

## NCAC1 meeting report, 9 Jan. 2025, San Antonio, TX

1. In attendance: Adam Davis (mtg chair), Laura Bowling, Doug Karcher, Raj Khosla, Martha Mamo, Gary Muehlbauer, Brian Slater, Mary Wiedenhoef, Wei Zhang; remote: Stephen Anderson, Christina Hargiss, Gary Pierzynski
2. Welcome, housekeeping (bathrooms, extension cords), registration checks; change to agenda (reviews first); NCAC1 context; **reviews due in NIMSSS by 2/17/2025**
  - a. Registration fee: Adam will have UIUC business office send invoices to all participants (\$75/unit)
  - b. Discussion about meeting process for 2026
    - i. Group will continue to meet in-person annually in the 2<sup>nd</sup> week of January. The meeting location will rotate, hosted by the chair at their institution. Motion (Muehlbauer): NCAC1 meets in person in Jan to visit host institution and review proposals; 2nd: Doug Karcher; vote: unanimously supported
    - ii. Officer selection: vice-chair will host in following year; secretary will become vice-chair at the following meeting
      1. **Vice-chair: Martha Mamo** (will host at UNL in early Jan. 2026, manage review process)
      2. **Secretary: Raj Khosla** (will host at UNL in early Jan. 2027, manage review process)
3. Gary P (AA): Presented slide show on context and background of NCRA/AgInnovation
  - a. NCRA groups help to flow Multistate Hatch Funding
  - b. Ag Leadership training Boot Camp
  - c. APLU
  - d. Jeanette Thurston (Director), Christina Hamilton (Asst Dir)
  - e. AgInnovation website has background on the organization and the 90 projects that are represented
4. Reviews [primary, secondary, tertiary reviewers]
  - a. NC1186 (NC\_temp 1186) [Wiedenhoef; Davis, Bowling]:
    - i. Multistate project report templates should make sure that the rubric for review is how they're going to be evaluated. E.g., how are the participants contributing to the various objectives of the project? [highlight this for the NCRA team, and AA]; @Gary P.
    - ii. Mary: Could there be an explicit area in the project write up to reference the review rubric?
    - iii. Laura: breadth of proposal is both a strength and a weakness; would be nice if they focused on the part of their work that they could collaborate on; more emphasis on synthesis
    - iv. Recommendation: **Approve with minor revisions** (1-Mary, 2-Adam--unanimous support)
  - b. NC246 (NC\_temp 246) [Mamo, Zhang, Anderson]
    - i. Synergistic merger of two previous projects; many institutions from NCR and Southern region; strong extension component
    - ii. Strong objectives and infrastructure across states for quantifying pest distribution

- iii. Spatial network to describe resistance
  - iv. Leveraging each others' extension program
  - v. Area for improvement: clearer statement of responsibilities among researchers
  - vi. Steve: good job, well-run group, project is going well
  - vii. Recommendation: **Approve with no revision** (primary; secondary; unanimous support)
- c. NC1187 (NC\_temp 1187) [Muehlbauer, Hargiss, Mamo]
- i. Assess impact of small soil particles on agriculture and ecosystems
  - ii. Develop knowledge to improve synchrotron measurement of soil matrices; analytical and data analysis methods for C and trace elements
  - iii. Small energetic group; need to increase number of participants; only 4 or 5 key people, should figure out a way to bring in early career scientists
  - iv. Need to call out who will do what parts of proposed work; minimal examples of collaboration; show better how they'll collaborate in the future. There's repeated measure of a workshop to be held, but hasn't been held yet.
  - v. Martha: strong publication track record; are there external collaborations that aren't showing up in report?
  - vi. Proposal well described overall, no overlap with other projects.
  - vii. Recommendation: **Approve with minor revision** (primary; secondary; unanimous support; note-- both Anderson and Wei abstained)
- d. NCCC31 (NCCC\_temp31) [Karcher, Slater, Wiedenhoeft]
- i. Ecophysiological aspects of forage management, been going since the mid-60s; renewal to run through sept 2030
  - ii. Active and productive group
  - iii. Three broad objectives, well-defined
  - iv. Excellent history of participation and output, with annual meetings; 22 Pis + 12 grad students representing 12 states met this past August
  - v. Excellent productivity: extramurally funded projects
  - vi. Mary: Well-oiled machine, good collaboration
  - vii. Brian: coordinating committee that also does collaborative research, extension and grants
  - viii. Recommendation: **Approve** (primary; secondary; unanimous support)
- e. NCCC211 (NCCC\_temp211) [Davis, Bowling, Khosla]
- i. Generates outsized impact, well-described, very active, very visible impact
  - ii. Cover crop acreage is growing, field guides and tools are heavily used
  - iii. No discussion of who does what, but they do have excellent evidence of how they've been successful together
  - iv. Recommendation: **Approve** (primary; secondary; unanimous support)
- f. NC7 [Zhang, Anderson, Muehlbauer]
- i. Plant Genetic resources
  - ii. Mid-term review: collect and preserve plant genetic resources
  - iii. North Central Plant Introduction Station (at ISU) is one of primary activities

- iv. Progress: excellent; cmte met in 2023 and 2024; good metrics over time for acquisition of accessions
- v. Collaborations and linkages: very good linkages and collaborative activity; evidence of active collaboration among several institutions
- vi. Funding: would advocate for adequate funding for the project; need more information on what the funding level is. Fair . Mary W: funding for the PI station is currently too low (can barely hire undergrads). Ambiguous, raise issue of funding level with AA (Kendall Lamkey)
- vii. Products: > 100 peer-reviewed journal articles; strong evidence of intl engagement
- viii. Gary: this group is supposed to promote better use of the germplasm resources; not designated for funding the actual plant introduction station; would be good to see more collaboration among group members, developing non-crop specific tools and ideas
- ix. Steve: probably should be continued; ranked them a little lower on the funding issue; NC projects don't always have enough funding (make use and level of funding clearer)
- x. Recommendation: **Approve** with minor revision (primary; secondary; unanimous support)
- g. NC1200 [Hargiss, Mamo, Karcher]
  - i. Regulation of photosynthetic processes (progress report)
  - ii. Met in Oct. at Danforth Center, with clear report from each PI
  - iii. Good collaboration, but difficult to determine contributions from various Pis; clarity has improved in recent report
  - iv. Can infer that there might be external funding, but this wasn't clear; should ask for what additional funding and training outcomes there were
  - v. Doug: more explicit description of outside funding sources
  - vi. Recommendation: **Approve** with minor revision (primary; secondary; unanimous support)
- h. NCCC215 [Slater, Wiedenhoeft, Davis]
  - i. Brian:
    1. Mid-term review: good example of how to do this type of group
    2. Has made good progress on application from two years ago
    3. Have clearly defined and well-supported outputs
    4. Good synergy across the four major states, actively coordinating potato breeding across the programs
    5. Provide forum for producers and industry personnel to connect around new varieties
    6. Excellent reporting
    7. Excellent coordination and linkages, actively working together (even though just another coordinating committee), external funding, joint publications
    8. Information exchange well-documented
  - ii. Mary: concur
  - iii. Recommendation: **Approve** (primary; secondary; unanimous support)
- i. NCERA103 [Bowling, Khosla, Zhang]

- i. Have existed for multiple 5 year periods; coordinates trials of non-traditional fertilizers and amendments
    - ii. Accomplishments: product evaluations, website, ed materials, meetings
    - iii. Coordination and linkages: evidence of interaction in the activity of producing compendium of research
    - iv. Information exchange: 1500 views of N-fixing pub in first 2 mo; information is being shared more widely
    - v. Good participation in meetings
    - vi. Raj: has participated in committee in the past; do joint projects, organized North Central soil fertility conference each year; a lot of synergism; they could describe their interactions even better; reported multiple success stories
    - vii. Wei: concur
    - viii. Recommendation: **Approve** (primary; secondary; unanimous support)
  - j. NCERA184 [Anderson, Muehlbauer, Hargiss]
    - i. Mid-term review: measurement of small grain diseases
    - ii. Practical objectives: disease trials, forecasting tools (why is this an NCERA rather than an NC?)
    - iii. Excellent progress based on 2023 and 2024 progress reports, meeting their objectives
    - iv. Coordination and linkages: excellent, based on meetings, with good participation and attendance
    - v. Information Exchange: excellent; extension and scientific articles
    - vi. Participation: good
    - vii. Gary: concur
    - viii. Recommendation: **Approve** (primary; secondary; unanimous support)
  - k. NCERA180 [Khosla, Karcher, Davis]
    - i. Precision ag group, going since at least 2001
    - ii. Meet regularly, active participation from 17 states, as well as federal and industry partners; participation among private partners has gone down as industry has consolidated
      - 1. Recommendation: would be good to work to revitalize participation from private partners
    - iii. Works collectively: USDA challenge grant, was successful on the third time; they're now working on revising the textbook; heavily involved in International Conference on Precision Agriculture
    - iv. Core suggestion: improve core reporting and impact assessment
    - v. Doug: lack of reporting of impact (no pubs or proposals listed)
    - vi. Recommendation: **Approve with revisions** (primary; secondary; unanimous support)
5. Program updates
- a. UMN (Gary):
    - i. New President, Rebecca Cunningham, interested in ag; asking why there isn't a major in Agronomy (Plant Sciences with Agronomy track); going to recruiting events around the state; problem: alums with agriculture degrees

are not recommending the program to hs students (don't want to be in the Twin Cities); there's a cultural shift in who/what they may be teaching

1. 20 students in agronomy with rural background; 100 from twin cities in horticulture
  - ii. Infrastructure needs: research facilities aren't supporting AnSci; Dean decided to create an external location for AnSci need Hormel (Hormel put up \$100M to fund \$300M facility on 400 ac); need 5000 acres to spread all the manure
  - iii. Three new Assoc Deans (Research, RECs, Education)
  - iv. Gary became permanent Head this year
  - v. New positions: doled out on budget from 2014; college has been run based on bottom line for last 10 years; have been gradually losing faculty; haven't had enough retirements to keep current with hiring
  - vi. Good research productivity: \$18M/yr
  - vii. Very strong graduate program (60)
- b. ISU (Mary):
- i. Interim Head since May 2023. Search is active for permanent Head.
  - ii. Three new Extension faculty since then (soils, forages, weeds)
  - iii. UG: 200+, Agronomy majors; secondary Seed Science major
  - iv. Curriculum review, revenue flat; campus wants them to do bigger classes (TA #?)
  - v. Grad: 90 on-campus; 125-150 online grad students
  - vi. Online Agronomy: going through 'Quality Matters' certification; asynchronous
  - vii. New degree, 'Digital and Precision Ag', in process of approval (collab between Agron & ABE)
- c. OSU
- i. Doug (CSS):
    1. Dean working to get Extension restructured; Dept of Extension, with Extension faculty (not PhD, not tenured), which has created siloing and lack of collaboration with depts
    2. Just began 4th year of current year; expects to get reappointed
    3. Budget has increased slightly due to 'History of Golf' and other popular classes on campus
    4. 36 TT, 2 clinical teaching
    5. Onboarded 3 new faculty in last year, 2 new weed scientists
    6. 1 death in faculty, didn't let dept know, passed unexpectedly
    7. Currently interviewing for two positions:
      - a. Clinical Director for online MS program
      - b. Fermentation specialist
    8. Credit system at OSU: going fwd, will be difficult to get approvals; faculty credits go back to college (get 1/2 credit back to dept); got 12 in last 3 years
    9. UG: three majors, several specializations (these do show up on the OSU website)
      - a. Plant Science: 130

- b. Hort: 20
      - c. Agron
    - 10. Looking at micro-credentials: plant breeding, controlled environment ag
    - 11. New applicants up 20%; make \$3000 scholarships to all students who accept their offers, over 4 semester period
    - 12. Grad student enrollment: mid-60s
    - 13. External program review in March 2024: positive experience, led to Action Plan (increase UG and Gr growth to 200 and 100, respectively); curriculum revision and retreat in May, additional strategic planning
    - 14. Challenges: recruitment; getting harder and harder to get accepted to central OSU campus (86000 applications for 12000 seats); telling prospective students to plan on starting at regional campus for a year, and then transfer automatically to main campus; increase profile in urban communities
    - 15. Deferred maintenance, under Assoc. Dean for Infrastructure: buildings 30 to 50 years old; decreased operations staff; RECs are run centrally by the college, but they're not doing what they need to do [it's actually better to run them from the department level, in Doug's view]
      - a. Gary: what kind of resources are in Assoc. Dean for Infrastructure office?
  - ii. Brian (School of Nat Res)
    - 1. Mix of natural and social scientists (soc. Sci. are dominating now); Economist and a Social Scientist are leading the school
    - 2. Incoming class of 9530, largest ever; most are urban; most don't decide to come to S NRes, so go after them as transfer students; went from 400 to 900 UG when Brian was Assoc Dir of School (now have dropped 100 students, which creates issue for funding); when 'Sustainability' was permitted to be used by other units, SNRES enrollments dropped
      - a. Intro to Soil Sci: 300+ students; fantastic instructor (has TT position at small liberal arts college, and then also teaches at OSU as lecturer)
    - 3. Would like to see overhaul at college, with new Assoc Dean of Extension and Outreach, to break down silos between county and campus Extension faculty
    - 4. 43 TT, 2 clinical
    - 5. Have not had a lot of opps to hire; new aquatic ecologist, new soil fertility specialist
    - 6. 120 Grad students (50 in non-thesis MS)
- d. MSU (Wei):
  - i. New President (5th in 5 years), engaged with CANRS
  - ii. Committed to intl engagement
  - iii. Dept. is pretty stable

1. One of stronger depts in college; 70+ faculty (40+, 30 specialized)
  2. There's been talk of an RCM model; there's debate over this, and new President argues that it creates turf wars; want to encourage collaboration, looking at a hybrid model, with new chief financial officer, staff needing to keep up
- iv. Support staff: how to build this back? How to proactively retain them? (get them to feel okay about taking vacations)
  - v. Teaching: tenure-based system for teaching faculty; make sure not to over-enroll, with difficult student: teacher ratios
  - vi. UG: 200+ (both 4 yr and 2 yr students); institute of ag technology is 2 yr (130 students enrolled; collaboration between community colleges and MSU)
  - vii. Research expenditures: ~\$19M/yr; 10% IDC return to faculty
  - viii. Infrastructure: centralized farm management; under AgBioResearch (Dir is also the Sr. Assoc. Dean for Research in the College)
  - ix. Grad students: 130
- e. UIUC (Adam):
- i. Chancellor Jones retiring; a real loss for UI
  - ii. Report
  - iii. REC reform:
    1. Personnel: three firings, updated structure, biweekly meetings with REC Team and Head, REC Council with staff, Head and faculty
    2. Update to Terms of Service and Field Plot Research fee structure; work order app
    3. Direct costing updates and improvements using extramural and Hatch funds; fine for small scale facilities, but we need funds for a new field lab (not enough staging area space for fac)
  - iv. IVCB, 6 years later: pendulum is swinging back; need to get coefficients right to avoid perverse incentives
  - v. Share REC Terms of Service and plot fee document with NCAC1 group
- f. UNL (Martha):
- i. New President: April 2024
  - ii. Discussion of combining UNL with UNMC for portfolio
  - iii. \$12M structural deficit; loss of \$1M from Agron and Hort since 2019
  - iv. IANR having state-level line continues to be a good strategic decision (brings in 50% of ICR, but accounts for only 1/3 of campus; this results in very strong statehouse support)
  - v. UNL: lots of leadership changes; interim chancellor for research, interim vice chancellor (equiv. to Provost); OVCDEI was closed in 2024
  - vi. National Center: 4 USDA-ARS research units + 60 ARS Sys
  - vii. AnSci: Feedlot of Future
  - viii. 3100 students in college
  - ix. Dept:
    1. Strategic directions doc after program review
    2. 71 fac, 46 tenure track; 2 new fac

3. Recruiting for a few positions: 3+1 program w/China Ag & Forestry Univ. (pay tuition differential with UNL; get dual degree)
4. Negotiating for new Plant HTP Director (Tom Clemente is retiring)
- x. UG: 185; 3+1: 100 (all Chinese); Graduate: 120 (35 are online MS); revenue sharing for online courses up to this point;
  1. With new budget model, the department won't get the online ed revenues
  2. For existing courses, the revenue will go into the general fund, rather than go directly back to the department
- xi. New positions:
  1. Previously: all the units put in requests for future-looking positions, but core positions have fallen by the wayside
  2. Updated approach: have to review faculty list and ask whether a given position is a core position; have used this to generate college support for six new positions
- xii. 2024 was a great year for fundraising: new endowed professorship and scholarships
- xiii. Farms: managed centrally by Ag Res Division; Assoc. Dean responsive to research and extension centers; Martha resisted the dept field plot acres being merged with the larger 40K prod acres
- g. KSU (Raj):
  - i. New President in 2022 (from NCSU), brought lots of energy to KSU campus; has been distancing himself in the last year for showing too much love for the Ag College; there has been a long run of administrative hiring that may be turning into administrative bloat
  - ii. Agronomy is very diverse dept.
    1. 50 faculty, 40 on campus, 10 on research centers
    2. 7 business units: soil tests, foundation seed, variety testing; two of units losing lots of \$
    3. Across state: 50 bldgs under agronomy; hail damage has created a huge liability for repairs (under university policy, have \$10M deductible)
    4. 15% budget cut following COVID (~\$1M); flat budget while inflation has risen; funds are going less far
    5. 30% student loss during COVID; 2024 is the first year that student numbers went up beyond 2019
    6. RCM model hasn't been useful for the university; campus working on a hybrid model
    7. 17% increase in enrollment in college
    8. Since 2022, Agronomy has increased: at 110 UG right now, plus 25 minors
      - a. President is doing a statewide tour of all counties that's turning into enrollment
      - b. Rarely turn students down, so have issues with retention
      - c. He'll offer \$500-1000 signing bonus to admits



9. National campus in Crops Judging Teams (33 national titles); have hired a great new coach, Rachel \_\_\_; Soybean Board really likes their Crop Judging team
  10. Research is strong: want to get to \$300M univ wide; college res. Expenditures are 50% of campus
  11. 90 grad students
  12. Have been able to hire several new faculty
  13. Fundraising/construction:
    - a. New road ended up going through a couple of their farm buildings; city would give them demolition and replacement cost
    - b. Raj got the opportunity to develop a master plan for the Agronomy Farm
    - c. Athletics wanted to develop a practice facility on the farm; Raj brought the President and stakeholders to the farm; stakeholders gave him a piece of their minds
    - d. Lost 16 acres from the farm; Raj wanted to put in enough infrastructure that they couldn't encroach on them
    - e. Presented the President with the Research and Innovation Center; Pres. came up with \$200M goal, with \$25M lift for Agronomy; broke ground for new 8000 sq ft center; putting in 48,000 sq ft Research and Innovation Center, scheduled to move in April 2026
    - f. The Purple Mob, (Field and Furrow equivalent), gets revenue for parking for football games; 10% of \$25M raised for sustainability endowment (with inflation, it's worth less, and needs to get more funding)
      - i. Space committee: costs \$5-7/sq ft to inhabit the spaces; presented it to the faculty; every work room is 800 sq ft (\$4000/yr); this has been limiting inefficient use of spaces
  14. Dept is responsible for all operations expenses for new infrastructure
  15. DEI office was closed at KSU; removed from all HR requirements; Office of Access and Opportunity
- h. Purdue (Laura):
- i. New President since 2023; handpicked successor of Mitch Daniels; strong engineering focus; the Four Pillars govern all hires:
    1. Purdue computes
    2. Daniel School (of Business)
    3. One Health
    4. Indianapolis Campus
  - ii. Getting mostly settled administratively in college
  - iii. Purdue has record high enrollment: 44K students; not enough housing; Admin has promised that fewer students will be admitted; tough for college of ag due to increased competitiveness; encouraging them to start

- at community college and transfer in; creating college of ag program for students to start in spring semester
- iv. Dept. of Agronomy: crops, soils, enviro, meteorology, climatology
- v. Faculty are happy and productive; smaller than used to be; currently at 28 faculty (25 tt, 3 teaching)
- vi. Whole college is down, and will not be increasing
- vii. TT primary teaching appointments are going away, clinical teaching faculty are increasing
- viii. Many of Purdue extension faculty are non-tenure track
- ix. 7 great new assistant professors; in last 20 years, there are only 4 new indiv.; more emphasis on engineering than ag.
- x. Hiring is driven largely by AAU metrics; res. \$/tt faculty lines; university is shedding tenure track faculty lines; Purdue wants to stay in the top of the rankings;
  - 1. 'Movable Dream Hires': this is the only hiring avenue for them to increase their faculty ranks; Dean's Office runs stats on these people; need H-index higher than college average
- xi. UG program holding steady; ending meteorology and climatology major
- xii. Agronomy is largest, then Plant Breeding and Genetics; brand new major in Digital Agronomy; Intl Agronomy
- xiii. Ad Hoc cmte to re-envision the majors
- xiv. Agronomy Farm: 1400 acre Agronomy Farm near campus, and multiple Purdue Ag centers around the state (no land rental fees, farm is self-sufficient)
- i. Mizzou (Steve):
  - i. Hiring is similar to what Purdue is doing, with aiming for poaching mid-career faculty (Mizzou Forward)
  - ii. Sent sheet along with dept. update
  - iii. New Provost
  - iv. Lots of internal admin hires in recent years
  - v. Programs of Distinction:
    - 1. Led by young faculty
  - vi. Plant Science: 4 retirements, only replacing 1-2; couple more retirements coming up
  - vii. Large enrollment in Soil Science; Provost told them to request another instructor position
    - 1. Fewer faculty than ever, more students; having trouble meeting the demand
  - viii. Worried about demographic cliff
  - ix. New Digital Ag Center in Plant Sciences

## 7. Adjourn