**NC 1195 Meeting Minutes**

**Project/Activity Number:** NC1195

**Project/Activity Title:** Enhancing nitrogen utilization in corn based cropping systems to increase yield, improve profitability and minimize environmental impacts

**Period Covered:** March 4, 2021 to February 28, 2022

**Date of this Report:** March 21, 2022

**Annual Meeting Date(s):** March 1-2, 2022

**Meeting attendees:**

14 attendees. Canisares, Lucas (Lucas.canisares@uky.edu) – University of Kentucky; Erickson, John (john.erickson@usda.gov) – NIFA National Program Leader; Horwath, William wrhorwath@ucdavis.edu) – University of California Davis; Khanal, Sami (khanal.3@osu.edu) – Ohio State University; Laboski, Carrie (laboski@wisc.edu) – University of Wisconsin; Lamkey, Kendall (krlamkey@iastate.edu) – Iowa State University; Li, Xiaofei (xiaofei.li@msstate.edu) – Mississippi State University; McDaniel, Marshall (marsh@iastate.edu) – Iowa State University; Norton, Jeanette (Jeanette.norton@usu.edu) – Utah State University; Owens, Vance (Vance.Owens@usda.gov) – USDA-NIFA National Program Leader; Poffenbarger, Hanna (hanna.poffenbarger@uky.edu)- University of Kentucky; Russell, Ann (arussell@iastate.edu) – Iowa State University; Saha, Deb (dsaha3@utk.edu) – University of Tennessee; Yin, Frank (xyin2@utk.edu) – University of Tennessee

**Brief summary of minutes of 2022 annual meeting:**

The 2022 meeting was held March 1-2 virtually online.

* The 2021 meeting minutes were approved with no changes or discussion.
* State reports. All attendees gave 15-30 minute presentations about their work relevant to this project theme, followed by discussion of each topic area:
	+ Lucas Canisares and Hanna Poffenbarger (University of Kentucky): Cover crop effects on corn and cotton optimum N rate
	+ Will Horwath (University of California Davis): Practices for carbon neutrality in California agroecosystems
	+ Ann Russell (Iowa State University): Translating scientific research into user-friendly, online education resources
	+ Jeanette Norton (Utah State University): Managing microbes for N cycle sustainability
	+ Xiaofei Li (University of Mississippi): Machine learning for predicting the EONR
	+ Carrie Laboski (University of Wisconsin): Weed control, phosphorus, and potassium effects on corn response to N rates; predicting AONR using soil health tests
	+ Marshall McDaniel (Iowa State University): Rhizosphere nutrient/microbe dynamics in diversified and conventional cropping systems
	+ Deb Saha (University of Tennessee): Cover crops mitigated nitrous oxide emissions from extensive soil drying and rewetting
	+ Sami Khanal (Ohio State University): Understanding cover crop presence, biomass, and impact on yield of cash crops
* NIFA update. John Erickson and Vance Owens gave the NIFA update:
	+ Staffing is as good or better than it was before the move to Kansas City in 2019
	+ Staff are still working remotely, although there is a plan to return to the workplace
	+ New RFAs have been delayed due to transition to new administration
	+ Priorities
		- Addressing climate change – mitigation, adaptation, equity and environmental justice, research and development
		- Equity and inclusion
		- More and better market opportunities
		- Food and nutrition insecurity
		- Making USDA a great place to work for everyone
	+ Program highlights
		- Sustainable Agricultural Systems – RFA should be out shortly
		- AFRI Foundational and Applied Science – Year 2 of 2-year RFA
			* Increased budget size ($650K) for standard grants
			* Partnership opportunities can increase budget by $150K
			* New Investigator seed grants – open and eligible to all institutions
	+ Double check that you have the correct NPL when reaching out about program opportunities
* Administrative update. Kendall Lamkey gave the Administrator Advisor’s report.
	+ Congratulations on the new project.
	+ Moving forward, we should encourage broad participation in our committee – we could integrate stakeholders outside of academia and have members outside of north central region.
	+ Continue find ways to work together and develop synergistic collaborations among members of the committee.
	+ NCRA webpage has good info on impact reporting
		- [North Central Regional Association (NCRA) (ncra-saes.org)](https://www.ncra-saes.org/)
		- [Virtual NC Multistate Handbook | ncra (ncra-saes.org)](https://www.ncra-saes.org/multistate-handbook)
* Key discussions:
	+ Several members are interested in machine learning with multivariate datasets
	+ We could consider applying for the Climate-Smart Agriculture Partnerships program and/or Sustainable Agricultural Systems program
		- Set up on-farm research in different states
		- Integrate economic analysis
	+ Several members are interested in developing a compilation of EONR/AONR vs CO2 burst data to evaluate the potential of this test to improve N fertilizer recommendations. We discussed writing a grant proposal to hire a PhD student or postdoc to work on this.
* Meeting in 2023: The group agreed to hold the next meeting on March 7-8, 2023 at Fairfield Inn and Suites, Kansas City, MO.
* Executive Committee changes: The current Secretary, Hanna Poffenbarger, will be the Chair in 2023; the current Member-at-Large, Sami Khanal, will be the Secretary. Debasish Saha was elected as the Member-at-Large for 2023. The current Chair, Xiaofei Li, will be the past Chair.