indicators.

Administrative Reports: Dr. George Kriz, Dr. Wayne Jordan, Dr. Maurice Horton

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Dr. Kriz indicated he will be retiring Oct. 31, 1999 and stated that Dr. Scott Smith, of the University of Kentucky, will replace him. He stated that it had been a pleasure to work with the group and reviewed accomplishments. There have been 11 publications to date (see attached). The following recommendations concerning publications were made: 1) Recommend that we place all old publications on our Web Site, 2) Recommend that there be a process for updating old publications. The Southern Directors will address and act on these issues.

Dr. Kriz indicated that SERA-IEG-6 has been approved (see attached) for the next 5 years and reviewed the three primary objectives 1) To develop, modify, and document reference laboratory procedures for nutrient analysis labs in the Southern Region, 2) To "regionalize" soil test calibration/correlation and interpretation efforts among states that share similar soils and climate. 3) To encourage analytical proficiency and adequate quality control/assurance among member laboratories. He also emphasized the importance of the group as we address phosphorus and other water quality issues in the future.

Dr. Kriz was presented a certificate of appreciation from the group for his guidance, leadership, and support during his years as administrative advisor. Drs. Jordan and Horton further commented on Dr. Kriz' unwavering support over the years.

Dr. Jordan indicated that he did not have anything specific to report to the group but that he would continue in his administrative role as advisor to the group as long as it was needed.

Dr. Horton gave a brief overview of recent program changes in Washington and their predicted impacts on research and extension activities.

Topics of Discussion:

What's ahead in the P arena? SERA-17 Programs and Activities, Dr. Steve Hodges

Steve's presentation (see attached copy of slides) pointed out that previous assumptions concerning phosphorus are now being questioned: 1) P does not leach, 2) Soils have an infinite capacity to retain P, 3) If we stop erosion, we also stop P movement, 4) There are no problems with P in our estuaries, 5) What are acceptable

concentrations of P from agricultural fields? The bottom line message of Steve's remarks was that we should not limit P rules to soil test P level!

A lengthy discussion followed in which Charles Mitchell, Leon Young, Tony Provin, and Bill Thom gave reports from activities in their states. The discussion ended with SERA-IEG-6 agreeing to develop a resolution to be sent to NRCS and other appropriate groups voicing concern over the current misuse of soil testing to establish phosphorus impact on the environment. A small group of participants put the resolution together and it was approved the next morning. (Click here for the final copy of this resolution.

(<http://aesl.ces.uga.edu/sera6draft/MIN/seraphos.htm>)) Dr. Jerry Kidder offered a second resolution (see below) to be reviewed by the committee and sent to appropriate Directors of Research and Extension in the Southern Region along with copies to *Agronomy News* and other journals as deemed appropriate to make the need for additional research known throughout the US.

Routine soil testing methods for phosphorus have been developed for decades and have been calibrated using agronomic parameters, primarily crop yield or similar performance measures. The SERA-IEG-6 group and its predecessors, which represent many years of professional work in soil testing and calibration, wishes to express serious reservations about inadequately researched efforts which attempt to interpret such P soil test results in terms of potential for causing environmental damage. We urge that research continue to be supported which would lead to development and calibration of environmental P tests.

Both resolutions were unanimously approved for further refinement and action by the chair according to directions of the group.

Tuesday, June 8, 1999

Committee Reports:

Dr. Ray Campbell - "Reference Sufficiency Ranges for Plant Analysis in the Southern Region of the United States". Approval has been received from the SAES Directors for placing the publication on the Web. The Editorial Committee will review the format and make final suggestions after which this will take place. The publication will be considered a "work in progress" and additional crops will be added as they become available. Ray Campbell expressed appreciation to

members for their assistance and patience in getting the publication completed. Members will be informed when the publication is available on the Web by e-mail.

Laboratory Report:

Dr. Jim Bartos, University of Florida - Jim showed a video and gave a summary of activities over the past couple of years that have greatly improved efficiency and performance of both the Extension and Research laboratory services (see attached).

Cu and Zn accumulation in waste amended soils:

Dr. Ray Tucker - Summaries of Observations in North Carolina; recent action to establish loading limits (see attached).

Dr. Fred Cox - Review of recent publication, "Zinc and Copper Toxicity in Peanut, Soybean, Rice, and Corn in Soil Mixtures." Commun. Soil Sci. Plant Anal., 29(19 & 20), 2991-3005 (1998).

North Central Region Report:

Dr. Doug Beegle (see attached) - In 2000, NCR 13 will host the joint meeting. Locations and times for the meeting were discussed. The SERA-IEG-6 group recommends that NCR 13 consider meeting at Penn State as first choice and Indianapolis as second choice. Prefer to meet between June and September.

State Reports:

Kentucky - Dr. Frank Sikora (see attached).

Summarizing soil test data.

Advising NRCS on P rules.

Research projects: Poultry Litter Changes During Stockpiling; Data bases collected over years for correlation; Environmental Soil Test for P.

New faculty positions.

Mississippi - Dr. Larry Oldham

Participating in a Nutrient Management Task Force.

Looking for new faculty member in forage.

North Carolina:

Dr. Ray Tucker

Continue to run record numbers of samples.

Robotics for pH being looked at.

Have a new director of the laboratory - Dr. Richard Reich.

Dr. Ray Campbell || 2025 SERA-IEG-6 ||

Developing nutrient management software for North Carolina that will facilitate development of nutrient and waste management plans.
 Evaluating nitrogen rates for grazing management systems.
 Updating waste distribution report for North Carolina.
 Analyzing approximately 30,000 plant, waste, and solution samples annually: 13,000 plant, 13,000 waste, and 4,000 solution.
 Summarizing waste data for publication.
 Installed new ICP, Perkin Elmer Optima in March.
 Dr. Fred Cox

Will be retiring at the end of July
Louisiana: - Dr. John Kovar (see attached)

Most samples from homeowners.
 Hope to change to M-3 extractant soon.
 Have a new pH system that is automated.
 Hope to switch to Adams-Evans buffer.
 Several grants and projects underway in poultry litter management.
 Looking at soil test P for runoff.
Oklahoma - Dr. Hailin Zhang (see attached)

South Carolina - Dr. Kathy Moore

Analyzed 33,400 soil, 3019 plant, 2028 feed, 333 water, 535 waste, and 587 other samples last year.
 Adapted routine Adams-Evans buffer method.
 Completed set up of waste analysis lab.
Virginia - Dr. Steve Donohue

Virginia has new incentive program for moving poultry waste out of intensive production areas (see attached).
 Soil testing is again a free service in Virginia.

Puerto Rico - Dr. David Sotomayor

Will work hard to get in sink with other labs.
 There is a general lack of correlation work. Will try to fill the gaps.
 Will be pleased to work with members of the group on projects of mutual concern.

Tennessee - Dr. Hugh Savoy

Numbers of samples have been increasing but stabilized this year.
 Lab reports now going out electronically to Extension offices. Will soon send reports directly to producers.
 Hope to also put files in ASCII file soon.

~~Get lots of questions on conversion of results from various labs.~~

Soil test work group is meeting to evaluate program.

Now recommend a 6" depth for all soil samples (conventional and no-till).

Formed a waste management priority group to address questions.

Working the Department of Ag. and NRCS.

Survey looking at manure fields for nutrient levels.

Other States:

Due to prior flight plans, several participants had to leave at 11:30 a.m. As a result, the reports of several states were not recorded.

Hopefully they can be added at a later date.

Alabama - Dr. Charles Mitchell - See attached.