

# Ross C. Braun

Assistant Professor of Turfgrass and Landscape Management | Director of Rocky Ford Turfgrass Research Center  
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## EDUCATION

### **Doctor of Philosophy, Horticulture, 2017.**

Kansas State University, Manhattan, KS

Dissertation: *Environmental and Management Impacts in Turfgrass Systems: Nitrous Oxide Emissions, Carbon Sequestration, and Drought and Traffic Stress*

### **Master of Science, Horticulture, 2014**

Kansas State University, Manhattan, KS

Thesis: *Cultural Strategies to Improve Zoysiagrass Acceptability and Performance in the Transition Zone*

### **Bachelor of Science, Sports & Urban Turfgrass Management, 2011**

Minor: Horticulture, North Dakota State University, Fargo, ND

## PROFESSIONAL EXPERIENCE

- **Assistant Professor**, Kansas State University, 2022-present
- **Director of Rocky Ford Turfgrass Research Center**, Kansas State University, 2022-present
- **Lead Research Scholar**, Purdue University, 2019–2022
- **Postdoctoral Research Associate**, Purdue University, 2018–2019
- **Postdoctoral Research Associate**, Kansas State University, 2017–2018
- **Graduate Research Assistant**, Kansas State University, 2012–2017
- **Graduate Teaching Assistant**, Kansas State University, 2013–2016
- **Golf Course Intern and Maintenance Staff**,
  - Spring Hill Golf Club, Wayzata, MN, 2011,
  - Oxbow Country Club, Oxbow, ND, 2010,
  - The Powder Horn Golf Course, Sheridan WY, 2010
- **Self-Employed**, Braun Lawn Care, Leeds, ND, 2002–2009

## TEACHING EXPERIENCE

### **Kansas State University (Primary Instructor, 2022-present)**

- **HORT 282**, Foundations of Horticultural Pest Management (1 credit hour, Spring)
- **HORT 490**, Horticulture Internship (3-6 credit hours; Fall, Spring, Summer)
- **HORT 515**, Basic Turfgrass Culture (3 credit hours; Spring)
- **HORT 550**, Horticultural Irrigation Systems (3 credit hours; Fall)
- **HORT 587**, Turfgrass Diseases and Their Management (1 credit hour; Fall even yr)
- **HORT 588**, Turfgrass Weeds and Their Management (1 credit hour; Fall even yr)
- **HORT 589**, Turfgrass Insects and Their Management (1 credit hour; Fall even yr)
- **HORT 706**, Advanced Culture of Golf and Sports Turf (3 credit hours; Spring)

### **Purdue University (2018-2022)**

- **AGRY/HORT 51200**, Integrated Turfgrass Systems (3 credit hours; Fall 2019) (co-taught with Drs. Aaron Patton and Quincy Law).

### **Kansas State University (2012-2018)**

- **HORT 515**, Basic Turfgrass Culture (3 credit hours; Spring) 4 Semesters (2013-2016) (lab instructor, teaching and lecturer assistant).
- **HORT 516**, Intensive Culture of Golf/Sports Turf (1 credit hour; Spring) – 4 Semesters (2013–2016) (lab instructor, teaching and lecturer assistant).

### **Invited Guest Lecturer**

- “*Research as a Career, Guest Panel*” Scientific Communication (AGCOM 810). *Kansas State University*, December 2023.

- “What You Need to Know About Sod to Make the Best Turf” Landscape Contracting and Management (HORT 31700). *Purdue University*, October (2020, 2021).
- “Utilizing Google Forms in the Workplace” Integrated Turfgrass Systems (HORT/AGRY 51200). *Purdue University*, October (2018, 2019, 2020, & 2021).
- “Networking” Golf Course and Sports Turf Operations (HORT 517). *Kansas State University*, September. 2014.

## ACCEPTED PUBLICATIONS

### Peer-reviewed Scientific Journal Publications (55)

1. Stanton, A., Keeley, S. J., Boyer, C. R., Domenghini, J. C., & **Braun, R. C.** (2025). Homeowner Lawn and Landscape Practices and Use of Cooperative Extension Resources. *Natural Sciences Education*, in press.
2. Stanton, A., Keeley, S. J., Boyer, C. R., Domenghini, J. C., Patton, A. J., Chavarria, M. R., Carr, T. Q., Hutchens, W. J., Frank, K. W., Xiang, M., Folck, A. J., Soldat, D. J., Koch, P. L., Thoms, A. W., Koski, A. J., Barnes, M. R., Trappe, J. M., & **Braun, R. C.** (2025). Horticulture Industry Awareness and Use of Lawn and Landscape Cooperative Extension Education Resources. *Natural Sciences Education*, in press.
3. Fry, J. D., & **Braun, R. C.** (2025). Using Ethephon for Suppressing Spring Seedheads in Interspecific Zoysiagrass Hybrid ('DALZ 1701'). *Crop, Forage and Turfgrass Management*, in press.
4. **Braun, R. C.**, Ojeokun, O. C., Patton, A. J., Fry, J. D., Chandra, A., & Martin, C. (2025). Zoysiagrass Sod Production: A Review. *Crop, Forage and Turfgrass Management*, in press. <http://dx.doi.org/10.1002/cft2.70074>
5. Ojeokun, O., Fry, J., Todd, T., Martin, C., Chandra, A., Xiang, M., Patton, A., Amgain, N., Sierra, A., Schiavon, M., Kenworthy, K., Kruse, J., **Braun, R.**, & Kennelly, M. (2025). Thatch accumulation in zoysiagrass genotypes across the US Transition Zone and Southern regions. *HortTechnology*, 35, 502–512. <https://www.doi.org/10.21273/HORTTECH05649-25>
6. Carr, T., Hutchens, W. J., Patton, A. J., **Braun, R. C.**, McFadden, D., & Richardson, M. D. (2025). Management strategies for preventing and recovering from zoysiagrass winterkill. *Crop, Forage and Turfgrass Management*, 11, e70050. <https://doi.org/10.1002/cft2.70050>
7. Milla-Lewis, S. R., Gouveia, B. R., Carbajal, E. M., Miller, G., Patton, A. J., Schwartz, B. M., Kenworthy, K. E., **Braun, R. C.**, Van der Laat, R., Xingwang, Y., Zhang, J., Chandra, A., Wu, Y., Raymer, P., Puzianowska, M., Baird, J., Fontainer, C., & Unruh, J. B. (2025). Registration of 'XZ 14069' zoysiagrass. *Journal of Plant Registrations*, 19, e20430. <https://doi.org/10.1002/plr2.20430>
8. McNally, B. C., Chhetri, M., Patton, A. J., Liu, W., Hoyle, J. A., Brosnan, J. T., Richardson, M. D., Bertucci, M. B., **Braun, R. C.**, & Fry, J. D. (2025). Optimizing ethephon application timing for 'Meyer' zoysiagrass seedhead suppression. *Crop Science*, 65, e21350. <https://doi.org/10.1002/csc2.21350>
9. **Braun, R. C.**, Mandal, P., Nwachukwu, E., & Stanton, A. (2024). The role of turfgrasses in environmental protection and their benefits to humans: 30 years later. *Crop Science*, 64, 2909–2944. <http://doi.org/10.1002/csc2.21383>
10. **Braun, R. C.**, & Patton, A. J. (2024). Growth responses to waterlogging stress among cool-season grass species. *Grass and Forage Science*. 1–12. <https://doi.org/10.1111/gfs.12655>
11. **Braun, R. C.**, Watkins, E., Hollman, A. B., & Patton, A. J. (2023). Assessing the fertilizer and pesticide input needs of cool-season turfgrass species. *Crop Science*, 63, 3079–3095. <https://doi.org/10.1002/csc2.21046>
12. Chandra, A., Genovesi, A., Fry, J., Patton, A., Meeks, M., **Braun, R.**, Xiang, M., Chhetri, M., & Kennelly, M. (2023). 'DALZ 1701', a third generation interspecific zoysiagrass hybrid. *Journal of Plant Registrations*, 17, 499–511. <http://dx.doi.org/10.1002/plr2.20319>
13. **Braun, R. C.**, Straw, C. M., Soldat, D. J., Bekken, M. A. H., Patton, A. J., Lonsdorf, E. V., & Horgan, B. P. (2023). Strategies for reducing inputs and emissions in turfgrass systems. *Crop, Forage and Turfgrass Management*. 9, e20218. <https://doi.org/10.1002/cft2.20218>
14. Yue, C., Lai, Y., Watkins, E., Patton, A., & **Braun, R.** (2023). A behavioral approach to the barriers to the adoption of new technology: A case study of low-input turfgrasses. *Journal of Agricultural and Applied Economics*, 55, 72–99. <https://doi.org/10.1017/aae.2023.7>
15. **Braun, R. C.**, Courtney, L. E., & Patton, A. J. (2023). Seed morphology, germination, and seedling vigor characteristics of fine fescue taxa and other cool-season turfgrass species. *Crop Science*, 63, 1613–1627. <https://doi.org/10.1002/csc2.20936>
16. Hong, M., Zhang, Y., **Braun, R. C.**, & Bremer, D. J. (2023). Simulations of nitrous oxide emissions and global warming potential in a C<sub>4</sub> turfgrass system using process-based models. *European Journal of Agronomy*, 142, 126668. <https://doi.org/10.1016/j.eja.2022.126668>

17. **Braun, R. C.**, Patton, A. J., Chandra, A., Fry, J. D., Genovesi, A. D., Meeks, M., Kennelly, M. M., Xiang, M., Chhetri, M., Richardson, M. D., Richmond, D. S., Pudzianowska, M. T., & Baird, J. H. (2022). Development of winter hardy, fine-textured zoysiagrass hybrids for the upper transition zone and similar climates. *Crop Science*, 62, 2486–2505. <https://doi.org/10.1002/csc2.20834>
18. **Braun, R.C.**, Bremer, D. J., Ebdon, J. S., Fry, J. D., & Patton, A. J. (2022). Review of cool-season turfgrass water use and requirements: II. Responses to drought stress. *Crop Science*, 62, 1685–1701. <https://doi.org/10.1002/csc2.20790>
19. **Braun, R.C.**, Bremer, D. J., Ebdon, J. S., Fry, J. D., & Patton, A. J. (2022). Review of cool-season turfgrass water use and requirements: I. Evapotranspiration and responses to deficit irrigation. *Crop Science*, 62, 1661–1684. <https://doi.org/10.1002/csc2.20791>
20. **Braun, R. C.**, Watkins, E., Hollman, A. B., Mihelich, N. T., & Patton, A. J. (2022). Management, harvest, and storage characteristics of low-input cool-season turfgrass sod mixtures. *Agronomy Journal*, 114, 1752–1768. <https://doi.org/10.1002/agi2.21051>
21. **Braun, R. C.**, & Patton, A. J. (2022). Species, clover-inclusion, and nitrogen fertilizer effects on sod tensile strength of fine fescue taxa. *Agronomy Journal*, 114, 1705–1716. <https://doi.org/10.1002/agi2.21039>
22. **Braun, R. C.**, Braithwaite, E. T., Kowalewski, A. R., Watkins, E., Hollman, A. B., & Patton, A. J. (2022). Nitrogen fertilizer and clover-inclusion effects on the establishment of fine fescue taxa. *Crop Science*, 62, 947–957. <https://doi.org/10.1002/csc2.20704>
23. **Braun, R. C.**, & Patton, A. J. (2022). Perennial ryegrass (*Lolium perenne*) culm and inflorescence density in lawns: Effects of nitrogen fertilization and scalping timing and height. *Crop Science*, 62, 489–502. <https://doi.org/10.1002/csc2.20665>
24. **Braun, R. C.**, Bremer, D. J., & Hoyle, J. A. (2022). Simulated traffic on turfgrasses during drought stress: II. Soil water content, soil compaction, and rooting. *International Turfgrass Society Research Journal*, 14, 516–527. <https://doi.org/10.1002/its2.62>
25. **Braun, R. C.**, Milla-Lewis, S., Carbajal, E., Schwartz, B. M., & Patton, A. J. (2021). Performance and playability of experimental low-input coarse-textured zoysiagrass in multiple climates. *Grass Research*, 1, 10 1–12. <https://doi.org/10.48130/GR-2021-0010>
26. **Braun, R. C.**, Patton, A. J., Reiter, M., Elmore, M. T., & Tuck, D. P. (2021). Tolerance of fine fescues in minimal-to-no mow golf course rough to indaziflam formulations. *Crop Forage, & Turfgrass Management*, 7, e20134, 1-4. <https://doi.org/10.1002/cft2.20134>
27. **Braun, R. C.**, Patton, A. J., Watkins, E., Hollman, A. B., Murphy, J. A., Park, B. S., Kowalewski, A. R., & Braithwaite, E. T. (2021). Optimal fine fescue mixture seeding dates in the northern United States. *Agronomy Journal*, 113, 4413–4428. <https://doi.org/10.1002/agi2.20859>
28. **Braun, R. C.**, Watkins, E., Hollman, A. B., Mihelich, N. T., & Patton, A. J. (2021). Investigation of cool-season species, seeding rate, and nitrogen fertilization in sod production: I. Establishment and sod tensile strength. *Agronomy Journal*, 113, 4176–4189. <https://doi.org/10.1002/agi2.20810> \*Top cited article in *Agronomy Journal* in 2021-2022 award
29. Patton, A. J., **Braun, R. C.**, Bearss, R. C., & Schortgen, G. P. (2021). Herbicide tolerance in eleven grass species for minimal-to-no-mow golf course rough. *Agrosystems, Geosciences & Environment*, e20204. <https://doi.org/10.1002/agg2.20204>
30. **Braun, R. C.**, Watkins, E., Hollman, A. B., Mihelich, N. T., & Patton, A. J. (2021). Investigation of cool-season species, seeding rate, and nitrogen fertilization in sod production: II. Management and shelf-life. *Agronomy Journal*, 113, 3460–3474. <https://doi.org/10.1002/agi2.20777>
31. Law, Q. D., Trappe, J. M., **Braun, R. C.**, & Patton, A. J. (2021). Greenhouse gas fluxes from turfgrass systems: Species, growth rate, clipping management, and environmental effects. *Journal of Environmental Quality*, 50, 547–557. <https://doi.org/10.1002/jeq2.20222>
32. Patton, A. J., & **Braun, R. C.** (2021). Measurement of turf height and growth using a laser distance device. *Crop Science*, 61, 3110–3123. <https://doi.org/10.1002/csc2.20295>
33. **Braun, R. C.**, Bremer, D. J., & Hoyle, J. A. (2021). Simulated traffic on turfgrasses during drought stress: I. Performance and recovery of turf canopies. *Crop Science*, 61, 2926–2938. <https://doi.org/10.1002/csc2.20324>
34. Alderman, E. J., Hoyle, J. A., **Braun, R. C.**, & Reeves, J. A. (2020). Winter golf cart traffic, colorants, and overseeding influence winter green cover and spring recovery of buffalograss. *Crop, Forage and Turfgrass Management*, 6, e20077. <https://doi.org/10.1002/cft2.20077>
35. **Braun, R. C.**, Patton, A. J., Braithwaite, E. T., & Kowalewski, A. R. (2020). Establishment of low-input turfgrass from seed with patch and repair mixtures: Mulch and starter fertilizer effects. *Crop Science*, 60, 3362–3376. <https://doi.org/10.1002/csc2.20266>

36. Patton, A. J., **Braun, R. C.**, Schortgen, G. P., Hoyle, J. A., & Reicher, Z. J. (2020). Irrigation following a fall proxy (ethephon) application affects spring seedhead suppression of ‘Meyer’ zoysiagrass. *Crop, Forage and Turfgrass Management*, 6, e20023. <https://doi.org/10.1002/cft2.20023>
37. **Braun, R. C.**, Patton, A. J., Watkins, E., Koch, P., Anderson, N. P., Bonos, S. A., & Brilman, L. A. (2020). Fine fescues: A review of the species, their improvement, production, establishment, and management. *Crop Science*, 60, 1142–1187. <https://doi.org/10.1002/csc2.20122> \*Top cited article in *Crop Science* in 2020-2021 award
38. Patton, A. J., **Braun, R. C.**, & Weisenberger, D. V. (2019). Single applications of natural postemergence weed control options do not provide effective ground ivy control. *Crop, Forage and Turfgrass Management*, 5, 180101. <https://doi.org/10.2134/cftm2018.12.0101>
39. Thompson, C. S., Hoyle, J. A., & **Braun, R. C.** (2019). Scalping tall fescue as soon as one day after treatment does not reduce glyphosate efficacy. *Crop, Forage and Turfgrass Management*, 5, 180098. <https://doi.org/10.2134/cftm2018.12.0098>
40. **Braun, R. C.**, & Bremer, D. J. (2019). Carbon sequestration in zoysiagrass turf under different irrigation and fertilization management regimes. *Agrosystems, Geosciences & Environment*, 2, 180060. <https://doi.org/10.2134/age2018.12.0060>
41. Alderman, E. J., Hoyle, J. A., Reeves, J. A., & **Braun, R. C.** (2019). Evaluating the effects of nitrogen rate and simulated golf cart traffic on ‘Cody’ buffalograss roughs. *Crop, Forage and Turfgrass Management*, 5, 180079. <https://doi.org/10.2134/cftm2018.09.0079>
42. Patton, A. J., **Braun, R. C.**, Schortgen, G. P., Weisenberger, D. V., Branham, B. E., Sharp, B., Sousek, M. D., Gaussoin, R. E., & Reicher, Z. J. (2019). Long-term efficacy of annual bluegrass control strategies on golf course putting greens. *Crop, Forage and Turfgrass Management*, 5, 180068. <https://doi.org/10.2134/cftm2018.09.0068>
43. **Braun, R. C.**, Hoyle, J. A., Van Ryzin, B., Sousek, M. D., & Thompson, C. S. (2018). Postemergence herbicide tolerance of buffalograss entering winter dormancy. *Crop, Forage and Turfgrass Management*, 4, 180064. <https://doi.org/10.2134/cftm2018.08.0064>
44. Hoyle, J. A., **Braun, R. C.**, Thompson, C. S., & Reeves, J. A. (2018). Late-season bermudagrass control with glyphosate, fluazifop, and mesotrione combinations. *Agrosystems, Geosciences & Environment*, 1, 180014. <https://doi.org/10.2134/age2018.06.0014>
45. **Braun, R. C.**, & Bremer, D. J. (2018). Nitrous oxide emissions in turfgrass systems: A review. *Agronomy Journal*, 110, 1–11. <https://doi.org/10.2134/agronj2018.02.0133>
46. Hoyle, J. A., **Braun, R. C.**, & South, P. E. (2018). The effect of human insect repellents on perennial ryegrass (*Lolium perenne*) injury and recovery. *Crop, Forage and Turfgrass Management*, 4, 180023. <https://doi.org/10.2134/cftm2018.03.0023>
47. **Braun, R. C.**, & Bremer, D. J. (2018). Nitrous oxide emissions in turfgrass receiving different irrigation amounts and nitrogen fertilizer forms. *Crop Science*, 58, 1762–1775. <https://doi.org/10.2135/cropsci2017.11.0688>
48. Hoyle, J. A., **Braun, R. C.**, Reeves, J. A., Keeley, S. J., & Bremer, D. J. (2018). Mowing height and cultivation effects on tall fescue conversion to buffalograss. *Crop, Forage and Turfgrass Management*, 4, 170061. <https://doi.org/10.2134/cftm2017.08.0061>
49. Thompson, C. S., **Braun, R. C.**, Hoyle, J. A., & Van Ryzin, B. (2018). Mowing timing does not affect the efficacy of broadleaf herbicides applied to control dandelion (*Taraxacum officinale*). *Crop, Forage and Turfgrass Management*, 4, 170074. <https://doi.org/10.2134/cftm2017.10.0074>
50. **Braun, R. C.**, Hoyle, J. A., Reeves, J. A., Flessner, M. L., & McElroy, J. S. (2018). Design and construction of mowing track for turfgrass experimentation in greenhouses. *Agronomy Journal*, 110, 1180–1183. <https://doi.org/10.2134/agronj2017.11.0625>
51. **Braun, R. C.**, Fry, J. D., Kennelly, M. M., Bremer, D. J., & Griffin, J. J. (2017). Single and sequential colorant application effects on buffalograss and zoysiagrass color during dormancy. *HortTechnology*, 27, 393–398. <https://doi.org/10.21273/HORTTECH03690-17>
52. Thompson, C., Fry, J., **Braun, R.**, & Kennelly, M. (2017). Rough bluegrass incidence in a new tall fescue sward as affected by seeding rate and mowing height. *Crop, Forage and Turfgrass Management*, 3, 1–4. <https://doi.org/10.2134/cftm2016.11.0074>
53. **Braun, R.**, Fry, J., Kennelly, M., Bremer, D., & Griffin, J. (2016). Colorant application volume and color persistence on a ‘Chisholm’ zoysiagrass lawn. *HortTechnology*, 26, 314–319. <https://doi.org/10.21273/HORTTECH.26.3.314>
54. Miller, G. L., Earlywine, D. T., **Braun, R.**, Fry, J. D., & Kennelly, M. M. (2016). Influence of nitrogen source and application timing on large patch of zoysiagrass. *Crop, Forage and Turfgrass Management*, 2, 1–9. <https://doi.org/10.2134/cftm2015.0189>

55. Thompson, C., **Braun, R.**, & Kennelly, M. (2014). Evaluation of fungicides for control of dollar spot and brown patch of greens height creeping bentgrass in Kansas. *2013 Plant Disease Management Reports*, 8, p. T041.

#### **Graduate Student Thesis**

1. Stanton, A. C. (2024). *Cooperative Extension and teaching at a land-grant university: homeowner and industry perspectives and considerations of lawn and landscape extension resources and authorized crib cards in the classroom*. M.S. thesis, Kansas State Univ., Manhattan. <https://hdl.handle.net/2097/44462>
2. Nwachukwu, E. U. (2025). *Assessment of cool-season turfgrass sod production characteristics of tall fescue and Kentucky bluegrass*. M.S. Thesis. Kansas State University, Manhattan. <https://hdl.handle.net/2097/44804>

#### **Trade Journals, Magazines, Newsletters, and Online Articles (38)**

1. **Braun, R.** (2025). Warm-Season Turfgrass Managers, Hang in There! Kansas Turfgrass Foundation *TurfNews*, September.
2. **Braun, R. C.**, Mandal, P., Nwachukwu, E., & Stanton, A. (2025). Ecosystem services of golf course turfgrass systems. *Golf Course Management*, March, 93, 66–74.
3. **Braun, R.** and Fry, J. (2025). K-State Turfgrass Science Accomplishments in 2024 and Upcoming Activities in 2025. Kansas Turfgrass Foundation *TurfNews*, January.
4. **Braun, R.** (2024). Cultivar selection when purchasing turfgrass seed or sod. Kansas Turfgrass Foundation *TurfNews*, September.
5. **Braun, R.** (2024). K-State turfgrass undergraduate program update. Kansas Turfgrass Foundation *TurfNews*, September
6. **Braun, R.** (2024). Research updates from the Braun Turfgrass Lab. Kansas Turfgrass Foundation *TurfNews*, January.
7. **Braun, R.** (2023). Reconsidering Fine Fescues for Kansas. Kansas Turfgrass Foundation *TurfNews*, September.
8. **Braun, R.** (2023). What are the potential ecosystem benefits of turfgrass? *Decode 6*. June 29, 2023. <https://decode6.org/articles/potential-turfgrass-ecosystem-services/>
9. **Braun, R.** (2023). How can I reduce turfgrass fertilization, mowing, irrigation, and pesticide use? *Decode 6*. June 29, 2023. <https://decode6.org/articles/reduce-turfgrass-inputs/>
10. **Braun, R.** (2023). 6 Ways to cut back on greenhouse gas while cutting your grass. *Decode 6*. June 12, 2023. <https://decode6.org/articles/6-ways-to-cut-back-on-greenhouse-gas-while-cutting-your-grass/>
11. **Braun, R.**, Bremer, D., Ebdon, S., Fry, J., & Patton, A. (2023). Breaking down the research on cool-season turfgrass water use and needs. *Golfdom*, June, 79,34-43.
12. **Braun, R.** (2023). Where does all the nitrogen go after an application? Kansas Turfgrass Foundation *TurfNews*, April, 3–4.
13. **Braun, R. C.**, Chandra, A., Patton, A. J., & Fry, J. D. (2023). Zoysiagrass hybrid development for the transition zone: A systematic process. *Golf Course Management*, February, 58–62.
14. Fry, J., & **Braun, R.** (2023). New zoysiagrass cultivar coming out. Kansas Turfgrass Foundation *TurfNews*, January, 3.
15. **Braun, R.** (2022). Hello from the new guy on the K-State turf & landscape management team. Kansas Turfgrass Foundation *TurfNews*, July, 3–4.
16. **Braun, R.**, & Hoyle, J. (2022). Efficacy of late-season bermudagrass removal using herbicide combinations. *Golfdom*, October, 24–29.
17. **Braun, R. C.**, & Patton, A. J. (2021). Identifying water submersion tolerance differences. *Golf Course Management*, December, 74.
18. Patton, A. J., & **Braun, R. C.** (2021). Herbicide tolerance of grass species used in minimal-to-no mow golf course rough. *Golf Course Management*, November, November, 75–79.
19. **Braun, R. C.**, Bremer, D. J. & Hoyle, J. A. (2021). The impacts of golf cart traffic on turfgrass during and after drought. *Golf Course Management*, May, 63–67.
20. **Braun, R. C.**, Patton, A. J., Milla-Lewis, S., Carbajal, E. & Schwartz, B. (2021). Zoysiagrass for golf course roughs. *Golf Course Management*, March, 85.
21. **Braun, R. C.**, & Bremer, D. J. (2020). Specific management practices can reduce greenhouse gas emissions and promote carbon sequestration in golf course fairways. *United States Golf Association Green Section Record*, 58(13):1–10. <https://www.usga.org/content/usga/home-page/course-care/green-section-record/58/13/specific-management-practices-can-reduce-greenhouse-gas-emission.html#>
22. **Braun, R. C.**, Patton, A. J., Watkins, E., Koch, P., Anderson, N. P., Bonos, S. A., & Brilman, L. A. (2020). Use of fine fescues on golf courses: IV. Biotic stresses. *Golf Course Management*, September, 82–87.
23. **Braun, R. C.**, Patton, A. J., Watkins, E., Koch, P., Anderson, N. P., Bonos, S. A., & Brilman, L. A. (2020). Use of fine fescues on golf courses: III. Abiotic stresses. *Golf Course Management*, August, 64–69.



24. **Braun, R. C.**, Patton, A. J., Watkins, E., Koch, P., Anderson, N. P., Bonos, S. A., & Brilman, L. A. (2020). Use of fine fescues on golf courses: II. Availability, establishment, and management. *Golf Course Management, July*, 52–58.
25. **Braun, R. C.**, Patton, A. J., Watkins, E., Koch, P., Anderson, N. P., Bonos, S. A., & Brilman, L. A. (2020). Use of fine fescues on golf courses: I. Introduction and history. *Golf Course Management, May*, 60–64.
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3. Nwachukwu, E., & **Braun, R. C.** (2025). Ecological Dynamics of Kentucky Bluegrass and Tall Fescue Turfgrass Swards. ASA, CSSA, SSSA *International Annual Meeting*, Salt Lake City, UT. Abstract #167479.
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#### Blog Posts, Social Media, and Websites (16)

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3. **Braun, R.** & Patton, A. (2021). Optimum seed date for fine fescue: Part 2. *Low Input Turf Using Fine Fescues*. <https://lowinputturf.umn.edu/optimum-seed-date-fine-fescue-part-2>
4. Patton, A., & **Braun, R.** (2021). Video: Identification tips for fine fescues. *Low Input Turf Using Fine Fescues*. <https://lowinputturf.umn.edu/video-identification-tips-fine-fescues>
5. **Braun, R.**, & Patton, A. (2020). Video: Research updates from Purdue University. *Low Input Turf Using Fine Fescues*. <https://lowinputturf.umn.edu/video-research-updates-purdue-university>

6. **Braun R., & A. Patton.** (2020). What are the fine fescues? *Low Input Turf Using Fine Fescues*.

<https://lowinputturf.umn.edu/news/what-are-fine-fescues>

<https://blogs.k-state.edu/turf/>

7. **Braun, R.** (2025). Management Guides to Reduce Winterkill in Warm-Season Turfgrasses. *Kansas State University Turfgrass Research and Extension Blog*.
8. **Braun, R.** (2025). Cultivar Selection When Purchasing Turfgrass Seed or Sod. *Kansas State University Turfgrass Research and Extension Blog*. <https://blogs.k-state.edu/turf/cultivar-selection-when-purchasing-turfgrass-seed-or-sod/>
9. **Braun, R.** (2022). Two-Minute Turf Extension Video: It's Seeding Time! *Kansas State University Turfgrass Research and Extension Blog*. <https://www.youtube.com/watch?v=7Sp9p4DD5o>
10. Alderman, E., **Braun, R.**, & Hoyle, J. (2015). The art of knowing your seed label. *Kansas State University Turfgrass Research and Extension Blog*. <https://blogs.k-state.edu/turf/the-art-of-knowing-your-seed-label>
11. Hoyle, J., & **Braun, R.** (2014). Do you want green zoysiagrass, buffalograss, or bermudagrass in the winter? *Kansas State University Turfgrass Research and Extension Blog*. <https://blogs.k-state.edu/turf/do-you-want-green-zoysiagrass-buffalograss-or-bermudagrass-in-the-winter/>

<https://sustainable-secure-food-blog.com/>

12. **Braun, R.** (2022). What is sustainable turfgrass? *Sustainable, Secure Food Blog*. <https://sustainable-secure-food-blog.com/2022/07/07/what-is-sustainable-turfgrass/>

#### *Social media accounts*

13. Social media manager for "KSU Turf" Twitter (X) and Facebook accounts (2023–present)
14. Social media manager for USDA-AMS-funded "Zoysia Research" Twitter (X) account (2022–present)
15. Social media manager for USDA-SCRI-funded "Low-Input Turf" Accounts (2018–present)
- a. Twitter (<https://twitter.com/LowInputTurf>), Facebook (<https://www.facebook.com/LowInputTurf>), Pinterest (<https://www.pinterest.com/lowinputturf/>), Instagram (<https://www.instagram.com/lowinputturf/>).

#### *Personal lab website*

16. Braun Turfgrass Lab (2022–present) <http://www.braunturfgrass.com/>

### Grant Proposals Funded (awarded \$2,900,097)

#### Hatch Capacity Grants Funded

Project title	Duration	Grant Agency	Grant Amount (amount to my program)	Role	Collaborators
Increasing Information, Opportunities, Production, and Adoption of Turfgrass Sod	10/01/2022 - 9/30/2027	USDA-NIFA	--	Lead-PI	J. Fry, S. Keeley

#### Grant Proposals Funded

Project title	Duration	Grant Agency	Grant Amount (amount to my program)	Role	Collaborators
Performance and recovery of four turfgrass species subjected to golf cart traffic during prolonged drought.	1/1/2016 – 12/31/2017	Golf Course Superintendents Association	\$7,930	Co-PI	D. Bremer, J. Hoyle
Simulation of nitrous oxide emissions and carbon sequestration in zoysiagrass fairway turf using the DAYCENT model.	1/1/2018 – 12/31/2020	United States Golf Association	\$76,812	Co-PI	D. Bremer
Identification of successful nitrogen fertilization establishment regimes for fine fescue sod production	1/1/2016 – 12/31/2017	The Lawn Institute	\$7,437	Co-PI	A.Patton
Investigation of water submersion tolerance of fine fescues ( <i>Festuca</i> spp.) in comparison to other cool-season turfgrass species	1/1/2021 – 12/31/2022	Golf Course Superintendents Association	\$26,373	Co-PI	A.Patton

Sod strength characteristics of 24 fine fescue cultivars	4/1/2021 – 12/31/2022	The Lawn Institute	\$22,847	Co-PI	A.Patton
FARM to LAWN: Enhancing the production, establishment, and marketability success of zoysiagrass sod.	3/31/2022 - 3/30/2026	USDA - AMS	\$748,040 (\$168,704)	Lead-PI	J. Fry, Purdue Univ, Texas A&M Univ.
Management Cost and Input Comparisons of Seeded vs. Sodded Turfgrass Areas	1/1/2023 - 12/31/2024	Heart of America Golf Course Superintendents Association	\$7,500	Lead-PI	--
Quantifying the Influence of the Aggressiveness and Ratio of Kentucky Bluegrass on Sod Strength of Tall Fescue-Kentucky Bluegrass Seed Mixtures	1/1/2023 - 12/31/2025	The Lawn Institute	\$31,251	Lead-PI	--
Dr. Braun Research Program Support	2/1/2023-12/31/2025	Kansas Turfgrass Foundation	\$15,000	Lead-PI	--
Cool-season Water Use Review	7/27/2023-7/26/2024	United States Golf Association	\$3,000	Lead-PI	--
Evaluation of Fine Fescue Cultivar Performance in Kansas	8/4/2023-12/31/2025	Blue Moon Farms	\$10,000	Lead-PI	--
Contributions of Turfgrass to Soil Quality, Soil Health, and Sustainability of Urban and Suburban Environments	12/1/2023 – 12/31/2026	RISE (Responsible Industry for a Sound Environment)	\$25,000	Lead-PI	--
Management Cost and Input Comparisons of Seeded vs. Sodded Turfgrass Areas Year 2	1/1/2024 - 12/31/2025	Heart of America Golf Course Superintendents Association	\$7,000	Lead-PI	--
Dr. Braun Research Program Support	2/1/2023-12/31/2025	Kansas Turfgrass Foundation	\$15,000	Lead-PI	--
2023 National Kentucky Bluegrass Trial	5/1/2024-10/31/2029	National Turfgrass Evaluation Program	\$5,000	Lead-PI	--
2024 National Tall Fescue Trial	4/1/2025-10/31/2030	National Turfgrass Evaluation Program	\$6,000	Lead-PI	--
Increasing the Diversity of Sod Production through Sustainable Turfgrass Adoption	9/30/2024 – 9/29/2027	USDA-AMS	\$993,207 (\$177,141)	Lead-PI (PD)	Purdue University, University of Minnesota, Rutgers University
Team Plants: Developing tomorrow's leaders in agricultural cropping systems through cross-disciplinary research and extension experiences	03/01/2024 – 02/28/2029	USDA - NIFA	\$749,772 (--)	PI	25 other collaborators from KSU and USDA-ARS
Evaluation of Advanced Zoysiagrass Hybrids for Golf Course Tees to Greens Use	1/1/2025 - 12/31/2029	US Golf Association, Inc.	\$122,912	Lead-PI	--
Management Cost and Input Comparisons of Seeded vs. Sodded Turfgrass Areas Year 3	1/1/25 to 12/31/26	Heart of America Golf Course Superintendents Association	\$10,000	Lead-PI	--
Dr. Braun Research Program Support	2/1/2025-12/31/2026	Kansas Turfgrass Foundation	\$10,000	Lead-PI	--

#### INVITED PRESENTATIONS

##### Extension/Outreach (>130) (Estimated audience reach of >16,000 industry professionals)

Event	Presentation	Invited	Location	Date (mo/yr)
HAGCSA Common Grounds Conference	K-State Turfgrass Research Update - 60 mins	Yes	Olathe, KS	12/19/25
HAGCSA Common Grounds Conference	Strategies for Reducing Inputs and Emissions on Golf Courses - 60 min	Yes	Olathe, KS	12/19/25
75 <sup>th</sup> Annual Kansas Turf and Landscape Conference	Plant Growth Regulators – 60 min	Yes	Manhattan, KS	12/4/25
75 <sup>th</sup> Annual Kansas Turf and Landscape Conference	Student Internship Overview by K-State Students – 60 min	Yes	Manhattan, KS	12/4/25



75 <sup>th</sup> Annual Kansas Turf and Landscape Conference	Cultivation – 30 min	Yes	Manhattan, KS	12/3/25
75 <sup>th</sup> Annual Kansas Turf and Landscape Conference	Turfgrass Weeds – 30 min	Yes	Manhattan, KS	12/3/25
75 <sup>th</sup> Annual Kansas Turf and Landscape Conference	Preemergence Herbicides – 60 min	Yes	Manhattan, KS	12/3/25
Zoysiagrass Field Day	New Zoysiagrass Research efforts – 10 min	Yes	West Lafayette, IN	8/19/25
Zoysiagrass Field Day	Zoysiagrass Cultivar Showcase – 5 min	Yes	West Lafayette, IN	8/19/25
Zoysiagrass Field Day	Zoysiagrass Home Lawn Research – 20 min	Yes	West Lafayette, IN	8/19/25
Golf Course Superintendents Association of America (GCSAA) Webinar Series	Fine Fescue Strategies for Golf Course Management – 60 min	Yes	Virtual	8/12/25
2025 Kansas Turf & Ornamentals Field Day	NTEP Cool-season Turfgrasses – 15 mins	Yes	Manhattan, KS	8/7/25
Blueville Nursery Tee Time	The Turfgrass Industry, Benefits, and Best Management Practices	Yes	Manhattan, KS	7/24/25
GCSAA First Green Event – Stagg Hill GC	The Importance of Soils and Benefits of Turfgrass Systems	Yes	Manhattan, KS	6/18/25
Golf Course Superintendents Association of America (GCSAA) Webinar Series	Benefits of Turfgrasses to Humans and How to Talk about Them – 60 min	Yes	Virtual	4/10/25
Iowa Pesticide Applicators Continuing Instruction Course Program	Preemergence Herbicides – 45 min	Yes	Virtual	2025 program
New England Regional Turfgrass Conference and Show	Sports Turf: Overseeding, interseeding, and traffic stress management – 60 min	Yes	Providence, RI	3/5/25
New England Regional Turfgrass Conference and Show	Strategies for reducing inputs and emissions in turfgrass systems – 60 min	Yes	Providence, RI	3/4/25
New England Regional Turfgrass Conference and Show	Distinguishing fine fescues: A comprehensive guide to proper utilization – 60 min	Yes	Providence, RI	3/4/25
GCSAA 2025 Conference	Strategies for Reducing Inputs and Emissions on Golf Courses – 120 min	Yes	San Diego, CA	2/3/25
GCSAA 2025 Conference	Traffic management during suboptimal growing conditions – 120 min	Yes	San Diego, CA	2/3/25
74 <sup>th</sup> Annual Kansas Turf and Landscape Conference	Braun Lab Research Update on Sod Production and Coated Seed	Yes	Manhattan, KS	12/4/24
74 <sup>th</sup> Annual Kansas Turf and Landscape Conference	Best cultivar options for warm-season and cool-season turfgrasses in the transition zone	Yes	Manhattan, KS	12/4/24
74 <sup>th</sup> Annual Kansas Turf and Landscape Conference	Turfgrass Weeds	Yes	Manhattan, KS	12/4/24
74 <sup>th</sup> Annual Kansas Turf and Landscape Conference	Cultivation	Yes	Manhattan, KS	12/4/24
October Kansas City Sod Growers Association Meeting	K-State Turfgrass Research Update	Yes	Overland Park, KS	10/9/24
2024 Kansas Turf & Ornamentals Field Day	Does turfgrass seed coating actually help? – 15 mins	Yes	Manhattan, KS	8/1/24
2024 Kansas Turf & Ornamentals Field Day	Tall Fescue and Kentucky bluegrass sod options – 15 mins	Yes	Manhattan, KS	8/1/24
GCSAA 2024 Conference	Herbicide Tolerance of 11 Grass Species for Minimal-to-no Mow Golf Course Rough Areas	Yes	Phoenix, AZ	1/24
GCSAA 2024 Conference	Distinguishing Fine Fescues: A Comprehensive Guide to Proper Utilization	Yes	Phoenix, AZ	1/24
GCSAA 2024 Conference	Managing Perennial Ryegrass Seedheads to Improve Turf Quality	Yes	Phoenix, AZ	1/24
73 <sup>rd</sup> Annual Kansas Turf and Landscape Conference	Customized agronomic programs for better turf results	Yes	Manhattan, KS	11/30/23
73 <sup>rd</sup> Annual Kansas Turf and Landscape Conference	Turf traffic management during suboptimal growing conditions	Yes	Manhattan, KS	11/29/23
73 <sup>rd</sup> Annual Kansas Turf and Landscape Conference	Cultivation	Yes	Manhattan, KS	11/29/23
73 <sup>rd</sup> Annual Kansas Turf and Landscape Conference	Mowing Basics	Yes	Manhattan, KS	11/29/23
2023 Kansas Turf & Ornamentals Field Day	Fine Fescue and Tall Fescue NTEP Trials – 15 mins	Yes	Olathe, KS	8/3/23
K-State Garden Hour	Drought Tolerant Lawns Of Kansas - Warm Season Turfgrasses – 60 mins	Yes	Virtual	6/7/23

Nebraska Turf Conference	Seeding tips for turf areas – 60 Min	Yes	La Vista, NE	1/5/23
Nebraska Turf Conference	Managing minimum to no-mow areas of the golf course – 60 mins	Yes	La Vista, NE	1/5/23
Nebraska Turf Conference	Busting weed control myths – 60 mins	Yes	La Vista, NE	1/4/23
72 <sup>nd</sup> Annual Kansas Turf and Landscape Conference	Managing minimum to no-mow turf areas on the golf course and landscape	Yes	Manhattan, KS	12/1/22
72 <sup>nd</sup> Annual Kansas Turf and Landscape Conference	New Zoysia Update	Yes	Manhattan, KS	12/1/22
72 <sup>nd</sup> Annual Kansas Turf and Landscape Conference	Cultivation	Yes	Manhattan, KS	11/30/22
72 <sup>nd</sup> Annual Kansas Turf and Landscape Conference	Mowing Basics	Yes	Manhattan, KS	11/30/22
Washington Turf and Landscape Show	Managing minimum to no-mow areas of the golf course – 50 mins	Yes	Virtual	12/22
Washington Turf and Landscape Show	Busting weed control myths – 60 mins	Yes	Virtual	12/22
2022 Kansas Turf & Ornamentals Field Day	New zoysiagrass cultivar finds its way out! – 15 min	Yes	Haysville, KS	8/4/22
Iowa Pesticide Applicators Continuing Instruction Course Program	Busting weed control myths – 45 min	Yes	Virtual	2022 program
Indiana Green Expo Online	Using fine fescues successfully in Indiana – 60 min	Yes	Virtual	4/22
Indiana Green Expo Online	Update: sod production research at Purdue – 60 min	Yes	Virtual	4/22
Commercial Pesticide Applicator Category 3b Training	Management of turf weeds – 60 min	Yes	West Lafayette, IN	3/1/22
Commercial Pesticide Applicator Category 3b Training	Turf cultural practices – 60 min	Yes	West Lafayette, IN	3/1/22
Indiana Green Expo	Using fine fescues successfully in Indiana – 60 min	Yes	Indianapolis, IN	1/22
Indiana Green Expo	Sod production research at Purdue – 60 min	Yes	Indianapolis, IN	1/22
Indiana Green Expo	Workshop E: turf math: Making the complicated seem simple – 4 hours	Yes	Indianapolis, IN	1/22
Northern Green Expo	Seeding tips for turf areas – 30 min	Yes	Minneapolis, MN	1/12/22
Northern Green Expo	Practical Applications for low maintenance turf – 1 hr	Yes	Minneapolis, MN	1/11/22
Pest Management and Lawn Maintenance: Online Workshop for Lawn-care Professionals	How turfgrass grows: The basics of turf maintenance – 1 hr 45 min	Yes	Virtual	10/21
2021 Turf and Landscape Seminar	Seeding tips for home lawns and sports fields – 45 min	Yes	Virtual	11/21
2021 Turf and Landscape Seminar	Turf traffic management during suboptimal growing conditions – 1 hr	Yes	Virtual	11/21
Indiana Professional Lawn & Landscape Association	Busting weed control myths – 1 hr	Yes	Danville, IN	08/21
MRTF Turf and Landscape Field Day	Managing perennial ryegrass seedheads to improve turf quality – 15 min	Yes	West Lafayette, IN	7/21
Pest Management and Lawn Maintenance: Online Workshop for Lawn-care Professionals	How turfgrass grows: The basics of turf maintenance – 1 hr 45 min	Yes	West Lafayette, IN	6/21
Commercial Pesticide Applicator Category 3b Training	Management of turf weeds – 60 min	Yes	West Lafayette, IN	3/4/21
Commercial Pesticide Applicator Category 3b Training	Turf cultural practices – 60 min	Yes	West Lafayette, IN	3/4/21
Michigan Green Industry Association 34th Annual Trade Show & Convention	Helpful advice for identifying turfgrasses - 1 hr	Yes	Virtual	3/21
Michigan Green Industry Association 34th Annual Trade Show & Convention	Preemergence herbicides to use when seed goes down – 1 hr	Yes	Virtual	3/21
Michigan Green Industry Association 34th Annual Trade Show & Convention	Busting weed control myths – 1 hr	Yes	Virtual	3/21
Turf Producers International 2021 Virtual Series	Fine fescue sod production	Yes	Virtual	2/21

Indiana Green Expo	Seeding tips for sports fields – 50 min	Yes	Virtual	1/21
Indiana Green Expo	Busting weed control myths – 35 min	Yes	Virtual	1/21
Pest Management and Lawn Maintenance: Online Workshop for Lawncare Professionals	How Turfgrass Grows: The Basics of Turf Maintenance – 1 hr 45 min	Yes	Virtual	12/20
70th Annual Kansas Turfgrass Conference	Busting weed control myths – 30 min	Yes	Virtual	12/20
70th Annual Kansas Turfgrass Conference	Developing a weed control program – 60 min	Yes	Virtual	12/20
70th Annual Kansas Turfgrass Conference	Preemergence herbicides you can use when seed goes down – 30 min	Yes	Virtual	12/20
2020 Virtual Herbicide Workshop	Busting weed control myths – 35 min	Yes	Virtual	11/20-12/20
2020 Turf and Landscape Seminar	Busting weed control myths – 35 min	Yes	Virtual	11/20
2020 Turf and Landscape Seminar	Managing minimal-to-no mow areas on the golf course – 30 min	Yes	Virtual	11/20
Pest Management and Lawn Maintenance: A Workshop for Lawncare Professionals	How Turfgrass Grows: The Basics of Turf Maintenance – 1 hr 45 min	Yes	West Lafayette, IN	10/20
Illinois Landscape Contractors Association Turf Education Day	Busting weed control myths – 45 min	Yes	Virtual	8/20
Illinois Landscape Contractors Association Turf Education Day	What are fine fescues and how can you use them? – 55 min	Yes	Virtual	8/20
Golf Course Superintendents Association of America (GCSAA) Webinar Series	Steps for successful fine fescue establishment – 65 min	Yes	Virtual	8/20
MRTF Turf and Landscape Field Day	Zoysiagrasses for the Midwest: Research updates – 15 min	Yes	Virtual	7/20
MRTF Turf and Landscape Field Day	Fine fescue establishment and management: Research updates – 15 min	Yes	Virtual	7/20
Pest Management and Lawn Maintenance: Online Workshop for Lawncare Professionals	How Turfgrass Grows: The Basics of Turf Maintenance – 1 hr 45 min	Yes	Virtual	6/20
Commercial Pesticide Applicator Category 3b Training	Management of turf weeds – 60 min	Yes	West Lafayette, IN	2/26/20
Commercial Pesticide Applicator Category 3b Training	Turf cultural practices – 60 min	Yes	West Lafayette, IN	2/26/20
Indiana Green Expo	Steps for successful fine fescue establishment – 45 min	Yes	Indianapolis, IN	2/13/20
Commercial Pesticide Applicator Category 3b Training	Management of turf weeds – 60 min	Yes	West Lafayette, IN	2/4/20
Commercial Pesticide Applicator Category 3b Training	Turf cultural practices – 60 min	Yes	West Lafayette, IN	2/4/20
2019 Turf and Landscape Seminar	The art of knowing your turfgrass seed label, and identification, calculation, and establishment tips – 75 min	Yes	West Lafayette, IN	11/19
2019 HLA Fall Seminar	Environmental and management impacts in turfgrass systems: nitrous oxide emissions and carbon sequestration – 60 min	Yes	West Lafayette, IN	10/19
2019 Lawn Care Diagnostic Training	Helpful advice for identifying turfgrasses – 90 min	Yes	West Lafayette, IN	7/19
2019 Lawn Care Diagnostic Training	Low-input options for grassing Indiana lawns – 25 min	Yes	West Lafayette, IN	7/19
MRTF Turf and Landscape Field Day	Zoysiagrass for Roughs in Indiana? Low Maintenance Options – 15 min	Yes	West Lafayette, IN	7/19
MRTF Turf and Landscape Field Day	Performance of Low Input Grasses – 15 min	Yes	West Lafayette, IN	7/19
MRTF Turf and Landscape Field Day	Fixing Dead Spots: The Number One Reason Homeowners Fire Their Lawn Care Company – 15 min	Yes	West Lafayette, IN	7/19
Commercial Pesticide Applicator Category 3b Training	Management of turf weeds – 60 min	Yes	West Lafayette, IN	2/20/19
Commercial Pesticide Applicator Category 3b Training	Turf cultural practices – 60 min	Yes	West Lafayette, IN	2/20/19
Commercial Pesticide Applicator Category 3b Training	Management of turf weeds – 60 min	Yes	West Lafayette, IN	2/13/19
Commercial Pesticide Applicator Category 3b Training	Turf cultural practices – 60 min	Yes	West Lafayette, IN	2/13/19

Professional Landscape Management School	Enhancing winter aesthetics of warm season turf – 60 min	Yes	Evansville, IN	2//1/19
Indiana Green Expo	Using pigments and colorants on dormant warm season turf – 60 min	Yes	Indianapolis, IN	1/19
Indiana Green Expo	Consumer preferences in lawn – 45 min	Yes	Indianapolis, IN	1/19
2018 Turf and Landscape Seminar	Customized agronomic programs for better turf results – 60 min	Yes	West Lafayette, IN	11/18
2018 Lawn Care Diagnostic Training	What are fine fescues and how can you use them? – 45 min	Yes	West Lafayette, IN	7/18
MRTF Turf and Landscape Field Day	Weed ID and control tour – 20 min	Yes	West Lafayette, IN	7/18
MRTF Turf and Landscape Field Day	Where does all the nitrogen go after application? – 15 min	Yes	West Lafayette, IN	7/18
Commercial Pesticide Applicator Category 3b Training	Turf cultural practices – 60 min	Yes	West Lafayette, IN	2/18
KSRE Commercial Pesticide Applicator Recertification Training	Weed Management and Identification in Turfgrass – 50 min	Yes	Wichita, KS	11/17
KSRE Commercial Pesticide Applicator Recertification Training	Disease Management and Identification in Turfgrass – 50 min	Yes	Wichita, KS	11/17
66 <sup>th</sup> Annual Kansas Turfgrass Conference	Environmental stewardship: Can smarter fertilizer and irrigation practices reduce greenhouse gas emissions? – 50 min	Yes	Topeka, KS	12/16
66 <sup>th</sup> Annual Kansas Turfgrass Conference	"No carts today"- The effects of traffic on drought-stressed turfgrasses – 50 min	Yes	Topeka, KS	12/16
Kansas Turfgrass Field Day	Carts during drought - How does the turf respond? – 15 min	Yes	Manhattan, KS	8/16
65 <sup>th</sup> Annual Kansas Turfgrass Conference	Fertilization basics – 30 min	Yes	Topeka, KS	12/15
65 <sup>th</sup> Annual Kansas Turfgrass Conference	Water use management – 50 min	Yes	Topeka, KS	12/15
Kansas Turfgrass Field Day	Managing turfgrass under stress – 15 min	Yes	Olathe, KS	8/15
Kansas Water Symposium	Waterwise solutions with warm season grass turf – 60 min	Yes	Hesston, KS	3/15
64 <sup>th</sup> Annual Kansas Turfgrass Conference	Colorants for warm-season grasses – 50 min	Yes	Topeka, KS	12/14
64 <sup>th</sup> Annual Kansas Turfgrass Conference	Mowing basics – 30 min	Yes	Topeka, KS	12/14
Kansas Turfgrass Field Day	Using colorant and paints – 15 min	Yes	Manhattan, KS	8/14
63 <sup>rd</sup> Annual Kansas Turfgrass Conference	Managing turfgrass in HD: Paints, pigments, and more – 45 min	Yes	Topeka, KS	12/13
63 <sup>rd</sup> Annual Kansas Turfgrass Conference	Basics of mowing turfgrass – 30 min	Yes	Topeka, KS	12/13
63 <sup>rd</sup> Annual Kansas Turfgrass Conference	Fertilization basics – 30 min	Yes	Topeka, KS	12/13
Kansas Turfgrass Field Day	Painting dormant warm-season grasses green – 15 min	Yes	Haysville, KS	8/13
62 <sup>nd</sup> Annual Kansas Turfgrass Conference	Mowing basics – 30 min	Yes	Topeka, KS	12/12

## Interviews

**CSA News Magazine** (<https://acsess.onlinelibrary.wiley.com/toc/23253584/2023/68/9>)

- Coyne, K. (2023). Maintaining Turf in a Changing Climate. *CSA News*, 68(9), 4-11. <https://doi.org/10.1002/csan.21113>  
(I also provided the cover image of this volume)

**Kansas State Agriculturist Magazin** - Interview with K. Johnson in "Turf Titans" , pg. 70-71.

- <https://www.flipsnack.com/kstateagcomaged/fall-2024-agriculturist-magazine/full-view.html>

**Emerging Trends - Frankly Speaking with Dr. Ross Braun Podcast Interview**

- Available on TurfNet Radio podcast on Spotify or Apple Music  
[https://www.turfnet.com/podcasts/rossi/emerging\\_trends\\_ross\\_braun/](https://www.turfnet.com/podcasts/rossi/emerging_trends_ross_braun/)

**Turfgrass Epistemology Channel/Posdcast**

- Discussion with Dr. Travis Shaddox on "Do new turfgrasses need less fertilizer and pesticides?"
- <https://www.youtube.com/live/1i--97imRak?si=pi-DYcgnRa1eZvV2>



## LEADERSHIP, SERVICE, & MEMBERSHIP RECORD

### **National/International**

1. *Ad hoc* manuscript reviewer (2017–present) for: *Agronomy* (1), *Agronomy Journal* (7), *Agrosystems, Geosciences & Environment* (5), *Compost Science & Utilization* (3), *Crop, Forage and Turfgrass Management* (14), *Crop Science* (21), *Discover Applied Sciences* (1), *Grass Research* (3), *Grass and Forage Science* (1), *HortScience* (2), *HortTechnology* (2), *International Turfgrass Society Research Journal* (18), *Irrigation Science* (1), *Journal of Environmental Quality* (1), *Journal of the American Water Resources Association* (2), *Natural Sciences Education* (1), *Urban Ecosystems* (1)
2. Guest editor: Advancing Resilient Agricultural Systems: Adapting to and Mitigating Climate Change (special virtual issue across multiple journals by ASA, CSSA, SSSA).
3. Guest Associate Editor: *Crop Science*, 2024–2025 for International Turfgrass Research Conference
4. Science Communications Editor, 2024–present for *Crop, Forage and Turfgrass Management*.
5. National Turfgrass Evaluation Program (NTEP) – Tall Fescue Committee, 2024–Present
6. North American Colleges & Teachers of Agriculture, lifetime member, 2022–present
7. International Turfgrass Society, 2018–present.
8. Turfgrass Producers International (TPI), Educator, 2022–present.
9. Irrigation Association, Lifetime Technical Member, 2022–present.
10. American Society of America, Crop Science Society of America, and Soil Science Society of America (ASA, CSSA, SSSA), 2014–present.
11. American Society of Horticultural Science (ASHS), Professional, 2014–present.
12. Golf Course Superintendents Association of America (GCSAA), 2008–present.
13. Judge for C-5 Graduate Student Competitions, ASA, CSSA and SSSA *International Meetings*. 2020–present
14. Judge for Collegiate Turf Bowl, Golf Course Superintendents Association of America (GCSAA), 2023–present

### **University/Local**

1. Director of Rocky Ford Turfgrass Research Center, 2022–present
2. Advisor of the K-State Chapter of the Golf Course Superintendents Association (GCSAA) Undergraduate Student Club, Kansas State University, 2022–present.
3. Board of Directors non-voting member, Kansas State University Golf Course Management and Research Foundation, 2023–present
4. HNR Course/Curriculum Committee, Fall 2023–present
5. HNR Space Utilization Committee Chair, Fall 2024–present
6. HNR Search Committee Chair for Assistant Professor/Extension Specialist of Turfgrass Management (vice-Fry) position, Summer 2025–present
7. HNR Search Committee for Extension Specialist/Assistant Professor (vice-Sullins) position, Spring 2024
8. Reviewer for the K-State College of Agriculture Graduate Student Scholarships, 2024–present
9. GCSAA First Green Volunteer, Stag Hill Golf Course, 2025
10. Horticulture and Landscape Architecture Diversity Committee, Purdue University, 2021–2022.
11. Riverside Covenant Church, West Lafayette, IN. (Youth group leader: 2021–2022), (Welcome team 2019–2021).
12. The First Green, The Fort Golf Course, Indianapolis, IN. September 2018.
13. Kansas State University Horticulture and Natural Resources Graduate Organization, 2013–2017 (President: 2015–2016).
14. Gamma Sigma Delta Honor Society, 2015–2018.
15. Kansas State University Graduate Student Council Participant, 2014–2017.
16. North Dakota State University (NDSU) Plant Sciences Curriculum Committee, 2009–2011.
17. North Central Turfgrass Association, 2009–2012 (Undergraduate Student Representative: 2010–2011).
18. North Dakota State University Student GCSAA Chapter, 2008–2012 (President: 2010–2011).
19. YouthFront Camp West service day volunteer, Edgerton, KS. 2015–2016.
20. Wildcat Ministries, Manhattan, KS. 2015–2017.
21. Habitat for Humanity ReStore volunteer, Manhattan, KS. 2015–2017.
22. National Society of Collegiate Scholars, 2008–2011.

## SCHOLARLY AND PROFESSIONAL AWARDS & HONORS

1. 2025 Outstanding Article for *Crop, Forage and Turfgrass Management* Journal in the topic area of Applied Turfgrass Management.

2. 2024: Top cited article in 2023 in *Crop, Forage and Turfgrass Management Journal*, Strategies for reducing inputs and emissions in turfgrass systems
3. 2023: Top cited article in 2021-2022 in *Agronomy Journal*, Investigation of cool-season species, seeding rate, and nitrogen fertilization in sod production: I. Establishment and sod tensile strength.
4. 2022 Editor's Citation for Excellence Award for the *Crop, Forage and Turfgrass Management Journal* for outstanding professional contributions for manuscript review in 2022.
5. 2022: "Safety Hero" for the month of August 2022 by the K-State College of Agriculture/KSRE Office of Environmental Health and Safety, for my efforts in preparing two laboratory spaces to meet safety guidelines for my research program (<https://express.adobe.com/page/UcgWOPPjFEp5e/>).
1. 2022: Top cited article in 2020-2021 in *Crop Science journal*, Fine fescues: A review of the species, their improvement, production, establishment, and management.
2. Gamma Sigma Delta Graduate Student PhD Research Award, Kansas State University. 2017.
3. 1<sup>st</sup> Place Agricultural Sciences Poster Competition: *Kansas State University Graduate Research, Arts and Discovery Forum*, 2017.
4. 1<sup>st</sup> Place Graduate Student Oral Competition: Golf Turf Management. *ASA, CSSA and SSSA International Meetings*, 2016
5. 3<sup>rd</sup> Place Graduate Student Poster Competition: Turf Ecology and Management. *ASA, CSSA and SSSA International Meetings*, 2016.
6. Timothy R. Donoghue Graduate Scholarship, *Kansas State University*, 2014–2017.
7. Richard Elmore Brown Outstanding College of Agriculture Graduate Student Teaching Award, *Kansas State University*, 2016.
8. Chris Stiegler Turfgrass Science Student Travel Award, *ASA, CSSA and SSSA International Meetings*, 2015.
9. 2<sup>nd</sup> Place *ASA, CSSA and SSSA International Meetings* Photo Contest, 2015.
10. 2<sup>nd</sup> Place Graduate Student Oral Competition: Turfgrass Cultural Practices, Ecology and Environment. *ASA, CSSA and SSSA International Meetings*, 2015.
11. North Dakota State University Undergraduate Representative, *Jacobsen Future Turf Managers Program*, Charlotte, NC. 2012.
12. Graduated with honors of Magna Cum Laude, *North Dakota State University*, 2011.
13. North Dakota State University Academic Dean's List, 2008–2011.

#### CERTIFICATIONS

1. Kansas Department of Agriculture, 2023–present  
Kansas Commercial Pesticide Applicator License Number: 303998  
Categories(s): 3A & 3B (Core, Ornamentals, Turf Pest)
2. Office of Indiana State Chemist, West Lafayette, IN, 2018–2023  
Indiana Commercial Pesticide Applicator License Number: PB274276  
Categories(s): 3B (Core, Turf Management)
3. Minnesota Department of Agriculture, St. Paul, MN, 2011–2012  
Minnesota Non-Commercial Pesticide Applicator License Number: 20128343  
Categories(s): A & E (Core, Turf and Ornamentals)