

Curriculum Vitae
John Ritten
Department of Agricultural and Applied Economics
University of Wyoming
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Education:

- Ph.D. Natural Resource Economics, Colorado State University, 2008
- M.B.A. New Mexico State University, 2004
- B.S. Marketing, Arizona State University, 2001
- A.A. General Studies, Arizona Western College, 1998

Academic Positions:

- 2020-Present** Professor, Department of Agricultural & Applied Economics, University of Wyoming
- 2019-2020** Interim Associate Dean, College of Agriculture and Natural Resources, and Director Wyoming Agricultural Experiment Station
- 2017- Present** Graduate Faculty, Environmental Sciences, Oregon State University
- 2014- 2020** Associate Professor, Department of Agricultural & Applied Economics, University of Wyoming
- 2008- 2014** Assistant Professor, Department of Agricultural & Applied Economics, University of Wyoming
- 2007- 2008** Instructor, Front Range Community College
- 2005- 2006** Lecturer, Department of Agricultural & Applied Economics, University of Wyoming
- 2004- 2008** Graduate Research Assistant, Department of Agricultural & Resource Economics, Colorado State University
- 2004** Graduate Research Assistant and Teaching Assistant, College of Business, New Mexico State University

University of Wyoming Job Descriptions:

- 2011- Present** 10-45% Research, 20-55% Extension, 25% Education, 5% Administration, 5% Service (variable annual job descriptions due to changes in administration). Research and Extension in the fields of production economics and systems analysis, with emphasis on sustainable agricultural practices.
- 2008-2011** 45% Research, 45% Extension, 5% Education, 5% Service. Research and Extension in the fields of production economics and systems analysis, with emphasis on sustainable agricultural practices.
- Stationed at the James C. Hageman Sustainable Agriculture Research and Extension Center (SAREC), UW AES Experiment Station - located in Lingle, WY

Publications (*Indicates Graduate Student at time of project):

Publications in Refereed Journals:

*Baldwin, Tevyn, John Ritten, Justin Derner, David Augustine, Hailey Wilmer, Jeff Wahlert, Steve Anderson, Gonzalo Irisarri, Danelle Peck. Stocking rate and marketing dates for yearling steers grazing rangelands: Can producers do things differently to increase economic net benefits? *Rangelands*. Accepted April 30, 2022.

*Hansen, Eilish, Amy Nagler, John Ritten, Ben Rashford. 2022. "Farm-Level Economics of Bioenergy in the Upper Missouri River Basin." *Journal of the American Society of Farm Managers and Rural Appraisers*, 16-30.

*Ellison, Melinda, Rebecca Cockrum, Warrie Means, Allison Meyer, John Ritten, Kathy Austin, Kristi Cammack. 2022. "Effects of Feed Efficiency and Diet on Performance and Carcass Characteristics in Growing Wether Lambs." *Small Ruminant Research*, 207.
<https://doi.org/10.1016/j.smallrumres.2021.106611>

Dillon, J.A., K.R. Stackhouse-Lawson, G.J. Thoma, S.A. Gunter, C.A. Rotz, E. Kebreab, D.G. Riley, L.O. Tedeschi, J. Villalba, F. Mitloehner, A.N. Hristov, S.L. Archibeque, John P. Ritten, Nathaniel D. Mueller. 2021. "Current State of Enteric Methane and the Carbon Footprint of Beef and Dairy Cattle in the U.S." *Animal Frontiers*, 11(4):57-68.
<https://doi.org/10.1093/af/vfab043>

*Dyer, Holly, Anna Maher, John Ritten, John Tanaka, and Kristie Maczko. 2021. "Ranch Profitability of Improving Soil Health on Rangelands." *Rangeland Ecology Management*, 77:66-74. <https://doi.org/10.1016/j.rama.2021.02.012>

Wilmer, Hailey, Terri Schulz, María E. Fernández-Giménez, Justin D. Derner, Lauren M. Porensky, David J. Augustine, John Ritten, Angela Dwyer, Rachel Murph. 2021. "Social learning lessons from Collaborative Adaptive Rangeland Management." *Rangelands*, In Press. <https://doi.org/10.1016/j.rala.2021.02.002>

Derner, Justin D., Bob Budd, Grady Grissom, Emily J. Kachergis, David J. Augustine, Hailey Wilmer, J. Derek Scasta, and John P. Ritten. 2022. "Adaptive Grazing Management in Semiarid Rangelands: An Outcome-driven Focus." *Rangelands*, 44(1):111-118.
<https://doi.org/10.1016/j.rala.2021.02.004>

Raynor, Edward J., Justin D. Derner, Tevyn Baldwin*, John P. Ritten, and David J. Augustine. 2021. "Multi-decadal Directional Shift in Shortgrass Stocking Rates." *Rangeland Ecology Management*, 74:72-80. <https://doi.org/10.1016/j.rama.2020.09.005>

Derner, Justin D., David J. Augustine, David D. Briske, Hailey Wilmer, Lauren M. Porensky, María E. Fernández-Giménez, Danelle E. Peck, John P. Ritten and the CARM Stakeholder Group. 2021. "Can Collaborative Adaptive Management Improve Cattle Production in Multi-paddock Grazing

Systems?" *Rangeland Ecology Management*, 75:1-8.
<https://doi.org/10.1016/j.rama.2020.11.002>

Briske, David, John Ritten, Amber Campbell, Toni Klemm, and Audrey King. 2021. "Future Climate Variability Will Challenge Rangeland Beef Cattle Production in the Great Plains." *Rangelands*, 43(1):29-36. <https://doi.org/10.1016/j.rala.2020.11.001>.

*Windh, Jessica, John Ritten, Justin Derner, Steve Paisley and Brian Lee. 2020. "Effects of long-term cattle market conditions on continuous season-long and rotational grazing system revenues." *The Rangeland Journal* (42):227-231. <https://doi.org/10.1071/RJ20067>.

Fernandez-Gimenez, Maria, John Ritten. 2020. "An Economic Analysis of Transhumance in the Central Spanish Pyrenees." *Pastoralism* 10(10):1-13. <https://doi.org/10.1186/s13570-020-00163-4>

*Whaley, Jaelyn R. Warrie J. Means, John P. Ritten, Hannah C. Cunningham-Hollinger, Chad M. Page, Heather N. McKibben, Whitney C. Stewart. 2019. "A survey of lamb carcass characteristics in the Intermountain West during periods of seasonally constrained supply." *Translational Animal Science*, 3(S1):1807-1811. <https://doi.org/10.1093/tas/txz104>

*Windh, Jessica L., John P. Ritten, Justin D. Derner, Steven I. Paisley, Brian P. Lee. 2019. "Economic Cost Analysis of Continuous-Season-Long versus Rotational Grazing Systems." *Western Economics Forum* (Invited – Special Issue), 17(1): 62-72.

Quintana Ashwell, Nicolas, Anna T. Maher, John A. Tanaka, John P. Ritten, Kristie A. Maczko, Holly Dyer, Holly Kirkpatrick, Kendall Roberts, and Thomas Hilken. 2019. "Ranch economics of prescribed grazing on rangelands: the case of representative ranches in northern Montana." *Western Economics Forum* (Invited – Special Issue), 17(1): 73-85.

Wilmer, Hailey, Lauren M. Porensky, María E. Fernández-Giménez, Justin D. Derner, David J. Augustine, John P. Ritten, Dannele P. Peck. 2019. "Community-Engaged Research Builds a Natureculture of Hope on North American Great Plains Rangelands." *Social Science*, 8(1), 22. Special Issue on *Engaged Scholarship for Resilient Communities*. [doi:10.3390/socsci8010022](https://doi.org/10.3390/socsci8010022)

Irisarri, Gonzalo, Justin Derner, John Ritten, Dannele Peck. 2019. "Interannual Variability of Beef Production and Net Revenue from Grazing of Yearlings on Semiarid Shortgrass Steppe." *Livestock Science*, 220: 93-99.
<https://www.sciencedirect.com/science/article/pii/S1871141318307881?via%3Dihub>

Ritten, John, Maria Fernandez-Gimenez, James Pritchett, *Emily Kachergis, and *Willow Bish. 2018. "A State and Transition Approach to determine Opportunity Costs of Providing Various Ecosystem Services." *Rangeland Ecology and Management*, 71: 737-752. In Press.
<https://doi.org/10.1016/j.rama.2018.06.010>

Bastian, Christopher T., John P. Ritten and Justin D. Derner. 2018. "Ranch Profitability Given Increased Precipitation Variability and Flexible Stocking." *Journal of the American Society of Farm Managers and Rural Appraisers*, 122-139.

*Munsick, Tristram R., Dannele E. Peck, John P. Ritten, Randall Jones, Michelle Jones, Myrna R. Miler. 2017. "Expected Net Benefit of Vaccinating a Rangeland Sheep Flock against Bluetongue Virus." *Frontiers in Veterinary Science*, 4. <https://doi.org/10.3389/fvets.2017.00166>

Ritten, John, Maria Fernandez-Gimenez, James Pritchett, *Emily Kachergis, and *Willow Hibbs. 2017. "Using STMs to Show Economic Interdependence of Ecological Sites at the Ranch Level." *Rangeland Ecology and Management*, 70: 666-674.

*Adjesiwor, Albert, Anowar Islam, Valtcho Jeliaskov, John Ritten, and Axel Garcia y Garcia. 2017. "Grass-legume seed mass ratios and nitrogen rates influence forage yield, nutritive value, and profitability." *Crop Science* 57(5): 2852-2864.

*Hamilton, Tucker, John Ritten, Christopher Bastian, Justin Derner, and John Tanaka. 2016. "Economic Impacts of Increasing Seasonal Precipitation Variation on Cow-Calf Enterprises." *Rangeland Ecology and Management*, 69(6): 465-473.

Brunson, Mark, Lynn Huntsinger, Urs Kreuter, John Ritten. 2016. "Useable Socio-Economic Science for Rangelands." *Rangelands*, 38: 85-89.

*Lee, Brian, John Ritten, Christopher Bastian, Andrew Kniss. 2015. "Profitability of Glyphosate-Resistant Sugarbeet Production in Whole Farm Systems." *Journal of the American Society of Farm Managers and Rural Appraisers*, 154-165.

*Lee, Brian, John Ritten, Andrew Kniss, and Christopher Bastian. 2014. "Profitability Comparison for Glyphosate-Resistant and Conventional Sugarbeet Production Systems." *Journal of Sugar Beet Research*, 51(1):2-13.

*Kachergis, Emily, Corrine Knapp, Maria Fernandez-Gimenez, John Ritten, James Pritchett, Jay Parsons, *Willow Hibbs, and Roy Roath. 2013. "Tools for Resilience Management: Multi-Disciplinary Development of State-and-Transition Models for Northwest Colorado." *Ecology and Society*, 18(4):39-51.

*Roberts, Trent, Dannele Peck, and John Ritten. 2012. "Cattle Producers' Economic Incentives for Preventing Bovine Brucellosis under Uncertainty." *Preventative Veterinary Medicine*, 107: 187-203.

*Ghimire, Rajan, Jay Norton, Urszula Norton, John Ritten, Peter Stahl, and James Krall. 2012. "Long-term Farming Systems Research in the Central High Plains." *Renewable Agriculture and Food Systems*, 28(2): 183-193.

Pritchett, James, Jay Parsons, *Emily Kachergis, Maria Fernandez-Gimenez, John Ritten. 2012. "Home on a Transitioning Range: A Ranch Simulation Game Demonstrating STMs." *Rangelands: Education in Rangeland Ecology and Management Special Issue*, 34(3): 53-60.

*Eisele, Kendall, John Ritten, Christopher T. Bastian, Steven Paisley, and Scott Lake. 2012. "Economic Comparison of Weaning and Feeding Strategies for Beef Production." *Journal of the American Society of Farm Managers and Rural Appraisers*, 73(5): 124-134.

Ritten, John P., Christopher T. Bastian, and Benjamin S. Rashford. 2012. "Profitability of Stocking the Range with Carbon: Insights from Recent Market Events." *Rangeland Ecology and Management*, 65(4): 340-350. Forum Article.

Bastian, Christopher, Steve Gray, Dannele Peck, John Ritten, Kristi Hansen, Jim Krall, and Steve Paisley. 2011. "The Nature of Climate Science for the Rocky Mountain West: Implications for Economists Trying to Help Agriculture Adapt." *Western Economics Forum*, 10(2): 23-32.

Ritten, John P., W. Marshall Frasier, Chris T. Bastian, Steven T. Gray. 2010. "Optimal Rangeland Stocking Decisions Under Stochastic and Climate-Impacted Weather." *American Journal of Agricultural Economics*, 92(4): 1242-1255.

Ritten, John, Christopher T. Bastian, Steven I. Paisley, and Michael Smith. 2010. "Long Term Comparison of Alternative Range Livestock Management Strategies Across Extended Droughts and Cyclical Prices." *Journal of the American Society of Farm Managers and Rural Appraisers*, 73(1): 243-252.

Ritten, John P., Chris T. Bastian, and W. Marshall Frasier. 2010. "Economically Optimal Stocking Rates: A Bioeconomic Grazing Model." *Rangeland Ecology and Management*, 63(4): 407-414.

Ritten, John P., W. Marshall Frasier, Christopher T. Bastian, Steven I. Paisley, Michael A. Smith, Siân Mooney. 2010 "A Multi-period Analysis of Two Common Livestock Management Strategies Given Fluctuating Precipitation and Variable Prices." *Journal of Agricultural and Applied Economics*, 42(2): 177-191.

Ritten, John, Christopher T. Bastian, Benjamin S. Rashford, Jay Norton, Urszula Norton, Steven I. Paisley, and Paul Burgener. 2009. "Can Carbon Find a Home on the Range?" *Western Economics Forum*, 8(2): 14-20.

Bastian, Christopher T., *Padmaja Ponnamaneni, Siân Mooney, John P. Ritten, W. Marshall Frasier, Steven I. Paisley, Michael A. Smith, Wendy J. Umberger. 2009. "Range Livestock Strategies Given Extended Drought and Different Price Cycles." *Journal of the American Society of Farm Managers and Rural Appraisers*, 72(1): 153-163.

Refereed Book Chapters:

Derner, Justin, Judith Capper, Guodong Han, Leigh Hunt, Kepler Euclides Filjo, John Ritten. 2017. "Livestock Production Systems." For *Rangeland Systems: Processes, Management and Challenges*. Edited by David Briske.

Frisvold, George B., Louise E. Jackson, James G. Pritchett and John P. Ritten. 2013. "Agriculture and Ranching." In *Assessment of Climate Change in the Southwest United States: A Report Prepared for the National Climate Assessment*, edited by G. Garfin, A. Jardine, R. Merideth, M. Black, and S. LeRoy, 218-239. A report by the Southwest Climate Alliance. Washington, DC: Island Press.

In Review:

Derner, Justin, Edward J. Raynor, David A. Augustine, Kevin E. Jablonski, Lauren M Porensky, John Ritten, David L. Hoover, Julie Elliott. Balancing Ecosystem Service Outcomes at the Ranch-Scale in Shortgrass Steppe: The Role of Grazing Management. *Rangelands*. Revise and Resubmit, May 4, 2022.

*Crow, Lewi, Lauren Porensky, David Augustine, John Ritten, Christopher Bastian, Steven Paisley. Evaluating economic impacts of prairie dog–cattle competition on ranching enterprises in the western Great Plains. *Rangeland Ecology Management*. Revise and Resubmit, April 12, 2022.

*Collins, Anna, Anna Maher, John Ritten, Derek Scasta, John Tanaka, Krisie Maczko. Characteristics of U.S. conservation program participants: Demographics, decision-making, and opportunities, Submitted to *Society & Natural Resources*. January 3, 2022.

Maher, Anna, Nicolas Quintana Ashwell, John Tanaka, John Ritten, Kristie Maczko. Ranch-Level Economic Benefits of Working Lands Greater Sage-Grouse Conservation Programs in the Western U.S. Submitted to the *Journal of Environmental Management*. December 20, 2021.

Reviewed Extension Publications:

*Baldwin, Tevyn, John Ritten, and Justin Derner. 2021. The Stocker Steer Quandary: The Price Slide. B-1371, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

*Asay, Jacob, Brian Lee, and John Ritten. 2020. Irrigated Alfalfa, Barley, Corn and Sugar Beet Budgets for the Big Horn Basin, Wyoming. B-1363, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

*Hanson, Eilish, John Ritten, Perry Miller, Amy Nagler, Selena Gerace. Is Growing Switchgrass Economically Feasible? Economic Considerations for Switchgrass Production in the Upper Missouri River Basin. B-1360.1, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

*Hanson, Eilish, John Ritten, Perry Miller, Amy Nagler, Selena Gerace. Crop Enterprise Budget. Conventional Dryland Switchgrass, Upper Missouri River Basin. B-1360.2, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Bridger Feuz, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 300-head, Cow-Calf Private Land Ranch, Cool Central Desertic Basins and Plateaus, MLRA 34A. B-1332.26, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Bridger Feuz, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 400-head, Cow-Calf Public Land Ranch, Cool Central Desertic Basins and Plateaus, MLRA 34A. B-1332.24, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Bridger Feuz, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 100-head, Cow-Calf Public Land Ranch, Cool Central Desertic Basins and Plateaus, MLRA 34A. B-1332.25, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Bridger Feuz, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 100-head, Cow-Calf Private Land Ranch, Cool Central Desertic Basins and Plateaus, MLRA 34A. B-1332.27, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Kirkpatrick, Holly Dyer, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 75-head, Cow-Calf Private Land Ranch, Northern Rolling High Plains, MLRA 58B. B-1332.36, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Bridger Feuz, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 600-head, Cow-Calf Public Land Ranch, Northern Rolling High Plains, MLRA 58B. B-1332.34, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Kirkpatrick, Holly Dyer, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Bridger Feuz, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 500-head, Cow-Calf Private Land Ranch, Northern Rolling High Plains, MLRA 58B. B-1332.35,

University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Kirkpatrick, Holly Dyer, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Mat Walter, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 100-head, Cow-Calf Private Land Ranch, Northern Rolling Plains, MLRA 58A. B-1332.33, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Mat Walter, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 300-head, Cow-Calf Private Land Ranch, Northern Rolling Plains, MLRA 58A. B-1332.32, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Jesse Fulbright, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 250-head, Cow-Calf Private Land Ranch, Brown Glaciated Plain, MLRA 52. B-1332.30, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Jesse Fulbright, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 300-head, Cow-Calf Public Land Ranch, Brown Glaciated Plain, MLRA 52. B-1332.28, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Danny Pratt, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 75-head, Cow-Calf Private Land Ranch, Brown Glaciated Plain, MLRA 52. B-1332.31, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Kirkpatrick, Holly Dyer, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Danny Pratt, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 100-head, Cow-Calf Public Land Ranch, Brown Glaciated Plain, MLRA 52. B-1332.29, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Kirkpatrick, Holly Dyer, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Caitlin Youngquist, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 300-head, Cow-Calf Public Land Ranch, Northern Intermountain Desertic Basins, MLRA 32. B-1332.22, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Kirkpatrick, Holly Dyer, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Caitlin Youngquist, John Tanaka, John Ritten, and Kristie Mazcko. Enterprise Budget for 100-head, Cow-Calf Private Land Ranch, Northern Intermountain Desertic Basins, MLRA 32. B-1332.23, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Dyer, Holly, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Tipton Hudson, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 50-Head, Cow-Calf Private Land Ranch, Columbia Plateau, MLRA 8." B-1332.2, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Dyer, Holly, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Tipton Hudson, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 50-Head, Cow-Calf Public Land Ranch, Columbia Plateau, MLRA 8." B-1332.1, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Tom Hilken, Kendall Roberts, Holly Dyer, Holly Kirkpatrick, Anna Maher, Nicolas Quintana Ashwell, Tipton Hudson, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 400-Head, Cow-Calf Private Land Ranch, Columbia Plateau, MLRA 8." B-1332.3, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Tom Hilken, Kendall Roberts, Holly Dyer, Holly Kirkpatrick, Anna Maher, Nicolas Quintana Ashwell, Tipton Hudson, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 400-Head, Cow-Calf Public Land Ranch, Columbia Plateau, MLRA 8." B-1332.4, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Tim Deboodt, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 150-Head, Cow-Calf Private Land Ranch, Blue Mountain Foothill Region, MLRA 10." B-1332.5, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Tom Hilken, Kendall Roberts, Holly Dyer, Holly Kirkpatrick, Anna Maher, Nicolas Quintana Ashwell, Sergio Arispe, Linda Rowe, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 500-Head, Cow-Calf Private Land Ranch, Blue Mountain Foothill Region, MLRA 10." B-1332.6, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Tom Hilken, Kendall Roberts, Holly Dyer, Holly Kirkpatrick, Anna Maher, Nicolas Quintana Ashwell, Tom Deboodt, Linda Rowe, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 700-Head, Cow-Calf Public Land Ranch, Blue Mountain Foothill Region, MLRA 10." B-1332.7, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Tom Deboodt, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 100-Head, Cow-Calf Private Land Ranch, Blue Mountain Foothill Region, MLRA 10." B-1332.8, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Tom Hilken, Kendall Roberts, Holly Dyer, Holly Kirkpatrick, Anna Maher, Nicolas Quintana Ashwell, Sarah Baker, Shannon Williams, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 300-Head, Cow-Calf Private Land Ranch, Lost River Valleys and Mountains, MLRA 12." B-1332.9, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Tom Hilken, Kendall Roberts, Holly Dyer, Holly Kirkpatrick, Anna Maher, Nicolas Quintana Ashwell, Sarah Baker, Shannon Williams, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 400-Head, Cow-Calf Public Land Ranch, Lost River Valleys and Mountains, MLRA 12." B-1332.10, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Sarah Baker, Shannon Williams, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 200-Head, Cow-Calf Private Land Ranch, Lost River Valleys and Mountains, MLRA 12." B-1332.11, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Sarah Baker, Shannon Williams, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 150-Head, Cow-Calf Public Land Ranch, Lost River Valleys and Mountains, MLRA 12." B-1332.12, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie

Tom Hilken, Kendall Roberts, Holly Dyer, Holly Kirkpatrick, Anna Maher, Nicolas Quintana Ashwell, Dustin Johnson, Pete Shrader, Fara Brummer, John Tanaka, John Ritten, Kristie Mazcko. 2018 "Enterprise Budget for 700-Head, Cow-Calf Public Land Ranch, Malheur High Plateau, MLRA 23." B-1332.13, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Dustin Johnson, Pete Shrader, Fara Brummer, John Tanaka, John Ritten, Kristie

Mazcko. 2018 “Enterprise Budget for 200-Head, Cow-Calf Public Land Ranch, Malheur High Plateau, MLRA 23.” B-1332.14, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Dustin Johnson, Pete Shrader, Fara Brummer, John Tanaka, John Ritten, Kristie Mazcko. 2018 “Enterprise Budget for 100-Head, Cow-Calf Private Land Ranch, Malheur High Plateau, MLRA 23.” B-1332.15, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie

Tom Hilken, Kendall Roberts, Holly Dyer, Holly Kirkpatrick, Anna Maher, Nicolas Quintana Ashwell, John Tanaka, John Ritten, Kristie Mazcko. 2018 “Enterprise Budget for 500-Head, Cow-Calf Public Land Ranch, Owyhee High Plateau, MLRA 25.” B-1332.16, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, John Tanaka, John Ritten, Kristie Mazcko. 2018 “Enterprise Budget for 200-Head, Cow-Calf Public Land Ranch, Owyhee High Plateau, MLRA 25.” B-1332.17, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, John Tanaka, John Ritten, Kristie Mazcko. 2018 “Enterprise Budget for 150-Head, Cow-Calf Private Land Ranch, Owyhee High Plateau, MLRA 25.” B-1332.18, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie

Tom Hilken, Kendall Roberts, Holly Dyer, Holly Kirkpatrick, Anna Maher, Nicolas Quintana Ashwell, Gary McCuin, John Tanaka, John Ritten, Kristie Mazcko. 2018 “Enterprise Budget for 500-Head, Cow-Calf Public Land Ranch, Central Nevada Basin and Range, MLRA 28B.” B-1332.19, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie

Tom Hilken, Kendall Roberts, Holly Dyer, Holly Kirkpatrick, Anna Maher, Nicolas Quintana Ashwell, Gary McCuin, John Tanaka, John Ritten, Kristie Mazcko. 2018 “Enterprise Budget for 500-Head, Cow-Calf Public Land Ranch, Central Nevada Basin and Range, MLRA 28B.” B-1332.20, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie

Holly Dyer, Holly Kirkpatrick, Tom Hilken, Kendall Roberts, Anna Maher, Nicolas Quintana Ashwell, Gary McCuin, John Tanaka, John Ritten, Kristie Mazcko. 2018 “Enterprise Budget for 100-Head, Cow-Calf Private Land Ranch, Central Nevada Basin and Range, MLRA 28B.” B-1332.21, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie

Ritten, John, Christopher Bastian, Steven Paisley. 2018. "Economic Models Show Drought Effects Cattle Producers Over 35-Year Horizon; Suggest Herd Diversification Helps Minimize Impact." Pages 9-11 in *Navigating Drought in Wyoming*. B-1325, University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Ritten, John, Steven Paisley, Bridger Feuz, and Hudson Hill. 2018. "What is the Price Slide?" Fact Sheet. Bulletin B-1319. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Lee, Brian, John Ritten and Tom Foulke. 2018. "Conventional Irrigated Alfalfa (Established), Goshen County, Wyoming." Fact Sheet. Bulletin B-1315.1. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Lee, Brian, John Ritten and Tom Foulke. 2018. "Conventional Dryland Winter Wheat/Fallow, Goshen County, Wyoming." Fact Sheet. Bulletin B-1315.5. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Lee, Brian, John Ritten and Tom Foulke. 2018. "Conventional Irrigated Corn for Grain, Goshen County, Wyoming." Fact Sheet. Bulletin B-1315.3. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Lee, Brian, John Ritten and Tom Foulke. 2018. "Conventional Irrigated Dry Edible Beans, Goshen County, Wyoming." Fact Sheet. Bulletin B-1315.2. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Lee, Brian, John Ritten and Tom Foulke. 2018. "No-Till Dryland Winter Wheat/Fallow Rotation, Goshen County, Wyoming." Fact Sheet. Bulletin B-1315.6. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Lee, Brian, John Ritten and Tom Foulke. 2018. "Organic Dryland Winter Wheat/Fallow Rotation, Goshen County, Wyoming." Fact Sheet. Bulletin B-1315.7. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Lee, Brian, John Ritten and Tom Foulke. 2018. "Conventional Irrigated Sugarbeet, Goshen County, Wyoming." Fact Sheet. Bulletin B-1315.4. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Ritten, John, and Bridger Feuz. 2018. "Calculating and Interpreting Financial Ratios." Fact Sheet. Bulletin B-1307. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Ritten, John, and Bridger Feuz. 2017. "Understanding Financial Statements." Fact Sheet. Bulletin B-1308. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Feuz, Bridger and John Ritten. 2017. "An Effective Combination: Partial Budgeting and Sensitivity Analysis." Fact Sheet. Bulletin B-1304. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Feuz, Bridger and John Ritten. 2017. "Net Present Value (NPV)." Fact Sheet. Bulletin B-1302. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Bastian, Christopher T., John P. Ritten and Bridger M. Feuz. 2017. "Which Market Gives Me the Best Price for My Cattle? Think About Marketing Costs as Well as Price!" Fact Sheet. Bulletin B-1303. University of Wyoming Extension, College of Agriculture and Natural Resources, University of Wyoming, Laramie.

Feuz, Bridger, Chris Bastian and John Ritten. 2016. "Market Comparison Tool." Online tool available at: <http://uwyoextension.org/ranchtools/market-comparison/>.

Peck, Dannele, *Trent Roberts, John Ritten, and Bruce Hoar. 2015. "The Cost of Brucellosis Prevention: Spaying Heifers." Fact Sheet. Bulletin B-1273. Cooperative Extension Service, College of Agriculture, University of Wyoming, Laramie.

Ritten, John, Brian Lee, Steve Paisley, and Bridger Feuz. 2015. "Cow Value Calculator." Online tool available at: <http://uwyoextension.org/cowvaluecalculator/index.html>.

Torell, L.A., N.R. Rimbey, J.A. Tanaka, D.T. Taylor, J.P. Ritten, and T.K. Foulke. 2014. "Ranch-level economic impacts of altering grazing policies on federal land to protect the greater sage-grouse." University of Wyoming, New Mexico State University, University of Idaho, and the Western Rural Development Center. University of Wyoming Extension Bulletin B-1258. Available online at <http://www.wyomingextension.org/publications/>.

*Lee, Brian, John Ritten, Christopher Bastian, Andrew Kniss. "Farm Level Impacts of Potential Regulations on Glyphosate Resistant Sugarbeet in Wyoming." Bulletin B-1254. Cooperative Extension Service, College of Agriculture, University of Wyoming, Laramie. December 2013.

Lee, Brian and John Ritten. "Can I afford to apply nitrogen to my crop this year?" Bulletin B-1252. Cooperative Extension Service, College of Agriculture, University of Wyoming, Laramie. August 2013. Associated Decision tool available at: <http://uwyoextension.org/nitrogencalculator/nitrogen-calculator.php>.

Rashford, Benjamin, Alexandre Latchininsky, and John Ritten. "Toward a more Comprehensive Valuation of Western Rangelands." Bulletin B-1245. Cooperative Extension Service, College of Agriculture, University of Wyoming, Laramie. February 2013.

Dannele Peck, Ben Rashford, *Trent Roberts, and John Ritten. "The Cost of Brucellosis Prevention: Fencing Stackyards." Bulletin B-1232. Cooperative Extension Service, College of Agriculture, University of Wyoming, Laramie. August 2012.

Maria Fernandez-Gimenez, *Emily Kachergis, *Willow Hibbs, Monique Rocca, James Pritchett, L. Roy Roath, and John Ritten. "New Tools for Conservation: Ecological Site Descriptions and their Role in Conservation Planning." Colorado State University. September 2011.

Maria Fernandez-Gimenez, *Emily Kachergis, *Willow Hibbs, Monique Rocca, James Pritchett, L. Roy Roath, and John Ritten. "New Tools for Land Management: Putting Ecological Site Descriptions to Use on Your Ranch." Colorado State University. September 2011.

Maria Fernandez-Gimenez, *Emily Kachergis, *Willow Hibbs, Monique Rocca, James Pritchett, L. Roy Roath, and John Ritten. "New Tools for Land Management: A Quick Introduction to Ecological Site Descriptions." Colorado State University. September 2011.

Ritten, John, Christopher Bastian, Marshall Frasier, Steve Paisley, and Mike Smith. "Comparison of Alternative Cattle Management Strategies Under Long-Term Drought" Bulletin B-1219. Cooperative Extension Service, College of Agriculture, University of Wyoming, Laramie. August 2011.

Ritten, John, Christopher Bastian, and Marshall Frasier. "Price or Weather – Which Signal Should Livestock Producers Follow?" Bulletin B-1221. Cooperative Extension Service, College of Agriculture, University of Wyoming, Laramie. August 2011.

Ritten, John, Christopher Bastian, and Marshall Frasier. "Considerations for Preparing a Drought Management Plan for Livestock Producers." Bulletin B-1220. Cooperative Extension Service, College of Agriculture, University of Wyoming, Laramie. July 2011.

Ritten, John, Christopher Bastian, Marshall Frasier, Steve Paisley, and Mike Smith. "Two Common Drought Management Strategies and Some Considerations for Wyoming Cattle Producers." Bulletin B-1218. Cooperative Extension Service, College of Agriculture, University of Wyoming, Laramie. June 2011.

*Eisele, K, J. Ritten, C. Bastian, S. Paisley. "Enterprise Budget for Beef Cattle: Cow-Calf Production." Bulletin B-1217. Cooperative Extension Service, College of Agriculture, University of Wyoming, Laramie. June 2011.

Contributed to "Sheep Basics" Course Handbook (MP-96), offered by UW CES. Updated Chapter 9 "Economics and Marketing" for 2010.

Ritten, John, Christopher T. Bastian, W. Marshall Frasier, Michael A. Smith, and Steven I. Paisley. "Managing Your Ranch During Drought: Implications from Long- and Short-Run Analyses."

Bulletin B-1205. Cooperative Extension Service, College of Agriculture, University of Wyoming, Laramie. May 2010.

Contributions to Government Publications:

Koontz, L., N. Sexton, A. Ishizaki, and J. Ritten. 2013. "Regional economic impacts of current and proposed management alternatives for Charles M. Russell National Wildlife Refuge." U.S. Geological Survey Open-File Report 2012-1014. 43 p. Available at: <http://pubs.usgs.gov/of/2012/1014/OF12-1014.pdf>.

U.S. Fish and Wildlife Service. 2012. Comprehensive conservation plan: Charles M. Russell National Wildlife Refuge, UL Bend National Wildlife Refuge. Lakewood, CO: U.S. Department of the Interior, Fish and Wildlife Service, Mountain–Prairie Region. 323 p. Available online: http://www.fws.gov/mountain-prairie/planning/ccp/mt/cmr_ulb/documents/cmr_ulb_ccp_final_all.pdf (Contributor, pages 118-131)

Rashford, Benjamin S., Alexandre V. Latchininsky, and John P. Ritten. 2012. "An Economic Analysis of the Comprehensive Uses of Western Rangelands." Report prepared for USDA, APHIS. March 26, 2012.

"Draft Comprehensive Conservation Plan and Environmental Impact Statement: Charles M. Russell National Wildlife Refuge, UL Bend National Wildlife Refuge." U.S. Fish and Wildlife Service. September 2010. Available online: <http://www.nwf.org/~media/PDFs/Regional/Northern-Rockies/CMR/cmrccpeisdraftallowres.pdf> (Contributor, pages 239-253)

Other Publications:

Klemm, Toni. David Briske, Matt Reeves, John Ritten, Amber Campbell, Audrey King. (2020) Ranching in a Warming World Is U.S. rangeland cattle production ready for climate change? Available at: <https://spark.adobe.com/page/U1akuopgckHHh/>

Jabbour, R., Islam, M. A., Lee, B. P., & Ritten, J. P. (2019). Integration of Early Harvest with Biological Control for Sustainable Alfalfa Production. *2019 Field Days Bulletin*

Norton, Jay, Urszula Norton, John Ritten, Taylor Bush, and Dixie Crowe. "Integrating Livestock and Cover Crops into Irrigated Crop Rotations." University of Wyoming, Agricultural Experiment Station, Field Day Bulletin – 2019, Powell Research and Extension Center.

Windh, Jessica*, John Ritten, Brian Lee, Steve Paisley, and Justin Derner. "Research Unwraps Costs of Five Grazing Situations, Determines Which Most Profitable." *Reflections*. 2019: 30-33. (Awarded *Top Student Story* in this issue).

Ritten, John. "Proper Stock Rate Research Continues." Wyoming Livestock Roundup 30(43), Page B5, February 23, 2019.

Ritten, John. "Cost of Replacement Heifers." Wyoming Livestock Roundup 30(33), Page 5, December 15, 2018.

Ritten, John. "What Impacts will Tariffs have on Cattle Markets?" Wyoming Livestock Roundup 30(13), Page 5, July 28, 2018.

Stewart, Whit, Warrie Means, and John Ritten. "Quantifying the Economic Impact of Excessively Fat Lambs in the Wyoming and U.S. Lamb Processing Sector." University of Wyoming, Agricultural Experiment Station, 2018 Field Days Bulletin.

Tanaka, John, John Ritten, Kristie Maczko, Anna Maher, Nicolas Quintana Ashwell Holly Dyer, Thomas Hiliken, Holly Kirkpatrick, and Kendall Roberts. "The Ranch Economics of Greater Sage-Grouse Conservation Practices." University of Wyoming, Agricultural Experiment Station, 2018 Field Days Bulletin.

Ritten, John. "What to Expect from the Cattle Cycle." Wyoming Livestock Roundup 30(2), Page 4, May 12, 2018.

Ritten, John. "What is the Impact of the Price Slide?" Wyoming Livestock Roundup 29(43), Page B3, February 24, 2018.

Ritten, John. "Time to Start Thinking of Next Year's Marketing Plan." Wyoming Livestock Roundup 29(27), Page B7, November 11, 2017.

Ritten, John. "Exports Impact Marketing Decisions." Wyoming Livestock Roundup 29(15), Page 9, August 12, 2017.

Ritten, John, Christopher Bastian, and Justin Derner. "We Corralled our Computers, Branded Them 'Southeast Wyoming Ranch,' & Weaned Some Surprising Results." Reflections. 2017: 8-11.

Ritten, John. "Adding Resilience and Flexibility Adds Opportunity." Wyoming Livestock Roundup 29(6), Page 4, June 10, 2017.

*Collins, Anna, John Tanaka, Kristie Maczko, John Ritten, and Derek Scasta. "Understanding Motivations and Impediments to Rancher Participation in USDA Natural Resources Conservation Service Conservation Programs." University of Wyoming, Agricultural Experiment Station, 2017 Field Days Bulletin.

Tanaka, John, John Ritten, and Kristie Maczko. "Ranch Economic Models for Evaluating Management Changes in Greater Sage-Grouse Habitat." University of Wyoming, Agricultural Experiment Station, 2017 Field Days Bulletin.

Ritten, John. "It's that Time of Year Again." Wyoming Livestock Roundup 28(48), April 1, Page 11, 2017.

Ritten, John and Steve Paisley. "Relative Feed Costs." Wyoming Livestock Roundup 28(40), February 4, 2017.

Ritten, John. "Why are High-Profit Firms High Profit Firms?" Wyoming Livestock Roundup 28(31), December 3, 2016.

Ritten, John. "Economics of Bluetongue." Wyoming Livestock Roundup 28(23), October 8, 2016.

Ritten, John. "Adaptive Financial Management." Wyoming Livestock Roundup, August 13, 2016.

Ritten, John. "Successful Ranches Need to be Flexible, Creative, Connected." Wyoming Livestock Roundup 28(6), June 11, 2016.

Derner, Justin, David Augustine, Lauren Porensky, Mark Eisele, Kendall Roberts, and John Ritten. "Flexible Stocking Strategies for Adapting to Climatic Variability." Cow Country (Wyoming Stock Growers), Spring 2016.

Ritten, John. "Long-Term Outlook for Ag." Wyoming Livestock Roundup 27(49), April 9, 2016.

Ritten, John. "Herd rebuilding in Wyo." Wyoming Livestock Roundup 27(41), February 13, 2016.

Harlan, M. K., J. Ritten, B. Rashford, and K. Cammack. "Valuation of Residual Feed Intake as a Selection Tool for Northeastern Wyoming Range Sheep Producers." University of Wyoming, Agricultural Experiment Station, 2016 Field Days Bulletin.

Ritten, John. "The Best Time to Think About Drought." Wyoming Livestock Roundup 27(32), December 12, 2015.

Ritten, John. "What Happened to Cattle Markets?" Wyoming Livestock Roundup 27(23), October 10, 2015.

Ritten, John. "What the H-2A Changes may Look like for Wyoming." Sheep Industry News, 19(8). August 2015.

Ritten, John. "Costs are Bad, Right?" Wyoming Livestock Roundup 27(15), August 15, 2015.

Kniss, Andrew, John Ritten, Robert Wilson, and Prashant Jha. "Efficacy and Economics of Cultural and Mechanical Weed Control Practices for Herbicide-Resistant Weed Management." University of Wyoming, Agricultural Experiment Station, 2015 Field Days Bulletin.

*Adjesiwor, A. T., M. A. Islam, V. Jeliakhov, J. P. Ritten, and A. Gracia y Garcia. "Productivity and Profitability of Irrigated Grass-Legume Mixtures." University of Wyoming, Agricultural Experiment Station, 2015 Field Days Bulletin.

*Hamilton, T., J. Ritten, C. Bastian, J. Derner, J. Tanaka, S. Lake, D. Mount, S. Paisley, D. Peck, and J. Reeves. "Economic Impacts of Variable Precipitation on Wyoming Ranchers." University of Wyoming, Agricultural Experiment Station, 2015 Field Days Bulletin.

*Harlan, M. K., J. Ritten, B. Rashford, and K. Cammack. "Valuation of Residual Feed Intake as a Selection Tool for Northeastern Wyoming Range Sheep Producers." University of Wyoming, Agricultural Experiment Station, 2015 Field Days Bulletin.

Ritten, John. "What the H-2A Changes may Look like for Wyoming." Wyoming Livestock Roundup 27(7), June 20, 2015.

Ritten, John. "Rebuild Cautiously" Wyoming Livestock Roundup May 2, 2015.

Ritten, John. "It's a good time to start planning for calf marketing" Wyoming Livestock Roundup 26(44), page B3, March 7, 2015.

Ritten, John. "How long will this 'golden age' last?" Wyoming Livestock Roundup 26(36), page 19, January 10, 2015.

Ritten, John. "Developing and breeding heifers for sale.....Will it pay?" Wyoming Livestock Roundup November 8, 2014.

Ritten, John. "New Cattle Budgets Released by UW." Wyoming Livestock Roundup September 20, 2014.

Ritten, John. "Importance of Public Lands Grazing." Wyoming Livestock Roundup 26(12), page 7, July 26, 2014.

*Hamilton, Tucker, J. Ritten, C. Bastian, D. Peck, J. Derner, and J. Reeves. "Economic Impacts of Climate Change and Drought on Wyoming Ranchers." University of Wyoming, Agricultural Experiment Station, 2014 Field Days Bulletin.

*Adjesiwor, A. T., M. A. Islam, V. Jeliaskov, A. Garcia y Garcia, and J. Ritten. "Irrigated Grass-Legume Mixtures." University of Wyoming, Agricultural Experiment Station, 2014 Sheridan Field Day Bulletin.

*Adjesiwor, A. T., M. A. Islam, V. Jeliaskov, A. Garcia y Garcia, and J. Ritten. "Effects of Phosphorus and Potassium Fertilization on Alfalfa Persistence." University of Wyoming, Agricultural Experiment Station, 2014 Sheridan Field Day Bulletin.

Norton, Jay, *Rajan Ghimire, Peter Stahl, John Ritten, Dannele Peck, and Urszula Norton. "Soil Quality and the Benefits of Crop Rotation, Reduced Tillage, and Manure Application in Crop and Forage Systems." University of Wyoming, Agricultural Experiment Station, 2014 Field Days Bulletin.

Ritten, John. "Grass is Plentiful." Wyoming Livestock Roundup 26(4), page 4, May 31, 2014.

Ritten, John. "Can Beef Quality be too High?" Wyoming Livestock Roundup 25(49), page 8, April 12, 2014.

Ritten, John. "Long-term Supply." Wyoming Livestock Roundup, February 22, 2014.

Ritten, John. "Impacting Cull Cow Value." Wyoming Livestock Roundup, January 4, 2014.

*Arias, R., S. Fensterseifer, C. Marshall, S. Paisley, J. Ritten, R. Funston, and S. Lake. "The Effects of Winter Protein Supplementation on Subsequent Calf Feedlot Performance and Carcass Characteristics." University of Wyoming, Agricultural Experiment Station, 2013 Field Days Bulletin.

Lee, B., and J. Ritten. "SAREC Wind Turbine." University of Wyoming, Agricultural Experiment Station, 2013 Field Days Bulletin.

Islam, M. A., V. Jeliaskov, A. Garcia y Garcia, J. Ritten, and B. Horn. Irrigated Grass-Legume Mixtures. University of Wyoming, Agricultural Experiment Station, 2013 Field Days Bulletin.

*Hamilton, T., J. Ritten, C. Bastian, S. Lake, D. Mount, S. Paisley, D. Peck, J. Derner, and J. Reeves. Economic Impacts of Climate Change and Drought on Wyoming Ranchers. University of Wyoming, Agricultural Experiment Station, 2013 Field Days Bulletin.

Ritten, John. "Restocking Considerations." Wyoming Livestock Roundup, August 17, 2013.

*Lee, Brian, John Ritten, Christopher Bastian, and Andrew Kniss. "What would happen to Producer Profits if Roundup Ready Sugarbeet weren't an Option?" Reflections. 2013: 6-8. (Awarded First Place Article in this issue).

Ritten, John. "Keeping an Eye on Feed." Wyoming Livestock Roundup, May 25, 2013. Page 4.

Ritten, John. "Timing is Everything." Wyoming Livestock Roundup, April 13, 2013. Page 9.

Ritten, John. "How will Beef demand hold up in the coming years?" Wyoming Livestock Roundup, March 2, 2013, page B11.

Ritten, John. "2013 Should be an Interesting Year." Wyoming Livestock Roundup, January 19, 2013. Page 5.

Ritten, John, Christopher Bastian, Mike Smith and Steve Paisley. "Ranching, Risk, and Resilience During Drought." *Rural Connections*. January 2013, 7(1): 11-14.

Ritten, John. "National Herd Update." Wyoming Livestock Roundup, December 8, 2012.

Smith, Mae, Rachel Meador, and John Ritten. "Planning for Drought." Wyoming Livestock Roundup, December 1, 2012.

Ritten, John. "Value of Preconditioning Programs." Wyoming Livestock Roundup, October 27, 2012.

Ritten, John. "Time for a Drought Management Plan." Wyoming Livestock Roundup, September 15, 2012.

Ritten, John. "How Much Impact Will Corn Have on Cattle This Fall?" Wyoming Livestock Roundup, July 21, 2012.

Lake, Scott, Steve Paisley, John Ritten, Rick Funston, Kimberly Vonnahme, and *Ricardo Arias. "The Effects of Winter Protein Supplementation on Subsequent Calf Feedlot Performance and Carcass Characteristics." University of Wyoming, Agricultural Experiment Station, 2012 Field Days Bulletin.

Ritten, John. "More Uncertainty Ahead." Wyoming Livestock Roundup, May 12, 2012.

Bastian, Christopher, John Ritten, Steven Paisley, and Scott Lake. "Scientists Explore Benefits from Weaning, Cornstalks and Cattle Feeding Options." Reflections. 2012: 6-9. (Awarded First Place Article in this issue).

*Meeks, Jenna, Jay Norton, Renee Gebault-King, Rajan Ghimire, Urszula Norton, Prakriti Bista, and John Ritten. "Long-term Project Integrating Ag Systems Begin to Yield Results." Reflections. 2012: 23-25.

Peck, Dannele, Christopher Bastian, and John Ritten. "UW Ag & Applied Economics Offers New Option in Livestock Business Management." Wyoming Livestock Roundup, 23(48): April 7, 2012.

Ritten, John. "Beef Demand Appears Strong, But for How Long?" Wyoming Livestock Roundup, 23(40): Page 13, February 11, 2012.

Ritten, John. "It Still Pays to Add Forage Gains to Feeders." Wyoming Livestock Roundup, 23(31): Page 2, 9, December 10, 2011.

Ritten, John. "Alternative Weaning and Feeding Strategies Provide Economic Impacts." Wyoming Livestock Roundup, 23(24): Page 19, October 22, 2011.

Ritten, John. "Current markets promote adding gains from forage." Wyoming Livestock Roundup, 23(16): Page 2, August 27, 2011.

Ritten, John. "New Southeastern Wyoming Cattle Budget Available." Wyoming Livestock Roundup, 23(8): Page 2, 5, July 2, 2011.

Bastian, Christopher, John Ritten, Michael Smith, Seven Paisley. "Dealing with Drought." Reflections. 2011: 11-14. (Awarded Second Place Article in this issue).

*Meeks, J., J. Norton, T. Kelleners, J. Krall, A. Kniss, U. Norton, D. Peck, J. Ritten, B. Hess, S. Paisley, and N. Ward. "Economic and Environmental Sustainability of Conventional, Reduced-Input, and Organic Approaches on Western Crop-Range-Livestock Farms." University of Wyoming, Agricultural Experiment Station, 2011 Field Days Bulletin.

*Gebault King, R., J. Norton, J. Ritten, E. Arnould, M. Press, R. Ghimire, and J. Meeks. "Soil Fertility Challenges in Northern High Plains Organic Farming Operations." University of Wyoming, Agricultural Experiment Station, 2011 Field Days Bulletin.

Lake, S., S. Paisley, J. Ritten, R. Funston, K. Vonnahme, and *R. Arias. "Effects of Winter Protein Supplementation on Subsequent Calf Feedlot Performance and Carcass Characteristics." University of Wyoming, Agricultural Experiment Station, 2011 Field Days Bulletin.

Lake, S., S. Paisley, J. Ritten, and *E. E. Smith. "Effects of Age at Weaning and Post-Weaning Management on Feedlot Performance and Carcass Characteristics of Beef Steers." University of Wyoming, Agricultural Experiment Station, 2011 Field Days Bulletin.

Ritten, John, Ben Rashford, Christopher Bastian. "Can Rangeland Carbon Sequestration Help Ranchers and Rural Economies Adapt to Climate Change?" *Rural Connections*. June 2011 5(2): 27-32.

Ritten, John. "High Corn Prices May Provide Opportunities." Wyoming Livestock Roundup, 22(51): Page 15, May 7, 2011.

Ritten, John. "Using State and Transition Models on Your Ranch." Wyoming Livestock Roundup, 22(44): Page 5, Section B, March 19, 2011.

Ritten, John. "What to expect from the beef industry in 2011 and beyond." Wyoming Livestock Roundup, 22(36): Page 2, 9, January 22, 2011.

Ritten, John. "What will happen to Calf Prices?" Wyoming Livestock Roundup, 22(22): Page 2, 6, October 16, 2010.

Ritten, John. "Does it pay to Background Calves?" Wyoming Livestock Roundup, 22(15): Page 2, 6, August 28, 2010.

Ritten, John. "Does Small Wind Make Sense (or Cents)?" Wyoming Livestock Roundup, 22(6) Page 2, 5, June 26, 2010.

Ritten, John. "Evaluating the Benefits of Fall Calving." Wyoming Livestock Roundup, 21(50): Page 2, 8, May 8, 2010.

Ritten, John. "Adjusting Stocking Rate to Forage Production Can Add Profits." Barnyards and Backyards newspaper insert (state-wide), University of Wyoming, Cooperative Extension Service, Page 7, May 4, 2010.

Ritten, John and John Hewlett. "How Much Could Your Carbon be Worth?" Wyoming Livestock Roundup, 21(39): page 2, February 20, 2010.

Ritten, John and John Hewlett. "Carbon Credit Valuation Tool." Posted at <http://agecon.uwyo.edu/RangelandCarbonCredits>, December 4, 2009.

Smith, Mike and John Ritten. "Flexible livestock systems possible for drought or good times." Barnyards and Backyards insert in Wyoming Livestock Roundup, August 2009.

Presentations (*Indicates Graduate Student at time of project):

Academic Presentations:

*Fancher, Hana, JD Wulfhorst, John Ritten. "Community Security in Beef Production: An Approach to Social and Economic Sustainability of Rangeland Dependent Livestock Enterprises." Presented at the *Society of Range Management* Annual meeting, February 9, 2022. Albuquerque, NM.

Ritten, John. "Ranch-Level Economic Impacts of Prairie Dog Conservation in the Thunder Basin Ecoregion of Wyoming." Thunder Basin Grasslands Research Initiative Symposium, virtual. February 3, 2022.

Ritten, John. "An Economic Assessment of Beef Cattle Vulnerability to Future Climates." Presented at the *Society of Range Management* Annual meeting, February 19, 2020. Part of the

Vulnerability of Beef Cattle Production to Ecological and Socio-Economic Challenges of Future Climates Symposium, Denver, CO.

*Hanson, Eilish, John Ritten, Ben Rashford, Amy Nagler, Andrew Kniss. "Bioenergy with Carbon Capture and Storage in the Upper Missouri River Basin: Farm-Level Economic Implications." Presented at the *Western Agricultural Economics Association Meetings*, July 2, 2019, Coeur d'Alene, ID. (Presented by Ritten)

*Windh, Jessica, John Ritten, Justin Derner, Steve Paisley, Brian Lee. "Continuous Season-Long and Rotational Grazing systems in Northern Colorado: Economic Returns over Variable Costs." Presented at the *Society for Range Management Annual Meeting*, February 12, 2019, Minneapolis, MN. (Presented by Windh)

Kazanski, Clare, Joe Fargione, Forest Isbell, John Ritten. "Soil Carbon Under Different Grazing Practices Across the Northern Great Plains." Poster presented at the *Society for Range Management Annual Meeting*, February 12, 2019, Minneapolis, MN.

Wilmer, Hailey, Lauren Porensky, David Augustine, Maria Fernandez-Gimenez, Justin Derner, John Ritten, Dannele Peck, David Hoover. "Practicing a New Nature-Culture of Hope: Lessons from Collaborative adaptive Rangeland Management." Poster presented at the *Society for Range Management Annual Meeting*, February 11, 2019, Minneapolis, MN. (Presented by Wilmer)

*Windh, Jessica, John Ritten, Justin Derner, Steve Paisley, Brian Lee. "An Economic Evaluation of Continuous and Rotational Cattle Grazing Systems in Northern Colorado." Presented at the *Western Agricultural Economics Association Meetings*, June 25, 2018, Anchorage, AK. (Presented by Windh)

Lee, Brian, John Ritten, Andrew Kniss. "Whole Farm Implications of Utilizing Direct harvest in Dry bean rotations in southeast Wyoming and western Nebraska." Presented at the *Western Agricultural Economics Association Meetings*, June 25, 2018, Anchorage, AK. (Presented by Lee)

*Hanson, Eilish, John Ritten, Ben Rashford, Andrew Kniss, and Amy Nagler. "What are the Farm-Level Implications from Adopting Bioenergy with Carbon Capture and Storage in the Upper Missouri River Basin?" Poster presented at the *Western Society of Crops Science Annual Meeting*, June 19, 2018, Laramie, WY. Poster presented by Hanson.

Ritten, John, Christopher Bastian, Justin Derner, John Tanaka. "Flexible Stocking as a Strategy for Enhancing Ranch Profitability in the Face of a Changing and Variable Climate." Presented at the *Western Agricultural Economics Association Meetings*, July 10, 2017, Lake Tahoe, CA.

*Dyer, Holly, John Ritten, John Tanaka, David Taylor, Kristie Maczko, and Jennifer Moore Kucera. "Wyoming Ranchers' Profitability from Improved Forage Production on Private Rangeland: An Approach to Measure Soil Health Benefits." Presented at the *Western*

Agricultural Economics Association Meetings, July 10, 2017, Lake Tahoe, CA. (Presented by Ritten)

Ritten, John, John Tanaka, Kristie Maczko, David Taylor, Jennifer Moore Kucera and *Holly Dyer. "Methods and Challenges for Valuation of Soil Health Properties." Presented at ACES (A Community on Ecosystem Services) 2016 Meeting. Jacksonville, FL. December 7, 2016. *Invited*. Presented by Dyer.

*Dyer, Holly, Kristie Maczko, Jennifer Moore Kucera, John Ritten, John Tanaka, and David Taylor. "Valuing Soil Health Benefits for Wyoming Ranchers." Presented at ACES (A Community on Ecosystem Services) 2016 Meeting. Jacksonville, FL. December 7, 2016. *Invited*. Presented by Dyer.

Ritten, John, Justin Derner, Christopher Bastian, John Tanaka, David Augustine, Lauren Porensky, Mark Eisele, Kendall Roberts. "Flexible Stocking Strategies in A Variable Climate: From Research to Reality." Presented at the INFORMS (Institute for Operations Research and Management Sciences) 2016 Annual Meeting, Multi-Criteria Decisions Making in Agriculture Symposium, Nashville, TN. November 15, 2016. *Invited*

Derner, Justin, David Augustine, Lauren Porensky, Mark Eisele, Kendall Roberts and John Ritten. "Flexible Stocking Strategies for Adapting to Climatic Variability." Presented at the 10th International Rangeland Congress, Saskatoon, SK, Canada. July 21, 2016. Presented by Derner.

Ritten, John, *Tucker Hamilton, Christopher Bastian, John Tanaka. "Economic Impacts of Increased Seasonal Precipitation Variation on Cow/Calf Producers." Poster presented at the 10th International Rangeland Congress, Saskatoon, SK, Canada. July 21, 2016. Presented by Derner.

Ritten, John, *Tucker Hamilton, Christopher Bastian, Justin Derner, John Tanaka. "Management Implications of Increasing Seasonal Precipitation and Source of Supplemental Funds on SE Wyoming Cattle Producers." Presented at the *Western Regional Science Association* 55th Annual Meeting, February 17, 2016, Waikoloa, HI.

*Hamilton, Tucker, John Ritten, Christopher Bastian, Justin Derner, John Tanaka. "Economic Impact of Increasing Seasonal Precipitation Variation on Cow-Calf Enterprises." Presented at the *Society for Range Management* Annual Meeting, February 1, 2016, Corpus Christi, TX. Part of the *Responding Rationally to Uncertainty* Organized Symposium. *Invited*. (Presented by Ritten)

Derner, Justin, David Augustine, Lauren Porensky, Mark Eisele, John Ritten. "Adapting to Climatic Variability for Livestock Operations: Flexible Stocking Strategies." Presented at the *Society for Range Management* Annual Meeting, February 1, 2016, Corpus Christi, TX. Part of the *Responding Rationally to Uncertainty* Organized Symposium. *Invited*. (Presented by Derner)

Derner, Justin, Leigh Hunt, Kelper Euclides Filho, John Ritten, Judith Capper, Guodong Han. "Livestock Production Systems." Presented at the *Society for Range Management Annual Meeting*, February 2, 2016, Corpus Christi, TX. (Presented by Derner)

*Harlan, McKenzie (Kate), John Ritten, Benjamin Rashford, Kristi Cammack. "Valuation of Residual Feed Intake as a Selection Tool for Northeastern Wyoming Range Sheep Producers." Presented at the *Northeastern Agricultural and Resource Economic Association / Canadian Agricultural Economics Society Joint Annual Meeting*, June 30, 2015, Newport, RI. (Presented by Harlan).

Ritten, John, James Pritchett, Maria Fernandez-Gimenez, Emily Kachergis, and Willow Hibbs. "A State-and-Transition Approach to Determine the Trade-Offs Associated with Livestock Production and other Ecosystem Services." Presented at the *Society for Range Management Annual Meeting*, February 6, 2015, Sacramento, CA.

Rimbey, Neil, John Tanaka, Allen Torell, John Ritten, Tex Taylor, and Tom Foulke. "Ranch-Level Economic Impacts of Changing Grazing Management to Protect Greater Sage-Grouse." Presented at the *Society for Range Management Annual Meeting*, February 2, 2015, Sacramento, CA. (Presented by Rimbey)

*Varelas, Leticia, John Tanaka, Ben Rashford, and John Ritten. "Using Multi-Criteria Analysis to Microsite Wind Turbines." Presented at the *Society for Range Management Annual Meeting*, February 3, 2015, Sacramento, CA. (Presented by Varelas)

Cammack, Kristi, *Melinda Ellison, John Ritten, Hanna Cummingham. "Fat or just 'Feed Efficient' – Animal Science, Genetics and Applied Economics Help You Decide." Presented at the *Roadmap to STEM*, organized by the Wyoming Department of Education and the University of Wyoming, August 8, 2014, Laramie, WY.

*Hamilton, Tucker, John Ritten, Chris Bastian, John Tanaka, and Justin Derner, "Management Implications of a Changing and Variable Climate for Production in Southeast Wyoming," Presented at the *Western Agricultural Economics Association Meetings*, June 22-24, 2014, Colorado Springs, Co. (Presented by Bastian)

*Hamilton, Tucker, John Ritten, Chris Bastian, John Tanaka, and Justin Derner, "Climate Change and Variation: Management Implications for Cattle Producers," Presented at the *Drought in Life, Cultures and Landscapes of the Great Plains 2014 Symposium*, April 3, 2014, Lincoln, NE. (Presented by Hamilton)

Ritten, John. "Can Ranchers Profitably Provide Ecosystem Services? An STM Approach." Research Across Disciplines Seminar. University of Wyoming. March 15, 2013.

J. Pritchett, M. Fernandez-Gimenez, E. Kachergis, J. Parsons, Ritten, J. "Home on a Transition Range: Extending State and Transition Models as a Tool for Adaptive Grazing Management."

Poster presented at the *Colorado Section of the Society for Range Management Annual Meeting*. Fort Collins, CO. November 29, 2012. (Presented by Fernandez-Gimenez)

Ritten, John, James Pritchett, Maria Fernandez-Gimenez, E. Kachergis, and Willow Hibbs. "Can Ranchers Profitably Provide Ecosystem Services? And STM Approach." Presented at the *4th International EcoSummit*, Columbus, Ohio, October 2, 2012.

Ritten, John, John Tanaka, Kristie Maczko, Jack Morgan, Netra Chetri, Lori Hiding, Matt Reeves, and John Mitchell. "Food Security and Rangelands: Insight into the Research Process." Department of Agricultural and Applied Economics Seminar Series, University of Wyoming, Laramie, WY, September 21, 2012. (Presented by Ritten)

*Roberts, T.W., D.E. Peck, J.P. Ritten. "Cattle Producers' Economic Incentives for Preventing Bovine Brucellosis Under Uncertainty." Presented at the *13th International Symposium on Veterinary Epidemiology and Economics*, Maastricht, The Netherlands, August 20-24, 2012. (Presented by Peck)

Maczko, Kristie, John Tanaka, John Ritten, Jack Morgan, Netra Chetri, Lori Hiding, Matt Reeves, and John Mitchell. "Sustainable Rangelands: Assessing Contributions to Food Security and Ecosystem Services." Presented at the *97th Annual Meeting of the Ecological Society of America*. August 5-10, 2012. Portland, OR. (Presented by Maczko)

Ritten, John, James Pritchett, Maria Fernandez-Gimenez, Emily Kachergis, and Willow Hibbs. "Can Ranchers Profitably Provide Ecosystem Services? An STM Approach." Poster presentation at the *5th Annual Ecosystem Services Partnership Conference*. July 31- August 3, 2012, Portland, OR. (Presented by Ritten)

*Lee, Brian, John Ritten, Christopher Bastian, and Andrew Kniss. "Farm Level Impacts of Regulation on Genetically Modified Beets in SE Wyoming." Presented at the *2012 Annual Meeting of the Western Agricultural Economics Association*. Park City, UT. June 22, 2012. (Presented by Ritten)

Islam, M. Anowarul, Robin Goose, Urszula Norton, Axel Garcia y Garcia, Dipak Santra, Ramesh Sivanpillai, John Ritten, Jay Norton, Steven Paisley, James Krall. "Legume Adoption Practices in the Central Great Plains of the United States: Economic and Environmental Benefits in Face of Climate Change." Fourth International Conference on Climate Change. July 12-13, 2012. University of Washington, Seattle, WA. (Presented by Islam)

Ritten, John, James Pritchett, Maria Fernandez-Gimenez, Emily Kachergis, and Willow Hibbs. "Can Ranchers Profitably Provide Ecosystem Services? An STM Approach." Presented at the Pacific Northwest Regional Economic Conference. May 17, 2012, Seattle, WA.

Ritten, J., M. Fernandez-Gimenez, E. Kachergis, W. Hibbs, J. Pritchett. "A State-and-Transition Approach to Evaluating Trade-offs among Ecosystem Services." Poster presented at the *Society*

for Range Management 65th Annual Meeting. Spokane, WA. January 31, 2012, and February 1, 2012. (Presented by Fernandez-Gimenez)

Ritten, J. "Terrestrial Rangeland Carbon Sequestration." Agriculture and Energy Workshop, Soil and Water Conservation Society Meeting. Laramie, WY. September 29, 2011. *Invited*.

Kachergis, E., J. Ritten and M. E. Fernandez-Gimenez. "Linking Ecological and Economic State-and-Transition Models for Adaptive Management of Rangeland Ecosystems." National Institute of Food and Agriculture Project Directors' Meeting, presented at the *Soil and Water Conservation Society* meetings. Washington, D.C. July 19, 2011. (Presented by Kachergis)

Ritten, J., M. Fernandez-Gimenez, E. Kachergis, W. Hibbs and J. Pritchett. "Linked Ecological and Economic State and Transition Model for Adaptive Management of Rangeland Ecosystems." Presented at the *2011 Joint Annual Meeting of the Canadian Agricultural Economics Society and the Western Agricultural Economics Association*. Banff, Alberta, Canada. June 30, 2011. (Presented by Ritten)

*Roberts, T., D. Peck, J. Ritten. "Private Investment in Disease Prevention when Effectiveness is Uncertain: An application to Bovine Brucellosis in the Greater Yellowstone Area." Presented at the *2011 Joint Annual Meeting of the Canadian Agricultural Economics Society and the Western Agricultural Economics Association*. Banff, Alberta, Canada. June 30, 2011. (Presented by Peck)

*Eisele, K., J. Ritten, C. Bastian, and S. Paisley. "Economic Comparison of Feeding and Weaning Programs in Southeast Wyoming Beef Production." Presented at the *2011 Joint Annual Meeting of the Canadian Agricultural Economics Society and the Western Agricultural Economics Association*. Banff, Alberta, Canada. June 30, 2011. (Presented by Eisele)

Ritten, J., E. Kachergis, M. Fernandez-Gimenez, W. Hibbs, J. Pritchett. "Do Livestock and Ecosystems Services Compete? A State-and-Transition Approach." Presented at the *International Symposium on Society and Resource Management*, Madison, WI. June 7, 2011. (Presented by Ritten)

Ritten, J., M. Fernandez-Gimenez, W. Hibbs, E. Kachergis, J. Pritchett, R. Roath, M. Rocca. "A State and Transition Approach to Adaptive Management of Rangeland Ecosystems." Department of Agricultural and Applied Economics Seminar Series, University of Wyoming, Laramie, WY, April 7, 2011. (Presented by Ritten)

Peck, D., M. Kauffman, *T. Roberts, B. Wilson, B. Rashford, J. Ritten, R. Coupal. 2011. "Costs of Brucellosis Prevention and Outbreaks in Greater Yellowstone Area Cattle." Department of Animal Science Seminar Series, University of Wyoming, Laramie, WY, February 11, 2011. (Presented by Peck)

Ritten, John, Maria Fernandez-Gimenez, Willow Hibbs, Emily Kachergis, Windy Kelley, James Pritchett, Roy Roath, and Monique Rocca. "Linked Ecological and Economic State and Transition

Model for Adaptive Management of Rangeland Ecosystems.” Presented at the *A Community on Ecosystem Services* Conference, Phoenix, AZ. December 8th, 2010. (Presented by Ritten)

Kachergis, Emily, John Ritten, and Willow Hibbs. “Managing Rangelands for Ecosystem Services Using State and Transition Models.” Poster presented at the 2010 *Institute for Livestock and the Environment Stakeholder Summit*, Fort Collins, CO. December 2, 2010. (Presented by Kachergis)

Ritten, John, Maria Fernandez-Gimenez, Willow Hibbs, Emily Kachergis, Windy Kelley, James Pritchett, Roy Roath, and Monique Rocca. “Linked Ecological and Economic State and Transition Model for Adaptive Management of Rangeland Ecosystems.” Poster presented at the 2010 *Institute for Livestock and the Environment Stakeholder Summit*, Fort Collins, CO. December 2, 2010. (Presented by Ritten)

Ritten, John. “Carbon Market Impacts on Beef Production and How Cap and Trade Might Look.” Presented at the University of Wyoming Department of Animal Science Seminar, Laramie, WY. September 10, 2010.

Ritten, John, Chris Bastian, and Ben Rashford. “Will Carbon Find a home on the Range? A Monte Carlo Simulation.” Poster presentation at the *American Agricultural Economics Association Annual Meeting* in Denver, CO. July 26, 2010. (Presented by Ritten).

Fernandez-Gimenez, Maria, Willow Hibbs, Emily Kachergis, Windy Kelly, James Pritchett, Kira Puntenny, John Ritten, Roy Roath, Monique Rocca, Aleta Rudeen, and Ryan Wattles. “Linking Ecological and Economic State-and-Transition Models for Adaptive Management of Rangeland Ecosystems.” Presented at the 2nd Annual Stakeholder Summit for the *Institute for Livestock and the Environment* in Fort Collins, CO. November 19, 2009. (Presented by Fernandez-Gimenez)

Ritten, John P., Christopher T. Bastian, Steve Paisley, and Michael Smith. “Economic Analysis of Alternative Cow/Calf Strategies Given Fluctuating Precipitation and Cattle Prices.” Presented at the University of Wyoming Department of Animal Science Seminar, September 25, 2009. (Presented by Ritten)

Ritten, John, Christopher T. Bastian, Michael A. Smith, Steven I. Paisley. “Comparison of Drought Mitigation Strategies for Cow-Calf Producers.” Selected paper session at the *Western Agricultural Economics Association Annual Meeting* in Kauai, Hi. June 24-26, 2009. (Presented by Ritten)

Ritten, John P., W. M. Frasier, and C. T. Bastian. "Determining Optimal Stocking Rates in Wyoming Using a Bellman Approach", Selected paper session at the *Western Agricultural Economics Association Annual Meeting* in Big Sky, MT. June 25-27, 2008. (Presented by Ritten).

*Ponnamaneni, P., C. T. Bastian, S. Mooney, J. P. Ritten, W. M. Frasier, S. I. Paisley, M. A. Smith, and W. J. Umberger. "Economically Sustainable Cattle Production Practices during Multiple

Years of Drought and Differing Price Cycles." Selected paper session at the *Western Agricultural Economics Association Annual Meeting* in Big Sky, MT. June 25-27, 2008. (Presented by Bastian).

Ritten, John. "Optimal Beef Cattle Grazing Strategies in the Intermountain West." Presented at the Agricultural and Resource Economics Lunchtime Seminar, Colorado State University, February 25, 2008.

Ritten, John, W. Marshall Frasier, Chris Bastian, Wendy Umberger, Sian Mooney, Michael Smith, and Steven Paisley. "Economically sustainable cattle production practices during multiple years of drought." Presented at the 2006 *Western Agricultural Economics Association Annual Meeting*, Anchorage, Alaska. (Presented by Ritten)

Extension Presentations:

Ritten, John. 2022. "Value and Economics of Range Improvements." Presented at the 2022 WY-UT Ag Days. March 10, 2022.

Ritten, John. 2021. "The need to think about system-wide, scalable solutions." Presented at the AgNext Research Summit: Shaping the Future of Sustainability in Animal Agriculture. Fort Collins, CO, December 1, 2021.

Kelley, Windy, and John Ritten. 2021. "Weather & Climate Resilience in WY: Why and How?" Zoom Presentation for UWE Virtual EPIC 2021, November 3, 2021.

Ritten, John. "Economic impacts of climate change to ranching. Challenges Associated with Increased Variability." Colorado Section of the Society for Range Management and the Colorado Plateau Science & Management Forum. Grand Junction, CO. October 7, 2021.

Ritten, John. "Challenges Associated with Increased Variability. Ranch Economic Impacts of Drought and Climate Change" University of Idaho Range Center Fall Forum. October 6, 2021. Available at: <https://www.youtube.com/watch?v=wPTXilMkOZ4>

Ritten, John. "Ranch-Level Economic Impacts of Prairie Dog Conservation in the Thunder Basin Ecoregion of Wyoming." Thunder Basin Grasslands Prairie Ecosystem Association Board Meeting. April 7, 2021.

Overlin, Annie, Kevin Jablonski, Justin Derner, David Augustine, Dannele Peck, and John Ritten. 2020. "2020 Colorado Drought and Beef Marketing Discussion." Zoom Presentation, July 17, 2020. Available at: <https://www.youtube.com/watch?v=JqjqOPHpXRA&t=3049s>

Hanson, Eilish*, John Ritten, Amy Nagler. "Bioenergy with Carbon Capture and Storage: Farm Level Implications in the Upper Missouri River Basin." 2019 MRNC (Missouri River Natural Resources Council) Missouri River Conference. Pierre, SD, March 7, 2019. Poster presented by Hanson.

Mosqueda, Elizabeth*, Andrew Kniss, John Ritten, Nevin Lawrence, Prashant Jha, Gustava Sbatella. "Economics of Cultural, Mechanical, and Chemical Weed Control Practices for Herbicide-Resistant Weed Management." Western Society of Weed Science Annual Meeting. Denver, CO, March 13, 2019. Poster presented by Mosqueda.

Ritten, John. "Value and Economics of Range Improvements. Do they Pencil Out?" Idaho Range Livestock Symposium. Marsing, ID, January 7, 2019.

Ritten, John. "The True Cost of Replacement Heifers: Raising vs Buying" Idaho Range Livestock Symposium. Marsing, ID, January 7, 2019.

Ritten, John. "Value and Economics of Range Improvements. Do they Pencil Out?" Idaho Range Livestock Symposium. Twin Falls, ID, January 8, 2019.

Ritten, John. "The True Cost of Replacement Heifers: Raising vs Buying" Idaho Range Livestock Symposium. Twin Falls, ID, January 8, 2019.

Ritten, John. "Value and Economics of Range Improvements. Do they Pencil Out?" Idaho Range Livestock Symposium. Pocatello, ID, January 9, 2019.

Ritten, John. "The True Cost of Replacement Heifers: Raising vs Buying" Idaho Range Livestock Symposium. Pocatello, ID, January 9, 2019.

Ritten, John. "Value and Economics of Range Improvements. Do they Pencil Out?" Idaho Range Livestock Symposium. Rexburg, ID, January 10, 2019.

Ritten, John. "The True Cost of Replacement Heifers: Raising vs Buying" Idaho Range Livestock Symposium. Rexburg, ID, January 10, 2019.

Ritten, John. "Long term strategies for operations during market changes and changes in spring precipitation." Southeast Wyoming Beef Convention. Torrington, WY November 20, 2018.

Ritten, John. "Economic Tools to Manage the Cow Herd." Oregon State University 2018 Beef Industry Tour. Corvallis, OR, October 25, 2018.

Ritten, John. "Economic Tools to Manage the Cow Herd." Oregon State University 2018 Beef Industry Tour. Roseburg, OR, October 24, 2018.

Ritten, John. "Economic Tools to Manage the Cow Herd." Oregon State University 2018 Beef Industry Tour. Prineville, OR, October 23, 2018.

Ritten, John. "Economic Tools to Manage the Cow Herd." Oregon State University 2018 Beef Industry Tour. Pendleton, OR, October 22, 2018.

Hanson, Eilish*, John Ritten, Ben Rashford, Andrew Kniss, and Amy Nagler. "What are the Farm-Level Implications from Adopting Bioenergy with Carbon Capture and Storage in the Upper Missouri River Basin?" Sustainable Agricultural Research and Extension Center Annual Field Day, Lingle, WY. August 22, 2018. Poster Presented by Hanson.

Windh, Jessica*, John Ritten, Justin Derner, Steve Paisley, and Brian Lee. "The Steaks have been Raised: The Overlooked Costs of Grazing System Management." Sustainable Agricultural Research and Extension Center Annual Field Day, Lingle, WY. August 22, 2018. Poster Presented by Windh.

Carpenter, K. T.*, W. C. Stewart, J. D. Scasta, J. P. Ritten, J. B Taylor, and S. L. Lake. "Quantitative Analysis of Ewe Size and Breed Performance on Semi-Arid Rangelands 2007-2017." Poster presented and the Annual Summer Wyoming Wool Growers Membership Meeting, August 7, 2018, Laramie, WY.

Whaley, J. R., W. J. Means, J. P. Ritten, H. N McKibbin, M. R. Becker, K. L. Lamagno, A. A. Julien, C. M. Page and W. C. Stewart. "Quantifying the Economic Impact of Excessively Fat Lambs in the U.S. Lamb Processing Sector." Poster presented and the Annual Summer Wyoming Wool Growers Membership Meeting, August 7, 2018, Laramie, WY.

Foulke, Tom, Caitlin Youngquist, Carrie Eberle, Jill Keith, Tex Taylor, Andrew Kniss, Brian Lee, John Ritten. "Wyoming First Grain Project." Powell Research and Extension Center Annual Field Day, Powell, WY. July 19, 2018. Poster Presented by Lee.

Bush, Taylor*, Jay Norton, Bonnie Bates, Caitlin Price Youngquist, John Ritten, Urszula Norton. "Integrating Livestock and Cover Crops into Irrigated Crop Rotations." Powell Research and Extension Center Annual Field Day, Powell, WY. July 19, 2018. Poster Presented by Bush.

Ritten, John. "Profitability of Heifers." Johnson County Cattlewomen 8th Annual Women's Agriculture Summit, Buffalo, WY. January 20, 2018. *Invited.*

Ritten, John. "Economics of Flexible Stocking." Flexible Stocking Summit, Nunn, CO. September 19, 2017. *Invited.*

Ritten, John. "Economics of Feeding Strategies for Beef Production." Annie's Project, Douglas WY. March 6, 2017. *Invited.*

Ritten, John. "Winter Cow Feeding Economics." Farm and Ranch Days, Riverton, WY. February 8, 2017. *Invited.*

Ritten, John. "Economics of Feeding Strategies for Beef Production." Annie's Project, Lusk WY. January 31, 2017. *Invited.*

Ritten, John. "Spring Calving Costs and Budgets." Progressive Rancher Forum, Wyoming Stock Growers Winter Meeting, Casper, WY. December 5, 2016. *Invited*.

Ritten, John, *Tucker Hamilton, Christopher Bastian, John Tanaka. "Economic Impacts of Increased Seasonal Precipitation Variation on Cow/Calf Producers." Poster presented at the Sustainable Agricultural Research and Extension Center (SAREC) Field Day, Lingle, WY, August 25, 2016.

Ritten, John. "Preparing the Next Generation of Wyoming Ranchers." Wyoming Stock Growers Association Summer Meeting, Laramie, WY. June 2, 2016. Opening General Session, *Invited*.

Ritten, John, *Kate Harlan, Ben Rashford, Kristi Cammack. "Using RFI as a Selection Tool for Ewes in Range Flocks." Presented at Fremont County Farm and Ranch Days, February 10, 2016, Riverton, WY.

*Munsick, Tris, Dannele Peck, John Ritten, Myrna Miller. "Economic Viability of Vaccinating for Bluetongue in Sheep." Presented at Fremont County Farm and Ranch Days, February 10, 2016, Riverton, WY. (Presented by Munsick)

Ritten, John. "Economic Impacts of Increasing Seasonal Precipitation Variation on Cow-Calf Enterprises." Wyoming Section of the Society for Range Management Winter Meeting. Laramie, WY. November 5, 2015. *Invited*.

Ritten, John. "A State and Transition Approach to Determine Opportunity Costs of Providing Various Ecosystem Services?" Wyoming Chapter of the American Society of Farm Managers and Rural Appraisers Winter Meeting. Laramie, WY. October 9, 2015.

Organizer, Wyoming Chapter of the American Society of Farm Managers and Rural Appraisers Winter Meeting. Laramie, WY. October 9, 2015.

Ritten, John and Dallas Mount. "Ranch Financial Workshop." Laramie Rivers Conservation District, Laramie, WY. September 29, 2015. *Invited*.

Ritten, John. "Ongoing Sheep Research at the University of Wyoming." Wyoming Wool Growers Midyear Membership Meeting. Panel Discussion. August 4, 2015. *Invited*.

Rimbey, Neil. L. Allen Torell, John A. Tanaka, David "Tex" Taylor, John Ritten, and Thomas Foulke. "Ranch-level Economic Impacts of Grazing Management to Protect Sage-grouse." Presented at the Idaho Range Livestock Symposium. Idaho Falls, Burley, and Marsing ID. April 7, 8, and 9, 2015. Presented by Rimbey.

Ritten, John. "Economics of Weed Control." Wyoming Weed Management Association Annual Meeting, Casper, WY. January 21, 2015. *Invited*.

Ritten, John. "Raising vs. Buying Replacement Heifers." Progressive Rancher Forum, Wyoming Stock Growers Winter Meeting, Casper, WY. December 1, 2014.

Ritten, John. "Replacement Heifer Development Considerations." SE Wyoming Beef Production Convention, Torrington, WY. November 18, 2014.

Ritten, John. "Ag Leasing Overview." University of Wyoming Extension In-Depth Training, Laramie, WY. November 5, 2014. *Invited*.

Ritten, John. "Farm-Level Economic Comparison of Organic, Reduced Input, and Conventional Systems – Session 1." Wyoming Organic Conference, Torrington, WY. February 22, 2014.

Ritten, John. "Farm-Level Economic Comparison of Organic, Reduced Input, and Conventional Systems – Session 2." Wyoming Organic Conference, Torrington, WY. February 22, 2014.

Ritten, John. Ritten, John. "Farm-Level Economic Comparison of Organic, Reduced Input, and Conventional Systems." Farm and Ranch Days, Riverton, WY. February 12, 2014.

Ritten, John. "Economic Comparison of Alternative Cull Cow Management Options." Farm and Ranch Days, Riverton, WY. February 12, 2014.

Ritten, John. Ritten, John. "Farm-Level Economic Comparison of Organic, Reduced Input, and Conventional Systems." Westi Ag Days, Worland, WY. February 5, 2014.

Ritten, John. "Economic Comparison of Alternative Cull Cow Management Options." Westi Ag Days, Worland, WY. February 5, 2014.

Lee, Brian, and John Ritten. "Evaluation of the SAREC Wind Turbine." Poster presented at the Annual SAREC Field Day, Lingle, WY. August 22, 2013. (Presented by Lee)

John Ritten. "Using Modeling to Account for Variability." Part of the *Master Stockman Ranch Management Institute* with Bridger Feuz, Hudson Hill, and John Hewlett. The Ranch at Ucross, Ucross, WY. February 25-27, 2013.

John Ritten. "Using Modeling to Account for Variability." Part of the *Master Stockman Ranch Management Institute* with Bridger Feuz, Hudson Hill, and John Hewlett. Bear River Lodge, Christmas Meadows, UT. February 11-13, 2013.

John Ritten. "Post Drought, or Continued Drought, Management Decisions for Livestock Producers." Presented at Westi Ag Days, Worland, WY, February 5, 2013.

Brian Lee and John Ritten. "Can you Afford to Apply Nitrogen this Year?" Presented at the Fremont County Farm and Ranch Days, Riverton, WY, January 30, 2013. (Presented by Lee)

John Ritten. "Post Drought, or Continued Drought, Management Decisions for Livestock Producers." Presented at the Fremont County Farm and Ranch Days, Riverton, WY, January 30, 2013.

John Ritten. "Post Drought Considerations for Livestock Producers." Presented at the Northwest Spring Roundup, Powell, WY, January 24, 2013.

John Ritten. "Benefits of Adaptive Stocking in a Variable Climate." Presented at the Wyoming Stock Growers Progressive Rancher Forum. December 11, 2012. Casper, WY. *Invited*.

Ritten, John. "Post-Drought Considerations (Maybe Continuing Drought Considerations) for Wyoming Cattle Producers." Presented at the SE Wyoming Beef Production Convention, Torrington, WY. November 20, 2012.

Ritten, John. "Important Niche Marketing Considerations." Presented at the University of Wyoming Extension, In Depth Beef Training, Laramie WY. November 6, 2012.

*Eisele, Kendall, John Ritten, Chris Bastian, Steve Paisley, and Scott Lake. "Analysis of Weaning, Feeding and Cornstalks." Poster presented at the Annual SAREC Field Day, Lingle, WY. August 23, 2012. (Presented by Bastian)

Ritten, John, Christopher Bastian, and Benjamin Rashford. "Will Carbon Find a home on the Range? A Monte Carlo Simulation." Poster presented at the Annual SAREC Field Day, Lingle, WY. August 23, 2012. (Presented by Ritten)

*Lee, Brian, John Ritten, Christopher Bastian, Andrew Kniss. "Economic Comparison of Conventional and Round-Up Ready Sugar Beets." Poster presented at the Annual SAREC Field Day, Lingle, WY. August 23, 2012. (Presented by Lee)

Ritten, John and Dallas Mount. "Drought Management Opportunities – Stocker vs. Cow/Calf." Presented at the 2012 Cattleman's Conference, in conjunction with the Wyoming State Fair. Douglas, WY. August 15, 2012.

Ritten, John. Participant, "Drought Management Options." Extension program, Laramie, WY, July 19, 2012.

Ritten, John. "Economics: Preliminary Tracking and Expectations." Presented at the *Sustainable Ag Systems Project 2012 Summer Field Day*. SAREC, Lingle, WY. July 19, 2012.

Ritten, John. Participant, "Drought Management Options." Extension program, Saratoga, WY, July 16, 2012.

Ritten, John. Guest Contributor to "Drought Management Strategies." Part of the High Plains Ranch Practicum, Lingle, WY. June 13, 2012.

Ritten, John. "Impacts of Alternative Feeding and Weaning Strategies in Profitability of Cow/Calf Producers and Feeders." Presented at the Albany County Cattleman's Update. Laramie, WY, February 21, 2012.

Ritten, John. "Beef demand still appears strong, but for how long?" Presented at the Relevant Agricultural Issues & Networking Series, hosted by the University of Wyoming, Goshen County Extension, and Eastern Wyoming College. Torrington, WY, February 16, 2012.

*Lee, Brian, and John Ritten. "Economic Comparison of Conventional and RoundUp Ready Sugarbeet." Presented at the Relevant Agricultural Issues & Networking Series, hosted by the University of Wyoming, Goshen County Extension, and Eastern Wyoming College. Torrington, WY, February 16, 2012.

*Lee, Brian, and John Ritten. "Economic Comparison of Conventional and RoundUp Ready Sugarbeet." Presented at WESTi Ag Days. Worland, WY, February 8, 2012.

Fernandez-Gimenez, Maria, James Pritchett, Jay Parsons, John Ritten, Emily Kachergis, and Jacey Cerda. "Ranch Decision Tools. Ecosystem Services. Profitability. Tradeoffs." The Carpenter Ranch, Hayden, CO, January 11, 2012. (Presented by Fernandez-Gimenez, Pritchett, and Parsons)

Fernandez-Gimenez, Maria, James Pritchett, Jay Parsons, John Ritten, Emily Kachergis, and Jacey Cerda. "Ranch Decision Tools. Ecosystem Services. Profitability. Tradeoffs." Meeker Extension Office, Meeker, CO, January 11, 2012. (Presented by Fernandez-Gimenez, Pritchett, and Parsons)

Emily Kachergis, Fernandez-Gimenez, Maria, James Pritchett, Jay Parsons, John Ritten, and Jacey Cerda. "State & Transition Models." Presented at the Wyoming Stock Growers Progressive Rancher Forum. December 13, 2011. Casper, WY. (Presented by Kachergis and Pritchett) *Invited*.

Fernandez-Gimenez, Maria, James Pritchett, Jay Parsons, John Ritten, Emily Kachergis, and Jacey Cerda. "New Tools for Range Management: Learning from the Land in NW Colorado." Nick Petry Workshop: Ranching at the Frontier - Ecosystem Service and Decision Tools." National Western Complex, Denver, CO, December 2, 2011. (Presented by Fernandez-Gimenez and Pritchett)

Parsons, Jay, James Pritchett, Maria Fernandez-Gimenez, John Ritten, Emily Kachergis, and Jacey Cerda. "Plants, Wildlife, or Cows? Making Choices in the S&T Ranch Game." Nick Petry Workshop: Ranching at the Frontier - Ecosystem Service and Decision Tools." National Western Complex, Denver, CO, December 2, 2011. (Presented by Parsons and Pritchett)

Ritten, John, Maria Fernandez-Gimenez, Emily Kachergis, Willow Hibbs, and James Pritchett. "Do Livestock and Ecosystem Services Compete? A State-and-Transition Approach." Presented at the Range Beef Cow Symposium, Mitchell, NE. December 1, 2011. Available at: <http://www.rangebeefcow.com/2011/documents/PP120111-AM04-Ritten.pdf> (Presented by Ritten) *Invited*.

Fernandez-Gimenez, Maria, James Pritchett, Jay Parsons, John Ritten, Emily Kachergis, and Jacey Cerda. "Ranch Decision Tools: Ecosystem Service, Profitability, Tradeoffs." Presented at the Colorado State University Extension Forum, Fort Collins, CO. November 9, 2011.

Ritten, John. "Economic Consideration of Small Wind." Given to the Wyoming Bankers Association, at SAREC, Lingle, WY. May 4, 2011.

Ritten, John. "Adaptive Stocking Rates on the Ranch: Long-Term Profitability Analysis." Presented at Farm and Ranch Days, Riverton, WY. February 10, 2011.

Ritten, John. "Carbon Sequestration Ideas for Farmers and Ranchers." Presented at Farm and Ranch Days, Riverton, WY. February 10, 2011.

Ritten, John. "Adaptive Stocking Rates on the Ranch: Long-Term Profitability Analysis." Presented at Westi Ag Days, Worland, WY. February 1, 2011.

Ritten, John. "Carbon Sequestration Ideas for Farmers and Ranchers." Presented at Westi Ag Days, Worland, WY. February 1, 2011.

Ritten, John. "Ranch System Long-Term Profitability Analysis." Presented at the Beef Production Convention, Torrington, WY. November 23, 2010.

Ritten, John. "Drought Management from a Systems Perspective." Presented at the High Plains Ranch Practicum, Lingle, WY. November 10, 2010.

Ritten, John. "Using Flexible Stocking to Increase Economic Performance." Presented at the Albany County Stockgrowers Meeting, Laramie, WY. November 9, 2010.

Ritten, John. "Current Markets and How Cap and Trade Would Look." Presented at the Colorado Nutrition Roundtable: "Carbon Balancing Acts: Green Cows and Carbon Footprints." Colorado State University, Fort Collins, CO. September 16, 2010.

*Smith, E. E., S. L. Lake, S. Paisley, and J. Ritten. "Low Input, Early Weaned, Feeder Calf Development Program that Produces Carcasses Comparable in Weight to Cattle Fed Traditionally but with Higher Quality Grades." Poster presented at the Colorado Nutrition Roundtable: "Carbon Balancing Acts: Green Cows and Carbon Footprints." Colorado State University, Fort Collins, CO. September 16, 2010. Presented by Smith.

Ritten, John P. "Economics and Demonstration of Small Scale Wind." Living & Working on the Land Conference, presented at SAREC, Lingle, WY. August 26, 2010.

Ritten, John P. "Economics and Demonstration of Small Scale Wind." Annual SAREC Field Day, Lingle, WY. July 22, 2010.

Ritten, John. "Approaches to Sustainable Ag." Given to the Wyoming Bankers Association, at SAREC, Lingle, WY. May 6, 2010.

Ritten, John, P., Christopher T. Bastian, Steve Paisley, Mike Smith. "Alternative Cow Calf Systems and Importance of Adaptive Stocking Strategies." Presented for the Master Cattleman Program, Riverton, WY. April 14, 2010. (Presented by R. Cunningham)

Ritten, John P. "Ranch System Financial Performance and Forage Response." Presented at the *Ranch Financial Training* for the PSAS and SMRR Extension Initiative Teams, Gudmundsen Sandhills Laboratory, Whitman, NE. March 24, 2010.

Ritten, John P. "Economic Basics." Presented at the *Ranch Financial Training* for the PSAS and SMRR Extension Initiative Teams, Gudmundsen Sandhills Laboratory, Whitman, NE. March 23, 2010.

Ritten, John, P., Christopher T. Bastian, Steve Paisley, Mike Smith. "Alternative Cow Calf Systems and Importance of Adaptive Stocking Strategies." Presented for the Master Cattleman Program, Laramie, WY. March 9, 2010. (Presented by Ritten)

Ritten, John, P., Christopher T. Bastian, Steve Paisley, Mike Smith. "Alternative Cow Calf Systems and Importance of Adaptive Stocking Strategies." Presented for the Master Cattleman Program, Kaycee, WY. March 4, 2010. (Presented by Ritten)

Ritten, John P. "Carbon Sequestration for Rangelands in Western Wyoming." Presented at SAREC Brown Bag Seminar, Lingle, WY. February 23, 2010.

Ritten, John, P., Christopher T. Bastian, Steve Paisley, Mike Smith. "Optimal Range Utilization." Presented at Farm and Ranch Days, Riverton, WY. February 11, 2010. (Presented by Ritten)

Ritten, John P. "Carbon Sequestration for Rangelands." Presented at Farm and Ranch Days, Riverton, WY. February 11, 2010.

Participated in Group Discussion at the Master Cattleman class at the Ferret's Den in Meeteetse, WY February 10, 2010.

Ritten, John, P., Christopher T. Bastian, Steve Paisley, Mike Smith. "Comparison of Ranch System Profitability Given Fluctuating Precipitation and Cattle Prices." Presented at the Platte County Feeders Tour, Wheatland, WY. February 4, 2010. (Presented by Ritten)

Member of the Panel Discussion Group at the Platte County Feeders Tour, Wheatland, WY. February 4, 2010.

Ritten, John, P., Christopher T. Bastian, Steve Paisley, Mike Smith. "Stocking Rates in the Face of Uncertain Weather." Presented at WESTI Ag Days, Worland, WY. February 3, 2010. (Presented by Ritten)

Ritten, John P. "Determining the Value of Carbon Credit Contracts in Rangeland Operations." Presented at the Wyoming Stock Growers Profitability in Livestock and Natural Resource Management Conference. December 7, 2009. Casper, WY.

Ritten, John P., Christopher T. Bastian, Steve Paisley, and Michael Smith. "Cow/Calf Management Under Changing Conditions." Presented at Lucille's Ferret's Den Café, Meeteetse, WY for the Park County Livestock Program, November 12, 2009. (Presented by Ritten)

Ritten, John P. "Introduction to Research and Extension Programming." Presented via Webinar to University of Wyoming's Cooperative Extension Service, through the Profitable and Sustainable Agricultural Systems (PSAS) Initiative Team Quarterly Webinar Training Series, September 10, 2009.

Ritten, John, Jim Krall, Steven Paisley, Jim Freeburn. "SAREC Research Update." Presented at the Goshen County Fair, July 29, 2009. (Presented by Ritten and Freeburn)

Ritten, John, Steven Paisley and Jim Freeburn. "SAREC Update 2009." Presented at the Lingle Lion's Club Meeting, Lingle, WY, June 1, 2009. (Presented by Ritten)

Ritten, John P., Christopher T. Bastian, Michael Smith, and Steve Paisley. "Economics of Sustainable Ranching: Allocating Forage Supplies in a Dry Variable Climate." Presented and Farm and Ranch Days, Riverton, WY, February 6, 2009. (Presented by Ritten)

Radio Interviews, Newspaper Interviews and Media Releases:

Interview, "Grazing Management Crucial in drought." Cited by Gayle Smith in the Wyoming Livestock Roundup, January 12, 2019, 30(37): Page 1, 6.

Interview, "Raised on the Ranch." Interview with Erika Dahlby for the Jackson Hole News & Guide, August 16, 2017.

Interview, "Hometown Herds." Interview with Erika Dahlby for the Jackson Hole News & Guide, August 9, 2017.

Interview, "Profitability on the ranch includes both costs and revenue considerations."
Interview with Saige Albert for the Wyoming Livestock Roundup, January 14, 2017, 28(37):
Page A14.

Interview for "Do Crops and Cows Really Pay their Way?" Interview with Robert Waggener for
Western Farmer-Stockman. Appeared in November 2016 issue.

Interview, "Crunch the Numbers Before you Buy those Heifers." Interview with Heather Maude
for Beef Magazine, published online on September 16, 2015. Available at:
http://m.beefmagazine.com/nutrition/crunch-numbers-you-buy-those-heifers?NL=BEEF-01&Issue=BEEF-01_20151225_BEEF-01_264&sfvc4enews=42&cl=article_1&utm_rid=CPG02000000656081&utm_campaign=7393&utm_medium=email&elq2=6dee8fd2ad4b4d13a47e5e5bc6e9d00d.

Interview, "Cattle Economics Impacted by Variation in Precipitation from Season to Season."
Interview with Natasha Wheeler for the Wyoming Livestock Roundup, November 14, 2015,
27(28): Page B4.

Interview, "What the H-2A Changes may Look like for Wyoming." Interview with Dan Frosch for
the Wall Street Journal, September 21, 2015.

Interview, "Smoking Hot Heifers." Interview with Burt Rutherford for Beef Magazine, July 27,
2015. Appeared in the September 2015 issue, pages 66-67.

Interview, "Rule Could Cause Problems for Wyoming Sheep Producers." Interview with Bob
Beck for Wyoming Public Media, Open Spaces, June 2, 2015.

Interview, "Industry Experts Encourage Cattle Producers to Expand, Consider All Options to
Accomplish Goals." Interview with Gayle Smith for the Wyoming Livestock Roundup, March 7,
2015, 26(44): Page 5.

Interview, "Value of the American Dollar Holds Important Implications for Agriculture."
Interview with Saige Albert for the Wyoming Livestock Roundup, February 14, 2015, 26(41):
Section B, page 11.

Interview, "Smoking Hot Heifers." Interview with Heather Maude for Beef Magazine Online,
January 23, 2015.

Interview, "What would happen to Producer Profits if Roundup Ready Sugarbeets weren't an
Option?" Interview with David Keto for online companion to Reflections article. (2013: 6-8).
April 23, 2013. Available at: <http://www.youtube.com/watch?v=cuMrEvtDk2E>.

Interview, "A Cattle Producers Dilemma." Radio Interview with Darrell Anderson, for Successful Farming Magazine. April 17, 2013. Aired May 28, 2013. Available at: http://www.northshoreproductions.com/Audio/sfrm4542_2013_may28.mp3

Interview, "Drought Continues to Affect Hay and Forage, Range and Livestock Production Conditions." Interview with Kelsey Tramp, for the Wyoming Livestock Roundup, March 30, 2013, 23(47): Section B, page 1.

Interview, "Buy Hay or Sell Cows?" Interview with Raylene Nickel for Successful Farming Magazine, October 19, 2012.

Interview, "Carbon Sequestration on Rangelands." Radio Interview with Caddie Brain, for ABC Rural Australia. September 17, 2012.

Interview, "When the going gets tough." Appeared in the Rawlins Times (Rawlins, WY), July 27, 2012.

Interview, "Wyo. Ranchers consider drought management options." Appeared in the Laramie Boomerang (Laramie, WY), July 21, 2012. Subsequently picked up by the Associated Press.

Interview, "Economic Model for Multiple Land Use." Appeared in the Angus Beef Bulletin, February 2012, page 71. Available online at: http://www.angusbeefbulletin.com/ArticlePDF/RBCS%20Business%2002_12%20ABB.pdf.

Interview, "New UW extension bulletins detail how Wyoming producers wrestle drought," Beef Magazine Online, August 29, 2011. Available at: <http://beefmagazine.com/natural-disaster/0829-drought-bulletin/>

Interview, "Extension educates on drought." Appeared in the Wyoming Livestock Roundup, Volume 23, Number 16, page 3, August 27, 2011.

Interview, "New UW extension bulletins detail how Wyoming producers wrestle drought," Ag Communications, College of Ag and natural Resources News Release, August 2011.

Interview, "2010 SAREC Field Day, and Update on Small Scale Wind Research." Radio Interview with Jim Freeburn, for KGOS, Torrington, WY. July 15, 2010.

Interview for "New Livestock Options in Drought." For Western Farmer Stockman article by Jessica Robinson. Appeared in May 2010 issue.

Interview for "Pick the Best Option for Cattle During Drought." For Nebraska Farmer article by Jessica Robinson. Appeared in December 2009 issue.

Interview for "Study Focuses on Cattle, Drought." For Western Farmer Stockman article by Jessica Robinson. Appeared in October 2009 issue.

Interview for “Utilizing Yearlings to Manage Price Risk.” For Bridger Feuz. Appeared in the Wyoming Livestock Roundup, Volume 21, Number 28, December 5, 2009.

Interview, “Planning is Key to Weathering Drought for Wyoming Cattlemen.” For Wyoming Business Report article by Brodie Farquhar. October 7, 2009. Appeared in November 1, 2009 issue.

Interview, “Research may aid cattle management during drought.” For Western Farmer Stockman article by Jessica Robinson. Appeared in October 2009 issue.

Interview, “2009 SAREC Field Day, and Update on SAREC Research.” Radio Interview with Jim Freeburn and Steven Paisley, for KGOS, Torrington, WY. July 22, 2009.

Grant Activities:

Pending Grant Proposals:

Hales, Kristen, Kim Stackhouse-Lawson, Brent Auvermann, Greg Thoma, Kristen Johnson, John Ritten. “Creating a marketplace for climate smart beef.” USDA, NRCS, \$57,618,841. Submitted May 8, 2022.

Wulfhorst, J.D., Mark Brunson, Alisa Coffin, Sandra Marquart-Pyatt, Sheri Spiegel, Dannele Peck and John Ritten. “DISES: Modeling transformational dynamics in socio-agroecosystems that shape sustainable responses to system-level stressors.” NSF DISES, \$1,577,303. Submitted November 15, 2021.

Lance McNew, John Ritten, J.D. Wulfhorst, Jeff Mosely, Christian Hagen, Roger Coupal, Katherine Lee, Greg Torell, Jeff Beck, David Dahlgren, Jonathan Dinkins, Perry Williams. “DISES: Socioeconomic Resilience and Transformation in the New Rural West—the Convergence of Energy Development, Exurban Development, and Climate Change.” NSF DISES, \$1,599,994. Submitted November 15, 2021.

Funded Grant Proposals:

Williams, Perry, John Ritten, Jeffrey Mosley, Christian Hagen, JD Wulfhorst, and Katherine Lee. “Sustaining Rural Livelihoods, Livestock Grazing, And Sage-Grouse Habitat In Western Sagebrush Systems.” U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA). Amount Requested: \$650,000.

Mealor, Brian, John Ritten. “Current and Potential Future Economic Impacts of Invasive Weeds in Wyoming – A Pilot Study.” Wyoming Weed and Pest Council. \$30,000. October 2021.

Dillon, Jasmine, JD Wulfhorst, John Ritten, Hannah Gosnell. “Taking Stock of Social Sustainability Research in the Beef Industry.” National Cattlemen’s Beef Association. \$9,000 awarded April 1, 2021.

Wulfhorst, JD and John Ritten. "Community Security in Beef Production Sustainability." National Cattlemen's Beef Association. \$97,733 awarded September 15, 2020.

Ellison, Melinda, Tracey Johnson, Katherine Lee, J.D. Wulfhorst, Eric Winford, John Ritten, Jocelyn Aycrigg. "Social, Economic, and Ecological Implications of Grazing Utilization and Timing on Riparian Habitat in the Intermountain West." U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA). 2018. Amount Awarded: \$495,000.

Jabbour, Randa, John Ritten, Brian Lee, Anowar Islam, Tatyana Rand, and Frank Peairs: "Integration of Early Harvest with Biological Control for Sustainable Alfalfa Production." U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA). 2018. Award amount: \$324,998.

Norton, Jay, Clain Jones, John Ritten, Neal Fehringer, Susas Tallman, Peter Kukowski, Vance Lungren, Lyle Evelo, Carson Hessenthaler. "Integrating livestock and cover crops into irrigated crop rotations." Western SARE. 2018. Award amount: \$250,000.

"Quantifying the Economic Impact of Excessively Fat Lambs in the U.S. Lamb Processing Sector." Stewart, Whit, Warrie Means, John Ritten. American Lamb Board. 2017. Award amount: \$30,000.

"Keeping Expiring CRP Lands in Grass Using NRCS Conservation Programs – Assessing Success." Maczko, Kristie, John Tanaka and John Ritten. USDA Natural Resources Conservation Service. 2017. Award Amount: \$120,000.

"Integrating Sustainable Social, Ecological and Technological Innovation for Achieving Global Climate Stabilization through Negative CO2 Emission Policies." Rashford, Benjamin, Dannele Peck, Roger Coupal, John Ritten, Robert Godby, and Shannon Albeke. National Science Foundation, EPSCoR Track II. 2016. \$1,856,255.

"Evaluating economic impacts of conservation practices for Greater sage-grouse on ranching operations in the context of rangeland sustainability." Maczko, Kristie, John Tanaka and John Ritten. USDA Natural Resources Conservation Service. 2016 Award Amount: \$490,600.

"Rangeland Soil Health: Literature Review, Economic Modeling, and Case Studies." Maczko, Kristie, John Tanaka and John Ritten. USDA Natural Resources Conservation Service. 2015 Award Amount: \$126,500.

"Improving Feed Efficiency in Sheep through Rumen Manipulation and Producer Adoption." Melinda Ellison, William Lamberson, Scott Lake, John Ritten, Kristi Cammack, Gavin Conant, Bob Innes. Western SARE Graduate Student Program, 2013. \$25,000.

“Efficacy and economics of cultural and mechanical weed control practices for herbicide-resistant weed management.” Andrew Kniss, John Ritten, Robert Wilson, Prashant Jha. USDA, AFRI Competitive Grants Program. 2013. Award Amount \$500,000.

“Productivity, Quality, Water Use Efficiency, and Benefit-cost Ratios of Irrigated Grass-Legume Mixtures.” Anowar Islam, Valtcho Jeliaskhov, Axel Garcia, John Ritten, and Blaine Horn. ShREC Competitive Graduate Student Assistantship. 2013. Award Amount: \$32,372.

“Economics Impacts of Climate Change and Drought on Wyoming Ranchers: A Critical Evaluation.” John Ritten, Christopher Bastian, Justin Derner, Scott Lake, Dallas Mount, Steve Paisley, Dannele Peck, and Justin Reeves. AES Competitive Grants Program. 2012. Amount Awarded: \$65,591.

“Impact of Maternal Feed Efficiency on Beef Cattle Production in Nutrient-Limited Environments.” Allison Meyer, Scott Lake, John Ritten, Kristi Cammack, and Steve Paisley. AES Competitive Grants Program 2012. Amount Awarded: \$68,728.

“Wyoming Master Cattleman – Ranch Management Institute.” Bridger Feuz, Ron Cunningham, John Hewlett, Hudson Hill, and John Ritten. Western Center for Risk Management Education Grants Program. 2012. Award Amount: \$21,000.

“Learning from the Land: Extending State and Transition Models for Adaptive Management of Wildlife Habitat on Western Rangeland.” Maria Fernandez-Gimenez, James Pritchett, Jay Parsons, Cameron Aldridge, C. J. Mucklow, Bill Ekstrom, John Ritten, Rachel Mealor, Emily Kachergis, Liza Rossi and Rachel Murph. USDA, NRCS, CIG Program, 2012. Award Amount: \$428,102.

“Improving Profitability and Sustainability of Sheep Production.” Kristi Cammack, Dan Rule, John Ritten, Scott Lake, K. Austin, Steve Paisley, Robert Stobart, William Lamberson, Gavin Conant, Rodney Kott, Lisa Surber, and Reid Redden. USDA, AFRI, Foundational Program – Small and Medium Sized Farms, 2011. Award Amount: \$499,991.

“Soil Carbon and Nitrogen Dynamics in Organic Crop and Animal Feed Production of the Northern High Plains Region.” Urszula Norton, Jay Norton, John Ritten, Axel Garcia. USDA, NIFA, Organic Transition Program. Submitted July 1, 2010. Award Amount \$700,000.

“Legume Adoption Practices in Western Central United States: Economic and Environmental Benefits in the Face of Increased Climatic Variability.” James Krall, Urszula Norton, Anowar Islam, John Ritten, Robin Groose, Jay Norton, Axel Garcia, Ramesh Sivanpillai, Stephen Gray and Steve Paisley. USDA, AFRI, Climate Change Program. Submitted May 14, 2010. Award Amount \$50,000.

“High Tunnel for Specialty Crop Production – Education and Research.” Jeff Edwards, Jim Krall, Jim Freeburn, John Ritten. Wyoming Specialty Crops Grant Program. Submitted January 29, 2010. Award Amount \$3,450 with \$6,340 in-kind match.

“SAREC Wind Energy Demonstration.” John Ritten Jim Krall, Jeff Edwards, Lindsay Taylor, and Jim Freeburn. Joint application to UW CES Energy Extension Grant and UW AES. Total CES Funding: \$5,948. Submitted October 21, 2009.

“Marketing opportunities and constraints confronting organic farming operations in the high plains.” Eric Arnould, Jay Norton, John Ritten, and Melea Press. USDA, CSREES, Organic Agriculture Research and Extension Initiative. Submitted March 9, 2009. Amount Funded: \$574,621.

“Use of annual forages in beef cattle production systems: Effects on agronomics, livestock performance, and soil health.” Greg Lardy, Paul Burgener, Francis Casey, Dennis Cash, Hans Kandel, Bryan Neville, Laura Overstreet, John Paterson, John Ritten, Kevin Sedivic, and Vance Owens. 5-State Ruminant Consortium. Submitted February 12, 2009. Amount Funded: \$112,000.

“Weaning strategies to Maximize Crop Residues and Improve Carcass Quality in Beef Steers.” Scott Lake, Kristi Cammack, Steven Paisley, Gary Moss, Min Du, Bret Hess, and John Ritten. 5-State Ruminant Consortium. Submitted February 12, 2009. Amount Funded: \$102,067

“Costs to Cattle Producers and Outfitters of Brucellosis Management Alternatives.” Dannele Peck, Ben Rashford, and John Ritten. 2008 Wyoming Wildlife/Livestock Disease Partnership Program. Amount funded: \$69,625. Submitted September 27, 2008.

“Linking Ecological and Economic State-and-Transition Models for Adaptive Management of Rangeland Ecosystems.” Maria Fernandez-Gimenez, Monique Rocca, James Pritchett, L. Roy Roath, and John Ritten. The United States Department of Agriculture, Cooperative State Research, Education, and Extension Service (CSREES) –Managed Ecosystems Program. Amount funded: \$499,007.

“Ecological and Economic Risk Assessment Decision Tool for Management of *Bromus tectorum* Invasions.” Cynthia Brown, L. Roy Roath, Michael Coughenour, W. Marshall Frasier, K. George Beck, Maria Fernandez-Gimenez, Brian Mealor, Marques Munis, and John Ritten. The United States Department of Agriculture, Cooperative State Research, Education, and Extension Service (CSREES) - Biology of Weedy and Invasive Species in Agroecosystems, NRI Program 51.9. Amount funded: \$497,496.

Contracts Awarded:

Ritten, John. \$40,000 from U.S. Department of Agriculture Agricultural Research Service for “Ag & Applied Economics Stipends.” May 2017.

Unfunded Grant Proposals:

Kazanski, Clare, John Ritten, Terri Schulz, Maria Fernandez-Gimenez, Ginger Allington. \$500,000 to USDA AFRI's Sustainable Agroecosystems program for "A winning plan for rangelands? Does integrated ranch management planning improve ranch-scale ecological, economic, and social outcomes?" Submitted August 8, 2019.

Ellison, Melinda, Tracey Johnson, Katherine Lee, J.D. Wulforst, Eric Winford, John Ritten, Jocelyn Aycrigg. \$500,000 to USDA AFRI's Sustainable Agroecosystems program for "Social, Economic, and Ecological Implications of Grazing Utilization and Timing on Riparian Habitat in the Intermountain West." Submitted July 31, 2018.

Kazanski, Clare, Sasha Gennet, John Ritten, Terri Schulz, Joe Fargione, William Burnidge, Robert Manes, Larry Clemens, Maria Fernandez-Gimenez. \$500,000 to USDA AFRI's Sustainable Agroecosystems program for "A winning plan for rangelands? Do Grazing Management Plans improve ranch-scale productivity, profitability, and vegetation diversity?" Submitted August 1, 2018.

Bangoura, Berit, Kerry Sondgeroth, John Ritten, and Travis Smith. \$499,516 to U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA) for "Impact of Coccidial Infections on Animal Health and Economy on Organic Dairy Farms."

Heitholt, Jim, Caitlin Youngquist, Urszula Norton, Gerry Andrews, Anowar Islam, John Ritten. "Improving N Use Efficiency for Dry Bean Production in the Intermountain West: Identifying Optimal Combinations of Cultivars, Rhizobia Strains, and N Management." Western SARE preproposal. Submitted June 1, 2017.

Hansen, Kristiana, Virginia Paige, Chris Bastian, Bridger Feuz, John Ritten, Glenn Owings, and Anne MacKinnon: \$701,216 to USDA NIFA for "Incentives, Markets, and Water Management to Enhance Agricultural Production in the Upper Colorado River Basin."

Ritten, John: \$319,665 to National Science Foundation for "Environmental and Economic Sustainability of Livestock Production: Dung Beetles, Decomposition, and Decision Making."

"Incorporating Forage Crops into Traditional Irrigated Corn Systems." Randa Jabbour, Andrew Kniss, John Ritten and Steve Paisley. AES Competitive Grants Program. 2016. Amount requested: \$40,094.

Foulke, Thomas, David Taylor, John Ritten, and Paul Lewin: \$118,000 to USDA NIFA for "Regional Economic Impact Implications of Federal Sage Grouse Policy Alternatives: A Dynamic Modeling Approach."

"Spatially explicit co-management for livestock production, energy development and water in a heterogeneous semi-arid landscape." PI: M. Murphy; Ritten (Co-I). Sponsor: NSF CBET. Amount: \$2,999,931. Submitted March 22, 2016.

“Development of Beef Cattle Production System Decision Support Tools to Enable Improved Genetic, Environmental, And Economic Resource Management.” Spangler, ML, Weaber, RL, Enns, RM, Frasier, WM, Speidel, SE, Thomas, MG, Golden, BL, Kuehn, LA, Snelling, WM, Thallman, RM, Ritten, JP. USDA, NIFA. Amount Requested: \$3,050,744. Submitted June 2, 2015.

“Linking long-term experimental and producer data to enhance decision-making with weather variability: increasing long-term sustainability and resiliency for Wyoming ranchers.” John Ritten, Justin Derner, Steven Paisley, Windy Kelley. Western SARE. Amount Requested: \$125,270. Submitted June 1, 2015.

“Learning from the Land: Adaptive Management for Multiple Ecosystem Services.” Maria Fernandez-Gimenez, John Ritten, Cameron Aldridge, James Pritchett, Marshall Frasier, Paul Mieman, Retta Bruegger. NRCS, CIG. Amount Requested: \$499,964. Submitted April 30, 2015.

“Global Climate Stabilization Trade-Offs on Food Security and Ecosystem Services in the Upper Missouri River Basin.” Poulter, B., Ewing, S., Jarchow, M., Rashford, B, Swanson, D., Ahmend, S., Albeke, S., Coupal, R., Dixon, M., Godby, R., Haggerty, J., Kerby, J., Miller, P., Peck, D., Spangler, L., Stoy, P. National Science Foundation. Amount Requested: \$6,000,000. Submitted February 20, 2015.

Lake, Scott, Kristi Cammack, Steven Paisley, and John Ritten: \$45,447 to USDA NIFA for “Expansion of the GrowSafe Feed Intake and Behavior Monitoring System for Beef Cattle Systems Research at the University of Wyoming.”

“Economic and Environmental Sustainability of Replacing Nitrogen-Fertilized Grasses with Grass-Legume Mixtures under Irrigation.” Anowar Islam, Peter Stahl, Urszula Norton, John Ritten, Axel Garcia y Garcia. AES Competitive Grants Program. Amount Requested: \$89,999. Submitted September 5, 2014.

“Vulnerability of freshwater ecosystems and livestock production to phenological shifts in water availability.” Annika Walter, Melanie Murphy and John Ritten. North Central Climate Science Center. Amount Requested: \$262,629. Submitted June 29, 2014.

“Wyoming Winter Wheat Variety Trial Selection for Risk Management.” Brian Lee and John Ritten. Submitted to the Agriculture Producer Research Grant Program, Wyoming Department of Agriculture. Amount Requested: \$38,906. Submitted November 14, 2013.

“Wheat Variety Selection: A Risk Aversion Approach.” Brian Lee and John Ritten. Submitted to the Agriculture Producer Research Grant Program, Wyoming Department of Agriculture. Amount Requested: \$35,946. Submitted July 19, 2013.

“Farmer-Rancher Co-Designed Conservation Strategies for Non-Irrigated Crop Production in the Northern Central High Plains, USA.” Jay Norton, Gary Hergert, Urszula Norton, John Ritten,

Rajan Ghimire, Ted Craig, Roger Stockton. USDA, AFRI, Organic Transition Program. Submitted April 5, 2013.

“Wheat Cropping Systems in High Plain’s Dryland: Augmentation Using Annual Forages.” Anowar Islam, Augustine Obour, John Ritten. USDA, NIFA. Submitted March 20, 2013.

“Sustainable Intensification of Central High Plains Irrigated Crop Production.” Urszula Norton, Jay Norton, Naomi Ward, John Ritten, Anowar Islam. Western SARE. Submitted June 4, 2013.

“Linking Long-Term Experimental and Producer Data to Increase Sustainability and Reduce Enterprise Risk for Wyoming Ranchers.” Justin Derner, Justin Reeves, John Ritten, Dallas Mount, Mark Eisele. Western SARE. Submitted June 3, 2013.

“Nitrogen Fertilizer Management Options for Cool-Season Forage Grasses in Wyoming.” Anowar Islam, Augustine Obour, John Ritten. SAREC Competitive Graduate Student Assistantship. 2013. Submitted December 7, 2012. Amount Requested: \$33,000.

“Rumen Microbial Changes Associated with High Sulfur Water.” Kristi Cammack, Kathy Austin, Scott Lake, Allison Meyer, John Ritten, Cody Wright, Ken Olson, Gavin Conant, and William Lamberson. AES Competitive Grants Program. Amount Requested: \$75,000. Submitted September 6, 2012.

“Development of Phosphorus Fertilization Options for Irrigated Alfalfa in Wyoming.” Anowar Islam, Augustine Obour, Valtcho Jeliakov, and John Ritten. AES Competitive Grants Program. Amount Requested: \$74,978. Submitted September 6, 2012.

“Added Crop Residues for Enhancing Benefits of No-Till after Conversion from Conventional Tillage Practices.” Emmanuel Omondi, Urszula Norton, John Ritten, Jay Norton. USDA, W-SARE. Submitted June 6, 2012.

“Incorporating Legumes into Dryland Cropping Systems in Semi-Arid Agriculture: Economic and Environmental Benefits in the Face of Climate Change.” Anowar Islam, Neil Hansen, Merle Vigil, Stephen Del Grosso, John Holman, Dipak Santra, Drew Lyon, Gary Hergert, Tapan Pathak, Thandiwe Nleya, Peter Sexton, Urszula Norton, Axel Garcia, Robin Groose, John Ritten, Jay Norton, Ramesh Sivanpillai, Steve Paisley, Augustine Obour, James Krall. USDA, NIFA, CAP Program, Regional Approaches for Adaptation to and Mitigation of Climate Variability and Change Program (A3101). Amount Requested: \$10,000,000. Submitted January 6, 2012.

“Integrated Annual Legume Livestock System to Mitigate Climate Change Impacts in the Central High Plains.” Augustine Obour, Steven Paisley, James Krall, John Ritten, Urszula Norton, Anowar Islam, Axel Garcia. USDA, AFRI, Integrated Approaches to Climate Adaptation and Mitigation in Agroecosystems Program. Amount Requested: \$500,000. Submitted December 16, 2011.

“Evaluating the Economic Viability and Sustainability of Livestock and Cropping Systems in the Face of Climate Change.” Christopher Bastian, Kristiana Hansen, Dannele Peck, John Ritten, Jacqueline Shinker, Bryan Shuman, James Krall, and Steven Paisley. USDA, AFRI, Integrated Approaches to Climate Adaptation and Mitigation in Agroecosystems Program. Amount Requested: \$500,000. Submitted December 16, 2011.

“Impact of Maternal Feed Efficiency on Beef Cattle Production.” Allison Meyer, Kristi Cammack, Scott Lake, Steve Paisley, John Ritten. AES Competitive Grants Program. Amount Requested: \$74,398. Submitted September 9, 2011.

“Inter-seeding Legumes in Hay Meadow Pastures to Improve Forage Production and Offset Nitrogen Cost in Wyoming.” Augustine Obour, Steven Paisley, Anowar Islam, James Krall, John Ritten. AES Competitive Grants Program. Amount Requested: \$65,854. Submitted September 8, 2011.

“Agronomic and Economic Sustainability of Organic High Tunnel Vegetable Production in Wyoming.” Augustine Obour, John Ritten, Axel Garcia, Valtcho Jeliakov. Western SARE, Soil Management Area, SW12-116. Amount Requested: \$189,248. Submitted June 10, 2011.

“Improving Sustainability and Profitability of Sheep Production.” Kristi Cammack, Dan Rule, John Ritten, Scott Lake, K. Austin, Steve Paisley, Robert Stobart. Western SARE Competitive Grants Research and Education Program. Amount Requested: \$198,630. Submitted June 3, 2011.

“Evaluating the Economic Viability and Sustainability of Livestock and Cropping Systems in a Climate Changed World.” Christopher Bastian, Kristi Hansen, John Ritten, Dannele Peck, Steve Gray, James Krall, Steven Paisley. USDA, AFRI, Foundational Program – Small and Medium Sized Farms. Amount Requested: \$397,672. Submitted March 11, 2011.

“Economic and Biophysical Implications of Soil Carbon Sequestration on Western Great Plains Rangelands.” John Ritten, Christopher Bastian, Kristi Cammack, Jay Norton, Ursula Norton, Steve Paisley, Ben Rashford. USDA, AFRI, Foundational Program – Small and Medium Sized Farms. Amount Requested: \$499,997. Submitted March 4, 2011.

“Wyoming Crop Producers Survey.” John Ritten, John Hewlett. Wyoming Faculty Grant in Aid Program. Amount Requested: \$7,500. Submitted February 3, 2011.

“An Integrated Approach to Improving Efficiency of Organically Produced Sheep.” Kristi Cammack, Scott Lake, Dan Rule, John Ritten, K. Austin, Steve Paisley, L. Feldman, W. Lamberson, G. Conant, A. Stone. USDA, NIFA, Organic Agriculture Research and Extension Initiative. Amount Requested: \$1,646,543. Submitted January 10, 2011.

“Evaluating the Economic Viability and Sustainability of Wyoming Cropping Systems in the Face of Climate Change.” Christopher Bastian, John Ritten, Kristi Hansen, Dannele Peck, Stephen

Peck, James Krall. AES Competitive Grants Program. Amount Requested: \$54,670. Submitted September 9, 2010.

“Improving Intermountain Pastures by Introducing Drought Tolerant and Winter Hardy Perennial Grass System.” Anowarul Islam, Steven Paisley, John Ritten, Malay Saha. AES Competitive Grants Program. Amount Requested: \$60,000. Submitted September 10, 2010.

“Improving Sustainability by Improving Animal Efficiency.” David Gerrard, Scott Lake, Steve Paisley, Kristi Cammack, Gary Moss, John Ritten. USDA, AFRI, Global Food Security Program. Amount Requested: \$4,800,000. Submitted July 8, 2010.

“An Integrated Approach to Improving Feed Efficiency of Sheep.” Kristi Cammack, Scott Lake, Steve Paisley, John Ritten Robert Stobart, Brenda Alexander, Gary Moss, Kathleen Austin. USDA, AFRI, Improving Sustainability by Improving Feed Efficiency of Animals Program. Amount Requested: \$4,768,135. Submitted July 8, 2010.

“Quantifying Soil Carbon Storage as an Ecosystem Service in Sagebrush Steppe Rangelands.” Emily Kachergis, Maria Fernandez-Gimenez, John Ritten. Colorado State University, Institute for Livestock and the Environment Mini Grant Program. Amount Requested: \$2,365. Submitted December 9, 2010.

“Evaluating the Economic Viability and Sustainability of Livestock and Cropping Systems in the Face of Climate Change.” Chris Bastian, Kristiana Hansen, Dannele Peck, John Ritten, Stephen Gray, Jim Krall, and Steve Paisley. USDA, AFRI, Foundational Program. Amount Requested: \$322,541. Submitted July 8, 2010.

“Quantifying Soil Carbon Storage as an Ecosystem Service in Sagebrush Steppe Rangelands.” Emily Kachergis, Maria Fernandez-Gimenez, John Ritten. Submitted to the 2010 Institute for Livestock and the Environment Mini-Grant Program. Amount requested: \$2,365. Submitted January 10, 2010.

“Augmenting High Plain’s Dryland Cropping Systems Using Annual Forages.” Jim Krall, Gary Peterson, Drew Lyon, Merle Vigil, John Holman, Anowarul Islam, John Ritten, and Steve Paisley. Western SARE Competitive Grants Research and Education Program. Amount Requested: \$200,700. Submitted November 11, 2009.

“Wyoming dryland and sprinkler-irrigated legume-winter wheat rotations that support sustainable crop production, soil fertility and economic viability.” Urszula Norton, Jim Krall, Jay Norton, John Ritten, Ramesh Sivanpillai, and Anowarul Islam. AES Competitive Grants Program. Amount Requested: \$60,000. Submitted September 10, 2009.

“Evaluating the Potential Economic Viability and Ecological Impacts of the Rangeland Carbon Credit Program for Wyoming Ranchers.” John Ritten, Christopher T. Bastian, and Jay Norton. AES Competitive Grants Program. Amount Requested: \$60,000. Submitted September 9, 2009.

“Alternative Low Input System for Developing Beef Heifers and Steers.” Scott Lake, Kristi Cammack, Gary Moss, Steve Paisley, and John Ritten. USDA, AFRI, Agricultural Prosperity for Small and Medium Sized Farms. Amount Requested: \$500,000. Submitted June 5, 2009.

“Sustainability Evaluation of Ranching Systems in the High Plains.” Dallas Mount, Aaron Berger, Lindsay Taylor, Kellie Chichester, Wayne Tatman, Mike Smith, Harlan Hughes, Manny Monserrate, and Kent Hunter. Pre-application to the Western SARE, Chapter 1 Grant Program. Submitted June 9, 2009.

“Integration of conservation tillage and direct harvest practices for reduced-input dry bean production.” Andrew Kniss, John Ritten, Robert Wilson, John Smith, and Gustavo Sbatella. USDA, AFRI, Agricultural Prosperity for Small and Medium Sized Farms. Amount Requested: \$500,000. Submitted June 5, 2009.

“Economic and Biophysical Implications of Soil Carbon Sequestration on Western Great Plains Rangelands” John Ritten, Christopher T. Bastian, Paul Burgener, Jay Norton, Urszula Norton, Steven Paisley, and Ben Rashford. USDA, AFRI, Managed Ecosystems Program. Amount Requested: \$500,000. Submitted May 28, 2009.

“Economic and Biophysical Implications of Soil Carbon Sequestration on Western Great Plains Rangelands” John Ritten, Christopher T. Bastian, Jay Norton, Urszula Norton, Steven Paisley, and Ben Rashford. School of Energy Resources, 2008-2009 Matching Grant Fund. Amount Requested \$100,000. Submitted April 15, 2009.

“Opportunities for a Regional Livestock Processing Facility: PHASE 1 – Identification of Barriers.” Warrie Means, John Ritten, Steven Paisley, Ron Pulley, Catherine Wissner, Nina Haas, Taylor Haynes, Rhonda Dibert, David Whetstone, and Cindy Garretson-Weibel. 2009 Post-Cheyenne, WY Sub regional Grant Program, SARE. Amount requested: \$40,480. Submitted December 31, 2008.

“A new dry edible bean production system that integrates reduced tillage and direct harvest.” Andrew Kniss, Gary Franc, John Ritten, Robert Wilson, John Smith, Gustavo Sbatella, and Carlos Urrea. The United States Department of Agriculture, Cooperative State Research, Education, and Extension Service (CSREES) –Specialty Crop Research Initiative (SCRI). Amount requested: \$993,239. Submitted August 1, 2008.

“Ecological and Economic Risk Assessment Decision Tool for Management of *Bromus tectorum* Invasions.” Cynthia Brown, L. Roy Roath, Michael Coughenour, W. Marshall Frasier, K. George Beck, Maria Fernandez-Gimenez, Marques Munis, and John Ritten. The United States Department of Agriculture, Cooperative State Research, Education, and Extension Service (CSREES) – Regional Integrated Pest Management Competitive Grants Program – Western Region (W-RIPM). Amount requested: \$159,965. Submitted December 8, 2007.

“Economic Analysis of Optimal Cattle Management and Control of Invasive Species in the Face of Drought on Western Rangelands.” W. Marshall Frasier, Chris T. Bastian, Stephen Enloe, Michael Smith, Steve Paisley, Wendy Umberger, and John Ritten. Natural Resources Conservation Service - Grazing Lands Conservative Initiative: Management and Control of Invasive Species Affecting Grazing Land Grant Program. Amount Requested: \$180,674. Submitted April 2006.

Teaching:

Courses Taught:

Course:	Institution:	Semester:
AGEC 4640	University of Wyoming	Fall, 2018
AGEC 5310	University of Wyoming	Fall, 2018
AGEC 4910	University of Wyoming	Fall, 2018
AGEC 5940	University of Wyoming	Fall, 2018
AGEC 5990	University of Wyoming	Fall, 2018
AGEC 5960	University of Wyoming	Fall, 2018
AGEC 4930	University of Wyoming	Fall, 2018
AGEC 4640	University of Wyoming	Spring, 2018
AGEC 5900	University of Wyoming	Spring, 2018
AGEC 4930	University of Wyoming	Spring, 2018
AGEC 4910	University of Wyoming	Spring, 2018
AGEC 5310	University of Wyoming	Fall, 2017
AGEC 4930	University of Wyoming	Fall, 2017
AGEC 4910	University of Wyoming	Fall, 2017
AGEC 4640	University of Wyoming	Spring, 2017
AGEC 5960 (1 Thesis Hour)	University of Wyoming	Spring, 2017
AGEC 4930	University of Wyoming	Spring, 2017
AGEC 4910	University of Wyoming	Spring, 2017
AGEC 5960 (2 Thesis Hours)	University of Wyoming	Fall, 2016
AGEC 2020 (supervised)	University of Wyoming	Fall, 2016
AGEC 4930	University of Wyoming	Fall, 2016
AGEC 4910	University of Wyoming	Fall, 2016
AGEC 5900 (3 Hours)	University of Wyoming	Fall, 2016
AGEC 4640	University of Wyoming	Spring, 2016
AGEC 5960 (4 Thesis Hours)	University of Wyoming	Spring, 2016
AGEC 4930	University of Wyoming	Spring, 2016
AGEC 4910	University of Wyoming	Spring, 2016
HP 4976	University of Wyoming	Spring, 2016
AGEC 5310	University of Wyoming	Fall, 2015
AGEC 5960 (4 Thesis Hours)	University of Wyoming	Fall, 2015
AGEC 2020 (supervised)	University of Wyoming	Fall, 2015
AGEC 4930	University of Wyoming	Fall, 2015
AGEC 5900 (3 Hours)	University of Wyoming	Fall, 2015
AGEC 5960 (1 Thesis Hour)	University of Wyoming	Summer, 2015

AGEC 4640	University of Wyoming	Spring, 2015
AGEC 5960 (4 Thesis Hours)	University of Wyoming	Spring, 2015
AGEC 4930	University of Wyoming	Spring, 2015
AGEC 5960 (4 Thesis Hours)	University of Wyoming	Fall, 2014
AGEC 2020 (supervised)	University of Wyoming	Fall, 2014
AGEC 5900 (3 Hours)	University of Wyoming	Fall, 2014
AGEC 5960 (1 Thesis Hour)	University of Wyoming	Summer, 2014
AGEC 4640	University of Wyoming	Spring, 2014
AGEC 5960 (11 Thesis Hours)	University of Wyoming	Spring, 2014
AGEC 5960 (3 Thesis Hours)	University of Wyoming	Fall, 2013
AGEC 2020 (supervised)	University of Wyoming	Fall, 2013
AGEC 5900 (3 Hours)	University of Wyoming	Fall, 2013
AGEC 5960 (1 Thesis Hour)	University of Wyoming	Summer, 2013
AGEC 4640	University of Wyoming	Spring, 2013
AGEC 5960 (10 Thesis Hours)	University of Wyoming	Spring, 2013
AGEC 2020 (supervised)	University of Wyoming	Fall, 2012
AGEC 5900 (3 Hours)	University of Wyoming	Fall, 2012
AGEC 5960 (6 Thesis Hours)	University of Wyoming	Fall, 2012
AGEC 4930 (3 Hours)	University of Wyoming	Fall, 2012
AGEC 4640	University of Wyoming	Spring, 2012
AGEC 5900 (1 Hour)	University of Wyoming	Spring, 2012
AGEC 5960 (1 Thesis Hour)	University of Wyoming	Spring, 2012
AGEC 2020 (supervised)	University of Wyoming	Fall, 2011
AGEC 5900 (3 Hours)	University of Wyoming	Fall, 2011
AGEC 5960 (3 Thesis Hours)	University of Wyoming	Fall, 2011
AGEC 5960 (10 Thesis Hours)	University of Wyoming	Spring, 2011
AGEC 5960 (1 Thesis Hour)	University of Wyoming	Fall, 2010
AGEC 5960 (1 Thesis Hour)	University of Wyoming	Summer, 2010
Econ 201	Front Range Comm. Coll.	Fall 2007, Spring 2008
Econ 202	Front Range Comm. Coll.	Fall 2007, Spring 2008
AGEC 5310	University of Wyoming	Fall 2005, Fall 2006
MGT 309 (Teaching Assistant)	New Mexico State Univ.	Spring 2004
BCS 502 (Teaching Assistant)	New Mexico State Univ.	Summer 2004

Guest Lectures:

Course:	Institution:	Semester:
AECL 4990 (Guest Lecture)	University of Wyoming	April 3, 2012
ANSC 4100 (Guest Lecture)	University of Wyoming	November 16, 2011
AECL 4990 (Guest Lecture)	University of Wyoming	March 2, 2011
AECL 4990 (Guest Lecture)	University of Wyoming	April 1, 2010
AGRI 1010 (Guest Lecture)	University of Wyoming	November 18, 2009

Graduate Student Supervision:

Current Graduate Committee(s):

Chair/Co-Chair:

- Hana Fancher, , M.S. Student, Department of Agricultural & Applied Economics. (Chair)

Current Committee Member:

- Mohammed Munkaila, M.S. Plant Science.
- Tyler Hicks, M.S. Plant Science.
- Zach Pieper, M.S. Animal Science.
- Benjamin White, PhD, Department of Economics.

Completed Graduate Degrees Supervised**Committee Chair or Co-Chair:**

- Jacob Asay, M.S. Student, Department of Agricultural & Applied Economics. “Economic Implications of Integrating Cover Crops into Irrigated Barley/Sugarbeet Rotations in the Bighorn Basin of Wyoming.” Spring 2021.
- Tevyn Baldwin, M.S. Student, Department of Agricultural & Applied Economics. “The Stocker Steer Quandary: Stocking Rate, Marketing Date, and Price Slides in Northeastern Colorado.” Spring 2021.
- Lewis Crow, M.S. Student, Department of Agricultural & Applied Economics. “Ranch-Level Economic Impacts of Prairie Dog Conservation in the Thunder Basin Ecoregion of Wyoming.” Fall 2020.
- Eilish Hansen, M.S. Plan A, Department of Agricultural & Applied Economics. “Bioenergy with Carbon Capture and Storage in the Upper Missouri River Basin: Farm-Level Economic Implications.” Summer 2019. (Chair)
- Jessica Windh, M.S. Plan A, Department of Agricultural & Applied Economics. “An Economic Evaluation of Season-Long Continuous and Rotational Grazing Systems in Northern Colorado.” Spring 2019. (Chair)
- Holly Dyer, M.S. Plan A, Department of Agricultural & Applied Economics. “Wyoming Ranchers' Profitability from Improved Forage Production on Private Rangeland: An Approach to Measure Benefits from Soil Health.” Summer 2017 (Chair)
- Tucker Hamilton. M.S. Plan A, Department of Agricultural & Applied Economics. “Increased Precipitation Variation: Management Implications for Cattle Production in Southeastern Wyoming.” Spring 2015 (Chair)
- Jenna Bagnall. M.S. Plan A, Department of Agricultural & Applied Economics. “An Economic and Environmental Cost-Benefit Analysis of Conventional, Reduced-Input, and Organic Cropping Systems in Southeastern Wyoming.” Fall 2013 (Co-Chair)
- Brian Lee, M.S. Plan A, Department of Agricultural & Applied Economics. “Farm Level Impacts of Regulations on Genetically Modified Sugar Beets in SE Wyoming.” May 2012. (Chair)
- Trent Roberts. M.S. Plan A, Department of Agricultural & Applied Economics. “Cost and Benefit to Producers of Brucellosis Management Strategies in the Greater Yellowstone Area of Wyoming.” Summer 2011. (Co-Chair)
- Kendall Eisele. M.S. Plan A, Department of Agricultural & Applied Economics. “Economic Comparison of Feeding and Weaning Strategies in Southeastern Wyoming Beef Production.”

May 2011. (Chair)

Committee Member on Agricultural and Applied Economics Committees:

- Jessie Gordon, M.S. Student, Department of Agricultural & Applied Economics. “Ranch-Level Economics of Adult-Booster Vaccination Against Bovine Brucellosis in the Greater Yellowstone Ecosystem.” Fall 2020.
- Victoria Omojoso, M.S. Student, Agricultural and Applied Economics. “Economics of Switchgrass in the Northern Plains: Adding Economic Feasibility to Biophysical Evaluations, M.S, Agricultural and Applied Economics.” Summer 2020.
- Jessica Hansen, M.S. Student, Department of Agricultural & Applied Economics. “Profitability Analysis of Supplementing Beef Cows in Early to Mid-Gestation in a Drought Scenario.” May 2012.

Committee Member on Outside Department Committees:

- Michael Baidoo, PhD Plant Science. “Productivity and profitability of alfalfa in response to phosphorus and potassium in association with calcium and magnesium ad harvest management.” Spring 2022.
- Tyler Jones, M.S. Plant Science. “Cover Crop vs. Cash Crop: Testing the Viability of Cover Crops in Semi-arid Hayfield Renovation.” Spring 2022.
- Amanda Koch, M.S. Plant Science. “Investigations in Cercospora Leaf Spot Management in Sugar Beets in the High Plains.” Spring 2022.
- Stephan Geu, M.S., Department of Plant Science. “Management of Rhizoctonia root and crown rot disease (RRCR) in sugar beet using fungicide-glyphosate sequential and tank-mix applications to improve farm efficiency.” Spring 2022.
- Tanner Hart, PhD, Department of Plant Science. “Emerging Invasive Threats: Working Toward Proactive Solutions Given Uncertain Futures.” Spring 2022.
- Colby Hales, M.S., Department of Animal Science. “High Altitude Disease on Beef Cattle.” Spring 2022.
- Jaelyn Whaley, M.S., Department of Animal Science. “Harvest season, carcass weight, and fat measurement effects on lamb carcass characteristics and economic comparison of moderate and heavy weight lamb carcasses in the western lamb processing industry.” Summer 2020.
- Amberle Filley, M.S., Department of Plant Science. “Introduction of Pulse Crops into the Wheat-Fallow System in Southeastern Wyoming.” Fall 2019.
- Nicole McKibben, M.S., Department of Animal Science. “Comparison of New Composite Breeds with the Suffolk Breed as Terminal Sires in an Extensive Production System: Feedlot Performance and Carcass Characteristics.” Summer 2019.
- Elizabeth Mosqueda, PhD, Department of Plant Science. “Efficacy and Economics of Cultural and Mechanical Weed Control Practices for Herbicide-Resistant Weed Management.” Summer 2019.
- Anna Maher, PhD, Environmental Sciences, Oregon State University. “Identifying Opportunities for Collaboration in Resilience-Based Management: Coordinating Rancher and Land Manager Incentives.” Summer 2019.

- Bryce Lidtka, M.S., Department of Rangeland Ecology and Watershed Management. “Quantifying the effects of rangeland grazing management on soil health, vegetative quantity, livestock performance, and ranch economics, on the northern mixed-grass prairie and shortgrass steppe.” Spring 2019.
- Anna Collins, M.S. Student, Department of Rangeland Ecology and Watershed Management. “Demographics, Motivations, and Experiences of Producers Participating in the Environmental Quality Incentives Program and the Conservation Stewardship Program.” Spring 2019.
- Ethan Cahill, MS Student, Department of Animal Science. “Variation and Impact of Divergent Selection for RFI Relating to Body Composition, Visceral Organ Characteristics, and Trait Repeatability in the Beef Cattle Industry: A Review” Plan B Paper. 2018.
- Benjamin White, MS Student, Department of Economics. “Micro-foundations of Open Access Resource Exploitation and Optimal Spatial Positioning of Incompletely Enforced Protected Areas” Plan B Paper. 2018.
- Clay Wood, MS Student, Department of Plant Sciences. “Evaluating the Use of Thresholds Concepts for Habitat Improvement Through Cheatgrass Management.” Spring 2018.
- Ricardo Paulo Arias Barajona, PhD Student, Department of Animal Science. “Evaluating the Effects of pre- and post-AI Nutrition on Embryo Quality and Reproductive Efficiency of Beef Cattle.” Summer 2017.
- Carl Coburn, PhD Student, Department of Plant Science. “Influence of experimental methods on herbicide resistance confirmation.” Summer 2017.
- Cole Ratzburg, M.S. Student, Department of Animal Science. “The Role of Trace Minerals in Beef Cattle Fertility.” Summer 2017.
- Clint Beiermann, MS Student, Department of Plant Sciences. “Dry Bean Growth and Development in Reduced Tillage Systems.” Spring 2017.
- Brianne Lind, MS Student, Department of Ecosystem Science and Management. “Social and Economic Characteristics of Public Land Ranchers Nationally and in Wyoming.” Fall 2015.
- Albert Adjesiwor, MS Student, Department of Plant Sciences. “Economic and environmental sustainability of irrigated grass-legume mixtures.” Spring 2015.
- Cara J. Clarkson, M.S. Student, Department of Animal Science. “The Effect of High Sulfate Water on Growing Lamb Performance and Rumen Microbiota Population. Summer 2014.
- Renee Gebault King, PhD Student, Department of Renewable Resources. “Phosphorus Dynamics in Calcareous Soils of the Northern High Plains Under Organic Management.” Summer 2014.
- Jason Bowey, M.S. Student, Department of Animal Science. “Evaluation of Modeled Feed Efficiency in Beef Cattle: Observed Outcomes, Predicted Measures, and Phenotypic Correlation in Growing Bulls.” Spring 2014.
- Shayla Burnett, M.S. Student, Department of Plant Sciences. “Selected Investigations into Cheatgrass Management in Wyoming Rangelands.” Fall 2013.
- Chance Marshall, M.S. Student, Department of Animal Science. “Effects of a Novel Pressed Dried DDG Block During the Third Trimester on Dry Matter Intake and Cow Performance and the Impacts of Feed Efficiency on Reproductive Performance.” Fall 2013.

- Carl Coburn, M.S., Department of Plant Sciences. “Comparison of the Eco-Efficiency of Conventional and Glyphosate-Resistant Sugarbeet Herbicide Treatments.” Fall 2013.
- Melinda Ellison, M.S., Department of Animal Sciences. “Effects of Diet and Feed Efficiency Status on Performance, Carcass Characteristics, and Rumen Microbial Profiles in Sheep.” Summer 2013.
- Jared Unverzagt, M.S., Department of Plant Sciences. “Herbicide Options in Field Corn and Sweet Corn that Allow Rotation to Dry Edible Bean and Sugarbeet.” Spring 2013
- Rebecca Cockrum, PhD, Department of Animal Science. “Improving Feed Efficiency in Sheep Through Genetic and Reproductive Analysis.” Summer 2012.
- Kelly K. Thompson, M.S. Plan B, Department of Animal Science. “The Effects of Limit-Feeding a Finishing Ration to Feedlot Steers on Feedlot Performance and Carcass Characteristics.” Summer 2012.

Undergraduate Students (Advisees):

- Fall 2011 – 5
- Spring 2012 – 5
- Fall 2012 – 5
- Spring 2013 – 3
- Fall 2013 – 3
- Spring 2014 – 5
- Fall 2014 – 6
- Spring 2015 – 7
- Fall 2015 – 9
- Spring 2016 – 12
- Fall 2016 – 21
- Spring 2017 – 20
- Fall 2017 – 22
- Spring 2018 – 22
- Fall 2018 – 8
- Spring 2019 – 8
- Fall 2019 - 4
- Supervised Honor’s Thesis for Jessica Arland – “Bison Production; An analysis of species, production potential, market trends and management considerations.” Spring 2014.
- Supervised Honor’s Thesis for Michelle Bartlett – “90 Minutes of Entertainment, Months of Planning, a Lifetime of Memories.” Spring 2016.

Service Activities:

Professional affiliations:

- Western Agricultural Economics Association Member
- Southern Agricultural Economics Association Member
- Society for Range Management Member
- American Agricultural Economics Association Member

- Sustainable Rangelands Roundtable Member
- American Society of Farm Managers and Rural Appraisers Member
 - Education Committee Member

Reviews:

Reviewed paper for *Environmental Management* (2022, 1)
 Reviewed grant application to *Foundation for Food & Agriculture Research*. (2021)
 Reviewed Idaho Climate-Economy Impacts Assessment (ICEIA) for the University of Idaho's McClure Center for Public Policy Research (2021)
 Reviewed paper for *Computers and Electronics in Agriculture* (2018, 1)
 Reviewed book chapter: *Farm Management* by Kay, Edwards, and Duffy (Chapter 9, 8th edition) (2017)
 Reviewed paper for *Agricultural and Resource Economics Review* (2018, 1) (2017, 1)
 Reviewed paper for *Agronomy* (2017, 1)
 Reviewed paper for *Climatic Change* (2016, 1)
 Reviewed paper for the *Journal of Agricultural and Resource Economics* (2014, 1) (2015, 1)
 Reviewed paper for *Natural Resource Modeling* (2015, 1)
 Reviewed paper for the *Journal of Rangeland Applications* (2013, 1)
 Reviewed paper for the *Western Economics Forum* (2011, 1) (2013, 1) (2014, 1)(2018, 1)
 Reviewed paper for *Rural Connections* (2013, 1)
 Reviewed paper for *Journal of Agricultural and Applied Economics* (2012, 1)
 Reviewed paper for *Rangelands* (2010, 1) (2012, 1)
 Reviewed abstracts for the WAEA meetings (2009, 4) (2010, 5) (2011, 5) (2012, 3) (2013, 1)
 Reviewed paper for *Water Resources Research* (2012, 1)
 Reviewed paper for the *African Journal of Business Management* (2012, 1)
 Reviewed paper for *Rangeland, Ecology and Management* (2009, 1) (2011, 1) (2012, 1)(2016, 1)(2019, 1)(2021, 2)
 Reviewed paper for *Land Degradation & Development* (2011, 1)
 Reviewed paper for the *American Journal of Agricultural Economics* (2010, 1) (2009, 1)
 Reviewed paper for *Ecological Economics* (2010, 1)
 Reviewed paper for the 4th World Congress of Environmental and Resource Economists 2010 (2010, 1)
 Reviewed Grant Proposals for the 2010 Western SARE PDP Grant Program (2010, 2)
 Reviewed abstracts for the 2010 AAEA meetings (2010, 8) (2015, 8)
 Reviewed paper for the 4th Grazing Livestock Nutrition Conference (2009, 1)
 Reviewed UW Extension Bulletin (2009, 1) (2017, 1)
 Reviewed abstracts for the 2009 Farming Systems Design Conference (2009, 3)

Committee Membership:

- LTAR Grazinglands Working Group
- Thunder Basin Research Initiative
- University of Wyoming Blue Sky Group (University-Wide Strategic Planning Group)

- WDC-54, “Social and Economic Sustainability of Rangeland-based Operations and the Communities that Rely on Them.”
- W-1188, “Maintaining Resilient Sagebrush & Rural Communities”
- Sustainable Extensive Rangeland Agricultural Systems in High Altitude Headwater Areas Center of Excellence (Co-Director, 2018-Present)
- WDC-40, “Endangered Species Science and Policy”
- Wyoming Beef Campaign – Joint committee with the Wyoming Governor’s Office, UW, Wyoming Stock Growers Association, Wyoming Business Council, Wyoming Department of Agriculture
- University of Wyoming Strategic Enrollment Initiative Advising Redesign Action Group
- College of Agriculture and Natural Resource Advising Center Policy/Plan Committee
- College of Agriculture and Natural Resource Tenure and Promotion Committee (Committee Chair 2018)
- WERA-1018, "The Social-Ecological Resilience of Rangelands in Working Landscapes"
- W-506, “Using Science-Based Solutions in Conservation of Threatened and Endangered Species: Sage-Grouse Case Study”
- Sustainable Rangelands Roundtable Member
- Departmental Graduate Committee Member
- Departmental Undergraduate Committee Member
- Departmental Undergraduate Curriculum Assessment Member
- Departmental Representative to UW Faculty Senate – Fall 2013
- Sheep Management Committee – Laramie Research and Extension Center
- Profitable and Sustainable Agricultural Systems (PSAS) – Initiative Team Member
- James C. Hageman SAREC Administrative Advisory Committee – Ex Officio Member
- James C. Hageman SAREC Community Advisory Committee – Ex Officio Member

Job Search Committees:

- Vice President, Research and Economic Development, University of Wyoming.
- Director, Geospatial Information Science and Technology, University of Wyoming.
- Director of Finance and Administration, College of Agriculture and Natural Resources (Chair).
- Dean of the College of Agriculture and Natural Resources, University of Wyoming.
- Assistant Professor of Meat Science, Department of Animal Science, College of Agriculture and Natural Resources, Position Number 5430.
- Project Coordinator for the Center for Sustainable Rangeland Agriculture Systems in High Altitude Headwater Areas in the College of Agriculture and Natural Resources, University of Wyoming, Position number 18000046.
- Extension Outreach Coordinator, NSF Track 2 EPSCor Research Collaboration. University of Wyoming, Position Number 5190.
- Assistant Research Scientist Position: Sage-grouse Management Economic Impacts on Ranches. University of Wyoming. (4 Positions)

- Post-Doctoral Position: Sage-grouse Management Economic Impacts on Ranches. University of Wyoming. (2 Positions)
- Agricultural Systems Project Manager. University of Wyoming, Position Number 4943.
- Research Scientist, Sustainable Agricultural Systems. Department of Agricultural and Applied Economics, University of Wyoming, Position Number 10252011.

Other Service:

- Search Equity Advocate for the University of Wyoming
- Judged Wyoming FFA State Farm Business Management Team Competition (2018, 2019)
- Judged Posters for REWM 4900 (Rangeland Capstone Course) final projects.
- Interviewed candidates for Ag Ambassador positions for the College of Agriculture and Natural Resources at the University of Wyoming.
- Judge for the 125th annual University of Wyoming Homecoming Sing. October 11, 2012, Laramie, WY.
- Session Moderator at the *2012 Annual Meeting of the Western Agricultural Economics Association*. Park City, UT. June 21, 2012.
- Session Moderator at the *2011 Joint Annual Meeting of the Canadian Agricultural Economics Society and the Western Agricultural Economics Association*. Banff, Alberta, Canada. June 30, 2011.
- Judged Posters for the *International Symposium on Society and Resource Management*. Madison, WI. June 7, 2011.

Awards

Awards Won:

- 2017 Promoting Intellectual Engagement (PIE) Award, University of Wyoming, Learning Resources Networks.
- The American Society of Farm Managers and Rural Appraisers Young, Professionals Network, Premier Young Professional Recruiter Award, 2017.
- Office of the Vice President for Research 2016 Interdisciplinary Scholarship Award. (Colorado State University)
- First Place Article, Reflections Publication, College of Agriculture and Natural Resources, University of Wyoming, 2013
- First Place Article, Reflections Publication, College of Agriculture and Natural Resources, University of Wyoming, 2012
- Second Place Article, Reflections Publication, College of Agriculture and Natural Resources, University of Wyoming, 2011

Awards Nominated for:

- 2017 College of Agriculture and Natural Resources Outstanding Advisor Award
- 2017 Agricultural Experiment Station Outstanding Research Award

- 2016 College of Agriculture and Natural Resources Outstanding Advisor Award
- 2015 College of Agriculture and Natural Resources Lawrence Meeboer Agricultural Classroom Teaching Award
- 2015 College of Agriculture and Natural Resources Outstanding Advisor Award