

NCERA 13 Meeting Minutes 25 February, 2013
Iowa City, Iowa

The NCERA 13 Committee was held the day before the 21st North Central Soil and Plant Analysis Workshop, which was held on February 26-27, 2013.

Minutes prepared by Ron Gelderman for D. Mengel.

Meeting was delayed about 30 minutes to wait for some representatives delayed by the storm.

Present:

Jon Dahl – Michigan State University
Fabián Fernández –University of Illinois
Robert Florence – Kansas State University
Ron Gelderman – South Dakota University
Brad Joern – Purdue University
Daniel Kaiser – University of Minnesota
Renuka Mathur– Iowa State University
Antonio Mallarino- Iowa State University
Manjula Nathan – University of Missouri
John Peters – University of Wisconsin-Madison
Kevin Jewell - The Ohio State University

Not able to Attend

Dave Franzen– North Dakota State University
Tim Shaver – University of Nebraska-Lincoln
Dave Mengel – Kansas State University

Meeting began at 1:36 p.m.

Meeting was called to order by Fabian Fernandez for Dan Kaiser who was delayed.

Minutes from last year have been put on Administrative website.

Minutes from the previous meeting were approved.

Current officers and rotation schedule was reviewed

Sequence for chair, based on two year term following the federal fiscal year (Oct.-Sept.) is as follows: 12-14 MN, 14-16 IL, 16-18 OH, 18-20 KS, 20-22 SD, 22-24 IA, 24-26 ND, 26-28 MO, 28-30 NE, 30-32 MI, 32-34 IN.

Since there is not a member from Ohio, the incoming secretary will be from Kansas, which is the next state in the sequence.

Ken Grafton was not present to provide the Administrative Advisor's Report.

State Reports:

Indiana

Plans are being made to have the four commercial soil testing laboratories in the state develop a laboratory certification program in response to the NRCS 590 standard and to discuss Indiana's pending conversion to using the Mehlich 3 soil test as the primary basis for making fertilizer recommendations. We recently completed a project evaluating soil test phosphorus relationships with soluble phosphorus measures and these results will be used to inform our new fertilizer recommendations for both phosphorus and potassium, and possibly phosphorus application limits for both NRCS and the Indiana Department of Environmental Management. Another project evaluating Ca:Mg ratios is ongoing with Jim Camberato. The two largest laboratories in the state analyze hundreds of thousands of soil samples from Indiana each year, and the number of samples analyzed has been increasing by 5-10 percent the last several years. In addition, more soils testing low in phosphorus and potassium have been submitted in the last few years. The increase in soil sample numbers is likely due to more intensive soil sampling as producers try to increase fertilizer use efficiency in light of increased fertilizer costs. The increased number of low testing soil samples also may be due to bringing marginal lands into production as a result of higher commodity prices and an increase in the amount of rented land in production.

The Department of Agronomy at Purdue University is renewing their search for a crop eco-physiologist faculty position, but the position will likely be in physiology at either the assistant or associate professor level as opposed to assistant professor only. Interviews will likely be scheduled for late spring 2013.

Iowa

1. Update for the ISU Soil and Plant Analysis Laboratory (SPAL) – Renuka Mathur

The following table summarizes the numbers and distribution of samples analyzed in 2012.

Sample Type	Research/State	Farm/Lawn	Total	%
Soil	9290	4644	13934	41
Plant	1697	1105	2802	8
Biochar	708		708	2
Slurry	352		352	1
Saturated media extract	4	2	6	0
Saturated paste		36	36	0
Limestone	339	7	346	1
Client 'Do-it-yourself'	975		975	3
TC/TN pre-weighed	8966		8966	27
Solutions	5581		5581	17
Total	27912	5794	33706	

The following summarizes the developments in the lab since August 2012:

1. There has been a steady increase in the biochar samples submitted to the lab since last year when the biochar analysis protocol was first established in the lab.
2. Evaluated and started offering hot water B test.
3. Hired a student programmer to work on upgrading our website.
4. About 60 students enrolled in courses within the Department of Agronomy toured the lab as part of their course work and were given demonstrations in various soil and tissue testing

methodologies and analytical instrument operations. Also 40 crop consultants or farmers attending the extension Soil Fertility Short Course toured the laboratory.

5. Evaluated cornstalk samples process protocol for nitrate determinations to improve efficiency.

2. Iowa Laboratories, Research/Extension Activities - Antonio Mallarino

Private laboratory (Solum), which opened in Ames last fall began operations last September and is using the slurry sample preparation as the default procedure. They adapted the NCERA-13 method. Apparently they analyzed more than 30,000 samples last fall, their first fall season. AgSource also began offering the slurry test for K last fall (not sure how many samples they have analyzed).

The College of Ag, extension, and the agronomy department continue struggling with budget issues. The three soil positions lost the last two years due to retirements (soil survey/classification and two fertility positions, mainly teaching) have not been filled. Last fall the department chair sent to the Dean a request to fill three positions: fertility teaching, microbiology genetic/ecology, soil informatics. No news at this time. The graduate fertility course "Soil Plant Relationships" was taught by a postdoc last fall. Two of the 12 regional field agronomists are retiring, and ISU Extension is filling the positions.

Emphasis for fertility applied research/extension effort (Sawyer and Mallarino) was on outreach for the science assessment of state Nutrient Export Reduction Strategy, Instinct to reduce N loss (swine manure, urea), N rates for corn with rye cover crop, N-P-K removal and recycling with corn residue, moist K testing, and micronutrients for corn and soybean. The College of Ag got external funding for 2 or 3 years to hire five field specialists stationed at research farms to help with or conduct on-farm research.

Kansas

The K-State Soil Testing lab provides soil, plant and water testing services to support extension and research activities for K-State faculty and analytical services for a number of state and federal agencies. In addition, the lab does soil testing for the general public and analytical service work for industries, universities and agencies outside Kansas.

Funding: The lab is a 100% fee supported activity, with the exception of salary of the faculty member assigned to the project (Mengel, 20% time assigned) and a portion of the salary of a Research Assistant (Florence, 0.8 time). The lab is financially stable. We are considering some changes in the fee structures to encourage more use of plant analysis, and develop "packages" of analyses to reduce costs for researchers.

Personnel: Current staffing includes Dave Mengel as faculty supervisor; three analysts, Kathy Lowe, Lynn Hargrave and Jacob Thomas; a ¾ time secretary, Melissa Pierce and a PhD student/RA, Robert Florence. In addition, 4-6 students regularly work in the lab. Turn-over in the lab analysts has been an issue over the past few years.

A new entry level analyst position has been recently approved. It is anticipated that this position will be filled later this spring.

Sample volume: Sample volume was increased slightly each year since 2007. In FY 2012 which ended June 30, 2012 we handled approximately 17,679 soil samples for farmers and homeowners. A similar volume of research and agency samples were also run. Plant analysis work is increasing dramatically. We provide free diagnostic services for county agents and state specialists, which comprises 300-400 plant and soil samples annually. We also have been making a point of emphasis in extension

programming to focus on plant analysis rather than soil testing for many of the secondary and micronutrients. This is also resulting in increases in sample volumes.

One major effort during 2012 was forage nitrate samples. Due to the drought and extreme shortage of forages, farmers and ranchers were desperate to obtain additional forage, and to utilize drought damaged corn, sorghum, and soybeans for hay. Starting in May the lab ran over 2,000 nitrate plant samples through the end of the year. The nitrate levels in many failed crops and supplemental forages were extremely variable. Highest values were found in brassicas planted in the late summer for fall/winter grazing. Levels in turnips and tillage radishes exceeded 60,000 ppm nitrate in late summer and early fall. Timely fall rains dropped those values in many areas.

Research projects: We continue to work on our fertilizer recommendations. Sensor based N recommendations for wheat and grain sorghum went on line in 2009, with up-dated versions going up for testing in the next few days.

We are still working on updating our down loadable fertilizer recommendation program. This project is being used as a driving force for reviewing many of our recommendations, and developing recommendations for commonly requested crops where none are currently available. Examples completed to date are new recommendations for cotton, canola, sesame, and many of the annual forages such as sorghum and millet.

We have completed a review of our pH and lime recommendations and a review of the N and P recommendations for our major crops, corn, wheat soybeans and sorghum are in various stages of completions.

Robert has completed a review of LOI vs Walkely-Black for SOM, and has developed a method we are confident will work for us. We began the transition to LOI on farmer and homeowner samples for SOM in January. We are currently doing a direct comparison of the two tests for all farmer samples coming in the lab, with the goal of switching all routine SOM testing to LOI. We will continue to offer SOM by Walkely-Black for farmers and researchers, but at a higher charge, reflecting our true costs which include disposal of hazardous wastes.

We also are in the final stages of developing environmental metal analysis for metals such as Pb, Cd, Zn, and Ni. This will use a 4 hour digest with nitric acid and analysis on ICP. Target users are urban homeowners. A limited number of samples are being run currently to support the urban gardening in brownfield program.

The next major project will be method comparison for pH and lime requirement. We still use the SMP, and are looking for alternatives. Of interest are the Mehlich and modified Sikora. The issue of underestimation of lime needs on low CEC soils will be a point of emphasis in this project, with the large number of soils in Kansas with CEC<5.

Equipment upgrades: Over the past five years we have upgraded our ICP, LECO, AA and lab driers and grinders. We have recently purchased a Skalar pH machine to replace our dead Labfit 3000. It should arrive any day.

General Comments:

Faculty positions: We are still hiring. KSU Agronomy has undergone a rapid transition from an older established faculty dominated by white, male, full professors, to a young, diverse faculty. Recent hires include, KRV Ex Field Agronomist, Forage Teaching, Weed Physiology research, Environmental Science

Ext, NW and SW Area Ext Agronomists; Cropping Systems Res and Teaching; State Climatologist/Climatologist; Sorghum Breeder, Hays; and Micro-Met. Active searches include Cropping Systems Ext; Forage Teaching; Sorghum Genetics and SC Exp Field Agronomist.

Michigan

With very little snow and mild temperatures through the end of December, the lab experienced a pretty strong fall for testing. The lab tested about 50 samples for stalk nitrates this fall. The lab has taken on a project with a golf course consultant to perform golf green characterizations (particle size, sand sieve and organic matter) for 500 to 600 samples this winter from courses throughout the country. Dr Kurt Steinke is going to be performing the Solvita soil respiration test on his research plots to determine the effectiveness of the test for predicting nitrogen release.

Departmental News – The College of Agriculture has a new Dean. Fred Poston moved from a university VP position to the Dean position. The interim Dean, Doug Buehler, becomes the Senior Associate Dean. Eric Olson (from Kansas State) was hired to fill the Wheat Breeder and Genetics position. He will assume the position on May 1st.

Minnesota

The state lab is still open in Minnesota. No current sample submission numbers are available from the past year, but financially the lab has been able to cover costs. Brian Barber and Keith Piotrowski took over the lab from Roger Eliason over a year ago. Since that time they have been upgrading old equipment and expanding in other areas. A HPLC was purchased to expand on sample analysis. The majority of samples run are coming from lawn and garden samples and from research samples from on campus.

The number of grid samples submitted to private labs has been steadily increasing over the past few years. Both MVTL and Agivse have been expanding facilities at their locations. In addition, the number of plant samples submitted has been increasing. Numbers from Agivse have shown a ten-fold increase in the number of samples submitted in 2012 than from 3 or for years prior. The increase has likely been a result of Winfield solutions tissue analysis program. However, the data was not available from the source of the samples to the labs.

Calibration research on phosphorus and potassium is ongoing. Research work has begun to look at the moist test for K. However, we are in the early stages and have no definitive conclusions based on what has been collected. We have been studying the Mehlich-3 colorimetric P test but have shown issues in the western part of the state. Therefore, we likely will not recommend use in the state at this time. Research also has been focused on tissue analysis focusing on areas of variability and trying to better address recommendations on where it can and should be used. At this time the samples collected at V5 have not shown definitive evidence of being predictive of final yield. Samples collected at R2 seem to reflect yield better, but the number of samples collected that late appear to be very small. Work will be ongoing in 2013 collecting data on existing trials to develop a values based on yield data for N, P, K, and S on corn and P and K on soybean.

Missouri

The University of Missouri Extension went through some changes by consolidating couple of administrative positions and also by adopting a new regionalization plan to reduce cost and also to create two urban regions to cover St. Louis and Kansas City area to meet the demand of urban agriculture. University extension is emphasizing the need for fee generation by the extension specialist to fund their extension and outreach program activities.

Even though the budget situation is tight at University of Missouri, the Division of Plant Sciences was able to get two faculty positions filled in 2012. Brent Myers was hired as the State Cereal Crops Extension Specialist and David Mendoza-Cozati was hired for the stress physiology faculty position. Interview process is currently underway for the Extension State Viticulture Specialist position. This position funded by soft money provided by the MO vine board and grapes growers association. The division currently has three positions open. Asst. Professor of Forage Physiology position (joint position with Biology Department) at Columbia campus, and two other positions (Entomology Research and Weed Science) at the Delta Research Center. The budget situation remains uncertain.

The severe drought conditions and more than 105 degree F that persisted for weeks in June-July in Missouri resulted in crop failure and farmers have been cutting corn for silage. Since nitrate poisoning of cattle was a problem in the state, the lab received quite few samples for nitrate testing in silage and chopped corn stalks.

The MU Soil and Plant Testing Lab had another very productive year in 2012. There was a significant increase in the number of samples received by the MU Soil and Plant Testing labs from 2011 to 2012. The MU soil and plant testing labs at Columbia campus and Delta Center analyzed a total of 36,986 soil samples, 2250 special soil tests, 6601 plant, 1451 water, 52 greenhouse media, 104 compost, 223 manure and 451 environmental tests. The soil testing lab at Delta Center, Portageville analyzed 10,773 soil samples. Both labs together analyzed a total of 37,044 soil samples in year 2011. A web based soil test database and recommendation program development is underway and should be completed and implemented by 2013 calendar year.

The lab had a financially sound year. MU soil testing labs continues to function as totally self supporting labs based solely on fee generation, and operates successfully in black. We hired a permanent research lab technician to the lab to meet the increased workload.

Research on nutrient management of bio-fuel cropping system was completed in 2012. Currently lab analysis underway on soil physical, microbiological and enzyme assay measurements to evaluate the effects of bio-fuel cropping systems on soil quality. am continuing to work with IPNI on building a national database to improve nutrient removal estimates. Due to the BCAP program funding and increased demand for bio-fuels, interest in growing bio-fuel crops. Research by Newell Kitchen shows that Switch grass and miscanthus will be good additions to marginal lands in Missouri. Since there is more interest in growing miscanthus and switch grass in the state, we established plots to conduct P and K fertilizer rate study to come up with P and K recommendation. Completed the field calibration study on lime method development using different buffer tests and is currently in the process of publishing the work and implement changes in the lab methods. John Lory received large funding to work on developing an improved P Index for Missouri jointly with adjacent states.

Ohio

The Ohio State University / Ohio Agricultural Research and Development Center

The Service Testing and Research Laboratory is a research oriented analytical laboratory. The STAR Lab's purpose is to provide inorganic chemical analysis needed by researchers at The Ohio State University. The STAR Lab is intended as a service lab for The Ohio State University researchers, therefore it is our policy to give priority to samples that are directly associated with university research projects. All samples submitted by non-university research projects will be analyzed in a timely manner. STAR Lab can perform most standard soil, plant, water and compost analysis generally used in

research projects. We will also work with individual researchers to provide the sample analysis that they need within the constraints of our instrumentation and facilities.

Summary of sample analysis FY2012:

Sample Type	Number	Percent
Animal tissue	879	11.6
Composts and manures	184	2.4
Digests, extracts and leachates	566	7.5
Plants and feed	2181	28.8
Soils	2183	28.8
Special digests	126	1.7
Water	1450	19.2
Total	7569	

The STAR Lab analyzed samples from twelve different OSU Departments or Colleges. OSU samples comprised 81.5 percent of the samples analyzed. The rest of the samples analyzed in the Lab, 18.5 %, were from outside sources, mainly from smaller universities throughout Ohio or research samples associated with OSU partners.

Star Lab provides these services through the efforts one manager / technician. The lab operation and salary are funded by sample fees. Additional support for major instrument purchases is provided through OARDC equipment funds.

School of Environment and Natural Resources:

The school is in the process of hiring a person to replace Dr. Robert Mullen. The position will be an Assistant Professor of Soil Fertility located at OARDC in Wooster.

Ohio switched to Sikora buffer method a number of years ago. Works fine as gives the same results as previous procedure. Committee discussion on Sikora procedure. Need to replace buffer after about 50 days. M. Watson former NCERA 13 rep doing well and coming to work most days.

South Dakota

Hired a new state extension Agronomist – Nathan Mueller out of K state. Hired soil physics position, Sandeep Kumar from Ohio State. Just hired Extension Plant Pathologist – will start in March. Extension Weeds position just vacated and will be filled. Five interviews for a new dept. head will be conducted in April. Forage research person went into admin. Not heard if they will fill. Still searching for a few extension field specialists including one in soils.

In legislature, a proposed fertilizer check off that will raise about \$300,000 passed both houses and waiting for Governors' signature. However, a bill to fully fund the Ag. Experiment station at 7 million was defeated.

Research lab is staying busy and financially sound for now. Applied Soil Fertility extension programs include; Instinct use on UAN and urea for corn, ESN on winter wheat, working with Mosaic fertilizers and seed safety, late N for wheat protein.

Lots of plant analysis being done by industry.

Wisconsin

The University of Wisconsin-Madison continues to operate two soil-testing laboratories: the Soil and Forage Analysis Laboratory in Marshfield and the Soil and Plant Analysis Laboratory in Madison. During the past ten months there has been an ongoing review of the laboratories initiated by the dean's office. The review committee has provided a report to the administration but no further action will occur until after the completion of the strategic planning process by the college sometime this summer. In November 2012, publication A2809 "Nutrient application guidelines for field, fruit and vegetable crops in Wisconsin" was released following nearly two years of work on the revision. The new guidelines will be in place for the 2013 growing season. As part of this process the software used to generate recommendations for Wisconsin has been revised and will be implemented by all Wisconsin Department of Agriculture, Trade and Consumer Protection laboratories beginning March 1, 2013. The UW laboratory continues to assist the Wisconsin Department of Agriculture, Trade, and Consumer Protection (WDATCP) with the soil testing laboratory certification program.

This past March, Kathryn VandenBosch began her duties as the new Dean of the College of Agriculture and Life Sciences. Prior to accepting the position at the UW she was professor of plant biology at the University of Minnesota in St. Paul. In the Department of Soil Science, Francisco Arriaga began his duties this past summer as an Assistant Professor. His research supports the development of management systems that promote crop productivity, as well as soil and water conservation. Interests include tillage, soil compaction issues, crop residue management, cover crops, and water quality and quantity issues. Birl Lowery will be stepping down as associate dean this summer and then retiring from the Department of Soil Science at the end of the 2013 calendar year.

Old Business

Future involvement of private labs. Much discussion on the topic. Advantages and disadvantages. Overall consensus was favorable for commercial lab involvement with NCERA-13 because of their laboratory experience.

Decision was made to invite one representative from each North Central laboratory for the NCERA 13 morning session of the Workshop year. The next workshop year is 2015. Will include lab invitation to NCERA 13 meeting when workshop registration information sent to labs.

Sub-Committee Reports:

A. Buffer pH - standby. The chapter has been revised.

Discussion – MO not yet switched to Sikora – still working on lab incubations. KS is working on Sikora. NE uses Woodruff as does MO at this time. Woodruff underestimates lime need for low CEC soils. Small differences with using Sikora in Iowa. The water pH adds more to prediction of lime than buffer pH.

B. Education - Peters

Seventy five registered for workshop. Even with 11 cancellations (mostly weather related) there were 71 attendees. Proceedings were distributed.

Committee discussion on moist K test procedure for lab certification. Bob Miller is working on. Solum is using in slurry form, while AgSource is doing a direct method. Right now if a lab can show proficiency with dry K test, is considered adequate.

Discussion on Solum's nitrate analysis equipment selling to Coops, consultants and other crop advisors. Using cadmium reduction and low maintenance.

C. Publications

1. NCR 221 (revised) as of Jan. 2013. Will be online only version. As chapters are revised, the online version will be revised. The revision date for each chapter will be put on Contents page as well as on Chapter itself. Acknowledgements, Introduction and Contents page were recently updated. The manual can be found at: http://ncera-13.missouri.edu/pdf/sb1001_updatedJan2013.pdf 221

Chapters 1 – Soil Prep. and Chapter 4 – pH both were revised in 2012.

Chapters 14 – Greenhouse and Chapter 15 – Quality Assurance revised in 2009.

Chapter 6 – Phosphorus. Discussion concerned Mehlich III ICP and colorimetric methods.

Other chapters of OM, Chloride, Nitrate, should soon be revised.

Discussion of Micronutrient chapter. Correlations with DTPA, Iowa good for Zn and Cu, not so good for Mn. Minn. is working on corn and soybean micros as well.

Sulfur chapter – draft by Franzen. Discussion that the draft has more calibration and correlation material than other chapters. Although this is excellent and needed material, it does not fit format of other chapters. Consensus of committee is that the draft be split into two; 1) A white paper concerning the calibration/correlation of sulfate-S tests to be listed on the website, and 2) the sulfate-S methods chapter.

E. Website - Nathan

What is on the site

- 1) Objectives
- 2) Activities
- 3) Current and past officers
- 4) Current representatives
- 5) Annual Reports (not yet on)
- 6) Minutes (only 2009 and 2011 to date)
- 7) Publication (221(Methods) 2013 version and 2011 version)
- 8) Links SERA 6 and NIMMS

Asked for other ideas of what could be on website. Some suggestions;

- 1) Lab procedure videos, virtual lab.
- 2) Comm. white papers
- 3) Calibration papers and/or references that validate methods
- 4) Links to North Central States' Fertilizer recommendations or websites
- 5) Fertility, soil testing apps

Comment that site is difficult to find. Google 'NCERA 13 soil' and will come up.

G. Potassium testing moist soil

What can/should we do? Iowa good field calibration. Sometimes M3 (color) extracts too much in that some of these soils respond. Discussion of a sample exchange. A few states were interested in an exchange to determine within and between lab variability especially with slurry method.

H. Seasonal variability in P, K, pH,

- impact of dry weather on soil tests. Recycling of K thru plants is much slower – Mallarino paper. A number of popular articles on this topic. Peck/Franzen data from Ill. Link to these on Website?

Other items

1) Plant analysis

- MN and Iowa saw early plant analysis not very predictive for many nutrients, later (R1 for corn) is better.
- Many interpretations need updates
- MN and IA actively working on field calibrations for micronutrients.
- MN noted ICP S appears to be low compared to CNS analyzer data.
- Possible plant analysis method review of plant S? Has there been a plant sample exchange with NCERA? Should check NAPT values for various methods. Plant analysis measures total elemental concentration in most cases and with numerous plant reference samples, there should be less method variability compared to soil tests.
- Mn needs calibration, difficult to find responsive soils.

2) Proficiency testing/NAPT

- Brad Joern is NAPT rep. Took input from committee on NAPT. Considerable discussion on positives and negatives with NAPT. Comment that more cooperation between ALP and NAPT is needed.

Next Meeting

November 19 – 20th 2013. To be held preceding the Ext-Industry Conference in Des. Moines, IA which is November 20-21st. (Room will be arranged by Phyllis Pates, IPNI)

Future Direction and Initiatives:

Committee Assignments

Education: John Peters (ch), Antonio Mallarino. Moving forward.

Buffer pH John Peters (ch), Carrie Laboski, Dave Mengel, Manjula Nathan. Standby.

K Testing –Moist Soils: Soil exchange? Antonio Mallarino (ch), Carrie Laboski, R. Gelderman.

NAPT liaison: Brad Joern. Moving forward.

Sensing: Dave Mengel (ch), Manjula Nathan, Ron Gelderman, Jon Dahl. Stand by.

Website: Manjula Nathan (ch), Antonio Mallarino. Moving forward.

Manure: John Peters (ch). Stand by.

Publications:

Publication Status update as of February 25, 2013

Still need to be done or in progress

- Prepare a new chapter titled “Correlating and Calibrating Soil Tests for Fertilizer Recommendations”. Dave Mengel will take the lead.

- Revise Pub. 221, Chapter 8 (Sulfate-Sulfur). Dave Franzen will take the lead. FIRST DRAFT SENT OUT TO THE COMMITTEE FOR REVIEW

Completed

- Revise Pub. 221, Chapter 4 (pH and Lime Requirement). John Peters will take the lead. DONE

- Revise Pub. 221, Chapter 1 (Soil Sample Preparation). This revision will include the handling of moist soil for analysis and slurry preparation. Ron Gelderman will take the lead on this. DONE

On Hold

- Develop a regional publication on Phosphorus. Antonio Mallarino, Brad Joern, Fabian Fernandez and Carrie Laboski will take the lead. ON HOLD

- Revise Pub. 221, Chapter 6 (Phosphorus). One of the key items is to add the ICP Mehlich P option. Antonio Mallarino will take the lead. ON HOLD

- Develop a document on end of season stalk nitrate testing. Robert Mullen was going to be the lead on this. ON HOLD

Other Discussion of duties

- Publication on “use of strip trials for soil test calibration”. Mallarino, others?
- Investigate plant S methods, Mathur, Gelderman, others?
- (from 2012 minutes) evaluate plant analysis values and establish critical nutrient level ranges. The committee decided that a white paper on the usefulness of tissue testing as a tool, how to collect samples, and interpret values would be important. Dave Franzen will lead the data collection to present preliminary results in our next meeting. Carrie Laboski, Dan Kaiser, and Fabián Fernández will also contribute to this effort.

NCERA-13 2013 Workshop
February 26-27, 2013
Iowa City, Iowa
Tuesday, February 26, 2013

1:00 Welcome and Introductions

1:10 Optical crop sensing for measuring N fertilizer needs of crops – Dave Mengel

1:40 Soil sampling recommendations as influenced by fertilizer placement – Fabian Fernandez

2:10 Biochar Quality & Testing – David Laird

2:40 Update on the NCERA-13 Recommended Chemical Soil Test Procedure Manual and NCERA-13 web site – Manjula Nathan

3:00 Break

3:20 Development of LOI in Kansas and comparison to Walkley-Black – Robert Florence

3:40 Testing moist soils Panel Discussion:

Antonio Mallarino – Iowa State University

Ron Gelderman – South Dakota State University

Michael Preiner - Solum Laboratory

Jim Frederick - AgSource Laboratory

5:10 Presentation by sponsors

5:30 Social Hour

6:30 Dinner at the Clarion

Wednesday February 27, 2013

6:30 Continental Breakfast

7:30 Individual State Sessions

8:00 History of plant analysis – Nathan Mueller

8:30 Interpretation of tissue test results for P and K in corn and soybeans – Antonio Mallarino

9:00 Mid-season plant analysis surveys for corn, soybeans, and wheat – Dan Kaiser

9:30 Plant tissue analysis surveys for alfalfa and soybean – Carrie Laboski and John Peters

9:50 Break

10:10 Relationships among Bray, Mehlich, soluble and bioavailable P in soils: Why should we care? – Brad Joern

10:45 NAPT Program Update – Grant Cardon

11:10 Manure Analysis Proficiency Update – Jerry Floren

11:35 ALP Program Update – Bob Miller

12:00 Wrap up and adjourn