Erik H. Ervin, Ph.D.

Chairperson, Department of Plant and Soil Sciences
Professor, Turfgrass and Horticultural Systems
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EDUCATION

- Ph.D. Horticulture. Colorado State University. 1998.
- M.S. Horticulture. Colorado State University. 1995.
- M.A. Philosophy. University of Colorado-Boulder. 1992.
- B.S. Horticulture. Iowa State University. 1989.

PROFESSIONAL POSITIONS

Chairperson and Professor, Plant and Soil Sciences Department, University of Delaware, January 2018 to present.
Department Head (interim), Department of Crop and Soil Environmental Sciences (CSES), Virginia Tech, November 1, 2016 to 2017.
Assistant Dean of Academic Programs, College of Agriculture and Life Sciences (CALS), Virginia Tech, 2013 to 2017, 50% appointment.
Professor, Turfgrass Culture and Physiology, CSES, Virginia Tech, 2011 to 2017.
Associate Professor, Turfgrass Culture and Physiology, CSES, Virginia Tech, 2005 to 2011.
Assistant Professor, Turfgrass Culture and Physiology, CSES, Virginia Tech, 2001 to 2005.
Assistant Professor and State Extension Turfgrass Specialist. Division of Plant Sciences (Horticulture), University of Missouri-Columbia. 1998-2000.

AREAS OF SPECIALIZATION

- Undergraduate, graduate, and adult education in turfgrass agronomics.
- Undergraduate advising and curriculum management.
- Adaptation and cultural management requirements for warm- and cool-season turfgrass species used on golf courses, lawns, parks, athletic fields, and roadsides.
- The physiology and ecology of turfgrass responses to environmental stress and the use of synthetic and natural plant growth regulators for improved stress response.

AWARDS and HONORS

R.D. Cake Memorial Award, 2018, Virginia Turfgrass Council for Career Achievement
Fellow of American Society of Agronomy, 2016
Chair, Division C5 (Turfgrass Science) of the Crop Science Society of America, 2013
Visiting Professor, Agricultural University of Hebei, Baoding, China: October 2006.
Virginia Turfgrass Council Award for Outreach Excellence, 2004
Watson Fellowship from Golf Course Superintendents Association of America, 1998

SCHOLARSHIP

Google Scholar: 1995 total citations, h-index = 25 as of February 10, 2018

Scholarly publications (82), including books and book chapters for career (1997-2018)

*denotes a graduate or undergraduate student

1. Zhang, X., W. Wu, E. H. Ervin, C. Shang, and K. Harich. 2018. Salt stress injury is associated with hormonal alteration in Kentucky bluegrass. HortScience 53(1):97-101.

2. McCall, D. S., X. Zhang, D. G. Sullivan, S. D. Askew, and E. H. Ervin. 2017. Enhanced soil moisture assessment using narrowband reflectance vegetation indices in creeping bentgrass. Crop Science, 57(Supplement 1): S-161-S-168.
3. Wu, W., Q. Zhang, E. H. Ervin, Yang, Z., and X. Zhang. 2017. Physiological mechanism of enhancing salt stress tolerance of perennial ryegrass by 24-epibrassinolide. Frontiers in Plant Science. 8: 1017[1-11].
4. Zhang, X., C. Shang, Y. Liu, G. Hu, K. Harich, and E. H. Ervin. 2017. Hormone and dehydrin expression responses to cold acclimation in two zoysiagrass cultivars with contrasting freezing tolerance. Intl. Turfgrass Soc. Res. J. 13: 1-9.
5. Chandra, A., J. D. Fry, A. D. Genovesi, M. Meeks, M. C. Engelke, Q. Zhang, D. Okeyo, J. Q. Moss, E. Ervin, X. Xiong, S. Milla-Lewis, J.T. Brosnan, J. Griffin, and L. Parsons. 2017. Registration of 'KSUZ 0802' Zoysiagrass. J. Plant. Reg. doi:10.3198/ jpr2016.03.0010.
6. Ervin, E. H., N. Reams*, X. Zhang, A. Boyd*, and S. Askew. 2017. An integrated nutritional and chemical approach to *Poa annua* suppression in creeping bentgrass greens. Crop Science, 57(2):567-572.
7. Mertz*, I., N. Christians, E. H. Ervin, and X. Zhang. 2017. Physiological responses of creeping bentgrass (*Agrostis stolonifera* L.) to a tryptophan-containing organic byproduct. Intl. Turfgrass Soc. Res. J. 13: 1-9.
8. Zhang, X., E. H. Ervin, W. Wu, N. Sharma*, and A. Hamill*. 2017. Auxin and trinexapac-ethyl impact on root viability and hormone metabolism in creeping bentgrass under water deficit. Crop Science, 57(Supplement 1):S-13-S-137.
9. McCall, D. S., E. H. Ervin, C. D. Shelton*, N. Reams*, and S. D. Askew. 2016. Influence of ferrous sulfate and its elemental components on dollar spot suppression. Crop Science, 57(2):581-586.
10. Wang*, K., X. Zhang, and E. H. Ervin. 2016. Small heat shock proteins, a key player in grass plant thermotolerance. Heat Shock Proteins and Plants, Asea et al., (eds.). Chapter 3, pp. 41-64. Springer International Publishing, Switzerland.
11. Ervin, E. H. and R. E. Schmidt. 2015. Chapter 3: Turfgrass Growth and Development, pp. 67-74 in Virginia Turfgrass Certification Manual. J. M. Goatley (editor).
12. Ervin, E. H. and J. M. Goatley. 2015. Chapter 4: Irrigation Management Principles, pp. 75-92 in Virginia Turfgrass Certification Manual. J. M. Goatley (editor).
13. Ervin, E. H. and A. Nichols. 2015. Chapter 7: Mowing Principles and Practices, pp. 149-162 in Virginia Turfgrass Certification Manual. J. M. Goatley (editor).
14. Zhang, X., E. H. Ervin, Y. Liu, G. Hu, C. Shang, T. Fukao, and J. Alpuerto*. 2015. Differential responses of antioxidants, abscisic acid, and auxin to deficit irrigation in two perennial ryegrass cultivars contrasting in drought tolerance. JASHS 140(6):562-572.
15. Liu, Y., X. Zhang, H. Tran, L. Shan, J. Kim, K. Childs, E. H. Ervin, T. Frazier, and B. Zhao. 2015. Assessment of drought tolerance of 49 switchgrass genotypes using physiological and morphological parameters. Biotechnology for biofuels 8:152. DOI: 10.1186/s13068-015-0342-8.
16. Hu, G., Y. Liu, X. Zhang, F. Yao, Y. Huang, E. H. Ervin, and B. Zhao. 2015. Physiological evaluation of alkali-salt tolerant switchgrass lines. PLoS one 10(7), e0125305.

EXTRAMURAL GRANTS (1998-2017)

	Office of Sponsored Programs	Field Testing (industry-various)
Principal Investigator, VT	$2,053,053	$1,407,231
Co-P.I., VT	$1,965,684	$85,000
University of Missouri	$0	$191,200
Totals	$4,018,737	$1,683,431
Career Total	**$5,702,168**	

Recent examples

Ervin, E. (PI), H. Scherer, P. Ziegler, and C. Friedel. 2017-2020. **$139,604**. Sustainability Scholars Program: Increasing underrepresented student success through experiential learning. USDA-Higher Education Challenge Grant.

Ervin, E. (PI) and X. Zhang. 2010-2017, **$755,591**. Field testing of turfgrass products for abiotic stress resistance. Multiple corporate industry sponsors.

Evanylo, G. (co-PI) and E. Ervin (co-PI), 2012-2016, **$340,209**: Development and testing of exceptional quality biosolids products for renovating and remediating urban soils. Sponsor: Metropolitan Washington Council of Governments.

Ervin, E. (co-PI), S. Schoenholtz (co-PI), and M. Goatley. 2011-2015, **$76,000**. Stream water quality monitoring on Virginia golf courses. Sponsors: Environmental Institute for Golf, VA Golf Course Superintendents Association and Virginia Agriculture Council.

Evanylo, G. (co-PI), E. Ervin (co-PI) and X. Zhang, 2008-2011, **$317,256**: Effects of land application on drought stress resistance induced by biosolids-borne plant hormones and carbon sequestration under varying tillage practices. Sponsor: Metropolitan Washington Council of Governments.

Soldat, D. (PI), J. Stier, R. Brooks, J. Kerns, P. Mitchell, and C. Williamson (University of Wisconsin), C. Kome (USDA), E. Ervin (co-PI) and G. Evanylo (Virginia Tech), 2008-2012. **$485,085**: Increasing the economic and environmental sustainability of sod production using biosolids. Sponsor: United States Department of Agriculture, Specialty Crops Research Initiative.

INDUSTRY AND EXTENSION PUBLICATIONS (136 in career, recent examples below)

Ervin, E., C. Wilson*, S. Kingsbury, and S. Schoenholtz. 2017. Water quality of streams flowing through Virginia golf courses. Golf Course Management. October.

Shelton*, C., D. McCall, E. Ervin, and S. Askew. 2017. Ferrous sulfate for dollar spot suppression. Golfdom. 73(3):29.

Shelton*, C., D. McCall, and E. Ervin. 2016. Dollar spot suppression with iron sulfate. Virginia Turfgrass Journal. May/June: 24.

Badzmierowski*, M., G. Evanylo, and E. Ervin. 2016. Organic amendments improve tall fescue lawn performance in an urban soil. Virginia Turfgrass Journal. May/June: 24

Ervin, E. and T. Fink. 2015. Warm-season putting greens in Richmond?: A review of NTEP trial results from CCV. Virginia Turfgrass Journal. May/June:16-19.

Wilson*, C., E. Yagow, K. Xia, E. Ervin, and S. Schoenholtz. 2015. Effect of golf course turfgrass management on water quality of non-tidal streams in the Chesapeake Bay Watershed. Commonwealth Crier. Spring:11.

PRESENTATIONS AND OUTREACH

Scientific meetings

Author or coauthor of **144** scientific papers at professional society meetings (e.g., Crop Science Society of America, Plant Growth Regulator Association of America, International Turfgrass Society Conference) since 1993; **Abstract list not included**.

Turfgrass industry presentations at state, national and international conferences

Invited to speak on numerous turfgrass subjects at over 100 conferences, meetings, and workshops in 35 US states, Australia, Canada, United Kingdom, Chile, Columbia, China, Portugal, and Italy since 1998: **336 presentations,** (list not included).