**NC Regional Multistate Project/Committee Annual Report**

**\*\*Please focus only on multistate efforts, especially for accomplishments and impacts. No lists of individual station reports, please. These reports need not be long, 2-3 pages will suffice, and should help showcase our NC multistate project portfolio. See page 2 for an example annual project report.**

**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 9, 2023 to March 11, 2024

**Date of this Report:** April 5, 2023

**Annual Meeting Date(s):** March 12-13, 2024

**Meeting Place:** Home2 Suites by Hilton, Kansas City, MO

**Meeting attendees:**

In-Person Attendees (6): Horwath, William ([wrhorwath@ucdavis.edu](mailto:wrhorwath@ucdavis.edu)) – University of California Davis; Erickson, John ([john.erickson@usda.gov](mailto:john.erickson@usda.gov)) – NIFA National Program Leader; Khanal, Sami ([khanal.3@osu.edu](mailto:khanal.3@osu.edu)) – Ohio State University; Saha, Debasish ([dsaha3@utk.edu](mailto:dsaha3@utk.edu)) – University of Tennessee; Peter Tomlinson ([ptomlin@ksu.edu](mailto:ptomlin@ksu.edu)) – Kansas State University; Zhu-Barker, Xia ([zhubarker@wisc.edu](mailto:zhubarker@wisc.edu)) – University of Wisconsin-Madison.

Virtual Attendees (5): Fernandez, Fabian G ([fabiangf@umn.edu](mailto:fabiangf@umn.edu)) – University of Minnesota; Poffenbarger, Hanna ([hanna.poffenbarger@uky.edu)-](mailto:hanna.poffenbarger@uky.edu)-) University of Kentucky; Roth, Richard ([rtroth@iastate.edu](mailto:rtroth@iastate.edu)) – Iowa State University; Poudel, Pratishtha ([ppoudel@purduue.edu](mailto:ppoudel@purduue.edu)) – Purdue University; Nunes, Vander ([vander.nunes@sdstate.edu](mailto:vander.nunes@sdstate.edu)) – South Dakota State University.

**A brief summary of minutes of the 2024 annual meeting:**

The 2024 meeting was held in a hybrid mode. 6 people attended the meeting in person in Kansas City, Missouri, and 5 people attended the meeting virtually via Zoom.

* Welcome, Introduction, approval of 2023 meeting minutes with no changes or discussion, review of meeting agenda.
* Highlight: Multiple new investigators joined the NC1195 team across different states including Pratishtha Poudel (Purdue Univ), Richard Roth (Iowa State Univ), and Vander Nunes (South Dakota State Univ).
* Administrative update: John Erickson gave the NIFA update and key points are highlighted below:
  + Most NIFA staff (except SES) have a remote duty station.
    - Permanent location (since Nov 1, 2020) 805 Pennsylvania Avenue, Kansas City, MO
  + 85% of NIFA staff live outside Kansas City
  + Most program panels are still virtual in FY24, but several PD meetings are back to in-person
  + USDA Research Strategy (2023-2026)
    - Priority 1: Accelerating Innovative Technologies and Practices
    - Priority 2: Driving Climate-Smart Solutions
    - Priority 3: Bolstering Nutrition Security and Health
    - Priority 4: Cultivating Resilient Ecosystems
    - Priority 5: Translating Research into Action
  + FY2024 AFRI Foundational and Applied Science Program:
* Deadline: August to October for most programs
* Some new program area priorities (none in PHPPP)
* Back to one-year RFA cycles
* Increased budget size ($650K) for standard grants
* Partnership opportunities can increase the budget by $150K
* New Investigator seed grants ($300 K for two years)
  + - * To all program areas
      * Expected to attain >30% funding rate
      * Reviewed in the same panel but ranked separately
  + NIFA Appropriations (approved 03/04/2024): ~$10 M budget cut across programs in FY 2024
  + NIFA Application Status Dashboard for real-time status
  + NIFA Project Reporting: Annual basis (emphasis on including how much % of the work under each objective has been accomplished during the reporting period)
  + NIFA Grants Modernization
    - Approval to move forward with a fit/gap analysis of NIH eRA to replace current NIFA software systems to administer competitive and capacity grants
    - Fit/gap will likely take ~12 months followed by a pilot of a couple of small programs and then full-scale implementation (~2-3 years minimum for full implementation)
* State reports. All in-person and two virtual attendees gave 20-35 minutes presentations about their work relevant to the overall project theme, followed by a discussion of each topic area:
  + Xia Zhu-Barker (University of Wisconsin-Madison): Assessing soil N2O emissions and N dynamics in a corn silage cropping system receiving processed dairy manure.
  + Hanna Poffenbarger (University of Kentucky): Winter cover crop effects on the optimum N rate of corn across multi-state field experiments. (virtual)
  + Debasish Saha (University of Tennessee): Long-term tillage and cover cropping differentially influenced soil nitrous oxide emissions from long-term cropping systems.
  + Will Horwath (University of California Davis): Role of metal associated organic matter in N processes.
  + Fabian Fernandez (University of Minnesota): Nitrogen research in Minnesota. (virtual)
  + Peter Tomilson (Kansas State University): Kansas State Report
  + Sami Khanal (Ohio State University): NC1195 Annual Meeting Update: Development of a novel nitrogen oxide sensor in collaboration with an industry partner
* **Key discussions:** 
  + Members discussed challenges with EONR approach, especially variability across years and management practices (cover cropping and drainage conditions)
  + Collaborative use of the existing regional data to develop decision tools and publications
  + Meeting in 2025: The group agreed to hold the next meeting on February 27-28, 2025, at Fairfield Inn and Suites, Kansas City, MO. (Motion: Sami Khanal; Second: Xia Zhu-Barker; Motion Approved)
* Executive Committee Changes: The current Secretary, Debasish Saha, will be the Chair in 2025; the current Member-at-Large, Peter Tomlinson will be the Secretary. Xia Zhu-Barker was elected as the Member-at-Large for 2025. The current Chair, Sami Khanal, will be the past Chair.