

CRAIG A. ROBERTS

Professor, State Forage Specialist (ret)

Plant Sciences

College of Agriculture, Food and Natural Resources

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EDUCATION

- Ph.D. Agronomy; Minor: Biochemistry; May 1985; University of Arkansas, Fayetteville, AR
- M.S. Agronomy; May 1982; University of Arkansas, Fayetteville, AR
- B.S. Geography; B.S. History; December 1979; University of North Alabama, Florence, AL
- A.A. Biblical Studies; May 1977; Florida College, Temple Terrace, FL

EXPERIENCE

- Professor, State Forage Specialist; University of Missouri (2005 to 2024)
- Associate Professor, State Forage Specialist; University of Missouri (1997-04)
- Assistant Professor, State Forage Specialist; University of Missouri (1991-96)
- Research Assistant Professor; University of Missouri (1988-90)
- Postdoctoral Research Associate; University of Illinois (1985-88)

HONORS

- Driver to Distinction; Dean, CAFNR, University of Missouri (2020)
- Extension Teamwork Award; University of Missouri (2019)
- Truman Award; Vice Chancellor, MU Extension, University of Missouri (2018)
- Extension Education Award; Crop Science Society of America (2017)
- Donald W. Fancher Provost Award of Outstanding Achievement in Extension and Continuing Education; University of Missouri (2016)
- Grasslander of the Year; Missouri Forage and Grassland Council (2015)
- Extension Teamwork Award; University of Missouri (2014)
- Chair; MU Faculty Council for University Policy (2013 to 2015)
- Outstanding Alumnus; Crop, Soil, Environmental Sciences, University of Arkansas (2008)
- J.W. Burch State Specialist Award for Agricultural Extension; University of Missouri (2008)
- Outstanding Contribution, Plant Sciences Faculty Fellowship; University of Missouri (2007)
- Fellow; Crop Science Society of America (2006)
- Fellow; American Society of Agronomy (2006)
- Editor-in-Chief; Crop Science Society of America Publications (2004-09)
- Frank Meyer Medal for Outstanding Paper in Plant Genetic Resources; Crop Science Society of America (Co-recipient, 2002)
- Senior Faculty Award for Research; Sigma Xi, Missouri Chapter (1997)
- Distinguished Appropriate Technology Award for Environmental Protection; National Center for Appropriate Technology, Butte MT (Co-recipient, 1994)
- Phi Alpha Theta, Rho-Beta Chapter (Honors History, 1987)
- Outstanding Contribution to Young Scientists Technical Program; American Forage and Grassland Council (1983)
- President; University of North Alabama Geography Club (1979)

ECONOMIC DEVELOPMENT

- AgBotanica, LLC

INTERNATIONAL

- Plant germplasm expedition in Morocco (1989)
- Cooperative research with University of Manitoba (1991) and Massey University (1995)
- Editor; Near-Infrared Spectroscopy in Agriculture, 822-p, 27 international authors (2004)
- Editor; *Neotyphodium* in Cool-Season Grasses, 392-p, 37 international authors (2005)
- Symposia and laboratory visits in Scotland (2017, 1997, 1991), South Korea (2001), Seychelles (2001), Germany (2000), Denmark (2000, 1998), Sweden (1999), Italy (1999, 1996), England (1997), New Zealand (1996), Canada (1995), France (1989)
- Virtual teaching at the Podillia State University, the Uman National University of Horticulture, and the Podillia Institute of Fodder and Agriculture, Ukraine (2023)

PROFESSIONAL ORGANIZATIONS

- Crop Science Society of America
- Alliance for Grassland Renewal
- Agronomy Society of America
- International Society of Precision Agriculture
- Soil Science Society of America
- American Forage and Grassland Council
- Missouri Forage and Grassland Council

PUBLICATION AND EDITORIAL SUMMARY (peer-reviewed journals only)

JOURNAL	AUTHOR	EDITOR*
<i>Agronomy Journal</i>	12	--
<i>Analytical Biochemistry</i>	1	--
<i>Applied Spectroscopy</i>	1	--
<i>Applied Turfgrass Science</i>	--	EIC
<i>Cereal Chemistry</i>	1	--
<i>Crop, Forage, Turfgrass Management</i>	1	--
<i>Crop Management</i>	2	EIC
<i>Crop Science</i>	27	AE, TE, EIC
<i>Forage and Grazinglands</i>	4	EIC
<i>Grass and Forage Science</i>	1	--
<i>Inter. J. Anim. and Veter. Sci</i>	1	--
<i>Journal of Agricultural and Food Chemistry</i>	2	--
<i>Journal of American Oil Chemists</i>	1	--
<i>Journal of Animal Science</i>	5	--
<i>Journal of Chemical Ecology</i>	1	--
<i>Journal of Dairy Science</i>	1	--
<i>Journal of Environmental Management</i>	1	--
<i>Journal of Environmental Quality</i>	--	EIC
<i>Journal of Plant Registrations</i>	--	EIC, FE
<i>Journal of Production Agriculture</i>	2	--
<i>Native Plants Journal</i>	1	--
<i>Natural Products Communication</i>	1	--
<i>Seed Science and Technology</i>	1	--
<i>The Plant Genome</i>	--	EIC, FE
<i>Weed Technology</i>	3	--

*EIC=Editor-in-Chief; AE=Associate Editor; TE=Technical Editor; FE=Founding Editor

PUBLICATIONS

REFEREED JOURNAL

- Hatch, K.M., R.N. Lerch, R.J. Kremer, C.D. Willett, C.A. Roberts, and K.W. Goyne. 2022. Evaluating phytochemical and microbial contributions to atrazine degradation. *J. Environ. Manage.* 321:115840. doi: 10.1016/j.jenvman.2022.115840.
- Roberts, C.A., J.G. Andrae, S.R. Smith, M.H. Poore, C.A. Young, D.W. Hancock, and G.J. Pent. 2020. The alliance for grassland renewal: a model for teaching endophyte technology. *Inter. J. Anim. and Veter. Sci.* 14:50-43.
- Bunton, G, Z. Trower, C. Roberts, and K.W. Bradley. 2019. Seasonal changes in forage nutritive value of common weeds encountered in Missouri pastures. *Weed Techn.* 34:164-171. doi:10.1017/wet.2019.89.
- Kenyon, S.L., C.A. Roberts, J.A. Lory, E.A. Bailey, R.L. Kallenbach, G.E. Rottinghaus, C.A. Young, and D.K. Davis. 2019. Comparison and diet preference of novel endophyte-infected tall fescue cultivars. *Crop Sci.* 59:1317-1329.
- Kenyon, S.L., C.A. Roberts, R.L. Kallenbach, J.A. Lory, M.S. Kerley, and G.E. Rottinghaus. 2018. Ergovaline concentrations of tall fescue as affected by limestone application. *Crop, Forage, and Turfgrass Management* 4:170082. doi:10.2134/cftm2017.11.0082.
- Kenyon, S.L., C.A. Roberts, R.L. Kallenbach, J.A. Lory, M.S. Kerley, G.E. Rottinghaus, N.S. Hill, and M.R. Ellersieck. 2018. Vertical distribution of ergot alkaloids in the vegetative canopy of tall fescue. *Crop Sci.* 58:925-931. doi: 10.2135/cropsci2017.03.0202.
- Kallenbach, R.L., C. Roberts, J. Lory, and S. Hamilton. 2017. Nitrogen fertilization rates influence stockpiled tall fescue forage through winter. *Crop Sci* 57:1732-1741. doi: 10.2135/cropsci2016.02.0097.
- Willett, C.D., R.N. Lerch, K.W. Goyne, N.D. Leigh, C. Lin, and C.A. Roberts. 2016. Benzoxazinone-mediated triazine degradation: a proposed reaction mechanism. *J. Agric. Food Chem.* 64:4858–4865. DOI: 10.1021/acs.jafc.6b01017
- Richner, J.M., R.L. Kallenbach, and C.A. Roberts. 2014. Dual use switchgrass: Managing switchgrass for biomass production and summer forage. *Agron. J.* 106:1438-1444.
- Willett, C.D., R.N. Lerch, K.W. Goyne, N.D. Leigh, C. Lin, and C.A. Roberts. 2014. A simple method for isolation and purification of DIBOA-Glc from *Tripsacum dactyloides*. *Nat. Prod. Comm.* 9:1-4.
- Roberts, C.A., D.K. Davis, M.L. Looper, R.L. Kallenbach, G.E. Rottinghaus, and N.S. Hill. 2014. Ergovaline and total ergot alkaloid concentrations in high- and low-moisture tall fescue silage. *Crop Sci.* 54:1887-1892.
- Houx, J.H., III., C.A. Roberts, and F.B. Fritsch. 2013. Evaluation of sweet sorghum bagasse as an alternative livestock feed. *Crop Sci.* 53:1784-1790.
- Safiullah M. P., T. Vuong, K. Clark, J. Lee, G. Shannon, C. Roberts, M. Ellersieck, J. Burton, P.B. Cregan, D.L. Hyten, H.T. Nguyen and D.A. Sleper. 2013. Genetic mapping and confirmation of quantitative trait loci for seed protein and oil contents and seed weight in soybean. *Crop Sci.* 53:765-774.
- Willett, C., Lerch, R., Lin, C., Goyne, K., Leigh, N., and Roberts, C. 2013. Identification of an atrazine-degrading benzoxazinoid in eastern gamagrass (*Tripsacum dactyloides*). *J. Agric. Food Chem.* 61:8026-8033.
- Hamilton, S.A., R.L. Kallenbach, G.J. Bishop-Hurley and C.A. Roberts. 2013. Stubble height management changes the productivity of perennial ryegrass and tall fescue pastures. *Agron. J.* 105:557-562.

- Sather, B.C., C.A. Roberts, and K.W. Bradley. 2013. Influence of metsulfuron-containing herbicides and application timings on tall fescue seedhead production and forage yield. *Weed Tech* 27:34-40.
- Roberts, C.A., J.H. Houx III, and F.B. Fritschi. 2011. Near-infrared analysis of sweet sorghum bagasse. *Crop Sci.* 51:2284-2288.
- Roberts, C.A., R.L. Kallenbach, G.E. Rottinghaus, and N.S. Hill. 2011. Ergovaline and ergot alkaloid concentrations change in conserved tall fescue forage. Online. *Forage and Grazingl.* doi:10.1094/FG-2011-1013-01-RS.
- Rogers, W.M., C.A. Roberts, J.G. Andrae, D.K. Davis, G.E. Rottinghaus, N.S. Hill, R.L. Kallenbach, and D.E. Spiers. 2011. Seasonal fluctuation of ergovaline and total ergot alkaloid concentrations in tall fescue regrowth. *Crop Sci.* 51:1-6.
- Rosebaum, K.K., K.D. Bradley, and C.A. Roberts. 2011. Influence of increasing common ragweed (*Ambrosia artemisiifolia* L.) and common cocklebur (*Xanthium strumarium* L.) densities on forage nutritive value and yield in tall fescue pastures and hayfields. *Weed Tech.* 25:222-229. 2011.
- Rogers, W.M., C.A. Roberts, R.L. Kallenbach, G.E. Rottinghaus, N.S. Hill, W.E. McClain, and D.G. Blevins. 2010. Poultry litter and its chemical equivalent can affect ergot alkaloid concentrations in tall fescue. *Forage and Grazingl.* Online. doi:10.1094/FG-2010-1203-01-RS.
- Bradley, K.D., R.L. Kallenbach, C.A. Roberts. 2010. Influence of seeding rate and herbicide treatments on weed control, yield, and quality of spring-seeded glyphosate-resistant alfalfa. *Agron. J.* 102:751-758.
- Looper, M.L., R.W. Rorie, C.N. Person, T.D. Lester, D.M. Hallford, G.E. Aiken, C.A. Roberts, G.E. Rottinghaus, and C.F. Rosenkrans, Jr. 2009. Influence of toxic endophyte-infected fescue on sperm characteristics and endocrine factors of yearling Brahman-influenced bulls. *J. Anim. Sci.* 87:1184-1191.
- Dierking, R.M., R.L. Kallenbach, and C.A. Roberts. 2009. Fatty acid profiles of orchardgrass, tall fescue, perennial ryegrass, and alfalfa. *Crop Sci.* 50:1496-1502.
- Roberts, C.A., R.L. Kallenbach, N.S. Hill, G.E. Rottinghaus, and T. J. Evans. 2009. Ergot alkaloid concentrations in tall fescue hay during production and storage. *Crop Sci.* 49:1496-1502.
- Curtis, L.E., R.L. Kallenbach, and C.A. Roberts. 2008. Allocating forage to fall-calving cow-calf pairs strip-grazing stockpiled tall fescue. *J. Anim. Sci.* 86:780-789.
- Dierking, R.M., R.L. Kallenbach, M.S. Kerley, C.A. Roberts, and T.R. Lock. 2008. Yield and nutritive value of 'Spring Green' festulolium and 'Jessup' endophyte-free tall fescue stockpiled for winter pasture. *Crop Sci.* 48:2463-2469.
- Ren, C., K.D. Bilyeu, C.A. Roberts, and P.R. Beuselinck. 2007. Factors regulating the mobilization of storage reserves in soybean cotyledons during post-germinative growth. *Seed Sci. Tech.* 35:303-317.
- Shewmaker, G.E., H.F. Mayland, C.A. Roberts, P.A. Harrison, N.J. Chatterton, and D.A. Sleper. 2006. Carbohydrate accumulations in eight tall fescue cultivars. *Grass and Forage Sci.* 61:413-421.
- Roberts, C.A., C. Ren, P.R. Beuselinck, H.R. Benedict, and K. Bilyeu. 2006. Fatty acid profiling of soybean cotyledons by near-infrared spectroscopy. *Appl. Spectrosc.* 60:1328-1333.

- Kallenbach, R.L., C.A. Roberts, T.R. Lock, T.R., D.H. Keisler, M.R. Ellersieck, and G.E. Rottinghaus. 2006. Performance of steers fed ammoniated straw from tall fescue seed fields. Online. Forage and Grazinglands doi:10.1094/FG-2006-0113-01-RS.
- Roberts, C.A., H.R. Benedict, N.S Hill, R.L. Kallenbach, and G.E. Rottinghaus. 2005. Determination of ergot alkaloid content in tall fescue by near-infrared spectroscopy. *Crop Sci.* 45:778-783.
- Wen, L., J.E. Williams, R.L. Kallenbach, C.A. Roberts, P.R. Beuselinck, and R.L. McGraw. 2004. Cattle preferentially select birdsfoot trefoil from mixtures of tall fescue and birdsfoot trefoil. Online. Forage and Grazinglands doi:10.1094/FG-2004-0924-01-RS.
- McGraw, R.L., F.W. Shockley, J.F. Thompson, and C.A. Roberts. 2004. Evaluation of fifteen native legume species for forage yield, quality, and seed production. *Native Plants J.* 4:152-159.
- Roberts, C.A., and J.A. Andrae. 2004. Tall fescue toxicosis and management. Online. *Crop Managm.* doi. 10:1094/CM-2004-0427-01-MG.
- Nihsen, M., E.L. Piper, C.P. West, R.J. Crawford, T.M. Denard, Z.B. Johnson, C.A. Roberts, D.A. Spiers, and C.F. Rosenkrans. 2004. Growth rate and physiology of steers grazing tall fescue inoculated with novel endophytes. *J. Anim. Sci.* 82:878-883.
- Kallenbach, R.L., G.J. Bishop-Hurley, M.D. Massie, and C.A. Roberts. 2003. Stockpiled annual ryegrass for winter forage in the lower Midwestern USA. *Crop Sci.* 43:1414-1419.
- Wen, L., C.A. Roberts, J.E. Williams, R.L. Kallenbach, P.R. Beuselinck, and R.L. McGraw. 2003. Condensed tannin concentration of rhizomatous and non-rhizomatous birdsfoot trefoil in grazed mixtures and monocultures. *Crop Sci.* 43:302-306.
- Roberts, C.A., R.L. Kallenbach, and N.S. Hill. 2002. Harvest and storage methods affect ergot alkaloid concentration in tall fescue. Online. *Crop Managm.* doi. 10:1094/CM-2002-0917-01-BR.
- Wen, L., R.L. Kallenbach, J.E. Williams, C.A. Roberts, P.R. Beuselinck, R.L. McGraw, and H.R. Benedict. 2002. Performance of steers grazing rhizomatous and non-rhizomatous birdsfoot trefoil in pure stands and in tall fescue mixtures. *J. Anim. Sci.* 80:1970-1976.
- Gebrehiwot, L., P.R. Beuselinck, and C.A. Roberts. 2002. Seasonal variations in condensed tannin concentration of three *Lotus* species. *Agron. J.* 94:1059-1065.
- Roberts, C.A., D.E. Spiers, A.L. Karr, H.R. Benedict, D.A. Sleper, P.A. Eichen, C.P. West, E.L. Piper, and G.E. Rottinghaus. 2002. Use of a rat model to evaluate tall fescue seed infected with introduced strains of *Neotyphodium coenophialum*. *J. Agric. Food Chem.* 50:5742-5745.
- Steiner, J.J., P.R. Beuselinck, S.L. Greene, J.A. Kamm, J.H. Kirkbride, and C.A. Roberts. 2001. A description and interpretation of the NPGS birdsfoot trefoil core subset collection. *Crop Sci.* 41:1968-1980.
- Gray, D.E., C.A. Roberts, G.E. Rottinghaus, H.E. Garrett, and S.G. Pallardy. 2001. Quantification of chicoric acid in purple coneflower by near infrared reflectance spectroscopy. *Crop Sci.* 41:1159-1161.
- Kallenbach, R.L., C.A. Roberts, L.R. Teuber, G.J. Bishop-Hurley, and H.R. Benedict. 2001. Estimation of fall dormancy in alfalfa by near infrared reflectance spectroscopy. *Crop Sci.* 41:774-777.
- Kallenbach, R.L., R.L. McGraw, P.R. Beuselinck, and C.A. Roberts. 2001. Summer and autumn growth of rhizomatous birdsfoot trefoil. *Crop Sci.* 41:149-156.
- Marek, S.M., C.A. Roberts, A.L. Karr, and D.A. Sleper. 2000. Chitinase activity in tall fescue as affected by ethephon and cultivar. *Crop Sci.* 40:713-716.

- Roberts, C.A., R.E. Joost, and G.E. Rottinghaus. 1997. Quantification of ergovaline in tall fescue by near infrared reflectance spectroscopy. *Crop Sci.* 37:281-284.
- Marek, S.M., C.A. Roberts, and A.L. Karr. 1995. Silver stain detection of chitinolytic isozymes after polyacrylamide gel electrophoresis. *Anal. Biochem.* 230:184-185.
- Davis, D.K., R.L. McGraw, P.R. Beuselinck, and C.A. Roberts. 1995. Total nonstructural carbohydrate accumulation in roots of annual lespedeza. *Agron. J.* 87:89-92.
- Bewig, K.M., A.D. Clarke, C.A. Roberts, and N. Unklesbay. 1994. Discriminant analysis of vegetable oils using near infrared reflectance spectroscopy. *J. Am. Oil Chem.* 71:195-200.
- Roberts, C.A., S.M. Marek, W. Lei, and A.L. Karr. 1994. Quantification of chitinase activity by near infrared reflectance spectroscopy. *Crop Sci.* 34:1070-1073.
- Gerrish, J.R., P.R. Peterson, C.A. Roberts, and J.R. Brown. 1994. Nitrogen fertilization of stockpiled tall fescue in the Midwestern U.S. *J. Prod. Agric.* 7:98-104.
- Pavetti, D.P., D.A. Sleper, and C.A. Roberts. 1994. Genetic variation and relationship of quality traits between herbage and seed of tall fescue. *Crop Sci.* 34:427-431.
- Roberts, C.A., P.R. Beuselinck, M.R. Ellersieck, D.K. Davis, and R.L. McGraw. 1993. Condensed tannins in diverse accessions of *Lotus corniculatus*. *Crop Sci.* 32:675-679.
- Bughara, S.S., D.A. Sleper, and C.A. Roberts. 1992. Effect of prepared cellulase solution concentrations on development of NIRS equations for predicting digestibility in tall fescue. *Agron. J.* 84:636-638.
- Roberts, C.A., S.M. Marek, T.L. Niblack, and A.L. Karr. 1992. Parasitic *Meloidogyne* and mutualistic *Acremonium* elicit chitinase in tall fescue. *J. Chem. Ecol.* 18:1107-1116.
- Beuselinck, P.R., D.A. Sleper, S.S. Bughara, and C.A. Roberts. 1992. Effect of mono and mixed culture of tall fescue and birdsfoot trefoil. *Agron. J.* 84:133-137.
- Roberts, C.A., R.R. Marquardt, A.A. Frohlich, R.L. McGraw, R.G. Rotter, and J.C. Henning. 1991. Chemical and spectral quantification of mold in barley. *Cereal Chem.* 68:272-275.
- Roberts, C.A., and K.J. Moore. 1990. Chemical regulation of tall fescue physiological development and nutritive value with amidochlor. *Agron. J.* 82:523-525.
- Moore, K.J., C.A. Roberts, and J.O. Fritz. 1990. Indirect estimation of the botanical composition of alfalfa-smooth bromegrass mixtures at three stages of maturity. *Agron. J.* 82:287-290.
- Roberts, C.A., K.J. Moore, and K.D. Johnson. 1989. Forage quality and yield of wheat-vetch at different stages of maturity and vetch seeding rates. *Agron. J.* 81:57-60.
- Roberts, C.A., F.E. Barton, II, and K.J. Moore. 1988. Estimation of *Acremonium coenophialum* mycelium in tall fescue tissue. *Agron. J.* 80:737-740.
- Roberts, C.A., P.L. Houghton, K.J. Moore, K.A. MacMillan, and R.P. Lemenager. 1987. Analysis of bovine udder, plate, and viscera using near infrared reflectance spectroscopy. *J. Anim. Sci.* 65:278-281.
- Roberts, C.A., K.J. Moore, D.W. Graffis, H.W. Kirby, and R.P. Walgenbach. 1987. Quantification of mold in hay using near infrared reflectance spectroscopy. *J. Dairy Sci.* 70:2560-2564.
- Roberts, C.A., K.J. Moore, D.W. Graffis, H.W. Kirby, and R.P. Walgenbach. 1987. Chitin as an estimate of mold in hay. *Crop Sci.* 27:783-785.

BOOKS EDITED

- Roberts, C.A., C.P. West, and D.A. Spiers (eds.) 2005. *Neotyphodium* in Cool-Season Grasses. 392 p. Blackwell Publishing Professional, Ames, IA.
- Roberts, C.A., J.W. Workman, and J.B. Reeves (eds.) 2004. Near-Infrared Spectroscopy in Agriculture. 822 p. ASA Monogr. 44, ASA, Madison, WI.

Brummer, E.C., N.S. Hill, and C.A. Roberts (eds.) 1998. Molecular and Cellular Technologies for Forage Improvement. 134 p. Crop Sci. Soc. Am. Spec. Pub. 26.

BOOK CHAPTERS

- Hill, N.S., L.P. Bush, and C.A. Roberts. 2020. Anti-quality components in forages. *In* K.J. Moore, et al. (eds.) Forages: the Science of Grassland Agriculture. Vol 2, 7th ed. Wiley Publishing, Hoboken, NJ.
- Roberts, C.A., G. Lacefield, D. Ball, and G. Bates. 2009. Managing tall fescue to optimize grazing in the northern hemisphere. p. 85-99. *In* H. Fribourg et al. (eds.) Tall Fescue for the 21st Century. ASA, Madison, WI.
- Bush, L.P., C.A. Roberts, and C. Schultz. 2007. Plant chemistry and antiquality components in forage. p. 509-529. *In* RF Barnes, et al. (eds.) Forages: the Science of Grassland Agriculture. 6th ed. Iowa State Press, Ames, IA.
- Roberts, C.A., and J.A. Andrae. 2005. Public education in tall fescue toxicosis. p. 359-377. *In* C.A. Roberts, et al. (eds.) *Neotyphodium* in Cool-Season Grasses. Blackwell Publishing Professional, Ames, IA.
- Roberts, C.A., J.S. Stuth, and P.C. Flinn. 2004. Near-infrared applications in forages and feedstuffs. p. 231-267. *In* C.A. Roberts et al. (eds.) Near-Infrared Spectroscopy in Agriculture. ASA Monogr. 44, ASA, Madison, WI.
- Roberts, C.A. 1995. Microbiology of stored forages. p. 21-38. *In* K.J. Moore and M.A. Peterson (eds.) Post-harvest Physiology and Preservation of Forages. Crop Sci. Soc. Am. Spec. Pub. No. 22, Madison, WI.

LEADERSHIP AND SERVICE (since last promotion)

UNIVERSITY OF MISSOURI

- Education Director; Plant Sciences Extension
- Chair; MU Faculty Council on University Policy
- Intercampus Faculty Council (Columbia, Kansas City, Rolla, St Louis)
- Chair; Intercollegiate Athletics Committee
- Chair; Student Welfare Committee, Intercollegiate Athletics Committee
- Co-Coordinator; MU Forage-Livestock Group
- Executive Committee; Plant Sciences, College of Agriculture, Food and Natural Resources
- Co-Coordinator; Missouri Grazing Schools, MU Extension
- Founder; Race Relations Committee, Faculty Council
- Chair; Student Affairs Committee, Faculty Council
- Chair; Chancellor's Concert Series
- Chair; Missouri Unions Committee
- Faculty Advisor; The Berean Way Student Org
- Campus Faculty Committee on Tenure
- Promotion and Tenure Committee; Plant Sciences
- Promotion and Tenure Committee; College of Agriculture, Food and Natural Resources
- Policy Committee; College of Agriculture, Food and Natural Resources
- Advisory Board; Forage Systems Research Center
- RIF Committee; Plant Sciences, College of Agriculture, Food and Natural Resources
- Awards Committee; Plant Sciences, College of Agriculture, Food and Natural Resources
- Missouri Press Advisory Committee
- Volunteer Teaching (lead instructor, co-instructor)
- Various post-tenure review cases, search committees, and mentoring committees

NATIONAL AND INTERNATIONAL

- Chair; NCCCC31 Ecophysiological Aspects of Forage Production
- Chair and Co-Founder; Alliance for Grassland Renewal
- Editor-in-Chief; Crop Science Society of America
- Vice President; Thomas Jefferson Agricultural Institute
- Board of Directors; Crop Science Society of America
- Budget and Finance Committee; Crop Science Society of America
- Books and Monograph Committee; Crop Science Society of America
- Co-Founder; Ukraine Ag Assistance Group

COMMUNITY

- Co-Editor; *Psalms, Hymns, and Spiritual Songs*
- Music Director and Pipe Sargent; Pipes and Drums, Boone County Fire Protection District
- Bagpiper; Mid-Missouri Pipe Band