

15 September 2025

CURRICULUM VITAE

David A. Wedin

A) ACADEMIC HISTORY

Birthdate: June 28, 1958
Citizenship: U.S.A.
Languages: English, Spanish

University Address: Center for Grassland Studies
University of Nebraska
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Lincoln, NE 68583-0974
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Degrees:
B.A. Biology & History of Science (Paracollege), St. Olaf College, Northfield, MN
1977 - 1981
Supervisor: Eugene Bakko

Ph.D Ecology, University of Minnesota, Minneapolis, MN
1983 - March 1990
Thesis Title: Nitrogen Cycling and Competition Among Grass Species
Supervisor: David Tilman

Employment:
2023-pres Director, UNL Center for Grassland Studies (50% FTE, 7/1/2023) & Professor, SNR (25% FTE)
2022-2023 Assistant Director for Properties & Land Management, UNL Center for Grassland Studies (20% FTE)
2008-pres Full Professor SNR/UNL
2000-2008 Associate Professor SNR / UNL
1998-2000 Assistant Professor (as of May 1, 1998) and Graduate Faculty Fellow
SNR / UNL
1997-1998 Associate Professor (tenured)
Department of Botany, University of Toronto
1992-1997 Assistant Professor
Department of Botany, University of Toronto
1992 Visiting Scientist (with William Parton)
Natural Resource Ecology Laboratory, CSU, Ft. Collins, Colorado
1990-1992 Post-doctoral Research Associate (with John Pastor)
Natural Resources Research Institute, University of Minnesota - Duluth
1985-1989 Graduate Research and Teaching Assistant
General Biology and Ecology Departments, University of Minnesota
1979-1981 Research and Teaching Assistant
Biology Department, St. Olaf College

Honors:
2014 Senior Faculty Holling Family Award for Teaching Excellence (CASNR/UNL)
1999 Junior Faculty Excellence in Research Award, Ag. Research Div., UNL
'99, '07, '14 Certificate of Recognition for Contributions to Students (UNL Parents Association and the UNL Teaching Council)
1983-1987 National Science Foundation Graduate Fellow
1981 Ken Bonde Award (St. Olaf College, for outstanding Paracollege senior)
1981 Phi Beta Kappa
1981 Departmental Distinction (St. Olaf College, Biology)

Professional Affiliations:
Ecological Society of America, AAAS, Society for Range Management

Research Interests:
Ecology and conservation of grasslands & savannas; carbon & nitrogen cycling in terrestrial ecosystems; Great Plains forestry; ecohydrology; fire ecology; conservation management of grasslands & woodlands.

Funded Grants (external):
2023-2024 "Integrated Shrub Management for Tallgrass Prairie Conservation in Eastern Nebraska", Lienemann Charitable Foundation. D.Wedin. \$40,000.
2019-2023 "Prairie Corridor Phase III", NE Environmental Trust (via City of Lincoln). D. Wedin, S. Thomas, and J. Wu-Smart. \$175,632.
2018-2021 "Shelterbelt Structure and Function in a Changing Great Plains Environment", USDA McIntire-Stennis, D. Wedin, J. Gamon, A. Suyker, E. North. \$150,000.
2016-2020 "Prairie Corridor Phase II", NE Environmental Trust (via City of Lincoln). D. Wedin, W. Schacht, and J. Wu-Smart. \$191,701.
2016-2020 "Ponderosa Pine on the Edge: Fire, Ecological Resilience and the Future of Nebraska's Pine Landscapes", USDA McIntire-Stennis, D. Twidwell and D. Wedin. \$375,000.

- 2014-2015 "Development of a model of American Burying Beetle Occurrence in the Plains Ecoregion of Nebraska", NE Dept of Roads. D. Wedin, L. Higley, W. Hoback (OSU). \$74,148. (8/2014 – 12/2015)
- 2013-2014 "Learning from the 2012 Niobrara Fires", NE Environmental Trust (via The Nature Conservancy). D. Wedin, W. Schacht, and D. Twidwell Jr. \$165,550 (5/2013 – 6/2016)
- 2011-2015 "Trees, shrubs, grasses and the Nebraska Sandhills: experimental ecohydrology and belowground ecology", USDA McIntire-Stennis Program. D. Wedin. \$250,000. (1/2011 – 12/2015)
- 2011-2015 "Methane uptake by grassland soils: biogeochemistry, microbial ecology and integrative modeling", National Science Foundation. J. vonFischer, S. Matzner, W. Parton, C. Webb, D. Wedin. \$1,392,000. (4/2011 – 3/2015)
- 2005-2010 "Trees, shrubs, grasses and the Nebraska Sandhills: experimental ecohydrology and belowground ecology", USDA McIntire-Stennis Program. D. Wedin. \$200,000.
- 2003-2007 "Sand Hills biocomplexity: integrating biogeophysical processes across space and time", National Science Foundation (Biocomplexity in the Environment Grant). D.A. Wedin, G. M. Henebry and D. Loope. \$1,800,000
- 2000-2001 "Spatiotemporal coupling of ecological and geological dynamics in the Nebraska Sand Hills", National Science Foundation (Biocomplexity Incubation Grant). D.A. Wedin, T.J. Arkebauer, S.C. Fritz, G. M. Henebry and D. Loope. \$100,000
- 2000-2006 "Biodiversity, disturbance and ecosystem functioning at the prairie-forest border." National Science Foundation (Long Term Ecological Research), D. Tilman, S. Hobbie, P. Reich, M. Davis, J. Knops, S. Naeem, M. Ritchie, D. Wedin, C. Lehman. \$4,200,000.
- 1999-2003 "Interaction of biodiversity, CO₂ and N on ecosystem functioning", Department of Energy. P. Reich, D. Tilman, S. Naeem, J. Knops, D.A. Wedin and D. Ellsworth, \$1,590,000.
- 1994-2000 "Succession, biodiversity and ecosystem functioning at the prairie-forest border", National Science Foundation (Long Term Ecological Research), D. Tilman, P. Reich, M. Ritchie, R. Inouye and D.A. Wedin; Wedin subcontract = \$34,000 per annum, total grant = \$3,780,000 US.
- 1992 – 1999 Participated in 8 funded research grants totaling \$2,112,000

B) SCHOLARLY AND PROFESSIONAL WORK

Publications (ResearchGate September 2025, H-Index 51, publications 100, citations 21,810):

- Gschwentner, D., L. Blehm, J. Brahney, D. Wedin, and J.R. Corman. In Press. Nitrogen-limitation overrides impacts of wildfire ash on primary production in naturally eutrophic, grassland lakes. Ecosystems.
- Wang, R., J.A. Gamon, K.F.E. Hogan, P.R. Kellar, and D. A. Wedin. 2025. Prairie management practices influence biodiversity, productivity and surface-atmosphere feedbacks. New Phytologist doi: 10.1111/nph.70195.
- Allen, R., A. Mazis, B. Wardlow, P. Cherubinia, J. Hiller, D. Wedin, and T. Awada. 2023. Coupling dendroecological and. remote sensing techniques to assess the biophysical traits of *Juniperus virginiana* and *Pinus ponderosa* within the Semi-Arid grasslands of the Nebraska Sandhills. Forest Ecology and Management 544:121184.
- Donovan, V.M., C.L. Wonkka, C.P. Roberts, D.A. Wedin, D.A. McGranahan, and D. Twidwell. 2023. The influence of wildfire on invasive plant abundance and spatial structure in eastern ponderosa pine savanna. Plant Ecology 224:987-999.
- Borgmeier A., Gattoni K., Harris T., Higgins R., Mullin P., Porazinska D., Powers K., Wedin D., and Powers T. 2022. Plectus of the Prairie: A Case Study of Taxonomic Resolution from a Nematode Biodiversity Survey. Journal of Nematology Vol.54 (Issue1) 2022-0039.
- Donovan, V.M., C.P. Roberts, Caleb; D.T. Fogarty, D.A. Wedin and D. Twidwell. 2022. Targeted grazing and mechanical thinning enhance forest stand resilience under a narrow range of wildfire scenarios. Ecosphere. DOI: 10.1002/ecs2.4061.
- Lamke, K.E., Wedin, D.A., and J. Wu-Smart. 2022. Remnant prairies and high-diversity restorations work together to support wild bees season-long. Prairie Naturalist. Special Issue 1:30-0.
- Borgmeier, A., K. Gattoni, T. Harris, P. Mullin, D. Porazinska, K. Powers, D. Wedin, & T. Powers. 2021. Nuance or numbers: Taxonomic bias in approaches to measure nematode biodiversity. Journal of Nematology 53:4-5. (meeting abstract).
- Mazis, A., J.A. Fowler, J. Hiller, Y. Zhou, B.D. Wardlow, D. Wedin and T. Awada. 2021. Ecophysio-optical traits of semiarid Nebraska grasslands under different *Juniperus virginiana* and *Pinus ponderosa* canopy covers. Ecological Indicators. 131: 2021.108159.
- Donovan, V.M., C. P. Roberts, C.L. Wonkka, D. Uden, D. Angeler, C. Allen, D.A. Wedin, R. Drijber and D. Twidell. 2021. Collapse, reorganization, and regime identity: breaking down past management paradigms in a forest-grassland ecotone. Ecology and Society. 26(2):27.
- K. Koehler-Cole, C.A. Proctor, R.W. Elmore and D. Wedin. 2021. Spring-planted cover crops for weed control in soybean. Renewable Agriculture and Food Systems. 1-8, <https://doi.org/10.1017/S1742170521000107>.
- Roberts, C.P., V.M. Donovan, C.R. Allen, D.B. Angeler, C. Helzer, D. Wedin and D. Twidwell. 2021. Monitoring for spatial regimes in rangelands. Rangeland Ecology and Management. 74:114-118.
- Roberts, C., V.M. Donovan, S. Nodskov, E. Keele, C.R. Allen, D. Wedin, and D. Twidwell. 2020. Fire legacies, heterogeneity, and the importance of mixed-severity fire in ponderosa pine savannas. Forest Ecology and Management, 459:117853.
- Donovan, V.M., C.L. Wonkka, D.A. Wedin, and D. Twidwell. 2020. Land-use type as a driver of large wildfire occurrence in the U.S. Great Plains. Remote Sensing. 12:1869
- Wedin, D.A. and M. P. Russelle. 2020. Nutrient cycling in forage production systems. Pages 215-225 in K.J. Moore, M. Collins, C.J. Nelson, and D.R. Redfearn (eds.) Forages Volume II: The Science of Grassland Agriculture (7th Ed). Wiley Blackwell Publishing, Ames, IA.
- Arterburn, J., D. Twidwell, C.L. Wonkka, W.H. Schacht & D.A. Wedin. 2019. Restoring Fire-Grazer Interactions to Pursue Heterogeneity in Sandhills Prairie. Frontiers in Ecology and Evolution, 7:365.
- Donovan, V.M., C.P. Roberts, C.L. Wonkka, D.A. Wedin & D. Twidwell. 2019. Ponderosa pine regeneration, wildland fuels management, and habitat conservation: Identifying trade-offs following wildfire. Forests 10:286
- Roberts, C., V.M. Donovan, C.L. Wonkka, L. Powell, C.R. Allen, D.G. Angeler, D.A. Wedin, and D. Twidwell. 2019. Fire legacies in eastern ponderosa pine forests. Ecology & Evolution, 9:1869-1879.
- Keele, E.C., V.M. Donovan, C.P. Roberts, S.M. Nodskov, C.L. Wonkka, C.R. Allen, L. Powell, D.A. Wedin, D.G. Angeler, & D. Twidwell. 2019. Relationships between a burn severity gradient, cavity-nesting birds and habitat in ponderosa pine forest. American Midland Naturalist, 181:1-17.
- Frater, P.N., E.T. Borer, P.A. Fay, V. Jin, B. Knaeble, E. Seabloom, L. Sullivan, D.A. Wedin, & W.S. Harpole. 2018. Nutrients and environment influence arbuscular mycorrhizal colonization both independently and interactively in *Schizachyrium scoparium*. Plant and Soil 425:493-506. <https://doi.org/10.1007/s1104-018-3597-6>.
- Adane, Z., P. Nasta, V. Zlotnik, & D. Wedin. 2018. Impact of grassland conversion to forest on groundwater recharge in the Nebraska Sand Hills. Journal of Hydrology: Regional Studies 15:171-183.
- Arterburn, J., D. Twidwell, W.H. Schacht, C.L. Wonkka, & D.A. Wedin. 2018. Resilience of Sandhills grassland to wildfire during drought. Rangeland Ecology and Management, 71:53-57.
- Liang, Z.B., D.J. Lee, I.M. Dweikat, D.A. Wedin, G.Y. Yuen and R.A. Drijber. 2017. Molecular diversity of arbuscular mycorrhizae in roots of

- Juniperus virginiana* invasive to grasslands. Soil Science Society of America Journal 81:526-536.
- Msanne, J., T. Awada, N. Bryan, W. Schacht, R. Drijber, Y. Li, X. Zhou, J. Okalebo, D. Wedin, J. Brandle, and J. Hiller. 2017. Ecophysiological responses of native invasive woody *Juniperus virginiana* l. to resource availability and stand characteristics in the semi-arid grasslands of the Nebraska Sandhills. Photosynthetica 55:219-230.
- Wedin, D. 2016. The 2016 Stubbendieck Great Plains Distinguished Book Prize winner: Michel Hogue's *Metis and the Medicine Line*. Great Plains Quarterly 36:253-257.
- Durso, L. M., Wedin, D. A., Gilley, J. E., Miller, D., Marx, D. 2016. Assessment of Selected Antibiotic Resistances in Ungrazed Native Nebraska Prairie Soils. Journal of Environmental Quality, 45 (2):454-462.
- Fay, P.A., and NUTNET (38 additional authors including D.A. Wedin). 2015. Grassland productivity limited by multiple nutrients. Nature Plants online doi: 10.1038/nplants.2015.80.
- Wang, T., D.A. Wedin, T.E. Franz, and J. Hiller. 2015. Effect of vegetation on the temporal stability of soil moisture in grass-stabilized semi-arid sand dunes. Journal of Hydrology 521:447-459.
- Wang, T., E. Istanbuluoglu, D. Wedin, and P. Hanson. 2015. Impacts of revegetation on the temporal evolution of soil saturated hydraulic conductivity in a vegetated sand dune area. Environmental Earth Sciences, 73:7651-7660.
- Nemec, K., C. Allen, D.A. Wedin and C. Helzer. 2013. Influence of diversity and seeding density on invasion resistance in experimental tallgrass prairie restorations. Ecological Restoration 31:168-185
- Awada, T., R. El-Hage, G. Makram, D.A. Wedin, J. Huddle, J. Msanne, R. Sudmeyer, D. Martin, and J. Brandle. 2013. Intra-annual variability and environmental controls over transpiration in a 58 year-old even-aged stand of invasive woody *Juniperus virginiana* L. in the Nebraska Sandhills. Ecohydrology. 6:731-740.
- Wingeyer, A.B., D.T. Walters, R. A. Drijber, D.C. Olk, T.J. Arkebauer, S.B. Verma, D.A. Wedin, and C.A. Francis. 2012. Fall conservation deep tillage stabilizes maize residues into soil organic matter. Soil Science Society of America Journal 76:2154-2163.
- Istanbuluoglu E., T. Wang, and D.A. Wedin. 2012. Evaluation of Ecohydrologic Model Parsimony at Local and Regional Scales in a Semiarid Grassland Ecosystem. Ecohydrology 5:121-142.
- Knops, J.M.H., D.A. Wedin, and S. Naeem. 2010. The role of litter quality feedbacks in terrestrial nitrogen and phosphorus cycling. The Open Ecology Journal 3:14-25.
- Schmeisser, R.L., D.B. Loope, and D. A. Wedin. 2009. Clues to the Medieval destabilization of the Nebraska Sand Hills, USA, from ancient pocket gopher burrows. Palaios 24:809-817.
- Sridhar, V. and D.A. Wedin. 2009. Hydrological behavior of grasslands of the Sandhills of Nebraska: Water and energy-balance assessment from measurements, treatments, and modelling. Ecohydrology 2:195-212.
- Wang, T., D. A. Wedin and V.A. Zlotnik. 2009. Field evidence for a negative correlation between saturated hydraulic conductivity and soil carbon in a sandy soil. Water Resources Research, Vol 45:W07503, doi:10.1029/2008WR006865.
- Sanderson, M.A., D. Wedin, and B. Tracy. 2009. Grassland: definition, origins, extent, and future. Pages 57-74 in W.F. Wedin and S.L. Fales (eds.) Grassland: Quietness and Strength for a New American Agriculture. ASA, CSSA, SSSA. Madison, WI.
- Eggemeyer, K.D., T. Awada, F.E. Harvey, D.A. Wedin, X. Zhou, and C.W. Zanner. 2008. Seasonal changes in depth of water uptake for encroaching trees *Juniperus virginiana* and *Pinus ponderosa* and two dominant C₄ grasses in a semi-arid grassland. Tree Physiology 29:157-169.
- Wang, T., Zlotnik, V.A., Wedin, D., Wally, K.D. 2008. Spatial trends in saturated hydraulic conductivity of vegetated dunes in the Nebraska Sand Hills: effects of depth and topography. Journal of Hydrology 349:88-97.
- Liang, Z., Drijber, R.A., Lee, D.J., Dwiekat, I.M., Harris, S.D., Wedin, D.A. 2008. A DGGE-cloning method to characterize arbuscular mycorrhizal community structure in soil. Soil Biology & Biochemistry 40:956-966.
- Mousel, E.M., W.H. Schacht, C.W. Zanner, and D.A. Wedin. 2007. Comparison of botanical composition, soil carbon content, and root distribution of subirrigated meadows in the Nebraska Sandhills. Great Plains Research 17:47-60.
- Wedin, D.A. and M. P. Russelle. 2007. Nutrient cycling in forage production systems. Pages 137-148 in R.F. Barnes, C.J. Nelson, K.J. Moore, and M. Collins (eds.) Forages Volume II: the Science of Grassland Agriculture. Blackwell Publishing, Ames, IA.
- Sridhar, V., K.G. Hubbard, and D.A. Wedin. 2006. Assessment of soil moisture dynamics of the Nebraska Sandhills using long-term measurements and a hydrology model. J. of Irrigation and Drainage Engineering. 132:463-473.
- Eggemeyer, K.D., T. Awada, D.A. Wedin, F.E. Harvey and X. Zhou. 2006. Ecophysiology of two native invasive woody species and two dominant warm-season grasses in the semiarid grasslands of the Nebraska Sandhills. International Journal of Plant Science 167:991-999.
- Tjoelker, M.G., J.M. Craine, D. Wedin, P.B. Reich and D. Tilman. 2005. Linking leaf and root trait syndromes among 39 grassland and savannah species. New Phytologist, 167:493-508.
- Wedin, D.A. 2004. C₄ Grasses: Resource use, ecology and global change. Pages 15-50 in Moser, L.E., B.L. Burson, and L.E. Sollenberger (eds.) Warm-Season (C₄) Grasses. Monograph No. 45. ASA, CSSA, SSSA. Madison, WI.
- Sanderson, M.A., R.H. Skinner, D.J. Barker, G.R. Edwards, B.F. Tracy, and D.A. Wedin. 2004. Plant species diversity and management of temperate forage and grazing land ecosystems. Crop Science 44:1132-1144.
- Reich, P.B., D. Tilman, S. Naeem, D.S. Ellsworth, J. Knops, J. Craine, D. Wedin, and J. Trost. 2004. Species and functional group diversity independently influence biomass accumulation and its response to CO₂ and N. Proceedings of the National Academy of Sciences (PNAS) 101:10101-10106.
- Craine, J.M., D.A. Wedin, F.S. Chapin III, and P.B. Reich. 2003. The dependence of root system properties on root system biomass of 10 North American grassland species. Plant and Soil 250:39-47.
- Craine, J. M., D. G. Tilman, D. A. Wedin, P. B. Reich, M. J. Tjoelker, and J. M. H. Knops. 2002. Functional traits, productivity and effects on nitrogen cycling of 33 grassland species. Functional Ecology 16:563-574.
- Craine, J.M., D.A. Wedin, F.S. Chapin and P.B. Reich. 2002. Relationship between the structure of root systems and resource use for 11 North American grassland plants. Plant Ecology 165:85-100.
- Craine, J. M., D. A. Wedin, and D. Tilman. 2002. Determinants of growing season soil CO₂ flux in a Minnesota grassland. Biogeochemistry 59:303-313.
- Knops, J.M.H., K.L. Bradley, and D.A. Wedin. 2002. Mechanisms of plant species impacts on ecosystem nitrogen cycling. Ecology Letters 5:454-466.
- Murphy, K.L., I.C. Burke, M.A. Vinton, W.K. Lauenroth, M.R. Aguiar, D.A. Wedin, R.A. Virginia, P.N. Lowe. 2002. Regional analysis of litter quality in the central grassland region of North America. Journal of Vegetation Science 13:395-402.
- Tilman, D., J. Knops, D. Wedin, P. Reich. 2002. Experimental and observational studies of diversity, productivity and stability. pp. 42-70. In: The functional consequences of biodiversity (A. Kinzig, S. Pacala and D. Tilman, eds), Monographs in Population Biology, Princeton University Press.
- Tilman, D., J. Knops, D. Wedin & P. Reich. 2002. Plant diversity and composition: effects on productivity and nutrient dynamics of experimental grasslands. Pages 21-35 in M. Loreau, S. Naeem and P. Inchausti (eds). Biodiversity and Ecosystem Functioning: Synthesis and Perspectives.

Oxford U. Press.

- Craine, J. M., J. Froehle, D. G. Tilman, D. A. Wedin, and F. S. Chapin, III. 2001. The relationships among root and leaf traits of 76 grassland species and relative abundance along fertility and disturbance gradients. *Oikos* 93:274-285.
- Craine, J. M., D. A. Wedin, and P. B. Reich. 2001. The response of soil CO₂ flux to changes in atmospheric CO₂, nitrogen supply, and plant diversity. *Global Change Biology* 7:947-953.
- Craine, J.M., D.A. Wedin, and P.B. Reich. 2001. Grassland species effects on soil CO₂ flux track the effects of elevated CO₂ and nitrogen. *New Phytologist* 150:425-434.
- Knops, J.M.H., D. Wedin & D. Tilman. 2001. Biodiversity and decomposition in experimental grassland ecosystems. *Oecologia* 126:429-433.
- Reich, P., J. Knops, D. Tilman, J. Craine, D. Ellsworth, M. Tjoelker, T. Lee, D. Wedin, S. Naeem, D. Behaeddin, G. Hendrey, S. Jose, K. Wragge, J. Goth & W. Bengston. 2001. Plant diversity enhances ecosystem responses to elevated CO₂ and nitrogen deposition. *Nature* 410:809-812.
- Reich, P.B., D.W. Petersen, D.A. Wedin and K. Wragge. 2001. Fire and vegetation effects on productivity and nitrogen cycling across a forest-grassland continuum. *Ecology* 82:1703-1719.
- Reich, P.B., D. Tilman, J. Craine, D. Ellsworth, M.G. Tjoelker, J. Knops, D. Wedin, S. Naeem, D. Bahaeddin, J. Goth, W. Bengston, and T.D. Lee. 2001. Do species and functional groups differ in acquisition and use of C, N and water under varying atmospheric CO₂ and N availability regimes? A field test with 16 grassland species. *New Phytologist* 150:435-448.
- Tilman, D., P.B. Reich, J. Knops, D. Wedin, T. Mielke and C. Lehman. 2001. Diversity and productivity in a long-term grassland experiment. *Science* 294:843-845.
- Gholz, H.L., D. A. Wedin, S. Smitherman, M. Harmon and W.J. Parton. 2000. Long-term dynamics of pine and hardwood litter in contrasting environments: toward a global model of decomposition. *Global Change Biology* 6:751-766.
- Wedin, D.A. 1999. Nitrogen availability, plant-soil feedbacks and grassland stability. Pages 193-197 in D. Eldridge and D. Freudenberger (eds). *People and Rangelands Building the Future*. Proceedings of the VI International Rangeland Congress. Townsville, Australia.
- Li, M., D.A. Wedin and L.L. Tieszen. 1999. C₃ and C₄ photosynthesis in *Cyperus* (Cyperaceae) in temperate eastern North America. *Canadian Journal of Botany* 77:209-218.
- Robertson, G.P., D. Wedin, P.M. Groffman, J.M. Blair, E.A. Holland, K.J. Nadelhoffer and D. Harris. 1999. Soil carbon and nitrogen availability: nitrogen mineralization, nitrification, and soil respiration potentials. Pages 258-271 In G.P. Robertson, C.S. Bledsoe, D.C. Coleman and P. Sollins (eds). *Standard Soil Methods for Long-Term Ecological Research*. Oxford U. Press, New York.
- Jarrell, W.M., D. E. Armstrong, D. F. Grigal, E.F. Kelly, H.C. Monger, D. A. Wedin. 1999. Soil water and temperature status. Pages 55-73 in G.P. Robertson, C.S. Bledsoe, D.C. Coleman and P. Sollins (eds). *Standard Soil Methods for Long-Term Ecological Research*. Oxford U. Press, New York.
- Sage, R.F., D.A. Wedin and M. Li. 1999. The biogeography of C₄ photosynthesis: patterns and controlling factors. Pages 313-373 in R.F. Sage and R.K. Monson (eds). *The Biology of C₄ Photosynthesis*. Academic Press.
- Craine, J.M., D.A. Wedin and F.S. Chapin III. 1999. Predominance of ecophysiological controls on soil CO₂ flux in a Minnesota grassland. *Plant and Soil* 207:77-86.
- Wedin, D.A. and J.M. Craine. 1998. Book review of T.M. Smith et al. "Plant Functional Types". *Ecoscience* 5:427-428.
- Tilman, D., J. Knops, D. Wedin, P. Reich, M. Ritchie and E. Siemann. 1997. The influence of functional diversity and composition on ecosystem processes. *Science* 277:1300-1302.
- Johnson, N.C. and D.A. Wedin. 1997. Soil carbon, nutrients, and mycorrhizae during conversion of a dry tropical forest to grassland. *Ecological Applications* 7:171-182.
- Wedin, D.A. and D. Tilman. 1997. Atmospheric nitrogen deposition: response (letters). *Science* 275:737.
- Wedin, D.A. and D. Tilman. 1996. Influence of nitrogen loading and species composition on the carbon balance of grasslands. *Science* 274:1720-1723.
- Wedin, D.A. 1996. Nutrient cycling in grasslands: an ecologist's perspective. Pages 29-42 in R. Joost (ed). *Nutrient Cycling in Forage Systems*. PPI, Manhattan, KS.
- Tilman, D., D. Wedin and J. Knops. 1996. Productivity and sustainability influenced by biodiversity in grassland ecosystems. *Nature* 379:718-720.
- Wedin, D.A., L.L. Tieszen, B. Dewey and J. Pastor. 1995. Carbon isotope dynamics during grass decomposition and soil organic matter formation. *Ecology* 76:1383-1392.
- Kephart, K., C. West and D.A. Wedin. 1995. Grassland ecosystems and their improvement. Pages 141-153 in J. Nelson et al. (eds). *Forages: The Science of Grassland Agriculture*. Iowa State University Press.
- Wedin, D.A. 1995. Species, nitrogen and grassland dynamics: the constraints of stuff. Pages 253-262 in C. Jones and J.H. Lawton (eds). *Linking Species and Ecosystems*. Chapman and Hall.
- Tilman, D., J.A. Downing and D.A. Wedin. 1994. Does diversity beget stability? (scientific correspondence). *Nature* 371:114
- Wedin, D.A. and J. Pastor. 1993. Nitrogen mineralization dynamics in grass monocultures. *Oecologia* 96:186-192
- Wedin, D.A. and D. Tilman. 1993. Competition among grasses along a nitrogen gradient: initial conditions and mechanisms of competition. *Ecological Monographs* 63:199-229.
- Wedin, D.A. 1992. Biodiversity conservation in Europe and North America: I. Grasslands - a common challenge. *Restoration and Management Notes* 10:137-143.
- Johnson, N.C., D. Tilman and D. Wedin. 1992. Plant and soil controls on mycorrhizal fungal communities. *Ecology* 73:2034-2042.
- Wedin, D.A. and D. Tilman. 1992. Nitrogen cycling, plant competition and the stability of tallgrass prairie. Pages 5-8 in Smith, D.D. and C. Jacobs (eds.), *Proceedings of the Twelfth North American Prairie Conference*. U. of Northern Iowa Press, Cedar Falls, Iowa.
- Tilman, D. and D. Wedin. 1991. Oscillations and chaos in the dynamics of a perennial grass. *Nature* 353: 653-655.
- Tilman, D. and D. Wedin. 1991. Dynamics of nitrogen competition between successional grasses. *Ecology* 72: 1038-1049.
- Tilman, D. and D. Wedin. 1991. Plant traits and resource reduction for five grasses growing on a nitrogen gradient. *Ecology* 72: 685-700.
- Wedin, D.A. and D. Tilman. 1990. Species effects on nitrogen cycling: a test with perennial grasses. *Oecologia* 84: 433-441.

Papers Presented or Co-Authored at Meetings and Symposia:

- Grass roots ecology & the stability of the Nebraska Sandhills. Nebraska Grazing Conference, Kearney, NE, August 2024. (D.A. Wedin)
- Growing season water use efficiency and evapotranspiration determined by eddy covariance and surface renewal of a soybean-corn rotation behind a tree windbreak in Nebraska. AGU Fall Meeting, December 2020 (K. Togliatti, B. Tong, T. J. Sauer, C. Dold, D. Wedin & A. Suyker)
- The resilience of the Sandhills: a legacy of grasslands. Nebraska Chapter Society for Range Management, Hastings NE, October 2019 (D. A. Wedin, M. Hartman & J. Hiller)
- Plant and pollinator diversity in remnant and restored tallgrass prairies: Are restored prairies better, worse or just different? America's Grasslands

Conference, Bismarck ND, August 2019 (K. Lamke, D. Wedin, J. Wu-Smart, E. Freese, W. Schacht & K. Hogan)

Fire legacies drive complexity in eastern ponderosa pine stand structure and biodiversity. North American Forest Ecology Workshop, Flagstaff, AZ. 2019. (C.P. Roberts, V.M. Donovan, C.L. Wonkka, L.A. Powell, C.R. Allen, A.G. Angeler, D. Wedin & D. Twidwell)

Impact of tree windbreaks on annual crops: carbon uptake and water use. 16th North American Agroforestry Conf, Corvallis, OR, June 2019 (C. Dold, J.H. Prueger, D. Wedin & T.J. Sauer)

The Nebraska SIF Campaign: A Multi-Scale Field Experiment. (B33C-06) AGU, Dec 2018. (J. Gamon et al. including D. Wedin)

Post-fire management alters structural and community characteristics of eastern ponderosa pine forest. Canadian Institute of Forestry, Grande Prairie, Alberta, September 2018 (V.M. Donovan, C.P. Roberts, C. Wonkka, D. Wedin, D. Twidwell)

The status and future of Nebraska's Pinus ponderosa landscapes: the Wildcat Hills. International Assoc. for Landscape Ecology (US-IALE), Chicago, Illinois, April 2018 (A.V. Schiltmeyer, D.A. Wedin, D. Twidwell)

Carbon dioxide fluxes and carbon storage of a tree windbreak and adjacent field. Soil Science Society of America Conference, Tampa, October 2017 (T.J. Sauer, C. Dold, D. Wedin and A.E. Suyker)

A stand scale assessment of Nebraska Wildcat Hills forests, woodlands and mixed-grass prairie; Nebraska Natural Legacy Conference, Nebraska City, October 2017 (A. Schiltmeyer & D.A. Wedin)

The impacts of management decisions on plant diversity in tall grass prairies, Nebraska Natural Legacy Conference, Nebraska City, October 2017 (E. Freese, D.A. Wedin & W. Schacht)

Impact of grassland plantations on groundwater recharge under historical and projected climate conditions, Geological Society of America, Denver CO, Sept 2016 (Z.A. Adane, V.A. Zlotnik, P. Nasta, D. Wedin & J.B. Gates)

Regeneration of ponderosa pine woodland following severe wildfire in the Niobrara River Valley. Society for Range Management, Corpus Cristi, TX, Feb 2016 (A.M. Hefner, & D.A. Wedin)

Grassland Resilience and the Stability of the Nebraska Sandhills, Doane/Wesleyan Freshman Research Symposium, Crete, NE, March 2015

Resilience of Sandhills grassland to an extreme wildfire and drought event, Society for Range Management, Sacramento, CA, Jan 2015 (J.R. Arterburn, D. Twidwell, D.A. Wedin & W.H. Schacht)

Plant diversity affects success of invasive thistles in restored Nebraska Grassland, Society for Range Management, Sacramento, CA, Jan 2015 (K. Price, D. Wedin, S. Young, & C. Helzer)

Resource use of *Poa pratensis* in Midwestern tallgrass prairies: consequences for soil carbon and nitrogen, Society for Range Management, Orlando, FL, Feb 2014

Climate Change and the Stability of the Nebraska Sandhills, Nebraska Natural Resources Commission, July 2008

Global change and the Nebraska landscape, Partnerships in Climate Change Research (USGS), UNL, October 2007

Using process-based models and pedotransfer functions for soil hydraulic characteristics to estimate groundwater recharge in semi-arid regions: is this a right approach? Geological Society of America Annual Meeting, Denver, CO, October 2007 (T. Wang, V.A. Zlotnik, J. Simunek, D. Wedin)

Was Weaver wrong? Soil moisture dynamics and rooting depths of sandhills grasslands. Ecological Society of America, San Jose, CA, August 2007 (D.A. Wedin, W.H. Schacht, J.D. Volesky, J.T. Hiller and N. Dobesh)

Geomorphic and ecological stability in the Nebraska Sand Hills, Ecological Society of America, San Jose, CA, August 2007 (K.R. Payne, D.A. Wedin, R.A. Drjber, and J.T. Hiller)

Tree canopy LAI thresholds affecting grassland herbaceous production in Nebraska's Sandhills, Ecological Society of America, San Jose, CA, August 2007 (N.M. Bryan, W.H. Schacht, T. N. Awada, and D.A. Wedin)

Saturated hydraulic conductivity of vegetated dunes in the Nebraska Sand Hills, Geological Society of America, Philadelphia, October 2006 (T. Wang, V. Zlotnik, and D. Wedin)

Soil moisture measurement and estimation for drought assessment in Nebraska, Geological Society of America, Longmont, CO, September 2006 (V. Sridhar, K. Hubbard, D. Wedin, J. You, and S. Korner).

The Sandhills Biocomplexity Project, Chinese National Academy of Science, Institute of Applied Ecology, Shenyang, China, July 2005

Initial Results from the Grassland Destabilization Experiment (GDEX), National Science Foundation, Biocomplexity in the Environment Meeting, Washington, DC, March 2005

The Nebraska Sand Hills Biocomplexity Project, Regional Conference on Biocomplexity, Sioux Falls, SD, August 11, 2004 (invited keynote address by D. Wedin)

Stable oxygen and hydrogen isotopes indicate stratification of soil water by trees and grasses in the Nebraska Sandhills. Ecological Society of America, Portland, OR, August 2004 (K. Eggemeyer, F.E. Harvey, T. Awada, C.W. Zanner and X. Zhou).

41 additional conference presentations, 1987-2003.

37 invited academic lectures (US, Canada, Europe, China), 1989 – present.

C) TEACHING (since 1998)

Forest Ecology (NRES424/824), 1998-2025, average enrollment 20 (2024 enrollment = 21)

Grassland Conservation (NRES438/838), 2014-2025, average enrollment 15 (2024 = 19)

Wildland Firefighter Training (NRES299), 2020-2025, average enrollment 20 (2024 = 28)

Grassland Seminar (GRAS/NRES495), 2024: 7 undergrads enrolled (ave seminar attendance 43 in person, 17 via Zoom)

Introduction to Forest Management (NRES310), 2016-2023, average enrollment 18

Principles of Ecology (NRES220 & 222), 1998-2015, average enrollment 125

D) SERVICE TO THE ACADEMIC COMMUNITY

Director, Nine-Mile Prairie (2007-2025), UNL

Director, Dalbey Prairie (2020-2025), UNL

Director, ARDC Agroforestry Farm (2015-2025), UNL

Ecosystems Panel Member (2008-2009), National Science Foundation

Reviewer for "Ecological Impacts of Climate Change", National Research Council

Natural Resources Undergraduate Curriculum Committee (1998-2018, Chair from 1999-2007), UNL

Promotion & Tenure Committee (SNR, UNL), Chair from 2015-2023

Coordinator, Undergraduate Scholarships for Natural Resources (2000-2023), UNL

Participant, NSF workshops: "Linking Ecological Biology and Geoscience" (Madison, 8/2001), "Biocomplexity in the Environment" (Washington DC, 10/2001, 9/2003)

Lead author, NSF site review team, Niwot Ridge LTER Site, University of Colorado, 7/2001.

Course instructor (April 1999), "Interactions between element cycles and ecosystems", Wageningen Agricultural University, The Netherlands.

Associate Editor (1997-2000), American Naturalist.

Panel Member (1997), Ontario Graduate Scholarships Review Panel.

Panel Member (1996), Conservation and Restoration Biology Grant Review Panel, NSF

Reviewer of manuscripts (5 to 10 per year) for 30 journals: Acta-Oecologia, Agronomy J., American J. of Botany, American Midland Naturalist, American Naturalist, Arctic and Alpine Research, Aust. J. of Soil Science, Austral Ecology, Biogeochemistry, Botanical Gazette, Canadian J. of Botany, Ecology, Ecology Letters, Ecological Monographs, Ecological Applications, Ecoscience, Ecosystems, Functional Ecology, Global Change Biology, Great Plains Research, J. of Ecology, J. of Range Management, Journal of Vegetation Science, Oecologia, Plant Ecology, Plant and Soil, Prairie Naturalist, Science, Vegetatio

Reviewer of research proposals (average of 5 per year) for NSF, DOE, USDA, NSERC (Canada), Nebraska Environmental Trust

Reviewer for the United Nations Environment Program - Global Biodiversity Assessment (1995)

E) Graduate students advised and co-advised: Heather Peat (MSc, 1997, U of Toronto), Christina Heidorn (MSc, 2000, U of T), William Draper (MSc, 2000, U of T), Joe Craine (PhD, 2000, UC-Berkeley), Xiaoping Ding (MS, 2002, UNL), Cullen Robbins (MS, 2005, UNL), Phil Dobesh (MS, 2007, UNL), Kimberly Payne (MS, 2009, UNL), Kristine Nemec (PhD, 2012, UNL), Ilonka Zlatar (MAS, 2014, UNL), Kelly Willemssens (MS, 2015, UNL), Kati Price (MS, 2015, UNL), Jeff Hartman (PhD, 2015, UNL), Amanda Hefner (MS, 2016, UNL), Hannah Birge (PhD, 2017, UNL), Matthew Warren (MAS, 2018, UNL), Allie Schiltmeyer (MS, 2018, UNL), Seth Peterson (MAS, 2020, UNL), Katharine Hogan (PhD, 2022, UNL), Carlee Koehler Moates (MAS, 2023, UNL).

Postdoctoral Scholars: Michael M.-R. Li (U of Toronto), Tamara Minnick (UNL), Tala Awada (UNL), Venkataramana Sridhar (UNL)

Totals: 20 graduate students advised, 4 post-docs