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ACADEMIC BACKGROUND

Ph. D.	Animal Science	New Mexico State University	May 2015
M.S.	Animal Science	Oregon State University	Dec 2010
B.S.	Agricultural Education	Brigham Young University - Idaho	Dec 2008

PROFESSIONAL EXPERIENCE

11/2024- 8/2025	Visiting Researcher (Sabbatical), Lincoln University & Beef + Lamb New Zealand (B+LNZ), Canterbury, New Zealand
6/2022- present	Associate Professor, Extension Sheep Specialist, University of Wyoming; Laramie, WY.
7/2017 - 6/2022	Assistant Professor/ Extension Sheep Specialist, University of Wyoming; Laramie WY (50% Extension, 30% Research, 15% Teaching, 5% Service)
7/2017 - 9/2019	Affiliate Graduate Faculty, Montana State University; Bozeman, MT.
6/2015 - 6/2017	Assistant Professor/ Extension Sheep Specialist Director- Montana Wool Lab Montana State University; Bozeman, MT. (77% Extension, 13% Research, 10% Service)
9/2013 - 5/2015	Graduate Assistant, New Mexico State University; Las Cruces, NM.
9/2013 - 5/2015	New Mexico State Univ. Intercollegiate Wool Judging Coach; Las Cruces, NM.
1/2012 - 8/2013	Research Associate, Texas A&M AgriLife Research; San Angelo, TX.
1/2011 - 1/2012	Area Extension Educator, University of Wyoming Extension; Gillette, WY.
1/2009 - 12/2010	Graduate Research Assistant, Oregon State University; Corvallis, OR.

APPOINTMENT EVOLUTION

Appointment	2015 MSU	2016 MSU	2017	2018	2019	2020	2021	2022	2023	2024
Extension	77%	77%	50%	50%	50%	50%	50%	50%	50%	50%
Research	13%	13%	31%	28.5%	26%	16%	16%	23%	23%	23%
Teaching	0%	0%	12.5%	15%	20%	30%	30%	25%	25%	25%
Service	10%	10%	4%	4%	4%	4%	4%	2%	2%	2%
Advising	0%	0%	2.5%	2.5%	0%	0%	0%	0%	0%	0%

LANGUAGES SPOKEN

- English – Fluent
- Spanish – Fluent

REFEREED JOURNAL PUBLICATIONS (student authors underlined, # indicates corresponding author)

45. Laverell, D. M., T.W. Murphy, J.M. Smylie, A. Kersh, T.E. Engle, #**W.C. Stewart**. A comparative study on growth, feed intake, and serum vitamin and mineral concentrations in Western white-faced rams with and without limb deformities. *Translational Animal Science*
44. **W. C. Stewart**, J. D. Scasta, C. Maierle, S. Ates, J. M. Burke, B. J. Campbell. 2025. Vegetation management utilizing sheep grazing within utility-scale solar: Agro-ecological insights and existing knowledge gaps in the United States. *Small Ruminant Research*. 107439. <https://doi.org/10.1016/j.smallrumres.2024.107439>
43. Kersh, A. J., H. M. Fraley, J. D. Scasta, J. D. Derner, P. Lima, #**W. C. Stewart**. 2024. Sheep dietary preferences in targeted grazing: Demographic, management, and weather effects in northern mixed-grass prairie. *Frontiers in Veterinary Science*. 11:1502948. <https://doi.org/10.3389/fvets.2024.1502948>
42. Scasta, J. D., C. Calkins, **W. C. Stewart**, D. I. McCracken, M. E. T. Thomson, K. Young, M. W. Dunbar, et al. 2024. Large animal training for U.S. Army Veterinary Services soldiers in Europe: An experiential and collaborative approach. *Journal of Military Learning*. October 2024:October-2024.
41. Becker, G. M., J. W. Thorne, J. M. Burke, R. M. Lewis, D. R. Notter, J. L. M. Morgan, C. S. Schauer, **W. C. Stewart**, R. R. Redden, B. M. Murdoch. 2024. Genetic diversity of United States Rambouillet, Katahdin and Dorper sheep. *Genetics Selection Evolution*. 56(1):56. <https://doi.org/10.1186/s12711-024-00791-2>
40. Wilson, C. S., J. B. Taylor, D. R. Notter, T. W. Murphy, **W. C. Stewart**, R. M. Lewis. 2024. Benchmarking performance in Targhee sheep in development of a genetic reference flock. *Translational Animal Science*. 8:txae176. <https://doi.org/10.1093/tas/txae176>
39. Scasta, J. D., **W. C. Stewart**, E. Hutchinson, K. Koepke, P. de Mello Taveres Lima, D. M. Laverell, A. Kersh, B. Stam. 2024. From Wild to Watchful: Integrating BLM Donkeys (Burros) for Sheep Ranch Protection. *Sheep and Goat Research Journal*. 39:12-19.
38. Knuth, D. O., R. M. Page, **W. C. Stewart**, G. L. Hummel, K. L. Woodruff, J. R. Whaley, A. L. Springer, Austin, K.J., Murphy, T.W., Bisha, B. and Cunningham-Hollinger, H.C. 2024. Milk microbiome in the first month of lactation and at weaning from ewes supplemented with zinc pre- and postpartum. *Journal of Animal Science*. skae163. <https://doi.org/10.1093/jas/skae163>
37. Julian, A. A. M., J. D. Scasta, #**W. C. Stewart**. 2024. Sheep winter diets parameterized with fecal DNA metabarcoding and forage sampling informs mineral nutrition management. *Rangeland Ecology and Management*. 94:168-177 <https://doi.org/10.1016/j.rama.2024.03.003>
36. Newman C. E., C. L. Gifford, D. P. Anderson, J. D. Scasta, and #**W. C. Stewart**. 2024. US wool industry perceptions of digital record keeping and wool supply-chain traceability. *Applied Animal Science*. 40: 205-211. <https://doi.org/10.15232/aas.2023-02496>.
35. Becker, G.M., K. A. Shira, J. L. Woods, S. F. Khilji, C. S. Schauer, B. T. Webb. **W. C. Stewart**, B. M. Murdoch. 2023. Angular limb deformity associated with TSPAN18, NRG# and NOVA2 in Rambouillet rams *Scientific Reports*. 13: 16059. <https://doi.org/10.1038/s41598-023-43320-6>.
34. Becker, G.M., J. L. Woods, C. S. Schauer, **W. C. Stewart**, B. M. Murdoch. 2023 Genetic

- association of wool quality characteristics in U.S. Rambouillet sheep. *Frontiers in Genetics*. 13:1081175. <https://doi.org/10.3389/fgene.2022.1081175>
33. Whaley, J. R., T. W. Murphy, C. L. Gifford, W. J. Means, J. P. Ritten, H. N. McKibben, C. M. Page, and **#W. C. Stewart**. 2022. Effects of harvest season on carcass characteristics of lambs in the Intermountain West. *Applied Animal Science*. 38: 393-401. <https://doi.org/10.15232/aas.2022-02322>
 32. Page, C. M., R. M. Knuth, T. W. Murphy, D. C. Rule, B. Bisha, J. B. Taylor, **#W. C. Stewart**. 2022. Effects of increasing dietary zinc sulfate fed to gestating ewes: II Milk somatic cell count, microbial populations, and fatty acid composition. *Applied Animal Science*. <https://doi.org/10.15232/aas.202202268>
 31. Knuth, R. M., K. L. Woodruff, G. L. Hummel, J. D. Williams, K. J. Austin, **W. C. Stewart**, H. C. Cunningham-Hollinger, **#B. Bisha**. 2022. Effects of management strategies during early lactation and weaning on etiological agents of ovine subclinical mastitis and antimicrobial susceptibility of milk derived bacterial isolates. *J. Anim. Sci.* <https://doi.org/10.1093/jas/skac171>
 30. **#Stewart, W. C.**, J.D. Scasta, T.W. Murphy, J. B. Taylor, A. A. M. Julian,. Invited Review: Mineral Nutrition Considerations for Extensive Sheep Production Systems. 2021 *Applied Animal Science*. <https://doi.org/10.15232/aas.2021-02143>
 29. Knuth, R. M., **W.C. Stewart**, J. B. Taylor, B. Bisha, C. J. Yoeman, M. L. Van Emon, **#T. W. Murphy**. 2021. Relationships among intramammary health indicators, udder and teat morphometric traits, and ewe productivity in extensively managed research flocks. *Journal of Animal. Science*. <https://doi.org/10.1093/jas/skab059>
 28. **Stewart, W.C.**, D. M. Scott, S. B. Howell, R. M. Kaplan, B. L. Roeder, **#T. W. Murphy**. 2020. Anthelmintic resistance in gastrointestinal nematodes and associated management factors in Intermountain West sheep flocks. *Sheep and Goat Research Journal*. 35: 30-40
 27. **#Stewart, W.C.**, T. W. Murphy, C. M. Page, J. B. Taylor, D. C. Rule, K. Austin, C. Pankey. 2020. Effect of Increasing dietary zinc sulfate fed to primiparous ewes: I Effects on serum metabolites, mineral transfer efficiency, and animal performance. *Applied Animal Science*. <https://doi.org/10.15232/aas.2020-02057>
 26. R. McGregor, J. G. P. Bowman, C. M. Page, A. R. Hubbard, M. Manoukian, **W. C. Stewart**, and **#M. L. Van Emon**. 2020. The effect of ensiling sugar beets on preservation characteristics, nutrient profile, and in situ disappearance. *Journal of Agricultural Studies*. <https://doi.org/10.5296/jas.v8i4.17165>
 25. **#J. D. Scasta**, T. Jorns, J. D. Derner, B. Stam, M. McClaren, Craig Calkins, **W. C. Stewart**. 2020. Technical Note: Toxic plants in sheep diets grazing extensive landscapes: Insights from Fecal DNA metabarcoding. *Livestock Science*.
 24. **#Stewart W. C.**, T. R. Whitney, E. J. Scholljegerdes, J. A. Brady, D. L. Waldron, J. W. Walker, R. P. Adams, and J. M. B. Musser. 2019. Ruminant fermentation characteristics of goats selectively bred to have greater consumption of *Juniperus Pinchotii* foliage. *Animal Feed Science and Technology* <https://doi.org/10.1016/j.anifeedsci.2019.114240>
 23. **#Scasta J. D.**, K. Koepke, **W. C. Stewart**. 2019. Nutrition of dissimilar sheep breeds based on fecal NIRS predictions and vegetation responses in a targeted grazing experiment. *Applied Animal Science*. 35:441-453. DOI: <https://doi.org/10.15232/aas.2019-01844>
 22. C. M. Page, M. L. Van Emon, T. W. Murphy, C. K. Larson, J. G. Berardinelli, I. R. McGregor, and **#W. C. Stewart**. 2019. Effects of zinc source and dietary concentration on zinc serum concentrations, growth performance, wool traits, and reproductive characteristics in developing rams. *Animal*. 1-9. Doi:10.1017/S1751731119002180
 21. Kerth, C. R., K. R. Wall, R. K. Miller, T. R. Whitney, **W. C. Stewart**, J. A. Boles, **#T. W. Murphy**. 2019. Effects of plant secondary compounds found in *Juniperus spp.* on yearling Rambouillet wethers

- feedlot performance, carcass characteristics, adipose fatty acid composition, and sensory panel traits. Journal of Animal Science. DOI:10.1093/jas/skz174
20. [#]T. W. Murphy, **W. C. Stewart**, D. R. Notter, M. R. Mousel, G. S. Lewis, K. A. Leymaster, and J. B. Taylor. 2019. Evaluation of Rambouillet, Polypay, and Romanov–White Dorper x Rambouillet ewes mated to terminal sires in an extensive rangeland production system: Body weight and wool characteristics. Journal of Animal Science DOI:10.1093/jas/skz070
 19. Ishaq S. I., C. M. Page, C. Yoeman, T. W. Murphy, M. L. Van Emon, [#]**W. C. Stewart**. 2018. Zincamino-acid supplementation alters yearling ram rumen bacterial communities, but zinc sulfate supplementation does not. Journal of Animal Science. DOI:10.1093/jas/sky456
 18. Naumann, H. D., [#]**W. C. Stewart**, and T. R. Whitney. 2018. Juniperus species and stage of maturity affect concentration and biological activity of protein precipitable polyphenols. Animal Feed Science and Technology. 246:11-17. DOI: 10.1016/j.anifeedsci.2018.09.013
 17. McGregor, I. R., C. M. Page, **W. C. Stewart**, and [#]M. L. Van Emon. 2018. Effects of sugar beets on steer backgrounding performance, sheep nutrient metabolism, and rumen fermentation characteristics. Journal of Agricultural Studies. 6:190-205. DOI: 10.5296/jas.v6i3.13464
 16. [#]Murphy, T. W., **W. C. Stewart**, C. G. Smith, and J. B. Taylor. 2018. Effects of late gestation shearing on body weight gain, feed intake, and serum metabolite concentrations in Rambouillet ewes housed outdoors during winter. Animal.1-6. doi:10.1017/S175173111800191X
 15. Page, C. M., M. L. Van Emon, T. W. Murphy, J. G. P. Bowman, S. A. Wyffels, and [#]**W. C. Stewart**. 2018. Blood serum mineral element concentrations of weaned Montana ram lambs and their relationship with water quality characteristics. Professional Animal Scientist. 34:410-420. Doi:10.15232/pas.201801747 (Awarded Editor's Choice)
 14. J. L. Glasscock, [#]T. R. Whitney, J. R. Roper, A. R. Holmes, S. G. Marrs, **W. C. Stewart**, and E. J. Scholljegerdes. 2018. Substituting ground woody plants for cottonseed hulls in kid goat feedlot diets: growth performance and blood serum chemistry. Journal of Animal Science.
 13. [#]Walker, J. W., **W. C. Stewart**, R. Pope, S. Spear, M. Ebert, T. W. Murphy. 2018. Evaluation of mean fiber diameter measurements by FibreLux micron meter and OFDA 2000 in Texas and Intermountain West wool. Small Ruminant Research. 159:31-37. Doi: 10.1016/j.smallrumres.2017.12.008
 12. [#]T. R. Whitney, J. L. Glasscock, J. P. Muir, **W. C. Stewart**, E. J. Scholljegerdes. 2017. Substituting ground woody plants for cottonseed hulls in lamb feedlot diets: growth performance, blood serum chemistry, and rumen fluid parameters. Journal of Animal Science. 0. Doi:10.2527/jas.2017.1649
 11. **Stewart W. C.**, [#]T. R. Whitney, E. J. Scholljegerdes, D. M. Hallford, J. W. Walker, R. P. Adams, and H. D. Naumann. 2017. Effects of feeding ground redberry juniper (*Juniperus pinchotii*) to gestating ewes on pre- and postpartum performance, serum metabolites and hormones, milk fatty acid composition, and progeny pre-weaning performance. Journal of Animal Science. 0. doi:10.2527/jas.2016.1090
 10. **Stewart, W. C.**, [#]T. R. Whitney, E. J. Scholljegerdes, H. D. Naumann, N. M. Cherry, J. P. Muir, B. D. Lambert, J. W. Walker, R. P. Adams, K. D. Welch, D. R. Gardner, and R. E. Estell. 2015. Effects of *Juniperus* species and stage of maturity on nutritional, in vitro digestibility and plant secondary compound characteristics. Journal of Animal Science. 93:4034- 4047
 9. [#]Whitney, T. R., C. J. Lupton, J. P. Muir, R. P. Adams, and **W. C. Stewart**. 2014. Effects of using ground redberry juniper and dried distillers grains with solubles in lamb feedlot diets: Growth, blood serum, feces, and wool characteristics. Journal of Animal Science. 92:1119-1132.
 8. [#]Hall, J. A., W. R. Vorachek, **W. C. Stewart**, M. E. Gorman, W. D. Mosher, G. J. Pirelli, G. Bobe. 2013. Selenium supplementation restores innate and humoral immune responses in footrot-affected sheep. PLOS ONE 8: e82572. doi:10.1371/journal.pone.0082572

7. #Adams, R. P., C. A. Taylor, T. R. Whitney, **W. C. Stewart**, and J.P. Muir. 2013. Goats and deer do not use terpenoids to select or avoid browsing on *Juniperus pinchotti* Sudw. Trees. Phytologia. 95:238-245.
6. #Hall, J. A., G. Bobe, J. K. Hunter, W. R. Vorachek, **W. C. Stewart**, J. A. Vanegas, C. T. Estill, W. D. Mosher, G. J. Pirelli. 2013. Effect of feeding selenium-fertilized alfalfa hay on performance of weaned beef calves. PLOS One. 8:e58188.
5. **Stewart, W. C.**, G. Bobe, W. R. Vorachek, B. V. Stang, G. J. Pirelli, W. D. Mosher, #J. A. Hall. 2012. Organic and inorganic selenium: IV. Passive transfer of immunoglobulin from ewe to lamb. Journal of Animal Science 91:1791-1800
4. **Stewart, W. C.**, G. Bobe, G. J. Pirelli, W. D. Mosher, #J. A. Hall. 2012. Organic and inorganic selenium: III. Ewe and progeny performance. Journal of Animal Science. 90:4536-4543.
3. **Stewart, W. C.**, G. Bobe, W. R. Vorachek, G. J. Pirelli, W. D. Mosher, T. Nichols, R. J. Van Saun, N. E. Forsberg, #J. A. Hall. 2011. Organic and inorganic selenium: II. Transfer efficiency from ewes to lambs. Journal of Animal Science. 90: 577-584.
2. #Hall, J. A., R. J. Van Saun, G. Bobe, **W. C. Stewart**, W. R. Vorachek, W. D. Mosher, T. Nichols, N. E. Forsberg, G. J. Pirelli. 2011. Organic and inorganic selenium: I. Oral Bioavailability in ewes. Journal of Animal Science. 90: 568-576.
1. #Hall, J. A., A. M. Harwell, R. J. Van Saun, W. R. Vorachek, **W. C. Stewart**, M. L. Galbraith, K. J. Hooper, J. K. Hunter, W. D. Mosher, G. J. Pirelli. 2011. Agronomic biofortification with selenium: Effects on whole blood selenium and humoral immunity in beef cattle. Animal Feed Science and Technology 164:184–190.

SUBMITTED (student authors underlined, # indicates corresponding author)

1. Murphy, T. W., C. R. Kerth, **W. C. Stewart**, K. R. Wall, R. K. Miller, J. A. Boles. Sire breed effects on feedlot performance, carcass measurements, and meat sensory attributes of wethers harvested at 11 and 18 months of age. Small Ruminant Research. (*In Review*)
2. Kersh, A. J., J. D. Scasta, J. D. Derner, P. M. T. Lima, #**W.C. Stewart**. Breed-specific dietary preferences and temporal shifts in targeted sheep grazing in a northern mixed-grass prairie. Animal. (*In Review*)
3. Bhuiya, M. A. I., **W. C. Stewart**, D. M. Laverell, A. J. Kersh, S. S. Wulff, B. Bangoura. Seasonal gastrointestinal nematode burden in extensive sheep systems of the Intermountain West. Veterinary Parasitology: Regional Reports. (*In Review*)
4. Newman C. E., **W. C. Stewart**, D. P. Anderson, J. D. Scasta, C. L. Gifford. Perceptions and preferences of meat labeling claims in a blockchain traceability system among predominantly agriculturally connected consumers. Applied Animal Science. (*In Review*)

REVIEWED PROCEEDINGS (student authors underlined, # indicates corresponding author)

1. Knuth, R. M., K. L. Woodruff, G. L. Hummel, J. D. Williams, **W. C. Stewart**, H. C. Cunningham Hollinger, B. Bisha. 2021. Post-weaning management strategies and the impact on ewe subclinical mastitis and antimicrobial susceptibility. *Translational Animal Science*
2. **Stewart, W.C.**, J. R. Whaley, C. L. Gifford, T. W. Murphy, W. J. Means, J. P. Ritten. 2021. 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. Proceedings of 2021 NC214 Multistate Research Project- Increased Efficiency of Sheep Production, August 2-3, 2021, pp 27-31.
3. T. W. Murphy, **W. C. Stewart**, D. R. Notter, R. M. Knuth, T. T. Feagler, J. B. Taylor, Fleece and fiber characteristics of Rambouillet, Targhee, and their reciprocal-crosses at first shearing', *Translational*

Animal Science, Volume 4, Issue Supplement_1, December 2020, Pages S108–S112,
<https://doi.org/10.1093/tas/txaa115>

4. Whaley J. R., W. J. Means, J. P. Ritten, T. W. Murphy, C. L. Gifford, H. Cunningham-Hollinger, K. L. Woodruff, H. N. McKibben, C. M. Page, **#W.C. Stewart**. 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, *Translational Animal Science*, Volume 4, Issue Supplement_1, December 2020, Pages S27–S31, <https://doi.org/10.1093/tas/txaa091>
5. Julian A. A. M., J. D. Scasta, B. R. Stam, B. M. Sebade, C. M. Page, B. E. Springer, W. T. Renner, H. Cunningham-Hollinger, **#W.C. Stewart**. Mineral element concentrations of common grass and shrub species on sheep winter range in Wyoming: insights for mineral supplementation strategies, *Translational Animal Science*, Volume 4, Issue Supplement_1, December 2020, Pages S11–S16, <https://doi.org/10.1093/tas/txaa088>
6. Page, C. M., T. W. Murphy, J. B. Taylor, A. A. M. Julian, J. R. Whaley, K. L. Woodruff, G. L. Hummel, C. F. Demarco, D. M. Laverell, H. C. Cunningham- Hollinger, D. C. Rule, **#W.C. Stewart**. Effects of dietary Zn on ewe milk minerals and somatic cell count. *Translational Animal Science*, Volume 4, Issue Supplement_1, December 2020, Pages S17–S21, <https://doi.org/10.1093/tas/txaa089>
7. Knuth, R. M., H. C. Cunningham- Hollinger, B. Bangoura, A. A. M. Julian, C. M. Page, G. L. Hummel, K. L. Woodruff, J. R. Whaley, K. D. Bardsley, S. L. Lake, C. L. Gifford, B. Bisha, **#W.C. Stewart**. 2020. Impacts of dietary zinc concentrations on lamb feedlot performance. *Translational Animal Science*, Volume 4, Issue Supplement_1, December 2020, Pages S6–S10, <https://doi.org/10.1093/tas/txaa087>
8. Whaley J.R., W.J. Means, J.P. Ritten, H. Cunningham-Hollinger, C.M. Page, H.N. McKibben, **#W.C. Stewart**. 2019. A survey of lamb carcass characteristics in the Intermountain West during periods of seasonally constrained supply. *Translational Animal Science*, Volume 3, Issue Supplement_1, December 2019, Pages 1807–1811, <https://doi.org/10.1093/tas/txz104>
9. McKibben, H. N., D. R. Notter, **W. C. Stewart**, W. J. Means, N. L. Pierce, and J. B. Taylor. 2019. Comparison of new composite breeds with the Suffolk breed as terminal sires in an extensive production system: Carcass characteristics. *Translational Animal Science*, Volume 3, Issue Supplement_1, December 2019, Pages 1701–1704, <https://doi.org/10.1093/tas/txz061>
10. Knuth, R. M., **W. C. Stewart**, J. B. Taylor, C. J. Yoeman, B. Bisha, C. M. Page, B. C. Lindsey, M. L. Van Emon, T.W. Murphy. 2019. Subclinical mastitis in sheep: etiology and association with milk somatic cell count and ewe productivity in three research flocks in the Western U.S. *Translational Animal Science*, Volume 3, Issue Supplement_1, December 2019, Pages 1739–1743, <https://doi.org/10.1093/tas/txz078>
11. Murphy, T. W., **W. C. Stewart**, and J. B. Taylor. 2018. Factors affecting ewe somatic cell count and its relationship with lamb weaning weight in extensively managed flocks. *Transl. Anim. Sci.* 2018.2:s159S162. doi:10.1093/tas/txy031
12. Knuth, R. M., **W. C. Stewart**, J. A. Boles, C. M. Page, A. F. Williams, and T. W. Murphy. 2018. Evaluating the effect of South African Meat Merino breeding on pre- and post-weaning growth, feedlot performance, carcass traits, and wool characteristics in an extensive production setting. *Transl. Anim. Sci.* 2018.2:S163-S166. doi:10.1093/tas/txy036
13. McKibben, H. N., D. R. Notter, **#W. C. Stewart**, W. J. Means, N. L. Pierce, and J. B. Taylor. 2018. Evaluation of Suffolk, Siremax, and a test composite breed as terminal sires in an extensive production system: prefabrication carcass traits. *Transl. Anim. Sci.* 2018.2:S155-S158. doi:10.1093/tas/txy042
14. Meyerhoff, B., **W. C. Stewart**, S. H. Cox, R. L. Dunlap, N. P. Miller, R. Pope, and E. J. Scholljegerdes. 2017. Comparison of growth, feed efficiency, and wool characteristics of commercial Rambouillet ×

- South African Meat Merino crossbred rams to purebred Rambouillet rams. *Translational Animal Science* 1(Suppl1):231-234. doi:10.2527/asasws.2017.0056
15. **#Stewart, W. C.**, T. W. Murphy, D. R. Notter, M. R. Mousel, G. S. Lewis, K. A. Leymaster, and J. B. Taylor. 2017. Wool characteristics of Rambouillet, Polypay, and Romanov-White Dorper x Rambouillet ewes in an extensive rangeland production system. *Translational Animal Science* 1(Suppl1):165-169. doi:10.2527/asasws.2017.0057
 16. Page, C. M., I. McGregor, M. L. Van Emon, T. W. Murphy, C. K. Larson, J. G. Berardinelli, and **#W. C. Stewart**. 2017. Effects of zinc source and dietary concentration on zinc status, growth performance, and wool characteristics in developing rams1. *Translational Animal Science* 1(Suppl1):127-131. doi:10.2527/asasws.2017.0053
 17. McGregor, I., C.M. Page, C. Ryan, A.R. Hubbard, M. Manoukian, **W.C. Stewart**, and M.L. Van Emon. 2017. The effects of shredded sugar beets on sheep nutrient metabolism and ruminal characteristics1. *Translational Animal Science* 1(Suppl1):75-80. doi:10.2527/asasws.2017.0026
 18. I. McGregor, C.M. Page, **W.C. Stewart**, and M.L. Van Emon. 2016. Effects of increasing sugar beets on steer backgrounding performance. *Proc. West. Sect. Am. Soc. Anim. Sci.* 67: 176–179.
 19. C. M. Page, M. L. Van Emon, S. Spear, T. W. Murphy, J. G. Bowman, and **#W. C. Stewart**. 2016. Survey of serum trace mineral concentrations in weaned Montana ram lambs. *Proc. West. Sect. Am. Soc. Anim. Sci.* 67: 13–16.
 20. **Stewart W. C.**, T. R. Whitney, E. J. Scholljegerdes, D. M. Hallford, S. S. Soto-Navarro, and H. D. Naumann. Effects of feeding ground juniper to gestating ewes on pre- and postpartum ewe performance, serum biochemistry and hormones, milk fatty acid composition and progeny preweaning performance. 2015. *Proc. West. Sect. Am. Soc. Anim. Sci.* 65:10–16.
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ABSTRACTS/POSTERS (student authors underlined)

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4. C. E. Newman, C. L. Gifford, W. C. Stewart. Implementation of blockchain technologies in the U.S. sheep Industry: Producer and industry perceptions. American, Canadian, and Western Section of Society of Animal Science, July 16-20, 2023
5. A. Kersh, J. D. Scasta, J. Derner, H. Fraley, W. C. Stewart. Sheep foraging relative to stock density, time of day, and sheep type in a poisonous plant context. American, Canadian, and Western Section of Society of Animal Science, July 16-20, 2023
6. D. M. Laverell, T. W. Murphy, J. M. Smylie, A. Kersh, T. E. Engle, W. C. Stewart. Serum mineral and vitamin concentrations in central performance tested Rambouillet rams with and without angular limb deformities. American, Canadian, and Western Section of Society of Animal Science, July 16-20, 2023
7. M. Phillips, C. L. Gifford, T. W. Murphy, B. A. Freking, C. E. Newman, C. R. Ritchie, W. C. Stewart. Characterization of Katahdin lamb carcasses in a traditional lamb marketing context. American, Canadian, and Western Section of Society of Animal Science, July 16-20, 2023
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11. T. Bronnenberg, K. Kirkley, C. Magee, D. Murtazina, **W. C. Stewart**, J. Cantlon, A. M. Navratil. C. M. Clay, B. D. Cherrington. 2021. Obesity alters the estrogen-induced luteinizing hormone in ovariectomized ewes. Society for the Study of Reproduction Annual Meeting.
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17. C. M. Page, T. W. Murphy, J. B. Taylor, D. C. Rule, H. N. McKibben, J. R. Whaley, **W. C. Stewart**. 2019. Effects of increasing dietary zinc concentration during late gestation on ewe and lamb performance. American Lamb Board Lamb Summit-2019
18. J.R. Whaley, W.J. Means, J.P. Ritten , **W.C . Stewart**. 2019. Industry impacts of excessively fat lambs. Mountain States Cooperative Summer Meeting-2019
19. J.R. Whaley, W.J. Means, J.P. Ritten , **W.C . Stewart**. 2019. A historic overview of excessively finished lamb carcasses. American Lamb Board Lamb Summit-2019
20. A. A. M. Julian, J. D. Scasta, B. M. Sebade, B. R. Stam, **W. C. Stewart**. 2019. Trace mineral concentrations in common forage and shrub species on sheep winter range throughout Wyoming: Preliminary results. American Lamb Board Lamb Summit-2019
21. A. A. M. Julian, J. D. Scasta, B. M. Sebade, B. R. Stam, **W. C. Stewart**. 2019. Quantification of trace mineral concentrations in common forage and shrub species on sheep winter range throughout Wyoming. Mountain States Cooperative meeting- 2019
22. C. M. Page, D. C. Rule **W. C. Stewart**. 2019. Effects of dietary zinc concentrations on milk fatty acid composition in Rambouillet and Hampshire ewes. WSASAS-2019
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25. Kerth, C. R., T. W. Murphy, **W. C. Stewart**, J. A. Boles, T. R. Whitney, R. K. Miller. 2018. Effects of plant secondary compounds found in *Juniperus spp.* on yearling Rambouillet wethers feedlot performance, carcass characteristics, adipose fatty acid composition, and sensory panel traits. ASASJAM 2018.
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Diversifying Income opportunities by increasing the livestock feeding value of woody plant species.

American Society of Animal Science Joint Annual Meeting. July 15-19 2012.

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TECHNICAL REPORTS (student authors underlined)

University of Wyoming

Posbergh, C.*; Roeder, B.; Murphy, T.; Stewart, W.; Kott, R.; Hatfield, P.; Thomas, V.; Drummond, J. 2023. Ewe and lamb body condition, breeding and production data from the Montana Agricultural Experiment station, Montana State University, Bozeman, MT from 1960 - 2012. Ag Data Commons.

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C. E. Newman, **W. C. Stewart**, B. Hostetler. 2022. Traceability of American wool assurance program certified wool through the U.S. supply chain and potential use of blockchain technology. American Sheep Industry Association.

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Stewart, W. C., D. Scott, S. Howell, B. Roeder, T.W. Murphy. 2020. Gastro-intestinal nematode resistance to anthelmintic drug classes utilizing a larval development assay and associated risk factors in Montana and Wyoming sheep. Western-SARE. March 2020.

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Stewart, W. C., K. Koepke, C. M. Page, B. Sebade, J. D. Scasta, H. Hollinger. 2018. Producer Summary: University of Wyoming (Pilot) Pasture Based Ram Test. September 2018.

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Montana State University

Stewart, W. C. 2017 (PI). Progress Report: Quantifying trace mineral status in weaned Montana ram lambs. National Sheep Industry Improvement Center

Stewart, W. C. 2017 (PI). Progress Report: Wool research and education initiative. National Sheep Industry Improvement Center

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FUNDING***University of Wyoming (Total Funding \$2,823,680 awarded as PI or Co-PI)***

T. Maxwell, A. Greer, D. Scobie, **W.C. Stewart**, S. Ates. 2025. *Diversified Pasture for Sheep*. TR Ellett Agricultural Research Trust. NZD \$110,000. 2025–2028. Lincoln University, New Zealand.

W.C. Stewart. *Wyoming Sheep Innovators Exchange: Wyoming to NZ*. Wyoming Business Council. \$7,500. 2025. (Funded)

W.C. Stewart. *Rancher Exchange Program with Lincoln University*. UWyo Global Engagement Office. \$5,000. 2025. (Funded)

P. Lima, W.C. Stewart, J.D. Scasta. 2023. Use of virtual fence to promote targeted grazing against invasive forages in western rangelands. (5/1/2024- 5/1/2026) \$, (Pending)

P. Lima, W.C. Stewart, J.D. Scasta. 2023. Measurement of methane emissions from grazing sheep in Western U.S. rangelands. (8/1/2023- 6/15/2026) \$270,379 (Pending)

W.C. Stewart. Lamb-A-Year Value Discovery Program. 2023. Wyoming Sheep Industry Producer Lamb Donations. (8/1/2022 to 6/1/2023) \$42,370 (Funded)

C. L. Gifford., H. Cunningham-Hollinger, W.C. Stewart. 2023. Understanding potential genomic associations with lamb flavor and carcass characteristics. USDA-NIFA (3/1/23- 3/1/24) \$188,770 (Not Funded)

C. L. Gifford., W.C. Stewart, H. Cunningham-Hollinger. 2023. Lamb feeding strategies and meat quality assessment in a novel sheep breed. USDA-NIFA (6/1/23- 5/31/26) \$75,000 (Funded)

Stewart, W. C., B. Lee, J. Whaley. 2022. Sheep Enterprise Benchmarking: Knowing the numbers enterprise wellness, and industry growth. American Lamb Board. (5/11/22- 9/30/25) \$58,000. (Funded)

Stewart, W. C., S. L. Lake. “Blanket Project/ Wyoming Wool Initiative”. 2022. UWyo College of Agriculture, Life Sciences, and Natural Resources. \$60,000. (Funded)

W.C. Stewart, T.W. Murphy. 2021. Quantifying genetic and non-genetic factors associated with lamb growth and carcass characteristics. USDA-ARS Cooperative Agreement. (10/21/21- 9/30/2023) \$28,000

Block J., **W.C. Stewart** C. G. Gifford, T. W. Murphy. 2021. Effects of choline supplementation on reproductive outcomes in ewe lambs and growth performance and carcass characteristics of their progeny. National Sheep Industry Improvement Center. \$21,572. (Funded)

Stewart, W. C., S. L. Lake. "Blanket Project/ Wyoming Wool Initiative". 2021. UWyo College of Agriculture and Natural Resources. \$120,000 (Total Funding Generated from initial \$60,000 seed monies).

Stewart, W. C., J. Derner, J. D. Scasta, "Livestock responses to adaptive grazing management in high plains rangelands," USDA-ARS Cooperative Agreement. (9/1/21- 12/31/25) \$100,000. (Funded).

Posbergh, C., B. Roeder, H. Goosey, **W. C. Stewart**. 2021. Understanding the impact and developing a sustainable approach for sheep keds management. Western SARE Research and Education. \$340,000 (Not Funded).

Stewart, W.C. 2021. Feasibility of blockchain technologies in the sheep industry. 2021. UWYO Center for Block Chain Technology and Digital Innovation . \$33,000 (Funded)

Schell, S. P., J. Connett, J. D. Scasta, **W. C. Stewart**. 2021. Integrated Pest Management UWYO Implementation Program Team Plan. USDA-National Institute of Food and Agriculture. \$353,473.12 (Funded)

Stewart, W.C., J. D. Scasta, J. Derner. 2021. Targeted sheep grazing to control larkspur. USDA-ARS Cooperative Agreement. \$32,880 (Funded).

Cunningham-Hollinger, H., S. Lake, W. C. Stewart. 2021. Evaluating long term impacts of supplementation methods on the rumen microbiome and feed efficiency. Wyoming Agricultural Experiment Station FY-21 Competitive Grants Program. \$6,339 (Funded).

Knuth, R. K., H. Cunningham-Hollinger, B. Bisha. **W.C. Stewart**. 2021. Mitigation of subclinical mastitis during early lactation and effects of subclinical mastitis on milk yield, lamb growth, and lamb survival. National Sheep Industry Improvement Center. \$29,700 (Funded).

Cunningham-Hollinger, H., **W. C. Stewart**, C. Gifford, J. D. Scasta. 2020. Improving productivity, efficiency, and sustainability of sheep and beef grazing systems. C-Lock Corporation \$98,380 (Not-Funded)

Boles, J. A., **W. C. Stewart**, C. Kerth. 2020. Does post-weaning management and age increase the incidence of off flavors in lambs? Bair Ranch Foundation. \$58,831 (Funded)

Gifford C., **W.C. Stewart**. 2020 Assessing the impact of transportation and season on live animal and meat quality characteristics, National Sheep Industry Improvement Center (USDA) (January 1, 2021) \$26,654.70. (Not Funded)

Gifford C., D. C. Rule, H. Cunningham-Hollinger, **W. C. Stewart**. 2020 Strengthening a metabolomics research program in animal, food and agricultural sciences by acquiring a synapt Q-ToF mass spectrometry system, Funded by National Institute of Food and Agriculture (USDA) - Equipment Grant Program (October 1, 2020) \$436,756.00, (In- Review)

Roeder, B., H. Goosey, M. Schuldt, **W. C. Stewart**. 2020. Control options and economic impact of sheep keds (*Melophagus ovinus*). Western-SARE \$78,289 (Not-Funded)

Bangoura, B., **W. C. Stewart** (Co-PI), J. D. Scasta, B. Schumaker. 2020. Parasitic nematode prevalence and transmission dynamics at the Wyoming wildlife-livestock interface with special respect to anthelmintic drug resistance distribution in ruminants. Riverbend Ranch Endowment in Wildlife-Livestock Health Pilot Research Projects. \$149,523 (Funded)

- Feuz, B., H. Hill, **W. Stewart**, R. Larsen. 2019. Training Ag loan professionals in the use of Wyoming ranch tools for sheep and cattle producers in Idaho, Montana and Utah. Western-SARE \$55,165 (NotFunded)
- Cunningham-Hollinger, H. C., **W. C. Stewart**, S. Lake, R. Yeatts. 2019. Investigations into the impact of biochar on production efficiency in ruminant livestock. Western-SARE \$326,199 (Not-Funded)
- Bangoura, B., **W. C. Stewart** (Co-PI). 2019. Impact of sheep coccidiosis and it's targeted control on sustainable lamb production. Wyoming Agricultural Experiment Station. \$9,996 (Funded)
- Knuth, R., H. Cunningham-Hollinger, B. Bisha, **W. C. Stewart**. 2019. Investigating the main mastitis causing pathogens in Western sheep flocks. National Sheep Industry Improvement Center \$20,000 (Funded)
- Stewart, W. C.** 2019 (PI). Y Cross Foundation Graduate Student Tuition and Fee Award. University of Wyoming College of Agriculture. \$ 9,000 (Funded)
- Stewart, W. C.**, H. Cunningham-Hollinger, S. L. Lake, C. Gifford, C. M. Page, A. Julian. 2019 Effects of dietary zinc concentrations on lamb feedlot performance, rumen fluid parameters, and carcass characteristics. ADM Animal Nutrition. \$1,300 (Funded)
- Bangoura, B., **W. C. Stewart**, A. Piccorelli, J. D. Scasta. 2019. Intestinal parasite burden in changing climate conditions – Impact on sheep production and animal-based food resources. University of Wyoming Faculty Innovation Seed Grant Program. \$90,000 (Not-Funded)
- Stewart, W. C.**, J. D. Scasta, B. Stam. 2019. Trace mineral concentrations in common Wyoming range plants on sheep winter range. National Sheep Industry Improvement Center \$15,099.45. (Funded)
- Feuz, B. H. Hill, B. Stam, **W. Stewart**. 2019-2020. “Risk management strategies for livestock production-targeting women, beginning, and traditional producers in RMA’s Topeka region. \$99,999 (Funded)
- Stewart, W. C.** 2018 (PI). Global Perspectives Grant. University of Wyoming College of Agriculture and Natural Resources. \$4,140 (Funded)
- Stewart W. C.**, B. Bisha. 2018. (Co-PI) The prevalence and impact of mastitis in Western sheep flocks and cost-effective strategies to diagnose, treat, and avoid its occurrence. National Sheep Industry Improvement Center. \$20,000. (Funded)
- G.B. Paige, J.P. Ritten, J. Beck, **W. C. Stewart**, J.D. Scasta, B. Meador, M. Murphy, S. Lake, S. Paisley, K. Vaughn, R. Coupal, T. Collier, A. Latchinsky. 2018. (Co-PI) Center of Excellence: Sustainable Extensive Rangeland Agricultural Systems in High Altitude Headwater Areas. USDA NIFA. (4/20/2018 9/30/2022). *Wyoming Agricultural Experiment Station through USDA NIFA, McIntire-Stennis: project.* \$50,000/year. (Funded)
- Stewart, W. C.** 2018 (PI). Y Cross Foundation Graduate Student Tuition and Fee Award. University of Wyoming College of Agriculture. \$18,000 (Funded)
- Stewart, W. C.**, J. D. Scasta, M. B. Stephenson. 2018 (PI) Evaluation of forage kochia varieties with cool season grasses to enhance late-season grazing. Range Changer Seeds. \$1,100 (Funded)
- Gitthens R. J., A. Hendrickson, W. J. Means, **W. C. Stewart**. 2018. (Co-PI) Rail to Plate: Lamb Industry Education for Chefs. American Lamb Board. \$7,840.21(Funded)
- Murphy, T., and **W. C. Stewart**. 2017. (Co-PI) Evaluating livestock feed value of lentil screenings sampled throughout the Northern Great Plains. U.S. Dry Pea and Lentil Council. \$10,320 (Pending). (Co-PI) (Not Funded)
- Stewart, W.C.**, W. Means, J. Ritten. 2018. (PI) Quantifying the economic impact of excessively fat lambs in the U.S. processing sector. The American Lamb Board. \$49,000. (Funded).

Stewart, W.C., W. Means, J. Ritten. 2018. (PI) Quantifying the economic impact of excessively fat lambs in the U.S. processing sector. National Sheep Industry Improvement Center. \$21,000. (Funded).

Feuz, B. H. Hill, B. Stam, **W. Stewart**. 2017- 2018. “Risk Management Education for Livestock, Beginning and Traditional Producers in RMA’s Topeka Region. \$99,999 (Funded)

Murphy, T., **W. C. Stewart**, M. Van Emon. 2017. (Co-PI) Quantifying trace mineral status of Western ewes during critical production periods. National Sheep Industry Improvement Center, \$24,129. (Funded).

Murphy, T., **W. C. Stewart**, C. J. Yoeman, D. Bimczok. (Co-PI) 2017 Mastitis in Sheep: Determining Its Prevalence, Quantifying Its Risk Factors, And Evaluating Non-Antibiotic Treatments to Reduce Its Impacts. NIFA-AFRI, \$451,555. (Not Funded).

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Murphy, T., **W. C. Stewart**, M. Van Emon, and C. Schauer. 2017. Quantifying trace mineral status of Western ewes during critical production periods. American Sheep Industry Association “Let’s Grow”, \$29,000. Not Funded.

Feuz, B. H. Hill, B. Stam, **W. Stewart**. 2016 “Risk Management Education for Livestock, Beginning, Traditional, Women and Native American Producers in RMA’s Spokane Region. 2016-17 USDA RMA RMEPP-Spokane, \$99,999

Scott, D., **W. C. Stewart**, T. W. Murphy. 2016. (Co-PI) “Integrated Parasite Management in Small Ruminants: Train the Trainer”. Western Sustainable Agriculture Research and Education Grant. \$74,189. Funded.

Murphy, T. W., **W. C. Stewart**, J. B. Taylor, C. Yoeman. 2016. “The prevalence and impact of mastitis in Western sheep flocks and cost effective strategies to diagnose, treat, and avoid its occurrence.” American Sheep Industry Association. Fall 2016. \$26,895. Funded.

Van Emon, M.L., C. M. Buck, R. Endecott, E. Glunk, T. W. Murphy, **W. C. Stewart**. “Livestock Pocketbook Guides and Web App”. Western Center for Risk Management Education. Fall 2016. \$39,773.16. Not Funded.

Stewart, W. C., and J. Tusick., 2016. (PI) “Wool pool software for greater marketability of wool clips”. Montana Department of Agriculture. \$4,500. Funded.

Thomson, J. M., J. A. Boles, T. W. Murphy, **W. C. Stewart**. 2016. “Enhancing graduate education in applied animal and range production”. USDA Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship (NNF) Grants Program. \$237,000. Not Funded.

Stewart, W. C., T. W. Murphy. 2016. (Principal) “Gravity oven for determination of clean wool fiber present in samples of raw wool”. Montana Agricultural Experiment Station Equipment Grant. \$4,000. Funded.

Murphy, T. W., **W. C. Stewart**. 2016. “Milk analyzers to determine mastitis prevalence in range ewes”. Montana Agricultural Experiment Station Equipment Grant. \$6,419. Funded.

Stewart, W. C., R. Pope, J. W. Walker, and T. W. Murphy. (Principal), 2016. "State of U.S. wool industry: national audit". National Sheep Improvement Center. \$40,000. Funded.

Murphy, T. W., **W. C. Stewart**, J. A. Boles. 2016. (Co-Principal) “Sire breed, harvest age, and diet effects on the flavor profile and consumer acceptance of American lamb. National Sheep Industry Improvement Center. \$46,565. Funded.

Stewart, W. C., C. M. Page, M. L. Van Emon. (Principal), “Effects zinc source (inorganic vs. organic) fed to developing rams on zinc status, growth performance, wool, and reproductive characteristics,” Zinpro Corporation. (May 2016- April 2017) \$8,600. Funded.

Stewart, W. C., J. Wallawein. (Principal), "Next Generation Wool Grower Program," American Sheep Industry Association "Lets Grow". (May 2016 - December 2017) \$10,500. Funded

Stewart, W. C., J. B. Taylor. (Co-Principal), "Genetic Improvement of U.S. Wool-type Breeds-Cooperative Agreement," US Department of Agriculture. (September 9, 2015 - September 30, 2017) \$20,000. Funded.

Stewart W.C., S. Spear. (Principal), "Validation of the FibreLux Micron Meter against the OFDA 2000", MSU Undergraduate Scholar Research Program. (September 2015 – September 2016) \$3,000. Funded.

Stewart, W. C., R. Pope, J. W. Walker. (Principal), "Wool Education and Research," National Sheep Improvement Center. (January 1, 2016 - December 30, 2016) \$40,000. Funded.

Stewart, W. C., P. G. Hatfield. (Principal), "Laserscan for rapid fiber diameter analysis," 2015-16 Montana Ag. Exp. Station Research Grant. (October 1, 2015) \$37,000. Funded

Stewart, W. C., C. M. Page, M. L. Van Emon. (Principal), "Survey of trace mineral status in ram lambs, and producer implications for ram development", National Sheep Improvement Center. (August 10, 2015 - August 10, 2016) \$14,000. Funded

L. M. Surber, **W. C. Stewart,** (Co-Principal), "Does wool harvest preparation method impact presence of hair contamination in fleece wool?" Bair Ranch Foundation. (September 1, 2015 - January 31, 2016) \$6,700.

Funded

Stewart, W. C., M. Schuldt, B. Roeder. (Principal) Montana Ram Sale Sheep Symposium. American Sheep Industry Association "Lets Grow". (May 2015 - January 2016) \$12,500. Funded

Stewart, W. C., M. Schuldt. (Principal) Immerging Entrepreneurs Producer Group. American Sheep Industry Association "Lets Grow". (May 2015- January 2017) \$35,500. Not Funded

New Mexico State University

Stewart, W.C., T. R. Whitney, and E. J. Scholljegerdes. Addressing knowledge and outreach gaps in the utilization of woody plants in livestock diets. USDA NIFA-AFRI Predoctoral Fellowship. 8/2013- 8/2015; \$79, 500. "High Priority" Review Designation. Not Funded

Stewart, W.C., E. J. Scholljegerdes, M. Ward. Southwest sheep symposium. USDA- National Sheep Industry Improvement Center. 8/2013- 8/2015; \$36,000. Not Funded

University of Wyoming Extension

Stewart, W. C., Rotating high plains sheep symposium. UW-CES programing enhancement grant. 10/201110/2013; \$10,000. (sub-award= \$4,000 received from UW-CES, CCCD, Farmers Cooperative).

Stewart, W. C., S. L. Lake, K.C. Olson, A. Islam. Suitability of *Kochia prostrata* for enhancement of forage-based sheep production in northeast Wyoming. Wyoming Agricultural Experiment Station Competitive Grant Program 3/2011- 3/2012; \$22, 200. (sub-award= \$2,500 received from UW-CES for establishment of test plots).

TEACHING

University of Wyoming

Lead Instruction

<u>Year</u>	<u>Semester</u>	<u>Course</u>	<u>Credits</u>	<u>Enrollment</u>
2023	Fall	ANSC 3535 Intro to Wool Evaluation	2	13
2023	Spring	ANSC 4500 Lamb Feeding Part 2 (Lamb-A-Year)	1	3
2023	Spring	ANSC 3540 Collegiate Wool Judging	2	8
2023	Spring	ANSC 4230 Advanced Sheep Prod. & Mgmt.	3	9

Curriculum Vitae-Year 8 T&P

2022	Fall	ANSC 3535 Intro to Wool Evaluation	2	16
2022	Fall	ANSC 4500 Lamb Feeding (Lamb-A-Year)	3	8
2022	Fall	ANSC 5880 Adv. Lamb Feeding	3	2
2021	Fall	ANSC 3535 Intro to Wool Evaluation	2	12
2021	Fall	ANSC 5880 Value Added Wool Processing	2	1
2021	Spring	ANSC 5550 Investigations in Sheep Nutr.	3	2
2021	Spring	ANSC 4230 Advanced Sheep Prod. & Mgmt.	3	26
2020	Spring	ANSC 5550 Investigations in Lamb Feeding	2	3
2020	Spring	ANSC 4230 Advanced Sheep Prod. & Mgmt.	3	29
2020	Fall	ANSC 4500 Spec. Prob Range Sheep Nutr.	2	1
2020	Fall	ANSC 3535 Intro to Wool Evaluation	2	9
2019	Fall	ANSC 3535 Intro to Wool Evaluation	2	10
2019	Summer	ANSC 4500 Spec. Prob Range Sheep Nutr	2	1
2019	Spring	ANSC 4230 Advanced Sheep Prod. & Mgmt.	3	28
2019	Spring	ANSC 5550 Investigations in Lamb Feeding	2	1
2018	Fall	ANSC 4500 Spec. Prob. Wool Evaluation	1-2	13
2018	Spring	ANSC 4230 Advanced Sheep Prod. & Mgmt.	3	25
2018	Spring	ANSC 5550 Investigations in Anim. Nutrition	2	2
2018	Spring	ANSC 5900 Practicum College Teaching	2	2
2018	Spring	HP 4975 Honors Program Research	3	1

Co-Instruction

ANSC 1009 4-H in Animal Science, Co-Instructor (Spring 2018- Present)

ANSC 1010, Intro. to Anim. Sci.-Sheep and Wool Section, Co-Instructor (Fall 2017-Present) 3 lectures 2 labs

West Texas A&M University

ANSC 3335 Feeds and Feeding, Applied Sheep Nutrition Lecture (Fall 2021)

Montana State University

ANSC 432, Sheep Production and Management, Montana State University (Spring 2016)

New Mexico State University

ANSC 350, Special Topics: Sheep Research Methods (Instructor), (Spring 2015)

ANSC 100, Introduction to Animal Science Lab (TA), Fall 2014 and Spring 2015)

ANSC 303, Livestock, Meat and Wool Evaluation (TA), (Spring 2014)

Oregon State University

ANSC (100) Introduction to Animal Science Lab (TA), (Fall 2010)

GRADUATE & UNDERGRADUATE ADVISEMENT

(Completed as Chair or Co-Chair: M.S. = 3; Ph.D.= 2)

Advisor or Co-Advisor (M.S.= 5; Ph.D. = 2; Current students = 2 M.S.)

Dylan Laverell, University of WY, M.S. Committee Chair, 2023- present

Aaron Kersh, University of WY, M.S. Committee Chair, 2022- present

Courtney Newman, University of WY, M.S. Committee Co-Chair, 2021- 2023

Hannah Fraley, University of WY, M.S. Committee Co-Chair, 2021- 2023

Alexis Julian, University of WY, M.S. Committee Chair, 2018- 2020

Jaelyn Whaley, University of WY, M.S. Committee Chair, 2018- 2020

Chad Page, University of WY, Ph.D. Committee Chair, 2017- 2020

Kelly Carpenter, University of WY, Ph.D. Committee Co-Chair, 2017- 2020

Nicole McKibben, University of WY, M.S. Committee Chair, 2018- 2020

Chad Page, M.S., Animal Science, Montana State University Committee Co-Chair, 2016-2018

Committee Member

Josephine Hernandez, M.S., Animal Science, 2023- present

Daniel Reynolds, M.S., Ecosystem Science and Management, 2023-present

Olivia Bowers, M.S, Veterinary Science, 2022- present

Ashraful Islam Bhuiya, Ph.D. Veterinary Science, 2021- present

Clara Ritchie, M.S., Animal Science, 2021- 2023

Ryan Knuth, Ph.D., Animal Science, 2019-2022

Craig Caulkins, M.S., Ecosystem Science and Management, 2019-2020

Jordan Moody, M.S., Animal Science, Michigan State University, 2019- 2020

Ryan Knuth, M.S., Animal Science, Montana State University 2017-2019

Ian McGregor, M.S., Animal Science, Montana State University 2015-2017

Ashton Hubbard, M.S., Animal Science, Montana State University 2016-2017

EXTENSION OUTREACH

Extension Statement

My extension appointment at the University of Wyoming has been deliberately structured to function synergistically with my teaching and research responsibilities, forming a cohesive three-way mission that integrates knowledge generation, applied research, and real-world impact for the sheep industry. At the heart of this program is a commitment to meaningful collaboration—with colleagues, producers, students, and industry partners—to ensure that extension programming remains relevant, science-based, and outcomes-oriented.

This collaborative foundation includes close coordination with the UWyo Extension Sheep Task Force, colleagues in the Department of Animal Science, and strategic partnerships with the Wyoming Wool Growers Association, American Sheep Industry Association, and the American Lamb Board. These collaborations enable programming that is both locally responsive and nationally significant. Most importantly, the work is grounded in the engagement of undergraduate and graduate student colleagues, whose involvement is integral to the design, implementation, and success of every initiative. Their participation ensures that extension not only delivers actionable knowledge to industry stakeholders but also cultivates the next generation of scientists, educators, and agricultural leaders.

Core Extension Efforts

Digital Outreach and Research Communication

- Developed and implemented a comprehensive digital extension strategy combining a dedicated website, social media platforms, and *Sheep Sense* research briefs to deliver timely, research-based information aligned with the sheep production calendar.
- Achieved 80,000+ annual stakeholder reach with an average 30% engagement rate on social media.
- Led a 2022 website overhaul resulting in a 10× increase in site visits and a rise in average user time from 2 minutes to 27 minutes.

- Curated applied research content, producer-focused field insights, and recorded webinars to expand access to science-based decision-making tools.

Individual Producer Consultations

- Conduct 50–70 individual producer consultations annually, including on-ranch visits, nutrition planning, and direct problem-solving support.
- Provide science-based guidance influencing management decisions for 85,000–110,000 head of sheep annually.
- Estimated economic impact of \$65,000–\$150,000 annually through resource savings, improved production, and reduced losses.
- Maintain direct communication networks with producers, task force members, and industry partners, ensuring rapid response to emerging challenges.

Wyoming Wool Initiative

- Founded and lead the Wyoming Wool Initiative, an integrated innovation and outreach platform focused on value-added marketing, traceability, and manufacturing solutions for the wool industry.
- Spearheaded the UWyo Blanket Project, transforming university-produced wool into commercial products and generating approximately \$600,000 to support continued research, outreach, and product development.
- Established the initiative as a national clearinghouse for wool marketing, branding, and traceability information, connecting producers, processors, manufacturers, and industry partners.
- Consulted and collaborated with wool industry stakeholders across the United States to enhance supply chain capacity, promote regional wool identity, and build long-term market opportunities for American wool.
- Expanded the land-grant mission by linking production agriculture to downstream value creation, demonstrating the economic and strategic importance of wool innovation for U.S. sheep producers.

Collegiate and Youth Wool Judging Program

- Reestablished the Collegiate Wool Judging Program in 2017 after an 18-year hiatus, integrating it into teaching and extension through two new courses: ANSC 3535 Wool Evaluation and ANSC 3540 Wool Judging.
- Produced 105+ collegiate alumni and supported 900+ collegiate competitors nationwide through practice contests and coaching opportunities.
- Launched and hosted a national collegiate and youth wool judging contest (since 2020) and developed 8 new FFA wool judging programs.
- Reached 730 youth and collegiate participants in Wyoming and 1,700+ nationally, building technical skills, industry knowledge, and leadership capacity.

Wyoming Ram Test Program

- Modernized and expanded the Wyoming Ram Test—a cornerstone program since 1960—by refining the Wyoming Certified Index to include feed efficiency, carcass merit, and genomic data.
- Reduced ram mortality from 8–10% to 1.5% and increased annual consignment from 50 to 100+ rams through improved health protocols and dietary reformulation.
- Organized and hosted an end-of-test field day providing producers with genomic data, NSIP evaluations, and performance benchmarks, strengthening adoption of genetic selection tools.

Lamb-A-Year Value Discovery Program

- Established and lead the Lamb-A-Year Program, integrating genetic evaluation, feeder lamb research, student experiential learning, and producer decision-making support.
- Secured 479 lamb donations from 105+ producers in four years, generating key data on growth, carcass traits, and feed efficiency.
- Directed program proceeds to support lamb promotion campaigns, undergraduate research, collegiate lamb grower activities, student field learning, international producer exchanges, and the Wyoming Wool Growers Association Sheep and Wool Festival.
- Collaborate closely with Drs. Gifford and Hollinger, Kalli Koepke, and Dr. Derek Scasta to integrate research, teaching, and extension efforts.

Overall Extension Impact (2017–2025)

- Built an integrated extension program combining digital education, youth development, genetic evaluation, research translation, and direct producer support.
- Reached tens of thousands of stakeholders annually, enhanced genetic selection practices, and created new opportunities for student learning, industry collaboration, and producer profitability.
- Strengthened Wyoming's position as a national leader in sheep extension, education, and applied research, delivering tangible value to producers while training the next generation of leaders in the sheep industry.
-

EXTENSION, POPULAR-PRESS PUBLICATIONS and MULTIMEDIA PRODUCTS (*Indicates Peer Reviewed Extension Product)***University of Wyoming***

Stewart, W.C. Fall checkpoints: Decisions shaping next year's lamb crop. In: Wyoming Livestock Roundup. September 19th, 2025.

Stewart, W.C., J. Hewlett. Management strategies for healthy lambs post weaning. In: Wyoming Livestock Roundup. August 30th, 2024.

Stewart, W.C., M. Most, M. Julian, D. Laverell, D. Montgomery and J.D. Scasta. Winter Care for Ewes: Nutritional Considerations. 2023. *UWYO Sheep Program*. Infographic.

M. Julian, **W. C. Stewart**, M. Most, D. Laverell, D. Montgomery and J.D. Scasta. 2023. Shearing success: nutritional considerations after shearing. *UWYO Sheep Program*. Infographic.

W.C. Stewart. Managing the barber pole worm during the summer. In: Wyoming Livestock Roundup. July 29th, 2022.

W.C. Stewart, B. Feuz. Market timing of lambs in Wyoming. In: Wyoming Livestock Roundup. June 3rd, 2022.

W.C. Stewart. Three overlooked management strategies at lambing. In: The Shepherd Magazine. April 2022.

W.C. Stewart. Helpful reminders for the lambing shed. In: Wyoming Livestock Roundup. March 2022.

W.C. Stewart, B. Feuz. Small flock marketing considerations. In: Barnyards and Backyards. Spring 2022.

Quintana- Whaley, J., **W.C. Stewart**, J. D. Scasta. Supplementation considerations for grazing ewes. In: The Shepherd Magazine. November 2021

Stewart, W.C., D. Lavarell, C. Newman, A. Newman. Wool Judging Tutorials. UWyo Extension.
<https://www.youtube.com/watch?v=a8kBTyr-BJo>

- Stewart, W.C.**, An inconvenient truth- ram management shortfalls. In: The Shepherd Magazine. October 2021
- Stewart, W.C.**, Pre- and post-breeding ram management. In: WY Livestock Roundup. September 2021
- Stewart, W.C.**, Ram Management. In: Univ. Idaho, Univ. WY, UT State Univ. Sheep and Goat Newsletter. Fall 2021. 1:2
- Stewart, W.C.**, and A. Islam. Meeting late-season grazing gaps for sheep with Sudan-grass and Sorghum x Sudan Hybrids. In: WY Livestock Roundup. May 2021.
- Stewart, W.C.**, The basics of sheep ked management. In: Univ. Idaho, Univ. WY, UT State Univ. Sheep and Goat Newsletter. Spring 2021. 1:1
- Stewart, W. C.**, Effective sheep ked control. In: WY Livestock Roundup. Feb 18, 2021
- *Stewart, W. C.**, and C. M. Page. Sheep phosphorus requirements and management considerations for InterMountain West ranchers. University of Wyoming Extension Bulletin 5/1/20, B-1362.
- Stewart, W. C.**, Production benchmarks and current levels of production. In: WY Livestock Roundup. April 2020
- Stewart, W. C.**, Ammonia in the lambing environment. In: WY Livestock Roundup. February 2020
- Stewart, W. C.**, Strategies for breeding ewe lambs. In: WY Livestock Roundup. September 2019
- Stewart, W. C.**, C. M. Page. Sheep require Zinc. In: The Shepherd Magazine. August 2019
- Stewart, W. C.**, Sheep lice prevention and treatment. In: The Shepherd Magazine. July 2019
- Stewart, W. C.**, Old sheep industry talking points and new norms. In: WY Livestock Roundup. June 2019
- Stewart, W. C.**, Vaccinating is key in controlling Clostridial organisms. In: WY Livestock Roundup. April 2019
- Stewart, W. C.**, Body Condition Scoring technique helps assess nutritional needs, determine feed costs of the small acreage sheep flock. In: WY Livestock Roundup (Barnyards & Backyards Insert). Spring 2019
- Stewart, W. C.**, Exhibiting fleeces supports 4-H and inter-collegiate wool judging. In: Wyoming Wool Growers Magazine. February 2019.
- Stewart, W.C.**, Involving the next generation in their industry organization In: Wyoming Wool Growers Magazine. February 2019.
- Stewart, W.C.**, Minimizing the adverse effects of ammonia in the lambing shed. In: Wyoming Wool Growers Magazine. February 2019.
- Schell, S., and **W. C. Stewart**, The common fluke parasite is becoming more common. In: WY Livestock Roundup (Barnyards & Backyards Insert). Spring 2019
- 2018**
- Stewart, W. C.** and C. M. Page. 2018. Tailoring sheep nutrition to Wyoming's unique production environment. Wyoming Reflections article.
- Stewart, W.C.**, Winter weather considerations for the ewe flock. In: WY Livestock Roundup. December 8th, 2018.
- Stewart, W.C.**, Summary of the 2018 WY Woolgrower summer meeting in Laramie. In: Wyoming Wool Growers Magazine. September 8th, 2018.
- Stewart, W.C.**, Objective selection, ram test and the 2018 ram purchasing. In: WY Livestock Roundup. September 8th, 2018
- Stewart, W.C.**, Trace minerals; essential to sheep, lambs, and profits. In: WY Livestock Roundup. July 15th, 2018
- Stewart, W.C.**, Economic impact of mastitis in Western sheep production systems In: Wyoming Wool Growers Magazine. April 2018.

- Stewart, W.C.**, Capturing maximum value in the 2018 wool clip. In: WY Livestock Roundup. Feb 2018
- Stewart, W.C.**, Is My De-Wormer Still Effective? In: WY Livestock Roundup (Barnyards & Backyards Insert). March 2018.
- Stewart, W.C.**, University of Wyoming On-Ranch Performance Testing Program In: Wyoming Wool Growers Magazine. January 2018.
- Stewart, W.C.**, Lambing Time FAQ's. In: Wyoming Wool Growers Magazine. January 2018.

2017

- Stewart, W.C.**, Ram Management Considerations Part Two. In: WY Livestock Roundup. Oct 21, 2017
- Stewart, W.C.**, Ram Management Considerations Part One. In: WY Livestock Roundup. Oct 14, 2017
- Stewart, W.C.**, Terminal sire test takes the guess work out of ram buying. In: WY Livestock Roundup. Sept

Montana State University

- Stewart, W. C.**, Cold weather considerations for sheep. In: The Shepherd Magazine. November 2016.
- Stewart, W. C.**, Sheep selection considerations. In: Montana Wool Grower. Ram Sale Edition 2016.
- Stewart, W. C.**, Asking the right selection questions. In: The Shepherd Magazine. August 2016.
- Stewart, W. C.**, MSU ram test purpose and results. In: Montana Wool Grower. Summer 2016.
- Stewart, W. C.**, Historical reflections. In: The Shepherd Magazine. July 2016.
- Stewart, W. C.**, Phosphorus in sheep mineral. In: The Shepherd Magazine. May 2016.
- Stewart, W.C.**, Choosing the right breed of sheep. In: Big Sky Small Acres. Spring 2016.
- Stewart, W.C.**, Costly mineral assumptions. In: The Shepherd Magazine. Feb 2016.
- Stewart, W.C.**, Heritability estimates of undesirable fiber types. In: The Shepherd Magazine. Jan 2016.
- Stewart, W. C.** Mastitis in sheep production systems. In: The Shepherd Magazine. August 2015.
- Stewart, W.C.**, Per Capita Lamb Consumption: Fact or Fiction? In: The Shepherd Magazine. June 2015.
- Stewart, W.C.**, New Mexico SAMM Composite Study. In: The Shepherd Magazine. April 2015.

Texas A&M AgriLife Research/ New Mexico State University

- Stewart, W.C.**, U.S. Sheep Inventory: Decline or Transition? In: The Shepherd Magazine. June 2014.
- Stewart, W.C.**, Wool Selection Decision Making. In: The Shepherd Magazine. May 2014.
- Stewart, W.C.**, Carbon Foot printing the U.S. sheep industry. In: The Shepherd Magazine. March 2013.
- Stewart, W.C.**, Genotype Environment Interaction. In: The Shepherd Magazine. January 2013.
- Stewart, W.C.**, San Angelo Research: A Legacy of Service. In: The Shepherd Magazine. December 2012.
- Stewart, W.C.**, South African Mutton Merinos. In: The Shepherd Magazine. November 2012.
- Stewart, W.C.**, Innovation at the Feed Bunk. In: The Shepherd Magazine. October 2012.
- Stewart, W.C.**, Waiting for the Rain. In: The Shepherd Magazine. September 2012.
- Stewart, W.C.**, Terminal Sire Selection: More Black than White? In: The Shepherd Magazine. August 2012.
- Stewart, W.C.**, Selenium 101. In: The Shepherd Magazine. July 2012.
- Stewart, W.C.**, Forage Kochia: A Novice's Perspective. In: The Shepherd Magazine. June 2012.
- Stewart, W.C.**, Sheep Programs: An Investment in our Future. In: The Shepherd Magazine. May, 2012.
- Stewart, W.C.**, Wood to Feed. In: The Shepherd Magazine. April 2012.
- Stewart, W.C.**, Making Sense of Carcass Ultrasound in Sheep. In: WY Livestock Roundup. October, 2011

PRESENTATIONS

Wyoming Stockgrowers/Wool Growers Joint Annual Meeting. A recap of sheep research findings and major take homes. Casper, WY December 5th 2023.

West Central States (WY, ID, UT) Wool Grower Meeting. Practical sheep nutrition from birth to lambing. Boise, ID November 3rd 2023.

West Central States (WY, ID, UT) Wool Grower Meeting. Wool Grading and Classing: Test your Knowledge w/ Dylan Laverell. Boise, ID November 2nd and 3rd 2023.

USDA-NASS and USDA NAHMS Study Training. The importance of USDA-NAHMS study and overview of sheep industry stakeholders. National Training via Zoom. October 31st 2023.

Wyoming Sheep Task Force Annual Meeting. Low cost grazing strategies to develop, research and field site evaluation w/ Dr. Dr. Derek Scasta. Laramie WY, October 19th 2023.

Wyoming Sheep Task Force Annual Meeting. Tour of Colorado Lamb Processors w/ Dr. Tyler Cozzens. Brush CO, October 18th 2023.

Wyoming Sheep Task Force Annual Meeting. Lamb feeding considerations and lamb feeding economic model presentation w/ Dr. Tyler Cozzens. Ault CO, October 18th 2023.

Wyoming Sheep Task Force Annual Meeting. Understanding the non-traditional lamb market- Field Study. Fort Collins CO, October 18th 2023.

Wyoming Sheep Task Force Annual Meeting. Utilizing new technology to enhance decision making. Laramie WY October 17th 2023.

Wyoming Sheep Task Force Annual Meeting. Alternative marketing strategies for lamb and wool. Laramie WY October 17th 2023.

Johnson County Wool Growers Meeting. Enterprise budgets and knowing your costs relative to peers. Kaycee WY October 4th 2023.

Wyoming Ram Sale Seminar. Getting more out of our input costs: Anthelmintics and mineral supplementation. Douglas, WY. September 11th 2023.

Scottish Rural College- U.S. Army Veterinary Corps Training. Internal parasites in sheep and FAMACHA training. Crianlarich Scotland. August 29th 2023

Scottish Rural College- U.S. Army Veterinary Corps Training. Sheep behavior and handling systems. Crianlarich Scotland. August 28th 2023

Wyoming Sheep and Wool Festival. Non-Traditional marketing strategies. Kemmerer, WY July 1st 2023.

Wyoming Sheep and Wool Festival. Basics of wool evaluation. Kemmerer, WY July 1st 2023.

Wyoming Ranch Camp. Entrepreneurism in the sheep industry: Production to marketing. June 15th to 16th 2023.

American Society of Animal Science Joint Annual Meeting. Invited Presentation: Extensive sheep supplementation strategies: Theory to practice. Albuquerque, NM July 18th 2023.

National Sheep Industry Improvement Center Strategic Visioning. Building capacity through more defined RFA's and Focus Areas. Zoom Presentation. May 22nd, 2023.

Lincoln University NZ. Challenges and opportunities in the US sheep industry: Opportunities for collaboration with NZ. Lincoln NZ May 11th 2023.

University of Wyoming Extension Sheep Seminar. Knowing the numbers on your sheep enterprise. Linge WY April 19th 2023.

Wyoming Ram Test Field Day Educational Program. Overview of ram test data and research update. Laramie, WY April 8th 2023

Michigan Sheep Producers Association. Grassroot strategies for getting more for your wool. Lansing, MI January 8th, 2023.

Michigan Sheep Producers Association. Revisiting what's overlooked a deeper dive in your sheep enterprise. Lansing, MI January 7th, 2023.

Wyoming Stockgrowers Association-Wyoming Wool Growers Natural Resource Rendezvous. Making sense of RFID technologies. Content co-created by W. C. Stewart, and C. Newman (presenter), and D. Laverell (presenter). Casper, WY December 6th, 2022.

West Central States (UT, ID, WY) Wool Growers Annual Meeting. Resiliency amidst uncertainty: Market timing and extending lambs. Content co-created by W. C. Stewart (presenter), and C. Newman, and D. Laverell. Park City, UT November 10th 2022.

University of Wyoming Animal Science Cowboy Classic Wool Judging Training. Getting a wool evaluation curriculum started in your classroom. Laramie WY October 13th, 2022.

Wyoming Ram Sale Seminar. Lamb market outlook and market timing strategies. Content co-created by W. C. Stewart (presenter), and C. Newman (presenter). Douglas, WY September 12th, 2022.

Wisconsin Sheep and Wool Festival- Sheep for Profit Workshop. Defining productivity and hitting the mark. Jefferson WI September 10th, 2022.

Wisconsin Sheep and Wool Festival- Sheep for Profit Workshop. Getting more from your wool. Jefferson WI September 9th, 2022.

Wyoming Wool Grower Association Summer Meeting. Knowing the numbers: Enterprise budgets on sheep enterprises. Wright WY, July 13th 2022.

Wyoming Wool Grower Association Summer Meeting. Knowing the numbers: Range nutrition considerations. Geis Ranch Wright WY, July 13th 2022.

Wyoming Wool Grower Association Summer Meeting. Managing early weaned lambs. Moore Ranch Wright WY, July 14th 2022.

National Columbia Show and Sale. Wool evaluation workshop. Cheyenne, WY June 8th, 2022

Wyoming Stockgrowers Meeting. Targeted Grazing of Larkspur with Sheep Field Tour. Co-presented with J. D. Scasta, H. Fraley, and A. Kersh Cheyenne, WY June 8th, 2022.

Rocky Mountain Katahdin Association. Carcass characteristics and cutability of hair lambs compared to wool lambs. Laramie, WY June 9th 2022.

Rocky Mountain Katahdin Association. Internal parasite management in sheep. Laramie, WY June 10th 2022

University of Wyoming Extension Ranch Camp. Opportunities in the sheep industry. Evanston WY May 26th, 2022

University of Wyoming Extension 4-H Wool Judging Contest. Considerations and resources for building a wool evaluation program. Laramie, WY April 29, 2022.

University of Wyoming Ram Test Educational Field Day. Overview of ram test data and research updates. Laramie WY April 2nd 2022

Wyoming-Utah Ag Days. Management of the ewe during late pregnancy. Evanston WY March 10th 2022

Riverton Farm and Ranch Days. Strategic management of the pregnant ewe. Riverton WY February 10th 2022.

The Wyoming Wool Initiative National Wool Judging Contest. Laramie, WY January 11th 2022

2021

Wyoming Stockgrowers Association; Progressive Rancher Forum, Larkspur Management Utilizing Sheep Grazing. Casper, WY December 13th 2022. Co-presented with J. D. Scasta.

University of Idaho/University of Wyoming Sheep Extension Series, The role of state sheep industry organizations in strengthening industry: Q&A with executive directors. November 10th 2021.

Farm Flock Economics. American Sheep Industry Association Webinar Series. Content co-created by B Feuz (presenter), W.C. Stewart, and J. Parsons (organizer/moderator). Available at:

<http://www.optimalag.net/sheepagriculture/webinars/farm-flock-economics/>

Wyoming's Cyber Security Conference. Feasibility of Blockchain Technologies in the U.S. Sheep Industry. Co-presented virtually with C. Newman. October 8th 2021.

Wyoming Ram Sale Sheep Production Workshop. Demystifying lamb quality, fabrication, and preparation: putting the pieces together. Co-presented with C. Gifford. Douglas, WY September 13th 2021.

University of California Sheep Production Workshop, Precision Mineral Nutrition in Sheep: Moving Targets. Rio Vista, CA 2021.

USDA-ARS Sheep Experiment Station Continuing Education for Staff. Accurate and Repeatable Body Condition Scoring of Ewes. Dubois, ID June 9th 2021.

Rocky Mountain Katahdin Hair Sheep Association Annual Meeting. Challenging. The Traditional Paradigm: Sheep Production Dynamics in the Wild-West. Dubois, ID June 10th 2021.

Wyoming Sheep Seminar, Sustainable Internal Parasite Management in Sheep, Fowler Ranch, Heart Mountain, WY May 11th 2021.

Wyoming Sheep Seminar, FAQ's on NSIP- Estimated Breeding Values, Fowler Ranch, Heart Mountain, WY May 11th 2021.

Wyoming Sheep Seminar, Developing a Custom Mineral Program, Powell, WY May 10th 2021.

University of Idaho/University of Wyoming Sheep Extension Series Introduction to Wool Evaluation: Train the Trainer. Idaho Falls, ID April 30th 2021.

University of Idaho/University of Wyoming Sheep Extension Series Introduction to Wool Evaluation: Train the Trainer. Jerome, ID April 29th 2021.

University of Idaho/University of Wyoming Sheep Extension Series, Wool Industry Trends and Pricing (Zoom Presentation). April 14th 2021.

University of Idaho/University of Wyoming Sheep Extension Series, Nutritional management for lambing season (Zoom Presentation). March 9th 2021.

2020

Wyoming Stockgrowers Association; Progressive Rancher Forum, Cost effective nutritional management of the ewe during winter months. Casper, WY December 7th 2020

Johnson County Wool Growers, Kaycee, WY. UWYO sheep program update. November 7th 2020.

University of Idaho/University of Wyoming Sheep Extension Series, Western-SARE Integrated parasite management-FAMACHA training (Zoom Presentation). October 22, 2020.

University of Idaho/University of Wyoming Sheep Extension Series, Sheep internal parasite management in the Intermountain West (Zoom Presentation). October 15, 2020

Montana Ram and Ewe Sale Educational Seminar. What's the trajectory of my sheep enterprise? Miles City, MT September 16th, 2020.

Wyoming Ram Sale Seminar. What's the trajectory of my sheep enterprise? Douglas, WY September 14th, 2020.

Johnson County Sheep Days, Wool harvesting and end-point uses of wool. Buffalo, WY August 20, 2020

University of Idaho/University of Wyoming Extension Series, Ram management considerations in the Intermountain West (Zoom Presentation). July 2, 2020

University of Wyoming Extension Series, Marketing the 2020 wool clip in the midst of a global pandemic. (Zoom Presentation) May 21, 2020

University of Wyoming Extension Series, Traditional lamb marketing considerations in the midst of a pandemic. Co-presented w/ B. Feuz. (Zoom Presentation) April 30, 2020

Barnyards and Backyards Webinar Series, Getting started with sheep (Zoom Presentation). April 17th, 2020.

U.S. Meat Animal Research Center Sheep Management Staff Training. Impact of USDA-ARS sheep research on land-grant university research and outreach. Clay Center, NE February 28th, 2020

Johnson County Sheep Seminar, Ewe management considerations during late gestation. Buffalo, WY February, 20th, 2020.

University of Wyoming Extension Series, Breeding ewe nutrition and management (Zoom Presentation). January 30th, 2020.

Wyoming Utah Ag Days, Sheep management strategies that pencil. Evanston, WY, January 28th, 2020.

2019

Wyoming Stock Stockgrowers Progressive Ranching Workshop. Flexible herd management. Co-presented w/ J. D. Scasta. December 9th, 2019 40 attendees

UWYO, K-State, and 4-H Wool Judging practice contest and clinic. Grading rail decision making. Laramie, WY. (December 7th, 2019) 30 attendees

West Central States (UT, ID, WY) Wool Grower Meeting. Building bridges with extension to expand sheep specific programing in UT, ID, and WY. Evanston, WY (November 7th, 2019) 27 attendees

West Central States (UT, ID, WY) Wool Grower Meeting. Precision sheep health and nutritional management. Evanston, WY (November 7th, 2019) 57 attendees

Wyoming Wool Growers Association. Lessons in sheep production systems from Argentina and Uruguay. Evanston, WY (November 7th, 2019) 27 attendees

Collegiate Wool Growers Meeting. Global perspectives on sheep production in Argentina and Uruguay. Laramie, WY (October 24th, 2019) 10 attendees

Instituto Nacional de Tecnologia Agropecuaria- Bariloche Research Center. Challenges and opportunities in the U.S. sheep industry: solutions through international collaborations UW and INTA . Bariloche, Argentina (October 18th, 2019). 10 attendees

Universidad de la Republica, Department of Animal Production. Challenges and opportunities in the U.S. sheep industry: solutions through applied research and extension. Montevideo, Uruguay (October 11th, 2019). 47 attendees

Universidad de la Republica, Veterinary Department. Challenges and opportunities in the U.S. sheep industry: solutions through applied research and extension. Montevideo, Uruguay (October 7th, 2019). 13 attendees

UW Extension/WWGA Emerging Entrepreneurs Field Day. Growing lamb and finishing diet considerations. Kinnear WY (September 27th, 2019). 25 attendees

UW Extension/WWGA Emerging Entrepreneurs Field Day. Management and pricing considerations for short-term ewes. Kinnear WY (September 27th, 2019). 24 attendees

Wyoming Ram Sale Seminar, Preparing for breeding season: ewe nutrition and phenotypic selection. Douglas, WY (September 9th, 2019). 21 attendees

Wyoming Wool Growers Summer Meeting. FAMACHA to guide deworming decision making. Laramie, Wyoming. (August 10th, 2019) 20 attendees.

Wyoming Wool Growers Summer Meeting. Resistance to anthelmintic in Wyoming and Montana. Laramie, Wyoming. (August 10th, 2019) 40 attendees.

Wyoming Wool Growers Summer Meeting. Evaluating sheep udders and body condition scores in cull keep scenarios. Laramie, Wyoming. (August 9th, 2019) 40 attendees.

Colorado Wool Growers Summer Meeting. Strategic mineral supplementation: preventing production losses in sheep production systems. Montrose, Colorado. (July 18th, 2019) 27 attendees.

Mountain States Lamb Cooperative: Producer Education Program. Mastitis in sheep: A Western perspective to what it costs and how to mitigate its effects. Buffalo, Wyoming. (July 16th, 2019) 50 attendees.

Mountain States Lamb Cooperative: Producer Education Program. Pre- and post- breeding ram management strategies. Buffalo, Wyoming. (July 16th, 2019) 50 attendees.

Wyoming Association for Career and Technical Education Summer Meeting. Utilizing wool evaluation in CDE and post-secondary curriculum. Casper, Wyoming. (June 21st, 2019) 13 attendees.

NCERA-214 Multi-State Research and Extension Meeting. Lamb feeding and processing industry infrastructure tour. Laramie, WY. (June 5th, 2019) 10 attendees.

NCERA-214 Multi-State Research and Extension Meeting. Sheep research and extension initiatives at the University of Wyoming. Laramie, WY. (June 4th, 2019) 15 attendees.

New Mexico Indian Livestock Days. Getting more for your wool through ram selection and clip preparation. Albuquerque, New Mexico (May 9th, 2019) 64 attendees.

New Mexico Indian Livestock Days. Sheep health considerations. Albuquerque, New Mexico (May 9th, 2019) 64 attendees.

University of Wyoming Ram Test Field Day. How to use ram test data to select for greater productivity. Laramie, Wyoming (April 13th, 2019) 33 attendees.

ANSC 1009 4-H in Animal Science. Sheep Health and Housing Considerations (Zoom Presentation). (March 20th, 2019), 68 attendees.

High Plains Organic Farming Conference, Maximizing production within narrow framework. Cheyenne, WY (February 28th, 2019), 10 attendees.

Pipestone Sheep Management Program Webinar. MN, IA, SD (Zoom Presentation). (February 21st, 2019), 49 webinar participants.

Fremont County Ag Days, Making more from your wool clip. Riverton, WY (February 7th, 2019), 21 attendees.

Wyoming Utah Ag Days, Sheep management strategies that pencil. Evanston, WY (January 31th, 2019), 17 attendees.

American Sheep Industry Association: PERC Council. Sheep and Goat Research Journal Update. New Orleans, LA. (January 24th, 2019)

2018

Cowboy Classic Collegiate Wool Judging Contest and 4-H Coaches Clinic. Principles of wool evaluation grading rail, commercial and breed classes. Laramie, WY. (December 8th, 2018). 52 attendees

Front Range Wool Pool Seminar. Targeted trace mineral supplementation strategies. Conrad, MT (Zoom Meeting). (December 4th, 2018). 35 attendees

Collegiate Wool Grower End-of Semester Meeting. Raw wool evaluation and end-point use. Laramie, WY (November 26th, 2018). 12 attendees

West Central States Wool Grower Meeting- Production Symposium. Sheep management strategies that pencil: revisiting what's often overlooked. Casper, WY. (November 10th, 2018). 53 attendees

West Central States Wool Grower Meeting- Production Symposium. Parasite Resistance in the Intermountain West. Casper, WY. (November 10th, 2018). 87 attendees

Rail to Plate: Lamb Industry Education for Chefs. Sheep production systems birth to plate. Laramie, WY. (October 29th, 2018). 10 attendees

North Dakota Lamb and Wool Producers Annual Meeting, Practical internal and external parasite management strategies, Medora, ND (October 13th, 2018). 51 attendees

Wyoming Ram Sale Seminar, Fundamentals of selection and ram nutritional management for optimal longevity, Douglas, WY (September 10th, 2018). 46 attendees

Multi-State Cooperative Sheep Meeting USMARC, Managing internal parasites McMaster to DrenchRite. Clay Center, NE (September 8th, 2018). 31 attendees

Nebraska Sheep and Goat Producer Association, Integrated parasite management in sheep. Hays Springs, NE (September 6th, 2018). 39 attendees

Wyoming State Fair, Wool judging basics. Douglas, WY (August 8th, 2018). 12 attendees

Colorado Wool Growers Annual Meeting. Practical internal and external parasite, and trace mineral management. Montrose, Colorado (July 12th, 2018). 61 attendees

Colorado Wool Growers Annual Meeting. Sheep management strategies that pencil: revisiting what's often overlooked. Montrose, Colorado (July 12th, 2018). 57 attendees

Colorado Wool Growers Annual Meeting- Young Entrepreneurs Meeting. Insights for leadership development within the sheep industry. Montrose, Colorado (July 11th, 2018) 12 attendees

Integrated Parasite Management-FAMACHA Training. Using fecal egg counts to guide decision making. Tremonton, Utah. (June 19th, 2018) 10 attendees.

Carcass Ultrasound Scanning at National Columbia Show and Sale. Gillette, WY (June 13th, 2018) 15 attendees.

Missouri Sheep Producers Annual Meeting. Nutritional management. Spickard, Missouri (June 9th, 2018) 35 attendees.

Missouri Sheep Producers Annual Meeting. Internal parasite management. Spickard, Missouri (June 9th, 2018) 30 attendees.

Wyoming State 4-H Wool Judging Competition. Setup, explanation, and officiating of contest. Laramie, Wyoming (April 27th, 2018) 75 attendees.

Youth and Coach Wool Judging Clinic. Principles of wool evaluation for selection and competition. Laramie, Wyoming (April 23rd, 2018) 10 attendees.

Wright Sheep Seminar. Ewe body condition scoring, mouthing, and udder evaluation. Wright, Wyoming (April 19th, 2018) 15 attendees.

Wright Sheep Seminar. Sheep parasite management: external to internal. Wright, Wyoming (April 19th, 2018) 15 attendees.

Wright Sheep Seminar. Sheep trace mineral supplementation insights. Wright, Wyoming (April 19th, 2018) 15 attendees.

WY-MT Sheep Seminar. Management strategies to reduce economic impact of internal and external parasites. Broadus, Montana (April 18th, 2018) 21 attendees.

University of Wyoming Ram Test Field Day. Performance Testing Basics: purpose, advantages, and limitations. Laramie, Wyoming (April 7th, 2018) 20 attendees.

Ag Extravaganza: Evening Session, Evaluation of external and internal parasites and management options. Basin, Wyoming. (March 15th, 2018) 23 attendees.

Ag Extravaganza: Morning Session, Unique qualities of different wool types and end-point uses. Basin, Wyoming (March 15th, 2018) 200 youth attendees.

Youth and Coach Wool Judging Clinic, Principles of wool evaluation and competition considerations. Laramie Wyoming, (March 14th, 2018) 12 attendees.

High Plains Organic Farming Conference, Challenges and Opportunities to Organic Sheep Production. Cheyenne, WY (February 28th, 2018) 25 attendees.

Johnson-Campbell County Wool Judging Clinic. Buffalo, WY (February 8th, 2018), 23 attendees

Fremont County Ag Days, Practical Parasite Control Strategies: Internal to External. Evanston, WY (February 7th, 2018), 12 attendees.

Wyoming Utah Ag Days, Practical Parasite Control Strategies: Internal to External. Evanston, WY (January 25th, 2018), 58 attendees.

Johnson County Wool Growers, Breakfast Q&A with the UW Sheep Specialist. Kaycee, WY (January 17th, 2018), 8 attendees.

Johnson County 4-H, Market lamb feeding management and lamb quality characteristics. Buffalo, WY (January 16th, 2018), 45 attendees.

Johnson County Wool Growers, Practical Parasite Control Strategies: Internal and External. Buffalo, WY (January 15th, 2018), 33 attendees.

2017

Montana Wool Growers Annual Meeting, “Gastrointestinal nematode resistance to anthelmintic treatment in Montana and Wyoming sheep flocks: Preliminary results (Year 1 of 2)” Billings MT (December 2nd, 2017),

Wyoming Women in Agriculture Conference, “Incorporating sheep into and an existing cattle enterprise,” Casper, WY (November 10th, 2017)

UW College of Ag Ambassador Meeting, “Wyoming sheep industry outlook” Laramie, WY (October 2nd, 2017)

UW Extension AG and Hort Initiative Team Meeting, “Sheep Program Initiatives” Laramie, WY (September 20th, 2017)

College of Agriculture Specialist Meeting, “Background and Programmatic Direction,” Laramie, WY (September 18th, 2017)

WY State Fair, “Basics of wool evaluation for exposition and competition” Douglas, WY (August 17th, 2017)

WYLR Cattlemen’s Conference, “Challenges and Opportunities in WY Sheep Industry: How UW Can Help,” Douglas, WY (August 17th, 2017)

Wyoming Wool Growers Summer Meeting, “Quantifying Resistance to Internal Parasites in Wyoming,” Casper, WY. (July 24th, 2017)

Montana State University

California Sheep Seminar-Risk Management Workshop, “Feeding, selection, and crossbreeding fundamentals for the ewe flock”. Bakersfield, CA. December 15th, 2016.

California Sheep Seminar-Risk Management Workshop, “Managing ewe nutrition through body condition scoring and quantitative selection strategies”. Davis, CA. December 14th, 2016.

California Sheep Seminar-Risk Management Workshop, “Common sense nutrition, selection, and crossbreeding strategies in sheep production”. Hopland, CA. December 13th, 2016.

West Central State Wool Growers, “Cost Effective Nutritional Management of the Ewe Flock” Sun Valley, ID. (November 18th, 2016).

Growth through agriculture granting committee, “Enhanced value of Montana wool through wool pool participation”, Helena, MT. (November 16th, 2016).

Hi-Line Sheep Seminar, “FAMACHA and Integrated Parasite Management Workshop”. Chinook, MT. (November 14th, 2016).

Western MT Sheep Growers Meeting, “MSU Sheep Program Update Research and Wool Pool Activities”, Ronan, MT (November 11th, 2016).

Southeast Montana Sheep Symposium, “Trace Mineral Nutrition and Other Nutritional Strategies for the Ewe Flock”, Boyes, MT (November 9th, 2016).

Southeast Montana Sheep Symposium, “Integrated Parasite Management”, Boyes, MT (November 9th, 2016).

NSIP Carcass Certification Training. “Carcass ultrasound: probe placement, image quality, image interpretation and selection applications”, MSU Animal and Range Sciences, Bozeman, MT. (November 7th, 2016).

University of WY Lamb 300, “Wool selection, management, and quality considerations for optimum profit”, Laramie, WY. (November 5th, 2016).

MSU Extension Annual Conference. "Overview of Montana State Extension Sheep Program", Bozeman, MT, (October 26th, 2016).

Montana Ram Sale and Sheep Symposium, "Ewe Body Condition Score and Reproductive Potential", Miles City, MT. (September 12th, 2016).

U.S. Sheep Experiment Station 100 yr. Centennial Celebration, "The "Western sheep production: the wine country of lamb and wool production", Dubois, ID (August 24th, 2016).

Wyoming Wool Growers Annual Meeting, "Western Wool: merits, expectations, and maintaining reputation", Casper WY (August 9th, 2016).

FAMACHA and Integrated Parasite Management Workshop, "Integrated parasite management in sheep", Montana Highland Lamb, Whitehall, MT (July 30th, 2016).

American Society of Animal Science, "Effects of selection for high and low juniper consuming goats on rumen fermentation characteristics," ASAS-JAM, Salt Lake City, Utah (July 20th, 2016).

Beaverhead County Wool Pool Mtg., "Wool Harvest Preparation and Grading", Dillon, MT. (April 16th, 2016).

Western Montana Wool Growers, Research Update MSU Ram Test Field Day, "How to use ram test and NSIP as selection tools," MSU Animal and Range Sciences, Bozeman, MT. (March 12th, 2016).

Big Timber Sheep Seminar, "Seasonal nutritional management challenges and opportunities", Big Timber, MT. (February 25th, 2016).

Western Montana Sheep Seminar, "Integrated Parasite Management in Sheep," Western Montana Wool Growers, Billings, MT. (February 13, 2016).

Montana Wool Growers Association Young Producers Meeting, "Needs Assessment and Transition Planning," Montana Wool Growers Association, Billings, MT. (December 2015).

Plenty wood Sheep Seminar and Wool Pool Meeting, "Management Strategies Increase Efficiency," MSU Extension, Plentywood Montana. (December 2015).

Front Range Sheep Seminar, "MSU Sheep Program Needs Assessment Producer Poll," Front Range Wool Pool, Conrad, MT. (December 8, 2015).

MSU Animal and Range Sciences Advisory Committee Meetings, "Sheep Extension Program Introduction and Update," MSU Animal and Range Sciences, Bozeman, MT. (November 2015).

MSU Sheep Advisory Committee Meetings, "Sheep Extension Program Introduction and Update," MSU Animal and Range Sciences, Bozeman, MT. (November 2015).

Montana Columbia Breeders Meeting, "Future Progress in the Columbia Breed," Montana State University Wool Lab, Bozeman. (November 16, 2015).

Tri-State Sheep Symposium, "Utilization of woody feeds in sheep production systems," North Dakota Lamb and Wool Producers, Medora, ND. (October 2015).

Animal Science Fall Friday, "Practical Mineral Supplementation Strategies," Northeast MSU Agricultural Extension Agents, Glasgow, MT. (October 30, 2015).

Western Montana Sheep Producers Annual Meeting, "MSU Sheep Program and Wool Lab Updates," Western Montana Sheep Producers Association, Moiese, MT. (October 10, 2015).

Montana Ram Sale Sheep Symposium, "Perceptions of estimated breeding values, current utilization and direction for the future," MSU Sheep Program, Montana Wool Growers Association, American Sheep Industry Association Lets Grow Initiative, USDA-ARS, Fort Keogh Range Livestock Research Laboratory. (September 2015).

FAMACHA Training and Parasite Management Workshop, "Integrated Parasite Management Strategies," MSU Sheep Extension Program and National Center for Appropriate Technologies, Whitehall, Montana. (August 1, 2015).

Opportunities to Increase Cash Flow. Presentation at 2015 ASAS Western Section Sheep Symposium, June 23, 2015

Effects of feeding ground juniper to gestating ewes on pre- and postpartum ewe performance, serum biochemistry and hormones, milk fatty acid composition and progeny preweaning performance. Oral Presentation at 2015 ASAS Western Section Meeting in Ruidoso, NM, June 23-25, 2015

Texas A&M AgriLife Research/ New Mexico State University

Effects of juniper species and stage of maturity on nutritional, digestive, and plant secondary compound characteristics. Presentation at 2014 ASAS Western Section Meeting in San Angelo, TX, June 25-27, 2014.
South America: Livestock and Cultural Considerations. Presentation at United States Army 410th Civil Affairs Battalion Veterinary Training Series in Las Cruces, NM, June 7, 2014.

An out-siders perspective to the TX hair sheep industry: challenges and opportunities. presentation at TX Sheep & Goat Raisers annual meeting in Kerrville, TX, July 27, 2013.

Alternative feeds: for a temporary crisis or permanent problem. Presentation at National Lamb Feeders Leadership School in San Angelo, TX, July 16, 2013.

Future of hair sheep in the U.S. sheep industry. Presentation at North American Hair Sheep Association in San Angelo, TX, April 14, 2013.

RADIO & POPULAR PRESS INTERVIEWS

“Great things happening at University of Wyoming sheep program”. Agriculture News from The Northern Ag Network.

“University of Wyoming sheep program will combine blockchain and Wyoming wool. Open Spaces from Wyoming Public Radio. June 4th 2021.

“Flock preparations heading into winter”, Radio Interview with Northern Ag Network, October
Spin Off Magazine Interview “As the Whorl Spins- Making the Grade: The University of Wyoming Fleece Judging Team, May 2019

“Importance of Wyoming Ram Test”, Radio Interview with Russell Nemetz, Northern Ag Network, May 1st, 2018

“Wyoming Ram Sale Update”, Radio Interview with Lane Nordlund, Northern Ag Network, September 12th, 2017

“UWYO Sheep Program Preview”, Radio Interview with Russell Nemetz, Northern Ag Network, August 15th, 2017

“Stewart Optimistic about Wyoming Sheep Industry”, Interview with Saige Albert in Wyoming Livestock Roundup September 2017

AWARDS

- 2024 University of Wyoming Extension Team Excellence Award, Sheep Task Force
- 2024 Global Perspectives Travel Award; Sheep Innovators Exchange Wyoming to New Zealand
- 2023 Department of the Army, Public Service Commendation Medal
- 2022 American Society of Animal Science- Western Section, Extension Award
- 2022 University of Wyoming Presidential Scholarly Achievement Award
- 2022 National Assoc. of Extension 4-H Youth Development Professionals Educational Piece
- 2022 Wyoming 4-H State Fair “Top Hand Award”
- 2021 Wyoming Agricultural Experiment Station Early Career Researcher Award

- 2019 Global Perspectives Travel Award; South American Sheep Production Systems
- 2019 International Sheep Industry Ambassador to New Zealand, American Lamb Board
- 2018 Wyoming Agricultural Experiment Station *Reflections Magazine* Article Award
- 2015 Young Scholar Award- Western Section American Society of Animal Science
- 2015 New Mexico State University Dean's Graduate Award of Distinction
- 2014 American Sheep Industry Association Heritage Memorial Scholarship
- 2013-14 New Mexico State Univ. Joe D. Wallace Endowed Graduate Scholarship
- 2009-12 Oregon State University. Graduate Research Assistantship
- 2005 BYU-Idaho Returned Missionary Scholarship

INSTITUTIONAL & PROFESSIONAL SERVICE ACTIVITIES

University of Wyoming

- Search Committee Chair, Precision Livestock Management Faculty (Fall 2021- Summer 2022)
- Search Committee Member, Associate Dean/Director WY Ag. Exp Station (Fall 2020- Spring 2021)
- Search Committee Member, LREC Farm Manager (Spring 2020)
- Search Committee Member, Animal Science Department Head (December 2019- January 2021)
- Graduate Studies Committee Member. (March 2018-present)
- Intercollegiate Wool Judging Coach/Coordinator (September 2018-present)
 - 2019 National Western Stock Show Overall Champion Team
- Search Committee Member, Meat Scientist Faculty Position. (July 2018-January 2019)
- Search Committee Member, Veterinary Pathologist Faculty Position. (December 2017- March 2018)
- Ram Test Coordinator, (July 2017-present)
- UW-LREC Sheep Operations Committee. (July 2017-present)
- Advisor UW Collegiate Wool Growers (RSO). (January 2018-present)

Montana State University

- Committee Member, Sheep Research and Teaching Faculty Search. (June 2015 - December 2015).
- Committee Chair, Wool Lab Manager/ Research Associate Position. (June 2015 - October 2015)
- Committee Chair, Wool Lab 10 Year Economic Analysis Business Plan. (May 2015 - March 2016)
- Committee Member, College of Agriculture Animal Operations Committee. (September 2015 – July 2017).

Professional Service and Collaborations

- Sheep Genetics USA, Education and Outreach Chair (Fall 2021- Present)
- NC214 Multi-State Research Project (Secretary)- Enhanced Efficiency of Sheep Production
- Wyoming Wool Growers Association COVID-19 Relief Sheep Working Group (April 2020- April 2022)
- USDA-ARS Meat Animal Research Center-Advisory Council Member (2019- Present)
- National Wool Judging Advisory Board (2019- Present)
- WSASAS Advising and Coordinating Committee (2017- 2019)
- WSASAS Graduate Student Paper Competition Committee member (2015- 2017)
- American Sheep Industry Association- Wool Roundtable Committee member (2015-2017)
- American Sheep Industry Association- Production, Education, and Research Council (2015- Present)
- Wyoming Ram Sale Committee- *Ex Officio* (2017- Present)

- Wyoming Ram Sale Sifting Committee- *Ex Officio* (2017- Present)
- Wyoming Wool Growers Association Executive Board- *Ex Officio* (2018- Present) • Wool Judge (State Fairs and Livestock Expositions)
- American Society of Animal Science member
- American Sheep Industry Association member

Ad-Hoc Journal Reviewer

- Sheep and Goat Research Journal, Editor (January 2019-present)
- Applied Animal Science
- Animal Reproduction Science
- Journal of Animal Science
- Animal Production Science
- Rangeland Ecology and Management
- Journal of Dairy Science
- Animals
- Animal Frontiers

Grant Proposal Reviewer/Panelist

- USDA- National Institute of Food and Agriculture
- U.S. Department of Energy
- USDA- Sustainable Agriculture Research and Education
- USDA- Western Sustainable Agriculture Research and Education
- Kuwait Foundation for the Advancement of Science
- Israel Binational Agricultural Research & Development Fund
- Texas A&M AgriLife Research

Certifications/Professional Development

- FAMACHA Certified Instructor
- Texas A&M Sheep Shearing School Alumnus
- ASI Wool Classing School: Certified Level 1 Classer
- NSIP Carcass Ultrasound School; Certified Scanner
- Howard Wyman Sheep Industry Leadership School
- Management Intensive Grazing School Alumnus
- Willamette Valley Grazing and Nutrition Group
- Summer Sustainability Series Ag

