

**Walter H. Schacht** (Principal Investigator)  
Center for Grassland Studies  
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**Professional Preparation**

Dana College	Biology and Environmental Studies	B.S., 1975
University of Nebraska-Lincoln	Range Management	M.S., 1982
Utah State University	Range Sciences	Ph.D., 1987

**Appointments**

2020	Interim Director, Center for Grassland Studies, University of Nebraska-Lincoln (UNL)
2012-2019	Sunkist Fiesta Bowl Professor of Agronomy, Dept. of Agronomy and Horticulture and School of Natural Resources, UNL
2011	Fulbright Scholar, Namibia University of Science and Technology
2005-2010	Professor, Dept. of Agronomy and Horticulture, UNL
1998-2005	Associate Professor, Dept. of Agronomy and Horticulture, UNL
1994-1998	Assistant Professor, Dept. of Agronomy and Horticulture, UNL
1989-1993	Assistant Professor, Dept. of Agriculture, Angelo State University

**Synergistic Activities**

A leader of a group of range and forage scientists, animal scientists, and agricultural economists in developing an interdisciplinary major, two multi-state research projects, and a cluster hire of three new faculty members in grazing livestock systems. A leader of a team of range scientists, soil scientists, entomologists, plant physiologists, and modelers in grazing ecology and grassland carbon and nitrogen dynamics at multiple sites. Recently became interim director of the Center for Grassland Studies and a coordinating role with the Center for Resilience and the NE Integrated Beef Systems initiative at UNL.

**Grants Received (last 2 years)**

Miller, J.R., D.M. Debinski, L. Wright Morton, and W. Schacht. Adaptive management of invasive species to enhance agro-ecosystem services in grasslands. USDA AFRI \$439,893 (2016-2019).

Schacht, W.H., J. Wu-Smart, and C. Wienhold. Establishment of wildflower islands to enhance roadsides for pollinator health and aesthetics. Nebraska Department of Roads. \$143,356 (2016-2019).

Wedin, D. and W.H. Schacht. Prairie Corridor Phase 2. Nebraska Environmental Trust. \$262,136 (2016-2019).

Powell, L. and W.H. Schacht. Management of private grazing lands in Nebraska: do differences in ranch management and landowner characteristics affect conservation impacts? Nebraska Game and Parks Commission. \$174,289 (2014-2019).

**Refereed Journal Publications (last 2 years)**

Guretzky, J.A., M. Mamo, W.H. Schacht, J.D. Volesky, and A.B. Wingeyer. 2020. Mob grazing increases trampling but not litter deposition on a Nebraska Sandhills subirrigated meadow. *Crop, Forage, and Turfgrass Management*. <https://doi.org/10.1002/cft2.20047>.

Sliwinski, M.S., L.A. Powell, and W.H. Schacht. 2020. Similar bird communities across grazing systems in the Nebraska Sandhills. *Journal of Wildlife Management* 84:802-812.

- Chen, M., W.J. Parton, M.D. Hartman, S.J. Del Grosso, W.K. Smith, A.K. Knapp, S. Lutz, J.D. Derner, R. Tucker, D. S. Ojima, J. D. Volesky, M. B. Stephenson, W. H. Schacht, and W. Gao. 2019. Assessing precipitation, evapotranspiration, and NDVI as controls of U.S. Great Plains plant production. *Ecosphere* 10:289.
- Raynor, E.J., J.J. Coon, T.M. Swartz, L.W. Morton, **W.H. Schacht**, and J.R. Miller. 2019. Shifting cattle producer beliefs on stocking and invasive forage: implications for grassland conservation. *Rangeland Ecology and Management* 72:888-898.
- Evans, S.E., M. Mamo, A. Wingeyer, **W.H. Schacht**, K.M. Eskridge, J. Bradshaw, and D. Ginting. 2019. Soil fauna accelerate dung pat decomposition and nutrient cycling into grassland soil. *Rangeland Ecology and Management* 72:667-677.
- Evans, K.S., M. Mamo, A. Wingeyer, **W.H. Schacht**, K.M. Eskridge, J. Bradshaw, and D. Ginting. 2019. Dung beetles increase greenhouse gas fluxes from dung pats in a north temperate grassland. *Journal of Environmental Quality* 48:537-548.
- Nelson, S.B., J.J. Coon, **W.H. Schacht**, and J.R. Miller. 2019. Cattle select against the invasive grass tall fescue in heterogeneous pastures managed with prescribed fire. *Grass and Forage Science* 74:486-495.
- Schick, B.D., J.A. Guretzky, **W.H. Schacht**, and M. Mamo. 2019. Dietary nutritive value, dung quality, decomposition, and nutrient movement into soil in smooth bromegrass pastures. *Crop Science* 59:1294-1308.
- Cumming, K., J. Parsons, **W. Schacht**, and B. Baskerville. 2019. Examining the capacity of Nebraska rangelands for cattle production. *Western Economics Forum Journal* 17:46-61.
- Soper, J.M., E.J. Raynor, C. Wienhold, and **W.H. Schacht**. 2019. Evaluating composition and conservation value of roadside plant communities in a grassland biome. *Environmental Management* 63:789-803.
- Haigh T.R., **W. Schacht**, C.L. Knutson, A.J. Smart, J. Volesky, C. Allen, M. Hayes, and M. Burbach. 2019. Socio-ecological determinants of drought impacts and coping strategies for ranching operations in the Great Plains. *Rangeland Ecology and Management* 72:561-571.
- Hiller, T.L., J.E. McFadden, L.A. Powell, and **W. Schacht**. 2019. Seasonal and interspecific landscape use of sympatric greater prairie-chickens and plains sharp-tailed grouse. *Wildlife Society Bulletin* 43:244-255. DOI:10.1002/wsb.966.
- Raynor, E.J., C.D. Griffith, D. Twidwell, **W.H. Schacht**, C.L. Wonkka, C. Roberts, C. Bielski, D. Debinski, and J.R. Miller. 2018. The emergence of heterogeneity in a tall fescue-dominated prairie: a matter of scale detection. *Landscape Ecology* 33:2103-2119.
- Sliwinski, M., L.A. Powell, **W. Schacht**, and M. Burbach. 2018. Factors influencing ranchers' intentions to manage for vegetation heterogeneity and promote cross-boundary management in the northern Great Plains. *Ecology and Society* 23:45-57.
- Sliwinski, M., L.A. Powell, and **W. Schacht**. 2018. Grazing systems do not affect bird habitat on a Sandhills landscape. *Rangeland Ecology and Management* 72:136-144.

Stephenson, M.B., J.D. Volesky, **W.H. Schacht**, N.C. Lawrence, J. Soper, and J. Milby. 2018. Influence of precipitation on plant production at different topographic positions in the Nebraska Sandhills. *Rangeland Ecology and Management* 72:103-111.

Arterburn, J., D. Twidwell, **W. Schacht**, C. Wonkka, and D. Wedin. 2018. Resilience of Sandhills grassland to wildfire during drought. *Rangeland Ecology and Management* 71:53-57.

Nelson, S.B.M., J.J. Coon, C.J. Duchardt, J.R. Nelson, D.M. Debinski, and **W.H. Schacht**. 2018. Contrasting impacts of invasive plants and human-altered landscape context on next survival and brood parasitism of a grassland bird. *Landscape Ecology* 33:1799-1783.

Raynor, E.J., L.A. Powell, and **W.H. Schacht**. 2018. Present and future thermal environments available to sharp-tailed grouse in an intact grassland. *PloS One* 13.2 (2018):e0191233.

Sliwinski, M., M. Burbach, L.A. Powell, **W. Schacht**. 2018. Ranchers' perceptions of vegetation heterogeneity in the Northern Great Plains. *Great Plains Research* 28:185-197.