



**EMPLOYMENT (cont.)**

- 1992 Associate Professor, Range Science  
Agricultural Research Center-Hays, Kansas State University  
Conducted research to evaluate livestock nutrition and performance in forage-based livestock production systems. The mission was to increase the profitability of range livestock production through improved forage conversion efficiency by stocker and reproductive cattle, and improved reproductive efficiency by beef females.
- 1986-1992 Assistant Professor, Range Science  
Agricultural Research Center-Hays, Kansas State University  
same as above
- 1983-1986 Graduate Research Assistant  
Department of Range Science, Utah State University  
Designed and implemented research for dissertation project to study effects of short duration grazing on livestock nutrition and production, and sward structure effects on livestock behavior and diet selection. Teaching assistant for courses in Principles of Range Management and Range Principles-Field Study.
- 1984 Instructor  
Department of Range Science, Utah State University  
Taught two courses: Principles of Range Management and Range Principles-Field Study. Included responsibility for course curriculum, presentation, and evaluation.
- 1980-1982 Graduate Research Assistant  
Department of Animal and Range Sciences, Montana State University, and USDA-ARS Livestock and Range Research Laboratory, Miles City, MT  
Research included thesis project and data collection for various range improvement projects investigating range vegetation manipulation to improve livestock production. Teaching assistant for three courses: Principles and Practices of Range Management; Range Vegetation Analysis; and Animal Nutrition.

**PROFESSIONAL ACTIVITIES**

**Professional memberships**

- American Registry of Professional Animal Scientists
- American Society of Animal Science
  - Co-chair, Extension Committee, Western Section, 2015
  - Past President, Western Section, 2008-2009
  - President, Western Section, 2007-08
  - President Elect, Western Section, 2006-07
  - Secretary/Treasurer, Western Section, 2005-06
  - Member, Western Section Executive Committee, 2005-09
  - Member, Western Section Advisory and Coordinating Committee, 2002-05
  - Chair, 2005

**Professional memberships (cont.)**

American Society of Animal Science (cont.)

Member, Western Section Beef Symposium Committee, 1999-2001

Member, Western Section Land Use Committee, 1994-97

Society for Range Management

President, South Dakota Section, 2011-12

First Vice President, South Dakota Section, 2010-11

Second Vice President, South Dakota Section, 2009-10

W2012 Multistate Regional Project: Enhancing management, production, and sustainability of grazing ruminants in extensive landscapes

Secretary, 2001-02, 2010-11

Chair, 2002-03, 2011-12

**Honors and Awards**

- South Dakota State University Award for Excellence in Outreach nominee, 2012
- American Society of Animal Science, Western Section, Applied Animal Science Paper Award, 2nd place, 2011
- South Dakota State University Extension Award for Outstanding Multi-Disciplinary Effort, Small Acreage Team, 2010
- Utah State University College of Agriculture Graduate Mentor Award, 2001
- Utah State University ADVS Department nominee for College of Agriculture Teacher of the Year, 1998
- Utah State University College of Agriculture Faculty of the Quarter, Winter, 1997
- Who's Who Among Students in American Colleges and Universities, 1979
- Alpha Zeta, 1978

**PUBLICATIONS**

**Refereed Journal Articles**

1. **Olson, K.C.**, C. Schauer, C. Engel, J.J. Kincheloe, J.R. Brennan, and B.L. Hauptman. 2016. Effect of grazing prairie dog colonized rangeland on cattle nutrition and performance: A progress report. *Rangelands* 38(1):29-33. doi: 10.1016/j.rala.2015.12.003.
2. Johnson, P.S., **K.C. Olson**, R.N. Gates, H.H. Patterson, M. Hubert, D. Landblom, J.J. Kincheloe, H.A. Richter, and A.V. Grove. 2015. Early weaning reduces rangeland herbage disappearance. *Crop, Forage & Turfgrass Manage.* 1(1) DOI:10.2134/cftm2014.0090.
3. Kincheloe, J.J., L.G. Wood, D.R. Zobell, and **K.C. Olson**. 2014. Influence of monensin fed with a starch-based energy supplement on forage digestibility and intake by range cows during drought. *Prof. Anim. Sci.* 30:444-450. doi: 10.15232/pas.2013-01303.
4. Parvez, M.R., S. Fausti, T. Nleya, P. Johnson, **K. Olson**, and J. Rickertsen. 2013. Forage options and drought risk: A South Dakota case study. *J. Amer. Soc. Farm Managers Rural Appraisers.* 76:167-184.

**Refereed Journal Articles (cont.)**

5. Kessler, K.L., **K.C. Olson**, C.L. Wright, K.J. Austin, P.S. Johnson, and K.M. Cammack. 2012. Effects of supplemental molybdenum on animal performance, liver Cu concentrations, ruminal hydrogen sulfide concentrations, and the appearance of sulfur and molybdenum toxicity in steers receiving fiber-based diets. *J. Anim. Sci.* 90:5005-5012. doi: 10.2527/jas.2011-4453.
6. Kessler, K.L., **K.C. Olson**, C.L. Wright, K.J. Austin, K. McInnerney, P.S. Johnson, R.R. Cockrum, A.M. Jons, and K.M. Cammack. 2012. Effects of high-sulphur water on hepatic gene expression of steers fed fibre-based diets. *J. Anim. Physiol. Anim. Nutr. (Berl)*. doi: 10.1111/j.1439-0396.2012.01327.x.
7. Waldron, B.L., L.K. Greenhalgh, D.R. ZoBell, **K.C. Olson**, B.W. Davenport, and M.D. Palmer. 2011. Forage kochia (*Kochia prostrata*) increases nutritional value, carrying capacity, and livestock performance on semiarid rangelands. Online. *Forage and Grazinglands*. doi:10.1094/FG-2011-0301-01-RS.
8. Cammack, K.M., C.L. Wright, K.J. Austin, P.S. Johnson, P.A. Ludden, R.R. Cockrum, and **K.C. Olson**. 2010. Effects of high-sulfur water and clinoptilolite on health and growth performance of steers fed forage-based diets. *J. Anim. Sci.* 88:1777-1785.
9. Smart, A.J., J. D. Derner, J.R. Hendrickson, R.L. Gillen, B.H. Dunn, E.M. Mousel, P.S. Johnson, R.N. Gates, K.K. Sedivec, K.R. Harmony, J.D. Volesky, and **K.C. Olson**. 2010. Effects of grazing pressure on efficiency of grazing on North American Great Plains rangelands. *Rangeland Ecology and Management* 63:397-406.
10. Waldron, B.L., J.-S. Eun, D.R. ZoBell, and **K.C. Olson**. 2010. Forage kochia (*Kochia prostrata*) for fall and winter grazing. *Small Ruminant Research* 91:47-55.
11. Chen, D., M.D. Peel, **K.C. Olson**, B.C. Weimer, and D.B. DeWald. 2009. Differential ruminal degradation of alfalfa proteins. *Can. J. Plant Sci.* 89:1065-1074.
12. Jaeger, J.R., **K.C. Olson**, T. DelCurto, and A. Qu. 2008. Case study: Pattern of parturition as affected by time of feeding and prediction of the time of day that parturition will occur in spring-calving beef cows. *Prof. Anim. Sci.* 24:247-253.
13. Villalba, J.J., F.D. Provenza, and **K.C. Olson**. 2006. Terpenes and carbohydrate source influence rumen fermentation, digestibility, intake, and preference by sheep. *J. Anim. Sci.* 84:2463-2473.
14. Waldron, B.L., D.R. ZoBell, **K.C. Olson**, K.B. Jensen, and D.L. Snyder. 2006. Stockpiled forage kochia to maintain beef cows during winter. *Rangeland Ecol. Manage.* 59:275-284.
15. ZoBell, D.R., **K.C. Olson**, R.D. Wiedmeier, C. Stonecipher, and C. Kim Chapman. 2006. A nutritious whey silage fed to beef cows during maintenance. *J. Anim. Vet. Advances* 5:1117-1120.
16. Dhiman, T.R., M.S. Zaman, **K.C. Olson**, H.R. Bingham, A.L. Ure, and M.W. Pariza. 2005. Influence of feeding soybean oil on conjugated linoleic acid content in beef. *J. Agric. Food Chem.* 53:684-689.
17. **Olson, K.C.** 2005. Range management for efficient reproduction. *J. Anim. Sci.* 83(E. Suppl.):E107-E116.

**Refereed Journal Articles (cont.)**

18. Ure, A.L., T.R. Dhiman, M.D. Stern, and **K.C. Olson**. 2005. Treated extruded soybean meal as a source of fat and protein for dairy cows. *Asian-Aust. J. Anim. Sci.* 18:980-989.
19. ZoBell, D.R., E.K. Okine, **K.C. Olson**, R.D. Wiedmeier, L.A. Goonewardene and C. Stonecipher 2005. Effects of feeding wheat straw and middlings ensiled with whey on digestibility and growth of cattle. *Can. J. Anim. Sci.* 85:69-74.
20. Poulson, C.S., T.R. Dhiman, A.L. Ure, D. Cornforth, and **K.C. Olson**. 2004. Conjugated linoleic acid content of beef from cattle fed diets containing high grain, CLA, or raised on forages. *Livestock Prod. Sci.* 91:117-128.
21. ZoBell, D.R., E.K. Okine, **K.C. Olson**, R.D. Wiedmeier, L.A. Goonewardene, and C. Stonecipher. 2004. The feasibility of feeding high levels of whey silage and effects on production in growing cattle. *J. Anim. and Vet. Advances* 3:804-809.
22. ZoBell, D.R., L.A. Goonewardene, **K.C. Olson**, C. Stonecipher, and R.D. Wiedmeier. 2003. The effect of feeding wheat middlings to beef replacement heifers and growing and finishing steers on production, digestibility, ruminal fermentation and carcass characteristics. *Can. J. Anim. Sci.* 83:551-557.
23. Jensen, K.B., D.A. Johnson, K.H. Asay, and **K.C. Olson**. 2002. Seasonal-accumulated growth and forage quality of range grasses for fall and winter grazing. *Can. J. Plant Sci.* 82:329-336.
24. **Olson, K.C.**, J.R. Jaeger, J.R. Brethour, and T.B. Avery. 2002. Steer Nutritional Response to Intensive-Early Stocking on Shortgrass Rangeland. *J. Range Manage.* 55:222-228.
25. ZoBell, D.R., **K.C. Olson**, R.D. Wiedmeier, D. Sass, K.J. Shinnars, and T.A. McAllister. 2002. The effects of mechanical processing of corn silage on subsequent feedlot performance of backgrounded replacement heifers. *Anim. Feed Sci. Tech.* 96:221-228.
26. DelCurto, T., B.W. Hess, J.E. Huston, and **K.C. Olson**. 2000. Optimum supplementation strategies for beef cattle consuming low-quality roughages in the western United States. *Proc. Am. Soc. Anim. Sci.*, 1999. Available at: <http://www.asas.org/jas/symposia/proceedings/0922.pdf>. Accessed June 9, 2001.
27. ZoBell, D.R., R.D. Wiedmeier, **K.C. Olson**, and R. Treacher. 2000. The effect of an exogenous enzyme treatment on production and carcass characteristics of growing and finishing steers. *Anim. Feed Sci. Tech.* 87:279-285.
28. **Olson, K.C.**, R.D. Wiedmeier, J.E. Bowns, and R.L. Hurst. 1999. Livestock response to multispecies and deferred-rotation grazing on forested rangeland. *J. Range Manage.* 52:462-470.
29. Jaeger, J.R., **K.C. Olson**, L.R. Corah, and W.E. Beal. 1995. Prostaglandin F<sub>2α</sub> and naloxone therapy in the anestrous postpartum beef cow. *Theriogenology* 43:657-666.
30. **Olson, K.C.**, J.R. Brethour, and J.L. Launchbaugh. 1993. Shortgrass range vegetation and steer growth response to intensive-early stocking. *J. Range Manage.* 46:127-132.
31. Jaeger, J.R., J.C. Whittier, L.R. Corah, J.C. Meiske, **K.C. Olson**, and D.J. Patterson. 1992. Reproductive response of yearling beef heifers to a melengestrol acetate-prostaglandin F<sub>2α</sub> estrous synchronization system. *J. Anim. Sci.* 70:2622-2627.

**Refereed Journal Articles (cont.)**

32. **Olson, K.C.**, J.R. Jaeger, and J.R. Brethour. 1992. Growth and reproductive performance of heifers overwintered in range or drylot environments. *J. Prod. Agric.* 5:72-76.
33. **Olson, K.C.** 1991. Diet sample collection by esophageal fistula and rumen evacuation techniques. *J. Range Manage.* 44:515-519.
34. Perry, R.C., L.R. Corah, R.C. Cochran, J.R. Brethour, **K.C. Olson**, and J.J. Higgins. 1991. Effects of hay quality, breed, and ovarian development on onset of puberty and reproductive performance of beef heifers. *J. Prod. Agric.* 4:13-18.
35. **Olson, K.C.**, G.B. Rouse, and J.C. Malechek. 1989. Cattle nutrition and grazing behavior during short-duration-grazing periods on crested wheatgrass range. *J. Range Manage.* 42:153-158.
36. **Olson, K.C.** and J.C. Malechek. 1988. Heifer nutrition and growth on short duration grazed crested wheatgrass. *J. Range Manage.* 41:259-263.
37. **Olson, K.C.** and J.C. Malechek. 1987. A temporary esophageal cannula that prevents fistula contraction during extrusa collections. *J. Range Manage.* 40:282-283.
38. **Olson, K.C.**, R.S. White, and B.W. Sindelar. 1985. Response of vegetation of the Northern Great Plains to precipitation amount and grazing intensity. *J. Range Manage.* 38:357-361.

**Proceedings**

1. **Olson, K.C.** 2015. Cow supplementation: Getting the best bang for your buck. p. 163-175. *In: Proc., Range Beef Cow Symposium XXIV.* Loveland, CO.
2. Kincheloe, J.J., **K.C. Olson**, A.D. Blair, K.R. Underwood, M. Gonda, A.A. Harty, and R.N. Funston. 2015. Impact of maternal protein restriction in first calf heifers during mid- to late-gestation on dam and suckling calf performance through weaning. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 66:231-234.
3. Fulton, J.O., **K.C. Olson**, J.J. Kincheloe, A.A. Harty, M.K. Luebke, K.R. Underwood, S.M. Scramlin, and A.D. Blair. 2014. Effects of zilpaterol hydrochloride supplementation on growth performance, carcass characteristics and production economics of steers differing in biological type. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 65:188-191.
4. **Olson, K.C.**, J.A. Walker, and S. Hadrick. 2013. beefSD: An integrated and intensive Extension curriculum for beginning beef cattle producers in South Dakota. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 64:269-272.
5. Hojer, N.L., M.B. Hubert, P.S. Johnson, M.H. Price, and **K.C. Olson**. 2012. Effects of weaning age and winter development environment on heifer grazing distribution. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 63:108-112.
6. Hojer, N.L., M.B. Hubert, P.S. Johnson, M.H. Price, and **K.C. Olson**. 2012. Effects of weaning age and winter development environment on heifer performance. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 63:248-251.
7. **Olson, K.C.** 2011. Relationship between cow size, nutrient requirement, and production capacity. p. 8-12. *In: Proc., 31st Annual Utah Beef Cattle Field Day.*

**Proceedings (cont.)**

8. **Olson, K.C.** 2011. Matching your cattle to your environment. p. 24-28. *In: Proc.*, 33rd Annual Arizona/Utah Range Livestock Workshops.
9. **Olson, K.C.**, J. Waggoner, and J. Jaeger. 2011. Cow side of producing a 1,000 lb feeder, cow size and expenses. p. 76-83. *In: Proc.*, Range Beef Cow Symposium XXII. Mitchell, NE.
10. Hojer, N.L., M.B. Hubert, D.L. Gay, V.N. Owens, A.D. Ressett, R.H. Pritchard, K. Karges, and **K.C. Olson**. 2011. Response of beef cows and calves after supplementation with a novel distiller's grain during gestation. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 62:383-386.
11. Walker, J.A., C.S. Schauer, R. Salverson, P. Nester, G.A. Perry, **K.C. Olson**, and J.E. Held. 2011. Evaluating glycerin supplementation on reproductive performance of sheep. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 62:131-134.
12. DelCurto, T., and **K.C. Olson**. 2010. Issues in grazing livestock nutrition. Pages 1-7 *In: Proc.* 4<sup>th</sup> Grazing Livestock Nutrition Conference. B.W. Hess, T. DelCurto, J.G.P. Bowman, and R.C. Waterman eds. West. Sect. Am. Soc Anim. Sci., Champaign, IL.
13. Landblom, D. G., **K. C. Olson**, P. Johnson, R. Gates, M. K. Beutler, M. Hubert, G. A. Perry, S. W. Fausti, R. R. Salverson, S. Furman, and J. Vasconcelos. 2009. Beef system methods impact backgrounding and finishing net returns. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 60:119-122.
14. Perry, G., J. Walker, C. Wright, and **K. Olson**. 2009. Impact of method of heifer development and post-AI management on reproductive efficiency. pp. 35-42. *In: Proc.*, Range Beef Cow Symposium XXI. Casper, WY.
15. Walker, J., G. Perry, R. Daly, and **K. Olson**. 2009. Bull management and nutrition. pp. 116-124. *In: Proc.*, Range Beef Cow Symposium XXI. Casper, WY.
16. Greenhalgh, L.K., **K.C. Olson**, D.R. ZoBell, B.L. Waldron, A.R. Moulton, and B.W. Davenport. 2008. Perennial forage kochia for improved productivity of grass dominated winter grazing pastures. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 59:210-212.
17. Knight, C.W., **K.C. Olson**, C.L. Wright, K.J. Austin, K.M. Cammack, and R. Cockrum. 2008. Sulfur-induced polioencephalomalacia in roughage-fed feedlot steers administered high-sulfur water. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 59:364-366.
18. **Olson, K.C.**, and A. Harty. 2007. Delivery of supplements on rangelands. pp. 203-211. *In: Proc.*, Range Beef Cow Symposium XX. Fort Collins, CO.
19. Lira F., R., and **K.C. Olson**. 2006. Suplementación proteica de ovinos y su impacto sobre consumo de forraje de baja calidad (coirón) y total (II). *In: Proc.*, Sociedad Chilena de Producción 31<sup>st</sup> Animal Annual Meeting.
20. Wall, A.R., **K.C. Olson**, C.A. Stonecipher, M. Stuart, M.A. Maughn, and J.C. Malechek. 2006. Estimation of digesta kinetics of forage kochia and tall wheatgrass using Yb and Dy when fed alone or mixed together. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 57:48-51.
21. ZoBell, D.R., **K.C. Olson**, R.D. Wiedmeier, C. Stonecipher, and C. Kim Chapman. 2006. Whey silage for beef cows under maintenance conditions. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 57:404-408.

**Proceedings (cont.)**

22. Dahl, C.J., **K.C. Olson**, C.A. Stonecipher, and L.G. Wood. 2005. Influence of energy supplementation and monensin on forage digestibility and intake. Proc. West. Sec. Amer. Soc. Anim. Sci. 56:56-58.
23. Stonecipher, C.A., **K.C. Olson**, M.A. Buck, and J.C. Malechek. 2005. Digesta kinetics of steers fed forage kochia (*Kochia prostrata*) in a low quality forage diet. Proc. West. Sec. Amer. Soc. Anim. Sci. 56:442-444.
24. Wayment, H.A., R.D. Wiedmeier, **K.C. Olson**, and P.R. Schmidt. 2005. Long-term use of low-quality forages in beef cow nutritional management: Effects on productivity and economics. Proc. West. Sec. Amer. Soc. Anim. Sci. 56:277-280.
25. Lira F., R., and **K.C. Olson**. 2004. Suplementación proteica de ovinos y su impacto sobre consume de forraje de baja calidad (coirón) y total. pp. 157-158. *In*: Proc., Sociedad Chilena de Producción 29<sup>th</sup> Animal Annual Meeting.
26. **Olson, K.C.** 2004. Grazing management during and after extended drought. pp. 31-38. *In*: Proc., Intermountain Nutr. Conf. Utah Agr. Exp. Sta. Pub. 188.
27. Stonecipher, C. A., **K. C. Olson**, J. C. Malechek, and D. D. Carter. 2004. Intake and digestibility response to forage kochia (*Kochia prostrata*) in a low quality forage diet. Proc. West. Sec. Amer. Soc. Anim. Sci. 55: 273-275.
28. Wiedmeier, R.D., P.R. Schmidt, D.M. Meek, A.J. Young, **K.C. Olson**, D.R. ZoBell, and K.R. Wiedmeier. 2004. Comparative productivity of five cool-season pasture grasses under intermittent flood irrigation and grazed by beef cow-calf pairs using management intensive grazing practices. Proc. West. Sec. Amer. Soc. Anim. Sci. 55:279-281.
29. ZoBell, D.R., B.L. Waldron, **K.C. Olson**, R.D. Harrison, and H. Jensen. 2004. Utilization of forage kochia for fall/winter grazing. Proc. West. Sec. Amer. Soc. Anim. Sci. 55:282-284.
30. Porter, S.F., T.R. Dhiman, R.D. Wiedmeier, **K.C. Olson**, D.P. Cornforth, B.R. Bowman, and N.D. Luchini. 2003. Conjugated linoleic acid in tissues from beef cattle fed different lipid supplements. Proc. West. Sec. Amer. Soc. Anim. Sci. 54:381-384.
31. Wood, L.G., **K.C. Olson**, R.D. Wiedmeier, and J.E. Bowns. 2003. Livestock response to rest-rotation, deferred-rotation, or continuous grazing systems on forested rangeland. Proc. West. Sec. Amer. Soc. Anim. Sci. 54:95-98.
32. Jaeger, J.R., **K.C. Olson**, T. DelCurto, and A. Qu. 2002. Predicting the time of parturition in spring calving beef cows. Proc. West. Sec. Amer. Soc. Anim. Sci. 53:204-207.
33. Wiedmeier, R.D., **K.C. Olson**, B.A. Kent, and P.R. Schmidt. 2002. Utilization of low-quality forage as affected by beef cow body condition score. Proc. West. Sec. Amer. Soc. Anim. Sci. 53:593-595.
34. Wiedmeier, R.D., **K.C. Olson**, B.A. Kent, and P.R. Schmidt. 2002. Performance of beef cows wintered on ammoniated wheat straw as affected by limiting intake. Proc. West. Sec. Amer. Soc. Anim. Sci. 53:606-609.



**Proceedings (cont.)**

35. Davis, A.A., **K.C. Olson**, D.B. Vagnoni, and G.A. Broderick. 2001. Characterization of ruminal protein degradation in potential forages for irrigated pastures in the Intermountain West. Proc. West. Sec. Amer. Soc. Anim. Sci. 52:36-40.
36. Poulson, C.S., T.R. Dhiman, D. Cornforth, and **K.C. Olson**. 2001. Feeding strategies affect conjugated linoleic acid content and quality of beef. Proc. West. Sec. Amer. Soc. Anim. Sci. 52:87-90.
37. Stonecipher, C.A., D.R. ZoBell, **K.C. Olson**, and B.R. Bowman. 2001. Supplementation of undegradable intake protein to yearling heifers grazing flood-meadow pastures. Proc. West. Sec. Amer. Soc. Anim. Sci. 52:13-16.
38. Winger, H.Q., **K.C. Olson**, J.A. Walker, and B.R. Bowman. 2001. Comparison of one or two sustained-release chromic oxide boluses for sheep to estimate fecal output in calves. Proc. West. Sec. Amer. Soc. Anim. Sci. 52:525-528.
39. ZoBell, D.R., **K.C. Olson**, C.A. Stonecipher, and R.D. Wiedmeier. 2001. The effect of feeding wheat middlings to growing and finishing beef steers on production, digestibility, and carcass characteristics. Proc. West. Sec. Amer. Soc. Anim. Sci. 52:577-581.
40. Lira, R.J., A.A. Davis, and **K.C. Olson**. 2000. Influence of type of supplemental carbohydrate on ruminal responses and methane output from ruminants consuming low-quality forage. Proc. West. Sec. Amer. Soc. Anim. Sci. 51:303-307.
41. Palmer, M.D., and **K.C. Olson**. 2000. Influence of supplemental protein degradability on energy utilization and methane emission by beef cows on dormant, cool-season forages. Proc. West. Sec. Amer. Soc. Anim. Sci. 51:299-302.
42. Stonecipher, C.A., B.R. Bowman, C.E. Foley, and **K.C. Olson**. 2000. Suckling beef calf performance response to creep feeding with a soft, concentrated separator byproduct creep block. Proc. West. Sec. Amer. Soc. Anim. Sci. 51:328-330.
43. **Olson, K.C.** 1999. Economic evaluation of intensive grazing management systems for beef cattle. pp. 91-95. *In*: Proc., Intermountain Nutr. Conf. Utah Agr. Exp. Sta. Pub. 160.
44. Wiedmeier, R.D., H.T. Shenton, **K.C. Olson**, B.R. Bowman, B.A. Kent, and J.L. Walters. 1997. Production of 300-day old slaughter-weight calves, yearly energy budgets. Proc. West. Sec. Amer. Soc. Anim. Sci. 48:228-231.
45. Winger, H.Q., **K.C. Olson**, B.R. Bowman, and R.C. Rollim. 1996. Energy supplementation of beef cattle grazing tall wheatgrass during the calving season. Proc. West. Sec. Amer. Soc. Anim. Sci. 47:338-341.
46. Peterson, K.T., N.E. Cockett, K.N. Sorensen, D.D. Kress, D.C. Anderson, **K.C. Olson**, R. Rollim, and B. Bowman. 1995. Estimation of associations with the  $\beta$ -lactoglobulin,  $\alpha_{s1}$ -casein, and  $\kappa$ -casein genes and milk yield in beef cattle. Proc. West. Sec. Amer. Soc. Anim. Sci. 46:43-45.
47. Rollim, R.C., **K.C. Olson**, B.R. Bowman, and H.Q. Winger. 1995. Livestock production potential on irrigated Utah Intermountain meadows. Proc. West. Sec. Amer. Soc. Anim. Sci. 46:335-338.

**Proceedings (cont.)**

48. Christensen, D.E., R.D. Wiedmeier, H.T. Shenton, B.R. Bowman, and **K.C. Olson**. 1994. Effects of graded levels of dietary lasalocid on performance of Holstein cows during early lactation. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 45:328-329.
49. Meneses, R., R.D. Wiedmeier, H.T. Shenton, J.L. Walters, and **K.C. Olson**. 1994. Nutrient value of harvested and ammoniated standing mature pasture grass remaining after moderate grazing by sheep. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 45:213-215.
50. Shenton, H.T., R.D. Wiedmeier, B.R. Bowman, D.P. Cornforth, and **K.C. Olson**. 1994. Heifer versus bull calves in a slaughter weight calf production system. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 45:195-196.
51. Stenquist, N.J., R.D. Wiedmeier, and **K.C. Olson**. 1994. By-pass protein and implants in beef cattle. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 45:192-194.
52. **Olson, K.C.**, J.R. Jaeger, C.W. Peters, and L.R. Corah. 1993. Rumen-degradable or rumen-escape lipid supplementation to stimulate puberty or fertility in yearling beef heifers. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 44:375-377.
53. **Olson, K.C.**, and G.D. Sunvold. 1991. Predicting digestibility of mixed cool- and warm-season grass diets with internal markers. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 42:197-200.
54. **Olson, K.C.**, R.L. Senft, and J.C. Malechek. 1986. A predictive model of cattle ingestive behavior in response to sward characteristics. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 37:259-262.

**Abstracts of Invited Scientific Presentations**

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**Technical Reports**

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80. **Olson, K.C.** 2007. New Ideas about Replacement Heifer Growth Rates. Tri-State Livestock News. December 15, 2007.
81. **Olson, K.C.** 2006. Fall Drought Management. Tri-State Livestock News. August 31, 2006.
82. **Olson, K.C.** 2006. Replacement Heifer Management after Weaning. Tri-State Livestock News. October 19, 2006.
83. **Olson, K.C.** 2006. Corn Price Implications. Tri-State Livestock News. December 1, 2006.

**Popular Press Publications (cont.)**

84. **Olson, K.C.** 2006. Crossbreeding Cattle: A powerful tool to improve efficiency of production in a herd. Tri-State Livestock News Cattle Journal. December 6, 2006.
85. **Olson, K.C.** 2004. Proper management during, after drought important. Feedstuffs 76(29):11-13.

**EXTENSION PRESENTATIONS**

- 2014 After the Storm: What's Next? Extension Program, Cow Share Arrangements Can Create Win-Win Alternatives, Hot Springs, February 20.
- Range, Soils, and Beef Day, Grazing Steer Response to Level of Prairie Dog Colonization on Native Prairie, NDSU Hettinger Research and Extension Center, March 12.
- Nitrate Quick Test Initial Training and Certification, webinars, 2 presentations, April 15 and 21.
- Nitrate Quick Test Annual Recertification Training, webinars, 2 presentations, April 15 and 21.
- Montana Nutrition Conference, October 2013 Blizzard in South Dakota: Ramifications, Bozeman, MT, April 23.
- Sitting Bull College Sustainable Agriculture Conference, Grazing Steer Response to Level of Prairie Dog Colonization on Native Prairie, Ft. Yates, ND, April 25.
- beefSD class 2, Cow Nutrition and BCS, Wall, SD, June 12.
- beefSD class 2, Elevator Speeches, Chicago, IL, July 14.
- Hot Springs Rancher Seminar, Mineral Nutrition for Cows and Calves, Hot Springs, SD, September 10.
- SD Grazing School, Seasonality of Grazing Nutrition, Chamberlain, SD, September 17.
- SD Grazing School, Mineral Nutrition Needs of Livestock, Chamberlain, SD, September 17.
- 2013 Pine Ridge Area Farm and Ranch Day, Drought Issues – Range Management/Stocking Rate, Rocky Ford, SD, January 9.
- Tri-County Ranchers Workshop, Livestock Nutrition and Water Quality, Winner, SD, January 16.
- South Dakota Department of Agriculture, Next Generation of Livestock Production, Martin, SD, January 23.
- Sitting Bull College Sustainable Agriculture Conference, Grazing Livestock Nutrition, Ft. Yates, ND, April 5.
- Nitrate Quik Test Initial Training and Certification, webinars, 2 presentations, May 4 and May 7.
- Nitrate Quik Test Annual Recertification Training, webinars, 2 presentations, May 4 and May 7.
- beefSD class 2, How to Develop a Marketing Plan, Pierre, SD, August 28.

Cottonwood Laboratory Grand Opening and Tri-County Ag Day, High Sulfate Water Research, 2 presentations, Cottonwood Research Station, September 7.

SD Grazing School, Seasonality of Grazing Nutrition, Chamberlain, SD, September 11.

SD Grazing School, Mineral Nutrition Needs of Livestock, Chamberlain, SD, September 11.

beefSD class 2, Feedlot Cattle Finishing Management, Sturgis, SD, November 5.

**EXTENSION PRESENTATIONS (cont.)**

After the Storm: What's Next? Extension Program, Cattle Nutrition and Health, 4 presentations: Faith, New Underwood, Union Center, and Newell, December 17-18.

2012 Perkins County Livestock Improvement Association, Relationship Between Cow Size, Nutrient Requirement, and Production Capacity, Bison, SD, January 10.

8<sup>th</sup> Annual Cattleman's Workshop, "Size Does Matter" in Cow/Calf Production Systems: Cow Size and Corresponding Nutrient Demands, La Grande, OR, January 21.

Rancher's Workshop, Dietary Supplements for Winter Grazing, Miller, SD, January 26.

AgCEO, Supplementation Basics, Rapid City, SD, February 21.

AgCEO, Mineral Programs for Grazing Animals, Faith, SD, February 22.

AgCEO, Chilean Learning Communities, Rapid City, SD, March 6.

South Dakota Rangeland Days, High Sulfate Water Research, Cottonwood, SD June 19

South Dakota Agriculture Exchange, Hay and Forage: Nutrition Saved is Nutrition Earned, 2 presentations, Pierre, SD, June 28-29.

Nitrate Quik Test Training and Certification, webinars, 2 presentations, July 25 and August 9

Drought Program, Before the Snow Flies, How Cow/Calf Producers Can Prepare, Chamberlain, September 10.

SD Grazing School, Seasonality of Grazing Nutrition, Chamberlain, SD, 2 presentations, September 11 and 13.

SD Grazing School, Mineral Nutrition Needs of Livestock, Chamberlain, SD, 2 presentations, September 11 and 13.

beefSD, Alternative Feedstuffs in This Drought, Pierre, November 6.

beefSD, Grazing Nutrition, Managing by BCS, Apps for Ration Analysis, Pierre, November 6.

beefSD, Managing and Marketing Cull Cows, Pierre, November 7.

Extension Meeting in Chile, Options to Improve Beef Production in Extensive Systems, Punta Arenas, Chile, December 6.

2011 NRCS "Train-the-Trainer" for Range Conservationists and Range Management Specialists, Managing Calving to Coincide with Forage Availability, Pierre and Wall, SD, January 4-5.

**Kenneth C. Olson C.V.**

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31st Annual Utah Beef Cattle Field Day, Relationship Between Cow Size, Nutrient Requirement, and Production Capacity, Provo, UT, February 8.

33rd Annual Arizona/Utah Range Livestock Workshops, Matching Your Cattle to Your Environment, 2 presentations, St. George and Kanab, UT, April 5-6.

Range Beef Cow Symposium, Cow Side of Producing a 1000 lb. Feeder: Cow Size and Expenses, Mitchell, NE, November 30.

**EXTENSION PRESENTATIONS (cont.)**

2010 SASSY (Sustaining Annie's Project) Workshop, Mineral Nutrition in Gestating Cows, Buffalo, SD, January 27.

Bullnanza, Delivering Supplements on Rangeland, Winner, SD, February 12.

SDSU Winter Range Camp, Winter Feed Requirements for Cattle, 2 presentations, Isabel and Bison, SD, March 3.

Rapid City Rotary Club, Live Animal to Carcass Evaluation, Rapid City, SD, February 2.

South Dakota State Extension Advisory Board, Overview of Master Range Cattle Manager Program, Rapid City, SD, February 5.

Haakon County Pasture Walk, Effect of Grasshoppers on Stockpiled Forage, Philip, SD, September 22.

2009: Rancher's Workshop, Mineral Programs for Grazing Animals, White River, SD.

Black Hills Stock Show, 2 presentations, Demonstration of Measurement, Calculation, and Use of Ultrasound EPD, Rapid City, SD.

Black Hills Stock Show, Selecting Bulls based on EPD and Breeding Goals, Rapid City

Black Hills Stock Show, 2 presentations, Invasive Weed Control Strategies, Rapid City, SD.

Bullnanza, New Ideas about Replacement Heifer Development, Winner, SD.

Master Range Cattle Manager, Nutrition for Thin Cows, Bison and Wall, SD.

Master Range Cattle Manager, Economic Selection Indices and Ultrasound EPD, Bison and Wall, SD.

Master Range Cattle Manager, Developing a Marketing Plan, Bison and Wall, SD.

SASSY, Developing Marketing Ideas (member of panel), Wall, SD.

Making Advanced Feed Decisions, Pricing Decisions for Alternative Feedstuffs, Timber Lake, SD.

SD Grazing School, Seasonality of Grazing Nutrition, Oacoma, SD.

SD Grazing School, Mineral Nutrition Needs of Livestock, Oacoma, SD.

Antelope & Cottonwood Research Station Field Days, 2 presentations, High Sulfate Water Issues, Buffalo and Cottonwood, SD.

Antelope Research Station Field Day, Early-Weaning Project Update, Buffalo, SD.

Master Range Cattle Manager, Cow/Calf Nutrition, Sturgis, SD.

Master Range Cattle Manager, Grazing Livestock Nutrition, Bison, Sturgis, and Wall, SD.

2008: West FEU 2 Beef Days, 2 presentations, Delivery of Supplements on Rangelands, St. Onge and Buffalo, SD.

Perkins County Livestock Improvement Association Winter Meeting, Alternatives for Marketing Calves, Bison, SD.

**EXTENSION PRESENTATIONS (cont.)**

Montana Winter Grazing Seminar, Evaluating Alternative Strategies for Beef Production, Sidney, MT.

Black Hills Stock Show, Using Ultrasound EPD, Rapid City, SD.

Cow-Calf Management Shortcourse, Condition Scoring Beef Cows, Bison and Gettysburg, SD.

Cow-Calf Management Shortcourse, Matching Cow Nutrient Requirements to the Environment, Bison and Gettysburg, SD.

Cow-Calf Management Shortcourse, Effect of Alternative Practices on Profitability, Bison and Gettysburg, SD.

Rancher Forum, Alternative Beef Cattle Management Systems, Faith, SD.

High School Career Day, Martin, SD.

Pfizer Livestock Research Update, High Sulfate Water: The Search for Solutions, Hettinger, ND.

South Dakota Veterinary Medicine Association spring meeting, Today's High Feed Costs for Cattle Producers: What Veterinarians Need to Know, Pierre, SD.

Educator In-Service Training, Using Annual Forages with Livestock: Feed Value & Performance, Huron, SD.

2007: West FEU 2 Beef Days, 3 presentations, Beef Production and Economic Responses to Early Weaning, Union Center, Bison, and Buffalo, SD.

Ag Seminar, Issues to Consider When Providing Supplements with Low-Quality Forages, Hot Springs, SD.

West FEU 5 program, 3 presentations, Supplementing Low-Quality Forages, Mission, Murdo, and Presho, SD.

Ag Expo Seminar, Crossbreeding Systems, Mobridge, SD.

Rancher Forum, Supplementing Low-Quality Forages, Faith, SD.

Rancher's Workshop, Considerations for Supplementing Low-Quality Forages, Gettysburg, SD.

Educator In-Service Drought Training, Grazing Management During and After Drought, Faith, SD.

ProEco Energy producer meeting, Ethanol Co-Products as Animal Feeds, Belle Fourche, SD.

Four-State Ruminant Consortium, Biologic and Economic Evaluation of Weaning, Backgrounding, and Finishing Management Strategies for Range Sheep Producers, Rapid City, SD.

Range Science 325 class guest lecture, Monitoring Tools for Range Livestock, Rapid City, SD.



**EXTENSION PRESENTATIONS (cont.)**

- Wells Fargo Crop Insurance meeting, Beef Production Systems that Enhance Profitability and Support Rural Economies, Union Center, SD.
- Forage Based Field Day for NRCS, Effect of Early Weaning and Winter Feeding on Cow Performance, Dickinson, ND.
- Forage Based Field Day for NRCS, Beef System Adjustments due to the Effect of Ethanol Production, Dickinson, ND.
- Antelope Research Station Field Day, Alternative Beef Cattle Management Systems, Buffalo, SD.
- Vitalix Seminar: Nutrition and Immunity Relations in Beef Cattle, Effect of Nutrition on Immunity in Beef Cattle, Rapid City, SD.
- Corn, Cattle and Energy, Ranch Labor Issues (team presentation with Stacy Hadrick), Rapid City, SD.
- Range Beef Cow Symposium, Delivery of Supplements on Rangelands, Fort Collins, CO.
- 2006: South Dakota Annual Extension Conference, Educator In-Service Training, OSU Cowculator and NRC2002 ration analysis programs, Brookings, SD.
- 2005: Arizona-Utah Range Livestock Workshop, 2 presentations, Kanab and St. George, UT.
- Universidad de Magallanes, 2 presentations, Animal Production Class and Seminar, Punta Arenas, Chile.
- Chilean Livestock Producer Technical Group, Punta Arenas, Chile.
- 2004: 2<sup>nd</sup> Forage Kochia Workshop, Logan, UT.
- 2003: BLM Senior Range Specialists and Field Office Managers, Richfield, UT.
- USU Extension Satellite Conference on Nonfat Dried Milk for Beef Cattle, Logan, UT.
- 1<sup>st</sup> Forage Kochia Workshop, Logan, UT.
- Kampenaik Sheep Field Day, Punta Arenas, Chile.
- 2002: 3<sup>rd</sup> Chilean Livestock Producer Technical Group visit to USU, 2 presentations.
- Society for Range Management, Utah Section annual meeting, Cedar City, UT.
- 2000: Chilean Extension Meetings, 2 presentations, Puerto Natales & Punta Arenas, Chile.
- Chinese Scientist visit to USU and USDA Forage and Range Research Lab.
- 1998: Beef Cattle Symposium, Lethbridge, Alberta, Canada.
- 1997: 2<sup>nd</sup> Chilean Livestock Producer Technical Group visit to USU.
- 1996: 1<sup>st</sup> Chilean Livestock Producer Technical Group visit to USU and USDA Forage and Range Research Laboratory.
- 1995: BYU Beef Field Day, Provo, UT.
- Arizona Strip Range Livestock Workshop, 2 presentations, Kanab and St. George, UT.

**EXTENSION PRESENTATIONS (cont.)**

- Cold Desert Field Trip, 5<sup>th</sup> International Rangeland Congress, Tintic Valley, UT.
- 1994: Arizona Strip Range Livestock Workshop, 2 presentations, Kanab and St. George, UT.
- 1993: Utah Cattlemen's Association Board Meeting, Logan, UT.
- Utah Agriculture Extension Agents Update, Logan, UT.
- Land Grant Days, Utah State University, Logan, UT.
- Sky View High School Vocational Agriculture students, Smithfield, UT.
- 1991: Russell Rotary Club, Russell, KS.
- Hays CO-OP Farmer Meeting, Hays, KS.
- 1990: KSU Animal Science & Industry Department Cattlemen's Day, Manhattan, KS.
- Lane County Crop and Livestock Dinner, Dighton, KS.
- Kansas Forage and Grassland Council Annual Meeting, Great Bend, KS.
- University of Illinois Veterinary School faculty members visit, Hays, KS.
- 1989: Russell State Bank Annual Agriculture Clientele Dinner, Russell, KS.
- Republic County Extension Sale Barn Meeting, Belleville, KS.
- 1988: Rush County Extension CRP Meeting, LaCrosse, KS.
- Ford County Extension "Going to Grass" Sale Barn Meeting, Dodge City, KS.
- Beef Empire Ranch Management and Feedlot Field Day, Garden City, KS.
- Utah State University International Soil and Water Conservation Course, Hays, KS.
- Russell Rotary Club, Russell, KS.
- Wilson Lions Club Annual Farmer Dinner, Wilson, KS.
- 1987: Kiowa County Extension Beef Producers Barbecue, Greensburg, KS.
- Northwest Kansas Vocational Agriculture Teachers Update, Hays, KS.
- Argentinean Agriculture Producer Technical Group Tour, Hays, KS.

**GRANSTMANSHIP**

**South Dakota State University**

1. **Olson, K.C.**, A.D. Blair, R.N. Gates, B.L. Gordon, A. Harty, J.J. Kincheloe, M.R. McDaniel, K. O'Neill, K. Reeves, R. Salverson, L. Mesman, S. Christen, and N. Bitterman. beefSD: Enhancing knowledge and success of beginning beef producers through mentorship and training. USDA NIFA Beginning Farmer and Rancher Development Program, 10/2015-9/2018, \$744,113
2. Johnson, P.S., **K.C. Olson**, K.C. Jensen, J.J. Kincheloe, and A.A. Harty. Managing grassland vegetation with winter-patch grazing: potential benefits to livestock and wildlife. North Central Region-Sustainable Agriculture and Research Education (NCR-SARE), \$199,924
3. Blair, A.D., **K.C. Olson**, M. Gonda, K. Underwood, and J.J. Kincheloe. Impact of maternal protein restriction in beef cattle during mid- to late-gestation on gene expression and epigenetic change in offspring. South Dakota Beef Industry Council, \$17,627
4. Blair, A.D., **K.C. Olson**, A.A. Harty, R.R. Salverson, K.R. Underwood, S.M. Scramlin, J.J. Kincheloe, and M.K. Luebbe. Effect of nursing-calf implant timing on growth performance and carcass characteristics. SD Beef Industry Council, 10/2014-9/2015, \$55,405
5. Weaver, A.D., **K.C. Olson**, K.R. Underwood, M. Gonda, R.N. Funston, and J.J. Kincheloe. Impact of maternal protein restriction in mid- to late-gestation on gene expression, offspring growth, carcass composition, and meat quality. SD Beef Industry Council, 10/2013-9/2015, \$106,305
6. Maddock, R., K. Sedivec, R. Littlefield, C. Schauer, B. Geaumont, G. Halvorson, M. Mongoh, P. S. Johnson, **K.C. Olson**, R.N. Gates, M. Liebig, D. Archer, J. Hendrickson, J. Garden-Robinson, and L. Xu. Facilitating self-directed development of a sustainable natural resource-dependent food system for a highly dispersed, ethnically distinct rural community, USDA NIFA AFRI Global Food Security Program, 9/2010-8/2015, \$4,987,413 (SDSU sub-award = \$1,275,156)
7. **Olson, K.C.** and J.A. Walker. Beginning entrepreneurs expanding the future of South Dakota (beefSD), USDA NIFA Beginning Farmer and Rancher Development Program, 9/2010-8/2013, \$748,892
8. **Olson, K.C.**, A. Harty, J.A. Walker, and R. N. Gates. IRM groups to sustain learning communities initiated in Master Range Cattle Manager, USDA NC Risk Management Education Center, 7/2010-12/2011, \$46,464
9. Walker, J.A., R.N. Gates, and **K.C. Olson**. Organic and Natural Beef Production in South Dakota, USDA NC Risk Management Education Center, 7/2009-6/2010, \$20,085
10. Gates, R.N., Johnson, P.S., **K.C. Olson**, E. Mousel, M. Hubert and J. Walker. Encouraging Native American rancher success: Resource management planning and building bridges to technical and financial assistance, USDA Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers, 10/2008-9/2012, \$289,245
11. **Olson, K.C.**, J.A. Walker and R.N. Gates. Master Range Cattle Manager Program, USDA NC Risk Management Education Center, 7/2008-6/2009, \$37,500

**GRANSTMANSHIP (cont.)**

12. **Olson, K.C.**, C. Clark, A. Harty, and M. Lemke. Nitrate Quiktest training, Dakota SARE Mini-Grants Program, 4/2008-3/2009, \$2000
13. Johnson, P.S., **K.C. Olson**, R.N. Gates, T. Nleya, S. Fausti, M.K Beutler, and G. Perry. Improving small ranch profitability by evaluation of alternatives in beef cattle enterprises, USDA CSREES NRI Small Farm & Ranch Profitability, 10/2007 - 12/2011, \$499,974
14. Cammack, K.M., **K.C. Olson**, P.S. Johnson, C.L. Wright, S.I. Paisley, and K. McInnerney. Differential gene expression as an indicator of tolerance to high-sulfate water in steers, USDA CSREES Four-State Ruminant Consortium, 10/2007 - 9/2011, \$100,000
15. **Olson, K.C.**, G. Perry, S. Fausti, Beutler, P.S. Johnson and R.N. Gates. Alternate beef system grazing strategies to improve ranch profitability and rural community sustainability, USDA CSREES Four-State Ruminant Consortium, 10/2007 - 9/2011, \$125,000
16. R. Gates, J. Walker, J. Held, T. Daly, W. Getz, S. Hart, **K.C. Olson**, P. Johnson, E. Van der Sluis, M. Beutler, M. Hubert, C. Clark, I. Graves, M. Lemke, J. Keimig, L. Butler, and S. Burke. Meat goat production feasibility in South Dakota: Evaluation of current production and marketing and development of grazing guidelines, SD AES Competitive Grant, 10/1/2007-9/30/2009, \$50,000
17. Walker, J.A. and **K.C. Olson**. Incentive for ag educators to attend Range Beef Cow Symposium, Dakota SARE Mini-Grants Program, 12/2007 - 6/2008, \$1,620
18. Walker, J.A., **K.C. Olson**, R. Pruitt, M. Diersen, and S. Hadrick. Finding individual solutions for cow/calf producers through production and financial analyses, USDA NC Risk Management Education Center, 7/2007 - 6/2008, \$25,939
19. Gates, R.N., **K.C. Olson**, and M. Hubert. Connecting extension educators and beef producers through transformational education, Dakota SARE Mini-Grants Program, 5/2007-10/2007, \$1,950
20. **Olson, K.C.**, P.S. Johnson and R.N. Gates, Evaluation of the Influence of Grazing Systems on Patterns of Rangeland Utilization by Beef Cattle Grazing Northern Great Plains Rangeland, SD AES Competitive Grant, 10/2006 - 9/2008, \$20,000
21. **Olson, K.C.** Cottonwood Research Station Field Day, USDA NCR-SARE Speaker Bureau, 9/2006, \$428

**Utah State University**

22. **Olson, K.C.**, D.R. ZoBell, B.L. Waldron, and M. Palmer, Perennial forage kochia for improved sustainability of grass-dominated ecosystems, USDA/CSREES Western SARE, 2003, \$149,503
23. **Olson, K.**, D. Chen, M. Peel, and D. DeWald, Characterization of ruminal degradation of specific plant proteins in alfalfa, USU Center for Integrated Biosystems, 2003, \$15,550
24. **Olson K.C.** and N. Taylor, Livestock-wildlife interactions: Use of vegetation communities and nutrient intake by elk and mule deer, Rocky Mountain Elk Foundation, 2002, \$7,800
25. **Olson, K.C.**, T.R. Dhiman, R. Banner, and D.R. ZoBell, Reducing methane emissions from grazing beef and dairy cattle, EPA Ruminant Livestock Efficiency Program, 1998, \$149,358

26. **Olson, K.C.**, Characterization of protein quality in potential forages for irrigated pastures in the Intermountain West, USU Vice President for Research, 1998, \$20,000
27. **Olson, K.C.**, B.E. Norton, J.E. Bowns, and R.D. Wiedmeier, Evaluation of livestock and vegetation responses to grazing systems on southern Utah forested rangelands, USU Vice President for Research, 1998, \$15,000
28. **Olson, K.C.**, Suckling beef calf performance response to supplementation with Crystalyx® soft molasses creep blocks, Hubbard Milling Company, 1997, \$10,432
29. **Olson, K.C.**, B.E. Norton, J.E. Bowns, and R.D. Wiedmeier, Evaluation of livestock and vegetation responses to grazing systems on southern Utah forested rangelands, Utah Department of Agriculture and Food/Utah Mineral Lease Fund, 1997, \$12,300
30. **Olson, K.C.**, R.D. Wiedmeier, and R. Banner, Addendum to reducing methane emissions from beef cow herds in range based management systems, EPA Ruminant Livestock Efficiency Program, 1995, \$36,557
31. **Olson, K.C.**, R.D. Wiedmeier, and R. Banner, Reducing methane emissions from beef cow herds in range based management systems, EPA Ruminant Livestock Efficiency Program, 1994, \$524,695
32. **Olson, K.C.**, Beef cattle grazing management to improve production efficiency from irrigated meadows, Utah Department of Agriculture and Food/Utah Mineral Lease Fund, 1994, \$15,000
33. **Olson, K.C.**, Grazing livestock management for meadows, Utah Department of Agriculture and Food/Utah Mineral Lease Fund, 1993, \$12,000
34. **Olson, K.C.**, Grazing livestock management for meadows, USU Faculty Research Grants, 1993, \$14,875

#### **MENTORING OF GRADUATE STUDENTS**

1. Rodrigo Rollim. MS in Animal Science, Animal Nutrition  
Thesis title: Evaluation of the production potential for cow/calf operations grazing Utah high-elevation irrigated meadows.  
Completed 1995
2. Raul Lira. MS in Animal Science, Animal Nutrition  
Thesis title: Influence of type of supplemental carbohydrate on ruminal responses and methane output from ruminants consuming low-quality forage.  
Completed 2000
3. Rebecca Sannes. MS in Dairy Science, Animal Nutrition  
Thesis title: The influence of ruminally degradable carbohydrates and nitrogen on microbial protein synthesis and protein efficiency of lactating Holstein cows  
Completed 2000
4. Matt Palmer. MS in Animal Science, Animal Management  
Thesis title: Influence of supplemental protein degradability on nutrient utilization and methane output by beef cows on dormant, cool-season forages.  
Completed 2000

**MENTORING OF GRADUATE STUDENTS (cont.)**

5. Amy Davis. MS in Animal Science, Animal Nutrition  
Thesis title: Characterization of ruminal protein degradability in potential forages for irrigated pastures in the Intermountain West.  
Completed 2001
6. Harold Winger. MS in Animal Science, Animal Nutrition  
Thesis title: Energy supplementation of beef cattle grazing tall wheatgrass during the calving season.  
Completed 2001
7. Darrell Eddington. MS in Animal Science, Animal Management  
Thesis title: Response of beef cow/calf nutrition, performance, and methane emissions to stocking rate on irrigated meadows.  
Completed 2001
8. Lee Wood. MS in Animal Science, Animal Nutrition  
Thesis title: Livestock Response to Rest-Rotation, Deferred-Rotation, or Continuous Grazing  
Completed 2003
9. Nancy Taylor. MS in Range Science  
Thesis title: Distribution of domestic cattle in southern Utah vegetation communities and predicting intake by elk and mule deer using blood and fecal samples  
Completed 2004
10. Carlene Dahl. MS in Animal Science, Animal Nutrition  
Thesis title: Influence of energy and Monensin supplementation on forage digestibility and intake by range cows during drought  
Completed 2006
11. Alicia Wall. MS in Animal Science, Animal Nutrition  
Thesis title: Nutrient utilization by beef steers on forage kochia and low quality forage diets and simultaneous use of Yb and Dy to measure digesta kinetics of two forages  
Completed 2006
12. Heather Richter. MS in Range Science  
Thesis title: Impacts of early weaning and winter feeding strategies on cow-calf performance and forage utilization  
Completed 2009
13. Nikki Hojer. MS in Animal Science, Ruminant Nutrition  
Thesis title: Effects of weaning age and winter development environment on replacement heifer performance and grazing distribution  
Completed 2012
14. Janna Kincheloe. PhD in Animal Science, Ruminant Nutrition  
Dissertation title: Impact of maternal protein restriction in mid- to late-gestation on gene expression, offspring growth, carcass composition, and meat quality