

2024 WERA meeting minutes

Meeting called to order at 1 pm in Salon del Ray A Hilton Hotel San Antonio, TX Sunday 10 Nov 2024

Attendees: Nick Boerman (USDA-ARS; Oklahoma; chair), Jonathan Schnore (Washington State), Michael Neff (Washington State), Mingying Xiang (Oklahoma), Kelly Kopp (Utah), Paul Johnson (Utah), AA, Keenan Amundsen (Nebraska), Shuizhang Fei (Iowa)

Discussion of future meeting locations:

2025: Meeting combined with the ITS meeting in Japan. Day to be determined. Kelly Kopp president, Michael Neff, Secretary.

2026: Location will be Pullman, WA; date next to their annual field day. Michael Neff president.

2027: Joint meeting with SERA in Frisco Texas. After the PGA Championship (May 20-23).

State Reports:

Washington:

Michael Neff

- WSU is building a new research farm in Skagit Valley, WA.
- Collecting common bermudagrass in Washington that follows a Texas cattle trail and have survived cold winters (-15 to -20 below). Handing this project over to post-doc.
- \$695,000 (two year) from state for high traffic and high wear research to not take out turf for artificial. Precedent in WA to address this issue. Michael suggested a person in their Landscape Architecture department who is involved in public perception of turf and design. Should invite to be part of the project. Low input vs no input is a goal.
- Matchless KBG variety (no burn) is now PVP protected and is in production.

Nebraska:

Keenan Amundsen

- Roch Gaussion (UNL) retired and moved.
- W1: From advanced evaluation trials of buffalograss derived from chinch bug and leaf spot resistant germplasm, identified top five populations with highest seed yields over two years. From multi-year evaluations of sod-strength plots, advanced

vegetative buffalograss lines were selected. Top performing lines from each study were planted together for PVP data collection and to compare under both turf and production field settings. Top performing lines will be advanced in regional trials.

- W1: Genomic studies of bentgrasses and buffalograss are in progress in collaboration with US Golf Association, USDA-ARS, and Penn State University. Sequencing is complete and we are assembling data into contigs and scaffolds. The data will support future genomic-based breeding and molecular genetics research. We are already leveraging the data to identify genes within QTL regions.
- W2: Continued research on aeration times and practices, to better understand impact to organic matter management and incorporation of topdressing sand into the soil profile.
- W2/W3: We are managing the perennial ryegrass and Kentucky bluegrass NTEP evaluation trials and recently established the new 2024 Tall Fescue test. The tall fescue study will be managed under deficit irrigation to determine the impacts of reduced irrigation on the tall fescue lines. The data is useful to turfgrass managers, providing regional performance data on current and emerging cultivars.
- W3: We are actively evaluating 500 experimental buffalograss lines for turf quality traits important for turfgrass managers and production traits important to our producers. Research will support further adoption of buffalograss in turf systems, which will contribute to reduced water use given buffalograss relative lower water demand compared to other turfgrass species.
- W5: We publish research and educational information to our website (<https://turf.unl.edu>) and through social media. The information provides useful and timely information to professional and non-professional turfgrass managers. We share research at conferences and at extension outreach events throughout Nebraska, supporting the needs of turfgrass managers.

Iowa:

Shui-zhang Fei

- cool-season grasses in corn production as a cover crop. Temporal and spatial separation reduces competition. Looking at summer dormancy. *Poa pratensis*, *Poa bulbosa* (obligate daylength), *Poa secunda* (obligate temperature and daylength). Always a tradeoff in balancing the summer dormancy and survival. Social implications and threshold for not watering and brown. Consumer behavior is always relevant.
- Quincy Law is now at Iowa State University, replacing Nick Christians (retired). Primary teaching and some research.

Oklahoma:

Nick Boerman

- Mingying Xiang will lead the effort in drafting an SCRI project for the Western region USA.

General discussion:

- Paul Johnson- Make state reports focus on collaborative projects, especially those in the multi-state group. Concise reports for both readability and to help out the person combining the reports. Importance of collaborative projects since that is the main goal of these groups.
- Attendance is a concern given only a few at the meeting this year. Stand-alone meetings are best and meetings combined with other multi-state groups. There is a lot of commonality with other regions involved with turf research—similar problems that we can learn from. Combining with a field day will be useful. Scheduling with those in mind increases value.
- Attendees described their support for attending the meeting. Iowa State is good support. Nebraska, Utah State also. Others mixed. Let's explore why and encourage others to participate. Need to recruit people and involvement. More private industry. For example Chrissy Segars with PBI Gordon, TWCA, other affiliated organizations especially those in the West. GCSAA, USGA reps. Ogallala conservation district organization (private conservation group). Other groups, stakeholder groups, etc. to involve.

SCRI project discussion:

- No funding for a Western region project in the past, new opportunities now.
- Possible topic: broader take on turf/outdoor water conservation including ground cover, ornamentals. Going more broadly may increase chance of getting funded. Any project needs to serve to change behavior and perceptions. Needs to be unique and different than the warm-season SCRI project.
- Start smaller with a planning grant to bring stakeholders together (include seed industry stakeholders). Focus on smaller project overall, instead of the really big proposals done before, plan on pre-proposal submission Fall 2025.
- A good topic would be turf in the SW. Currently the focus of cities and other entities is on turf removal. Not a good approach if the intention is to save water. But the water industry has misguidedly taken this on as a silver bullet. If there was a way to demonstrate without question the positive benefits. Removal of turf has unintended consequences and equity issues.

- Another topic that will get people excited is urban heat. Moderating of urban heat and can demonstrate how much turf is related or impacts it. This can address what is an increasing problem in the urban west. May get the attention of the review panel. One way to cool is to increase ET. What is the acceptable and necessary amount of irrigation or ET to achieve a desired amount of cooling? Is there a compromise or balance there?
- Warm-season grass use in the north—survival in winter? What management or conditions lead to rhizome development and storage to assist in winter survival?
- Bluemuda and other warm/cool season mixes: Bermuda, bluegrass, tall fescue, buffalograss combos? Michael is planting blumuda now and will be evaluating.
- Cool season grasses, social implications and threshold for not watering and brown. Consumer behavior is always relevant.
- Like mentioned before, a project needs to focus on social science decision making. Combine with groundwater recharge.
- effect of irrigating artificial turf? Pollution problems? Soil health impacts? Start small with a social, choice, environmental impact type of project then broadening to physiology later. 50% on social science in the initial proposal.
- Artificial turf companies are releasing a plastic that has less environmental impact.

Publications:

1. S Browning, J Fech, A Folck, & R Gaussoin (2023) Cool Season Lawn Calendar- Western Nebraska. Pages 1-2 in NebGuide (G2359). Lincoln, NE: Nebraska Extension. <https://extensionpublications.unl.edu/assets/pdf/g2359.pdf>
2. S Browning, J Fech, A Folck, & R Gaussoin (2023) Cool Season Lawn Calendar- Eastern Nebraska. Pages 1-2 in NebGuide (G2356). Lincoln, NE: Nebraska Extension. <https://extensionpublications.unl.edu/assets/pdf/g2356.pdf>

Research (just published/in press pubs in the last 2 years, 2023-24).

1. Amundsen, K., C. Thompson, W. Kreuser, R. Gaussoin. 2024. Management costs influence golfer perceptions of turfgrass quality and playability. International Turfgrass Society Research Journal (in press).
2. Berndt, W. L., & Gaussoin, R. E. 2023. Predicting Munsell color for turfgrass leaves. Crop Science, 63, 1566– 1580. <https://doi.org/10.1002/csc2.20843>
3. Fidanza, M., Bigelow C, Kostka S, Ervin E, Gaussoin R., Rossi F, Cisar J, Dinelli D, Pope J, and Steffel J. 2023. Considerations with biostimulants in turfgrass. Chapter 15 in: Fidanza, M. (ed.), Achieving sustainable turfgrass management, Burleigh Dodds Science Publishing, Cambridge, UK, 2023 (ISBN: 978 1 80146 019 4; www.bdspublishing.com)
4. Folck, A. J., Bigelow, C. A., Jiang, Y., & Patton, A. J. 2023. Genotypic variation in germination rate, seedling vigor, and seed phenotype of Kentucky bluegrass cultivars. Crop Science, 63, 3065–3078. <https://doi.org/10.1002/csc2.21045>

5. Folck, A. J., Bigelow, C. A., Jiang, Y., & Patton, A. J. 2023. Growth analysis of Kentucky bluegrass cultivars from six classification groups. *Agrosystems, Geosciences & Environment*, 6, e20444. <https://doi.org/10.1002/agg2.20444>
6. Raudenbush, Z., Sousek, M., Thompson, C. S., & Gaussoin, R. E. 2024. Safety of carfentrazone-ethyl following application of bensulide to creeping bentgrass putting greens. *Crop, Forage, and Turfgrass Management*, 10, e20285. <https://doi.org/10.1002/cft2.20285>