NC-1195 Committee – 2016 Meeting Minutes

Attending: Peter Scharf (chair), John Sawyer (member-at-large and secretary), Carrie Laboski, Rhae Drijber, Will Horwath, Nick Hill, Hanna Poffenbarger (for Mike Castellano), Marshall McDaniel.

Peter Scharf called the meeting to order at 8:30 a.m. on March 8 and reviewed the proposed agenda. Each member introduced themselves. The meeting agenda was reviewed and approved.

Members welcomed Nick Hill and Marshall McDaniel to the committee. The committee appreciated Hanna Poffenbarger attending the meeting and providing a research summary.

Minutes from the 2015 meeting were reviewed. Carrie Laboski made a motion to approve the minutes, seconded by Will Horwath. Minutes were unanimously approved.

Beatrix Haggard was to be the secretary for the 2016 meeting, but she left the committee due to a change in job and location. John Sawyer, as member-at-large, became secretary and recorded minutes of the meeting.

Marshall McDaniel was elected member-at-large and Carrie Laboski secretary for the 2017 meeting. John Sawyer will move to chair for the 2017 meeting.

The committee is awaiting project renewal approval.

Neither Ray Knighton nor Sue Blodgett were able to attend the meeting and therefore there was no USDA or administrative adviser report.

Member Report Topics:

Rhae Drijber, University of Nebraska-Lincoln

Topic: Effect of corn stover removal level and tillage system on microbial communities.

Will Horwath, University of California-Davis

Topic: Soil respiration tests as predictor of nitrogen mineralization potential.

John Sawyer, Iowa State University

Topic: Era hybrid response to N rate and NUE, and N rate timing in corn.

Carrie Laboski, University of Wisconsin-Madison

Topic: Nitrogen rate timing in corn and spatial variability in N response.

Marshall McDaniel, Iowa State University

Topic: Micro-economic theory application to soil carbon and N mineralization concepts.

Hanna Poffenbarger, Iowa State University

Topic: Long-term N fertilizer rate effects on N cycling in Iowa continuous corn systems.

Peter Scharf, University of Missouri

Topic: Aerial imaging to detect N deficiency stress in corn under wet conditions and effect of N timing and additives on corn N response.

Nick Hill, University of Georgia

Topic: White clover as a living mulch and N source in corn production.

Jac Varco (reported via Peter Scharf), Mississippi State University.

Topic: Nitrogen fertilizer management in corn, quantifying soil and fertilizer N in corn, response to N stabilizer products, and corn canopy N stress sensing.

General Discussion:

There was considerable discussion about soil N mineralization measurements, relation to corn N fertilization requirement, and the associated database compiled in a prior research project conducted by the committee. Marshall McDaniel is interested in reviewing the database and developing a summary/publication using an analysis via the micro-economic method he is researching. Peter Scharf and Carrie Laboski will get databases to both Marshall McDaniel and Rhae Drijber.

There was discussion about the 7th International Nitrogen Initiative Conference (INI 2016) to be held in Melbourne, Australia (Dec. 4-8, 2016). Should be the last continent to host the conference. No one from the committee is currently planning on attending.

There was discussion about sharing past committee research datasets when requested by individuals outside of the committee. General consensus was to check with committee members before sharing a dataset.

Rhae Drijber would like soil from non-N responsive research sites if anyone has such sites.

There was a brief discussion about N recommendation systems being used in corn production. Some state agency nutrient management programs require use of university systems. There is no survey of systems used across the regions represented by committee members present at the meeting.

There was discussion of N fertilizer product use in each state. Does not appear there are major shifts, but some on-going trends. Nitrogen application in California drip irrigation systems is shifting to UAN solution.

There was discussion of N and P fertilizer use in turf systems, and how P has been removed from fertilizers sold for homeowner turf.

There was discussion of potential future collaborations in regard to research proposals, but no specific ideas to follow up on.

There was discussion of potential products (publications) from the committee. These could include N mineralization measures, carbon dioxide release and soil health tests, do we need low NUE to feed the world, and what factors drive NUE. No specific action or follow up.

The next committee meeting will be March 7 and 8, 2017, same hotel (Fairfield Inn and Suites, Kansas City Airport). The meeting room is available and was reserved by Marshall McDaniel. Peter Scharf will check with those not attending to see if there are any major conflicts with the 2017 meeting dates.

Need to remind new and current members that form Appendix E needs to be submitted, or they will not be official members of the committee.

Rhae Drijber motioned to adjourn the meeting, Carrie Laboski seconded. Meeting adjourned at 10:30 a.m.