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EDUCATION

B.S.	Colorado State University	Animal Science	1980
M.S.	Colorado State University	Animal Science	1985
Ph.D.	Colorado State University	Range Science	1988

PROFESSIONAL EXPERIENCE

2005 – present	Associate Professor	New Mexico State University	Las Cruces, NM
2002-2004	Associate Professor	Montana State University - Bozeman	Havre, MT
1996-2002	Assistant Professor	Montana State University - Bozeman	Havre, MT
1995-1996	Extension Agent	University of Arizona	Globe, AZ
1994-1995	Scientist-Ecologist	USDA-ARS	Woodward, OK
1988-1993	Range Management Consultant	Western Range Service	Elko, NV

COURSES TAUGHT

❖ RGSC 458 Livestock Behavior, Welfare and Handling	3 credits
❖ RGSC 460 Advanced Rangeland Management (senior capstone course)	4 credits
❖ RGSC 509 Approaches to Rangeland Research (graduate research methods)	3 credits

ADMINISTRATION

- ❖ Director of the Chihuahuan Desert Rangeland Research Center
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RESEARCH EMPHASIS

Large herbivore grazing behavior, both modeling and empirical approaches; GPS-based animal tracking; rangeland livestock production; rangeland and riparian area management; livestock-wildlife interactions.

SOURCES OF FUNDING TO SUPPORT RESEARCH

❖ USDA Western SARE. 2009. Enhancement of Sustainable Livestock Grazing through Selection and Training	\$229,527
❖ USDA – Rangeland Ecosystem project. 2005 to 2007. Development of novel approaches to minimize encroachment of invasive shrubs using biological control	\$ 34,125
❖ USDA - IFAFS. 2001. Consortium for the application of behavioral principles to management (BEHAVE). Consortium with Utah State, U of Arizona and U of Idaho.	\$ 6,400
❖ USDA - IFAFS. 2000. An evaluation of the effectiveness of livestock distribution practices in grazed watersheds. Consortium with UC Davis and OSU. (4-year study, total grant funding was 1.1 million).	\$288,480
❖ Private feed company. 1997 to 2007. (10 one-year grants) Using low moisture block supplements to improve livestock grazing distribution and cattle performance.	\$162,800
❖ American Salers Association. 1999. Selecting cattle for grazing distribution.	\$ 7,500
❖ USDA Western Regional SARE. 1998. Selecting cattle to prevent grazing distribution problems.	\$115,598
❖ BLM Challenge Cost Share. 1998. Controlling clubmoss with fire.	\$ 9,878

PUBLICATIONS

Refereed Book Chapters

- ❖ Bailey, D.W. and F.D. Provenza. 2008. Mechanisms determining large-herbivore distribution. *In*: H. H. T. Prins and F. van Langevelde [EDS.]. Resource ecology: spatial and temporal dynamics of foraging. Dordrecht, Netherlands: Springer. p. 7-28.

Refereed Scientific Journal Publications

- ❖ Bailey, D.W. and D. Jensen. 2008. Method of supplementation may affect cattle grazing patterns. *Rangeland Ecol. Manage.* 61:131-135.
- ❖ Bailey, D.W., H.C. VanWagoner, R. Weinmeister, and D. Jenson. 2008. Evaluation of low-stress herding and supplement placement for managing cattle grazing in riparian and upland areas. *Rangeland Ecol. Manage.* 61:26-37.
- ❖ Bailey, D.W., H.C. VanWagoner, R. Weinmeister, and D. Jenson. 2008. Comparison of low-moisture blocks and salt for manipulating grazing patterns of beef cows. *J. Anim. Sci.* 86:1271-1277.
- ❖ Goulart, R.C.D., M. Corsi, D.W. Bailey, and S.S. Zocchi. 2008. Cattle grazing distribution and efficacy of strategic mineral mix placement in tropical Brazilian pastures. *Rangeland Ecol. Manage.* 61:656-660.
- ❖ Bailey, D.W. and G.R. Welling. 2007. Evaluation of low-moisture blocks and conventional dry mixes for supplementing minerals to beef cows. *Rangeland Ecol. Manage.* 60:54-64.
- ❖ Bailey, D.W., H.C. VanWagoner, and R. Weinmeister. 2006. Individual animal selection has the potential to improve uniformity of grazing on foothill rangeland. *Rangeland Ecol. Manage.* 59:351-358.
- ❖ VanWagoner, H.C., D.W. Bailey, D.D. Kress, D.C. Anderson, and K.C. Davis. 2006. Differences among beef sire breeds and relationships between terrain use and performance when daughters graze foothill rangelands as cows. *Appl. Anim. Behav. Sci.* 97:105-121.
- ❖ Bailey, D.W. 2005. Invited synthesis paper: Identification and creation of optimal habitat conditions for livestock. *Rangeland Ecol. Manage.* 58:109-118.
- ❖ Haley, D.B., D.W. Bailey, and J.M. Stookey. 2005. The effects of weaning calves in two stages on their behavior and growth rate. *J. Anim. Sci.* 83:2205-2214.
- ❖ Bailey, D.W. 2004. Management strategies for optimal grazing distribution and use of arid rangelands. *J. Anim. Sci.* 82(E. Suppl.):E147-E153.
- ❖ Bailey, D.W., M.R. Keil, and L.R. Rittenhouse. 2004. Daily movement patterns of hill climbing and bottom dwelling cows. *J. Range Manage.* 57:20-28.
- ❖ Thoma, D.P., D.W. Bailey, D.S. Long, G.A. Nielsen, M.P. Henry, M.C. Breneman and C. Montagne. 2002. Short-term monitoring of rangeland forage conditions with AVHRR imagery. *J. Range Manage.* 55:383-389.
- ❖ Bailey, D. W., D. D. Kress, D. C. Anderson, D. L. Boss, and E. T. Miller. 2001. Relationship between terrain use and performance of beef cows grazing foothill rangeland. *J. Anim. Sci.* 79:1883-1891.
- ❖ Bailey, D. W., G. R. Welling, and E. T. Miller. 2001. Cattle use of foothills rangeland near dehydrated molasses supplement. *J. Range Manage.* 54: 338-347.
- ❖ Bailey, D.W., L.D. Howery and D.L. Boss. 2000. Effects of social facilitation for locating feeding sites by cattle in an 8-arm radial maze. *Appl. Anim. Behav. Sci.* 68:93-105.
- ❖ Howery, L.D., D.W. Bailey and G.B. Ruyle. 2000. Can cattle use artificial cues to track food locations? *Appl. Anim. Behav. Sci.* 67:1-14.
- ❖ Bailey, D.W. and G.R. Welling. 1999. Modification of cattle grazing distribution with dehydrated molasses supplement. *J. Range Manage.* 52:575-582.
- ❖ Bailey, D.W., B. Dumont, and M.F. WallisDeVries. 1998. Utilization of heterogeneous grasslands by domestic herbivores: theory to management. *Annales de Zootechnie* 47:321-333.
- ❖ Bailey, D.W. and P.L. Sims. 1998. Association of food quality and locations by cattle. *J. Range Manage.* 51:2-8.
- ❖ Bailey, D.W. and P.L. Sims. 1998. Comparison of eastern gamagrass grain and cottonseed meal as supplements for sheep fed mature eastern gamagrass hay. *Anim. Feed Sci. Tech.* 76:95-102.
- ❖ Bailey, D.W., D.C. Anderson, and D.E. Doornbos. 1997. Comparison of ivermectin and conventional external parasite control in young beef cows. *Professional Animal Scientist.* 13:129-132.
- ❖ Bailey, D.W., J.E. Gross, E.A. Laca, L.R. Rittenhouse, M.B. Coughenour, D.M. Swift, and P.L. Sims. 1996. Invited Synthesis Paper: Mechanisms that result in large herbivore grazing distribution patterns. *J. Range Manage.* 49:386-400.
- ❖ Bailey, D.W. 1995. Daily selection of feeding areas by cattle in homogeneous and heterogeneous environments. *Appl. Anim. Behav. Sci.* 45:183-199.
- ❖ Sims, P.L. and D.W. Bailey. 1995. Calf production by Angus-Hereford and Brahman-Hereford cows on two native rangeland forage systems. *J. Anim. Sci.* 73:2893-2902.
- ❖ Bailey, D.W., J.W. Walker, and L.R. Rittenhouse. 1990. Sequential analysis of cattle location: day-to-day movement

- patterns. *Appl. Anim. Behav. Sci.* 25: 137-148.
- ❖ Bailey, D.W., L.R. Rittenhouse, R.H. Hart, and R.W. Richards. 1989. Characteristics of spatial memory in cattle. *Appl. Anim. Behav. Sci.* 23:331-340.
 - ❖ Bailey, D.W., L.R. Rittenhouse, R.H. Hart, D.M. Swift, and R.W. Richards. 1989. Association of relative food availabilities and locations by cattle. *J. Range Manage.* 42:480-482.
 - ❖ Senft, R.L., M.B. Coughenour, D.W. Bailey, L.R. Rittenhouse, O.E. Sala, and D.M. Swift. 1987. Large herbivore foraging and ecological hierarchies. *BioScience* 37:789-799.
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Peer Reviewed Publications

- ❖ Tanaka, J. A., N. R. Rimbey, L. A. Torell, D. Taylor, D. Bailey, T. DelCurto, K. Walburger, and B. Welling. 2007. Grazing distribution: The quest for the silver bullet. *Rangelands* 29(4):38-46.
- ❖ George, M., D. Bailey, M. Borman, D. Ganskopp, G. Surber, and N. Harris. 2007. Factors and practices that influence livestock distribution. University of California ANR Rangeland Management Series Pub. 8217, 20 p. Available at <http://anrcatalog.ucdavis.edu/pdf/8217.pdf> (accessed 31 January 2007).
- ❖ Wyman, S., D.W. Bailey, M. Borman, S. Cote, J. Eisner, B. Leinard, S. Leonard, F. Reed, S. Swanson, L. Van Riper, T. Westfall, R. Wiley, and A. Winward. 2006. Riparian area management: Grazing management processes and strategies for riparian-wetland areas. Technical Reference TR 1737-20. BLM/ST/ST-06/002+1737. U.S. Department of Interior, Bureau of Land Management, National Science and Technology Center, Denver, CO. 105 p.
- ❖ Bailey, D.W., H. VanWagoner, and R. Weinmeister. 2005. Selecting cattle to improve grazing distribution patterns, rangeland health and water quality. Agricultural Innovations Fact Sheet, USDA Sustainable Agriculture Research & Education. Available at <http://www.sare.org/publications/factsheet/0505.htm> (accessed 4 November 2005).
- ❖ Bailey, D.W. 1999. Influence of species, breed and type of animal on habitat selection. p. 101-108, *In*: K.L. Launchbaugh, K.D. Sanders and J.C. Mosely, (eds.), *Grazing Behavior of Livestock and Wildlife*. Idaho Forest, Wildlife and Range Exp. Sta. Bull. #70. Moscow, ID.
- ❖ Howery, L.D., D.W. Bailey and E.A. Laca. 1999. Impact of spatial memory on habitat use. p. 91-100, *In*: K.L. Launchbaugh, K.D. Sanders and J.C. Mosely, (EDS.), *Grazing Behavior of Livestock and Wildlife*. Idaho Forest, Wildlife and Range Exp. Sta. Bull. #70. Moscow, ID.
- ❖ Bailey, D.W., L.R. Rittenhouse, and D.M. Swift. 1996. A conceptual model for studying grazing distribution patterns of large herbivores, *In*: N.E. West [ED.], *Rangelands in a sustainable biosphere*. Proceedings 5th International Rangeland Congress, Soc. Range Manage., Denver, CO. p. 29-30
- ❖ Bailey, D.W., P.L. Sims, and J.A. Bradford. 1996. Utilization and regrowth of eastern gamagrass (*tripsacum dactyloides* (L.) L.). *In*: N.E. West [ED.], *Rangelands in a sustainable biosphere*. Proceeding 5th International Rangeland Congress., Society for Range Management, Denver, CO. p. 31-32
- ❖ Rittenhouse, L.R. and D.W. Bailey. 1996. Spatial and temporal distribution of nutrients. *In*: M.B. Judkins and F.T. McCollum III (eds.), *Proceedings, 3rd Grazing Livestock Nutrition Conference*. Proceedings Western Section of the American Society of Animal Science 47 (Suppl. 1): 51-61.
- ❖ Sims, P.L., M.B. Coughenour, D.W. Bailey and J.A. Bradford. 1996. Evaluation of two gas exchange mathematical simulation models for C4 grasses. *In*: N.E. West (ED.), *Rangelands in a sustainable biosphere*. Proceedings 5th International Rangeland Congress. Society for Range Management, Denver, CO. p. 514-515
- ❖ Bailey, D.W. and L.R. Rittenhouse. 1989. Management of cattle distribution. *Rangelands* 11:159-161.
- ❖ Hanson, J.D., R.H. Hart and D.W. Bailey. 1986. A multivariate comparison of steer activity over different grazing systems. *In*: Charles Bonham and Larry Rittenhouse [EDS.], *Statistical Analysis and Modeling of Grazing Responses*. Society for Range Management, Denver, CO.