

Curriculum Vitae
Bradley J. Johnson, Ph.D.

Texas Tech University
Department of Animal and Food Sciences
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Personal Data

Birthdate: November 16, 1967
Birthplace: Milbank, SD
Marital Status: Married, Jolene R. Johnson
Children: Kaitlin, 5/09/97; Nathan, 4/30/99; Evan, 9/04/02

Education

South Dakota State University	1986-1990	B.S.	Animal Science
University of Minnesota	1991-1994	M.S.	Animal Science
University of Minnesota	1994-1997	Ph.D.	Animal Science

- Masters Thesis: *The effect of combined trenbolone acetate and estradiol implants on growth, carcass composition, and biochemical parameters of feedlot cattle.* Advisors: William R. Dayton, Ph.D. and Jay C. Meiske, Ph.D.
- Ph.D. Thesis: *Regulation of muscle cell growth and differentiation in pigs and cattle by insulin-like growth factor binding proteins (IGFBPs) and anabolic steroids.* Advisor: William R. Dayton, Ph.D.

Professional Experience

Professor/Gordon W. Davis Regent's Chair in Meat Science and Muscle Biology *June 1, 2008-*
Department of Animal and Food Sciences, Texas Tech University

- Muscle Growth and Development and Meat Quality

Joint FAO/WHO Expert Committee on Food Additives (JECFA) *2017-present*
Food and Agriculture Organization of the United Nations: JECFA-Residues of veterinary drugs: second five-year term

Graduate Studies Coordinator *February 28, 2011- October 31, 2014*
Department of Animal and Food Sciences, Texas Tech University

Graduate Faculty *October 13, 2008- present*
Department of Animal and Food Sciences, Texas Tech University

Associate Professor *June 11, 2005-May 31, 2008*
Department of Animal Sciences and Industry, Kansas State University

- Research, 70%; Teaching, 30%/Twelve-month, tenured
- Growth and Development with Emphasis in Nutrition

Graduate Faculty *February 7, 2001- present*
Department of Animal Sciences and Industry, Kansas State University

Assistant Professor *October 1, 2000 – June 10, 2005*
Department of Animal Sciences and Industry, Kansas State University

- Research, 70%; Teaching, 30%/Twelve-month, tenure-track
- Growth and Development with Emphasis in Nutrition

Graduate Faculty *May 11, 1999*

Department of Animal and Range Sciences, South Dakota State University

Assistant Professor *August 1, 1997 – October 27, 2000*

Department of Animal and Range Sciences, South Dakota State University

- Extension Ruminant Nutrition and Beef Feedlot Specialist
- Extension, 70%; Research, 30%/Twelve-month, tenure-track

Graduate Research Assistant *January 1991 – August 1997*

Department of Animal Science, University of Minnesota

Teaching Activities

1994 – 1995	Animal Science 1-120, Livestock and Meat Evaluation (Univ. of MN)
2001 – 2008	Animal Sciences and Industry 318, Fundamentals of Nutrition
2002 – 2008	Animal Sciences and Industry 902, Topics in Animal Growth
2001 – 2008	Undergraduate Advisement (23 ASI students, annually)
2008 –	Undergraduate Advisement (30 AFS students, annually)
2011 –	ANSC 3307, Feeds and Feeding (85 students)
2011 –	ANSC 5316, Muscle Chemistry (15 students)
2012 –	ANSC 5304, Growth and Development (15 students)
2013 –	ANSC 3316, Growth and Development (16 students)
2013 –	ANSC 5304, Growth and Development (9 students)
2013 –	ANSC 5316, Muscle Chemistry (13 students)
2012 –present	ANSC 5304, Growth and Development (15 students)
2016 - present	ANSC 3301 H01, Honors Principles of Nutrition (26 students)
2016 - present	ANSC 3316 Growth and Development (73 students)
2017 - present	ANSC 5316 Growth and Development (31 students)

Graduate Advisory Committees

Chaired – M.S.

1999 – 2001	Monica S. Eibs, Animal and Range Science (SDSU)
1999 – 2001	Nancy K. Grathwohl, Animal and Range Science (SDSU)
2001 – 2003	Jessica D. Dunn, Animal Sciences and Industry
2002 – 2004	Erin K. Sissom, Animal Sciences and Industry
2004 – 2006	Sara J. Winterholler, Animal Sciences and Industry
2004 – 2006	Amber E. Brazle, Animal Sciences and Industry (co-advising)
2004 – 2006	Brian L. Davis, Animal Sciences and Industry (co-advising)
2004 – 2007	Garrett L. Parsons, Animal Sciences and Industry
2006 – 2008	Tim Baxa, Animal Sciences and Industry
2007 – 2009	Lauren Luque, Animal and Food Sciences
2009 – 2011	Derek Finck, Animal and Food Sciences
2009 – 2011	Bryan Bernhard, Animal and Food Sciences
2009 – 2011	Rebecca Tokach, Animal and Food Sciences
2010 – 2012	Tanner Young, Animal and Food Sciences
2010 – 2012	Aaron Jennings, Animal and Food Sciences
2011 – 2013	Josh Cribbs, Animal and Food Sciences
2010 – 2013	Tyler Harris, Animal and Food Sciences
2012 – 2013	Samantha Aragon, Animal and Food Sciences

2012 – 2014	Alex Thompson, Animal and Food Sciences
2013 – 2014	Jessica Baggerman , Animal and Food Sciences
2013 – 2014	Clay Burson, Animal and Food Sciences
2015 - 2017	Tyler Vogel, Animal and Food Sciences
2022 - 2024	Sydney Bowman, Animal and Food Sciences
2023 - 2024	Cade Snethen, Animal and Food Sciences
2024 - present	Kade Miller, Animal and Food Sciences
2024 - present	John Nials, Animal and Food Sciences
2025 - present	Kylee Cannon, Animal and Food Sciences
Chaired – Ph.D.	
2001 – 2003	Ann T. Waylan, Animal Sciences and Industry
2003 – 2006	Kelly R. Lawrence, Animal Sciences and Industry (co-advising)
2004 – 2008	Erin K. Sissom, Animal Sciences and Industry
2005 – 2009	William F. Miller, Animal Sciences and Industry
2007 – 2010	Sandi L. Parr, Animal and Food Sciences
2011 – 2014	Jerilyn Hergenreder, Animal and Food Sciences
2010 – 2015	Andrew Hosford, Animal and Food Sciences
2012 – 2015	Aaron Jennings, Animal and Food Sciences
2014 – 2015	Nolan Rutherford, Animal and Food Sciences
2013 – 2017	Jongkyoo Kim, Animal and Food Sciences
2014 – 2017	Alex Thompson, Animal and Food Sciences
2015 – 2017	Jessica Baggerman, Animal and Food Sciences
2015 – 2018	Zachary Smith, Animal and Food Sciences
2016 – 2019	Kimberly Pritchett, Animal and Food Sciences
2017 – 2020	Phil Urso, Animal and Food Sciences
2019 – 2023	Luke Fuerniss, Animal and Food Sciences
2020 – present	Jerica Hall, Animal and Food Sciences
2020 – 2023	Kaitlyn Wesley, Animal and Food Sciences
2022 - present	Luana Felizari, Animal and Food Sciences
Member	
2001 – 2003	Grady Bishop, Animal Sciences and Industry
2001 – 2006	Tom Burkey, Animal Sciences and Industry
2001 – 2003	Kimberly Candler, Animal Sciences and Industry
2001 – 2006	Mofleh Awawdeh, Animal Sciences and Industry
2002 – 2004	Eman Ali Elwakeel, Animal Sciences and Industry
2001 – 2004	Elissa Good, Animal Sciences and Industry
2002 – 2005	Marc Epp, Animal Sciences and Industry
2002 – 2005	Sean Montgomery, Animal Sciences and Industry
2003 – 2007	Rajashekar Rachakatla, Anatomy and Physiology
2003 – 2006	Guillermo F. Schroeder, Animal Sciences and Industry
2004 – 2006	Jayne Bock, Food Science
2005 – 2006	Linda K. Yarrow, Human Nutrition (outside Chair)
2004 – 2007	Aaron M. Arnett, Animal Sciences and Industry
2004 – 2007	Dillon K. Walker, Animal Sciences and Industry
2005 – 2007	Ryan McMillan, Agricultural Economics
2006 – 2008	Justin O. Wallace, Animal Sciences and Industry
2007 – 2008	Derek W. Brake, Animal Sciences and Industry
2007 – 2008	Callie E. Walker, Animal Sciences and Industry
2007 – 2009	Susie Knetter, Animal Sciences and Industry
2008 – 2008	Ryan J. Rathmann, Animal and Food Sciences
2008 – 2009	Jessica Igo, Animal and Food Sciences
2008 – 2009	Jon DeClerck, Animal and Food Sciences
2008 – 2009	Suneet Randhawa, Animal and Food Sciences

2008 – 2010	Paige Alexander, Animal and Food Sciences
2009 – 2010	Matt May, Animal and Food Sciences
2009 – 2010	Matt Quinn, Animal and Food Sciences
2010 – 2013	Kari Spivey, Animal and Food Sciences
2010 – 2013	Sydney Knobel, Animal and Food Sciences
2011 – 2013	Tyson Brown, Animal and Food Sciences
2013 – 2015	Tanner Schmidt, Animal and Food Sciences
2012 – 2019	Jake Compton, Animal and Food Sciences
2017 – 2019	Dusty Suggs, Animal and Food Sciences
2017 – 2019	Jillian Milopoulos, Animal and Food Sciences
2016 – 2019	Tosha Opheim, Animal and Food Sciences
2017 – 2020	Hope Hall, Animal and Food Sciences
2019 – 2022	Melissa Sillivent, Animal and Food Sciences
2019 – 2022	Blake Foraker, Animal and Food Sciences
2019 – 2021	Jenna Frink, Animal and Food Sciences
2022 – 2023	Reese Wilson, Animal and Food Sciences
2021 – 2023	Devin Gonzales, Animal and Food Sciences
2022 – 2024	Paige Tegeler, Animal and Food Sciences
2022 – present	Thomas Dobbins, Animal and Food Sciences

Postdoctoral Research Associates

2002-2003	J. Patrick Kayser, Animal Sciences and Industry
2006-2011	Ki Yong Chung, Animal and Food Sciences
2011-2012	Mark Anderson, Animal and Food Sciences
2012-2013	Flavio Ribeiro, Animal and Food Sciences
2018-2020	Jongkyoo Kim, Animal and Food Sciences
2021-2022	Oscar Benitez, Animal and Food Sciences

Consulting

- U. S. Anti-doping Agency (USADA) Oct. 2016 to present
- Zoetis Animal Health-Growth Enhancement Technologies Oct. 2013 to present
- Elanco Animal Health-Growth Enhancement Technologies June 2010 to present
- NCBA/GET-IT Team-Growth Promotants and Modern Beef Production Feb. 2007 to present
- Merck Animal Health, Inc.-Growth Enhancement Technologies Oct. 2004 to present
- Orion Ethanol (aka Wildcat Bioenergy and SNB Associates) Pratt KS August 2004 to June 2007
- SAF Agri – Biosaf and Mannan Research. Winnipeg and Calgary Canada, April 2003
- SAF Agri – Mannan Research. Guadalajara, Mexico, November 2002
- VetLife/Ivy Labs, Implant and Ractopamine Interactions, February 2002
- LeSaffre Development (France) EU Additive Registration for Beef Cattle, August 2001
- SAF Agri – Beef Cattle Receiving Diets. Queretaro, Mexico; November, 2000
- Elanco Canada, Implant/Protein Requirements, Alberta, CA; October 1998
- College Livestock Feed Conference Board Meeting, Nutrient Management for Beef Feedlots, Ft. Mitchell, KY; September, 1998
- Ralco Mix, Receiving Cattle Management, Marshall, MN; August, 1998
- Land O Lakes BPS/BEC Training Meeting, Sioux City, IA; July 1998
- SAF Products, Minneapolis, MN, Ruminant Nutrition Topics; 1996
- Cargill Inc., Molasses Liquid Products Division, Minneapolis, MN; 1991-1992

- Invited Seminar Speaker: Western Regional Training Conference
Protein Nutrition for Beef Cattle Reno, NV, June 1992
- Invited Seminar Speaker: Technical Applications Conference for Zip Feeds
Protein Nutrition for Beef Cattle Watertown, SD/Sioux Falls, SD; October 1992
- GFI America, Minneapolis, MN; Lean Beef Production Topics; 1991-1992

Membership in Professional Societies and Scientific Activities

- 2024- American Physiological Society
- 2008- American Meat Science Association
- 2003- American Society for Nutritional Sciences
- 2001 - 2008. KS Representative, NC-131
Molecular mechanisms regulating skeletal muscle growth and differentiation.
- 1997 - Plains Nutrition Council
- 1998 - University of Minnesota Alumni Association
- 1990 - South Dakota State University Alumni Association
- 1990 - American Society of Animal Science
- 1990 - Phi Kappa Phi
- 1990 - Gamma Sigma Delta

Awards and Honors

- 2025 ASAS Animal Growth and Development Award
- 2024 Texas Tech University President's Academic Achievement Award
- 2023 South Dakota State University Distinguished Alumni Award
- 2020 AMSA Distinguished Research Award
- 2018 University of Minnesota Golden Alumni Award in Academics
- 2017 CASNR Service Award
- 2013 CASNR Research Award
- 2012 CASNR Graduate Student Advising Award
- 2007 11th Edition of *Who's Who Among American Teachers & Educators*
- 2007 Kansas State University, College of Agriculture 2007 Excellence in Graduate Teaching Award
- 2000 South Dakota Cooperative Extension Service
Specialist Association Merit Award
- 1995 University of Minnesota Graduate Fellowship Award
- 1994 University of Minnesota Graduate Fellowship Award
- 1993 University of Minnesota Graduate Fellowship Award
- 1992 University of Minnesota Outstanding Masters Student Award
- 1991 University of Minnesota Graduate Fellowship Award
- 1990 Graduated with High Honors from South Dakota State University
- 1990 Gamma Sigma Delta, Honor Society of Agriculture
- 1990 Phi Kappa Phi
- 1990 American Society of Animal Science Scholarship Award
- 1989 The National Dean's List 12th Ed. Vol. 2
- 1989 Zip Feed Mills Scholarship
- 1989 Dakota Feed Manufacturer's Scholarship
- 1989 Griffith Memorial Scholarship
- 1989 American Society of Animal Science Scholarship Award
- 1988 Zilverburg Scholarship
- 1988 Griffith Memorial Scholarship
- 1988 American Society of Animal Science Scholarship Award
- 1987 Harvest States Scholarship
- 1987 Dinkle Scholarship
- 1986 Cargill Scholarship

1986 – 1990 College Dean's List 8 consecutive semesters at SDSU

Ad Hoc Grant Reviewer, Manuscript Reviewer, and Regional Committees

- USDA-ERS Meat Spread Review Panel 2017-2018
- Midwest ASAS Growth and Development, Muscle Biology, and Meat Science Committee (2004-2007)
- Midwest ASAS Academic Quadrathlon – Committee Chair 2001 – 2002
- Growth and Development, Muscle Biology, and Meat Science;
Session Chair, Midwest ASAS, Des Moines, IA, March 16, 1999
- USDA-NRICGP: Animal Growth
- USDA-SBIR: Animal Production and Protection
- Journal of Agricultural and Food Chemistry
- Journal of Animal Science
- Journal of Swine Health and Production
- Canadian Journal of Animal Science
- NC-131, Molecular mechanisms regulating skeletal muscle growth and differentiation

Publications

Book Chapters and Invited Reviews (12)

- Smith, Z. K. and **B. J. Johnson**. 2017. Residual levels of animal growth promoters and the importance to sport drug analysis: Human environmental exposures. USADA Scientific Symposium 2017, Orlando Florida.
- Johnson, B. J.** 2015. Mechanism of action of beta-adrenergic agonists and potential residue issues. American Meat Science Assoc. Reference Paper.
- Johnson, B. J.**, and J. L. Beckett. 2015. Application of growth enhancing compounds in modern beef production. American Meat Science Assoc. Reference Paper.
- Smith, S. B., and **B. J. Johnson**. 2015. Marbling: Management of cattle to maximize the deposition of intramuscular adipose tissue. Beef Checkoff White Paper: Product Quality.
- Anderson, P. T., **B. J. Johnson**, and M. Dikeman. 2014. Growth of meat animals: Metabolic modifiers. In: Carrick Devine and Michael Dikeman, editors-in-chief. Encyclopedia of Meat Sciences 2e, Vol. 2, Oxford: Elsevier, 2014. pp. 62-69.
- Johnson, B. J.**, F. R. B. Ribeiro, and J. L. Beckett. 2013. Application of growth technologies in enhancing food security and sustainability. Animal Frontiers. 3:8-13.
- Tokach, R. J., K. Y. Chung, and **B. J. Johnson**. 2010. Factors affecting intramuscular adipose tissue development in beef cattle. Certified Angus Beef Association.
<http://www.cabpartners.com/news/research/Texas-Tech-white-paper.pdf>.
- Chung, K. Y., and **B. J. Johnson**. 2010. Cellular aspects of bovine intramuscular adipogenesis. Proc. Of 2010 Annual Congress of Korean Society of Animal Sciences and Technology. pp. 269-278.
- Johnson, B. J.**, and K. Y. Chung. 2009. Bovine satellite cells as precursors of intramuscular adipocytes. Proc. Of the 62nd American Meat Science Assoc. Reciprocal Meat Conference. pp. 1-5.
- Johnson, B. J.**, and C. D. Reinhardt. 2008. Growth Promotants for Beef Production: Anabolic Steroids: Performance responses and Mode of Action, in David E. Anderson and D. Michael Rings (ed): Current Veterinary Therapy V. Food Animal Practice. Philadelphia, WB Saunders Co. pp 643-651.
- Johnson, B. J.**, and K. Y. Chung. 2007. Alterations in the physiology of growth of cattle with growth-enhancing compounds. In: Vet. Clin. Food Anim. 23:321-332.
- Anderson, P. T., and **B. J. Johnson**. 2004. Growth of meat animals: Metabolic modifiers. In: Encyclopedia of Meat Sciences. pp. 538-546.

Peer-reviewed Manuscripts (165)

- Johnson, B. J.**, Z. K. F. Smith, P. M. Urso, and J. K. Kim. 2025. International Symposium on Ruminant Physiology: Nutrient signaling to skeletal muscle and adipose tissue. J. Dairy Sci. TBC:1-9.
<https://doi.org/10.3168/jds.2024-25791>.
- Felizari, L. D., S. M. Bowman, C. J. Crasto, J. O. Sarturi, D. R. Woerner, **B. J. Johnson**. 2025. Hepatic transcriptome profiling unveils candidate genes in cattle with liver abscesses under the influence of beef genetics in dairy cattle. PLoS One 20: e0324209. doi:10.1371/journal.pone.0324209.
- Snethen, C. M., M. N. Fedoruk, E. D. Ahrens, T. G. Sobolevskii, N. K. Avliyakov, and **B. J. Johnson**. 2025. Surveillance of anabolic agent residues in U.S. meat supply by liquid chromatography with high-resolution tandem mass spectrometry. Drug Testing and Analysis 0:1-8.
<https://doi.org/10.1002/dta.3901>.
- Green, M.M., H. R. Ford, A. P. Tegeler, O. J. Benitez, **B. J. Johnson**, and C. A. Strieder-Barboza. 2025. Single-cell assessment of intramuscular and subcutaneous adipose tissue in beef cattle. Agriculture 15:1545. <https://doi.org/10.3390/agriculture15141545>.
- Bowman-Schnug, S. M., L. K. Fuerniss, J. D. Cameron, J. L. Beckett, M. Ahsin, S. van Vliet, G. D. Hufstедler, and **B. J. Johnson**. 2025. Replacement of monensin with a proprietary tannin-blend additive in calf-fed Holstein steer diets. Vet. Sci. 12:166. <https://doi.org/10.3390/vetsci12020166>.
- Bowman-Schnug, **B. J. Johnson**, O. A. Turgeon, J. Figueroa, C. R. Belknap, Z. T. L. Gray, T. S. Edrington. 2025. Effects of feeding a *Saccharomyces cerevisiae* fermentation product compared to a direct-fed microbial in finishing diets of beef × dairy crossbred steers fed in the Pacific Northwest. Transl. Anim. Sci. 9:1-9. txaf098 doi.org/10.1093/tas/txaf098.

- Felizari, L.D., L. K. Fuerniss, J. L. Beckett, D. S. Secrist, G. D. Hufstedler, and **B. J. Johnson**. 2025. Evaluating a proprietary tannin-blend product as an alternative to monensin and tylosin phosphate in feedlot cattle diets. *Vet. Sci.* 12:446. <https://doi.org/10.3390/vetsci12050446>.
- Tegeler, A.P., H. R. Ford, J. F. Fiallo-Diez, T. C. Michelotti, **B. J. Johnson**, O. J. Benitez, D. R. Woerner, and C. A. Strieder-Barboza. 2025. Transcriptome and cellular evidence of depot-specific function in beef cattle intramuscular, subcutaneous, and visceral adipose tissues. *Biology* 14:848. <https://doi.org/10.3390/biology14070848>.
- Wesley, K. R., L. K. Fuerniss, J. R. Hall, J. D. Young, F. B. Green, P. N. Smith, J. P. Hutcheson, and **B. J. Johnson**. 2025. Effects of implant status and breed type on feedlot performance, carcass characteristics, sera metabolites, and immunohistochemical responses in finishing steers. *J. Anim. Sci.* 103:1-18. skaf003. <https://doi.org/10.1093/jas/skaf003>.
- Wesley, K. R., L. K. Fuerniss, J. T. Jobe, J. P. Hutcheson, W. T. Nichols, T. J. Kirkpatrick, S. L. Pillmore, K. B. Cooper, **B. J. Johnson**, and T. E. Lawrence. 2025. Myosin heavy chain, myogenic regulatory factors, and steroid hormone receptor responses in serially slaughtered implanted or nonimplanted beef steers. *Applied Animal Science* 41:10-20. <https://doi.org/10.15232/aas.2024-02579>.
- Dobbins, T. W., L. K. Fuerniss, M. S. Hernandez, **B. J. Johnson**, A. L. Petry, P. R. Broadway, N. C. Burdick Sanchez, and J. F. Legako. 2024. A pre- and postnatal immune challenge influences muscle growth and metabolism in weaned pigs. *J. Anim. Sci.* 102:1-10. skae350. <https://doi.org/10.1093/jas/skae350>.
- Urso, P. M., J. Kim, J. F. Legako, K. B. Wellmann, L. K. Fuerniss, and **B. J. Johnson**. 2024. Chromium and methionine effects on amino acid uptake, gene expression, and protein abundance in bovine satellite cells. *Meat and Muscle Biology* 8: 17748, 1-11. doi: <https://doi.org/10.22175/mmb.17748>.
- Foraker, B. A., **B. J. Johnson**, J. C. Brooks, M. F. Miller, N. C. Hardcastle, and D. R. Woerner. 2024. Carcass yield and subprimal cutout value of beef, high- and low-yielding beef × dairy, and dairy steers. *Meat and Muscle Biology* 8: 17004, 1-16. doi: <https://doi.org/10.22175/mmb.17004>.
- Theurer, M. E., D. R. Woerner, **B. J. Johnson**, R. Wilson, J. O. Sarturi, R. G. Amachawadi, T.G. Nagaraja, J. Simpson, J. T. Fox, P. Adams, and K. K. Karges. 2024. Effects of *saccharomyces cerevisiae* CNCM I-1077 and calcium clinoptilolite zeolite compared with tylosin phosphate and negative control on health, performance, carcass outcomes, and liver abscesses of dairy-beef cross feedlot cattle. *Applied Animal Science* 40: 317-328. <https://doi.org/10.15232/aas.2023-02475>.
- Wilson R. A., **B. J. Johnson**, J. O. Sarturi, W. L. Crossland, K. E. Hales, R. J. Rathmann, C. L. Bratcher, M. E. Theurer, R. G. Amachawadi, T.G. Nagaraja, S. E. Speidel, R. M. Enns, M. G. Thomas, B. A. Foraker, M. A. Cleveland, and D. R. Woerner. 2024. Identification of blood-based biomarkers for detection of liver abscesses in beef × dairy heifers. *Applied Animal Science* 40:386-397. <https://doi.org/10.15232/aas.2023-02504>.
- Lopez, A. M., J. O. Sarturi, **B. J. Johnson**, D. R. Woerner, D. D. Henry, F. M. Ciriaco, K. G. S. Silva, and C. J. Rush. 2024. Effects of bacterial direct-fed microbial combinations on beef cattle growth performance, feeding behavior, nutrient digestibility, ruminal morphology, and carcass characteristics. *J. Anim. Sci.* 102:1-10. doi.org/10.1093/jas/skae004.
- Silva, K. G. S., J. O. Sarturi, **B. J. Johnson**, D. R. Woerner, A. M. Lopez, B. M. Rodrigues, K. T. Nardi, and C. J. Rush. 2024. Effects of bacterial direct-fed microbial mixtures offered to beef cattle consuming finishing diets on intake, nutrient digestibility, feeding behavior, and ruminal kinetics/fermentation profile. *J. Anim. Sci.* 102:1-10. doi.org/10.1093/jas/skae003.
- Fuerniss, L. K., K. R. Wesley, S. M. Bowman, J. R. Hall, J. D. Young, J. L. Beckett, D. R. Woerner, R. J. Rathmann, and **B. J. Johnson**. 2023. Beef embryos in dairy cows: Feedlot performance, mechanistic responses, and carcass characteristics of straightbred Holstein calves and Angus-sired calves from Holstein, Jersey or crossbred beef dams. *J. Anim. Sci.* 101:1-14. doi.org/10.1093/jas/skad239.
- Fuerniss, L. K., J. D. Young, J. R. Hall, K. R. Wesley, O. J. Benitez, L. R. Corah, R. J. Rathmann, and **B. J. Johnson**. 2023. Beef embryos in dairy cows: Calfhood growth of Angus-sired calves from Holstein, Jersey or crossbred beef dams. *Transl. Anim. Sci.* 7:1-10. txad096 doi.org/10.1093/tas/txad096.
- Fuerniss, L. K., J. D. Young, J. R. Hall, K. R. Wesley, S. M. Bowman, L. D. Felizari, D. R. Woerner, R. J. Rathmann, and **B. J. Johnson**. 2023. Body, carcass, and steak dimensions of straightbred Holstein

- calves and Angus-sired calves from Holstein, Jersey, and crossbred beef dams. *J. Anim. Sci.* 101:1-14. doi.org/10.1093/jas/skad358.
- Fuerniss, L. K. and **B. J. Johnson**. 2023. Semi-automated technique for bovine skeletal muscle fiber cross-sectional area and myosin heavy chain determination. *J. Anim. Sci.* 101:1-8. doi.org/10.1093/jas/skad205.
- Wesley, K. R., A. B. Word, C. L. Maxwell, B. P. Holland, K. J. Karr, J. P. Hutcheson, L-A. J. Walter, and **B. J. Johnson**. 2023. The effect of different implant programs on beef × dairy steer feedlot growth performance and carcass characteristics. *Transl. Anim. Sci.* 7:1-10. txad124 doi.org/10.1093/tas/txad124.
- Waller, B. E., S. R. Garcia, L. K. Fuerniss, **B. J. Johnson**, D. R. Woerner, and D. M. Wulf. 2023. Effects of the F94L myostatin gene mutation in beef × dairy crossed cattle on muscle fiber type, live performance, carcass characteristics, and boxed beef and retail cut yields. *J. Anim. Sci.* 101:1-10. doi.org/10.1093/jas/skad324.
- Westbrook, L., **B. J. Johnson**, G. Gang, K. Toyonaga, E. Y. Kang, and S. B. Smith. 2023. GPR 120 gene expression and activity in subcutaneous and intramuscular adipose tissues of Angus crossbred steers. *J. Anim. Sci.* 101:1-10. doi.org/10.1093/jas/skad284.
- Fuerniss, L. K., K. K. Kreikemeier, L. D. Reed, M. D. Cravey, and **B. J. Johnson**. 2022. Cecal microbiota of feedlot cattle fed a four-species *Bacillus* supplement. *J. Anim. Sci.* 100:1-12. doi.org/10.1093/jas/skac258.
- Foraker, B. A., **B. J. Johnson**, R. J. Rathmann, J. F. Legako, J. C. Brooks, M. F. Miller, and D. R. Woerner. 2022. Expression of beef- versus dairy-type in crossbred beef × dairy cattle does not impact shape, eating quality, or color of strip loin steaks. *Meat and Muscle Biology* 5:2 1-19. doi:10.22175/mmb.13926.
- Dilger, A. C., **B. J. Johnson**, P. Brent, and R. L. Ellis. 2021. Comparison of beta-ligands used in cattle production: structures, safety, and biological effects. *J. Anim. Sci.* 99:1-16. doi.org/10.1093/jas/skab094. Board invited review.
- Baggerman, J. O., A. J. Thompson, M. A. Jennings, J. E. Hergenreder, W. Rounds, Z. K. Smith, and **B. J. Johnson**. 2021. Effects of encapsulated methionine on skeletal muscle growth and development and subsequent feedlot performance and carcass characteristics in beef steers. *Animals* 11:1627. doi.org/10.3390/ani11061627.
- Wellmann, K. B., J. K. Kim, P. M. Urso, Z. K. Smith, and **B. J. Johnson**. 2021. Evaluation of vitamin A status on myogenic gene expression and muscle fiber characteristics *J. Anim. Sci.* 99:1-10. doi.org/10.1093/jas/skab075.
- Thompson, A. J., Z. K. Smith, J. O. Sarturi, and **B. J. Johnson**. 2021. Antimicrobial supplementation alters digestibility and ruminal fermentation in a continuous culture model. *Journal of Applied Animal Research* 49:23-29. doi: 10.1080/09712119.2021.1876704.
- Chung, K. Y., J. K. Kim, and **B. J. Johnson**. 2021. All-trans retinoic acid alters the expression of adipogenic genes during the differentiation of bovine intramuscular and subcutaneous adipocytes. *J. Anim. Sci. Technol.* 63:1397-1410. https://doi.org/10.5187/jast.2021.e125.
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Invited Presentations (195)

Potential Mode of Action of CaHMB on Beef Feedlot Cattle. TSI Group/Metabolic Technologies, LLC. Campinas, S.P., Brazil. Oct. 18, 2024.

Application of anabolic agents in global meat production: Implications for antidoping. U. S. Antidoping Agency International Science Symposium. Seattle, WA. Sept. 28, 2024.

Nutrient signaling to skeletal muscle and adipose tissue. International Symposium of Ruminant Physiology. Chicago, IL. Aug. 27, 2024

Effective means of evaluating natural compounds as growth promotants for feedlot cattle. 58th Annual SBZ (Brazilian Animal Science) Meeting. Cuiaba, MT, Brazil. Aug. 13, 2024.

Podcast: Antidoping and Meat Contamination. The Shark Farmer. July 19, 2024.

Residues of anabolic agents and other veterinary compounds: Implications of foreign trade to human antidoping. Reciprocal Meat Conference. Oklahoma City, OK. June 17, 2024.

Texas Tech University Beef × Dairy Meeting: Moderator. Texas Tech University. Lubbock, TX. May May 14-16, 2024.

Influence of the plane of nutrition on postnatal growth through satellite cell activity. Purina/LOL Beef × Dairy Meeting. St. Louis, MO. April 18, 2024.

The effect of breed type on performance and growth responses in feedlot cattle. Munson Lakes Nutrition Beef Day. Winstead, MN. March 6, 2024.

The effect of breed type on performance and growth responses in feedlot cattle. Riverside Feeders Roundtable. Kennewick, WA. January 17-18, 2024.

Improving Beef Quality in Nicaragua. Carnes San Martin. Managua, Nicaragua. December 14, 2023.

Growth Promotants and Ionophores. Zoetis Beef Meeting. Richmond, MN. December 6, 2023.

Global Growth Promotant Usage for Meat Production. Agri-Beef/TTU Roundtable. Lubbock, TX. November 3, 2023.

Podcast: Antidoping and Meat Contamination. Taylor Hooton Foundation. September 21, 2023.

Making the Most of Dairy Pregnancies for Beef Production. Purina/LOL Dairy Training Conference. Alexandria, MN. September 13, 2023.

Managing the New Implant Regulations. OSU Extension Rancher's Roundtable (online). Lubbock, TX. September 7, 2023.

Podcast: Coenzymes and Muscle Growth. RumiNation Series. JEFO. August 30, 2023.

Implant Responses in Beef × Dairy Cross Cattle. Form-A-Feed Beef Conference. Larchwood, IA. June 28, 2023.

Beef Sire Committee. Select Sires. Dublin, OH. June 13, 2023.

Implant Responses in Beef × Dairy Cross Cattle. CA/AZ Cattle Feeders Meeting (CCA). San Diego, CA. May 25, 2023.

Global Steroidal Implants for Beef Production. Merck Animal Health. Amarillo, TX. May 21, 2023.

Global Growth Promotant Usage for Meat Production. Tyson Inc. Springdale, AR. May 17, 2023.

Current State of Beef × Dairy Cattle Feeding. Select Sires/COBA Elite Dairy Conference. Lubbock, TX. May 3, 2023.

Making the Most of Dairy Pregnancies for Beef Production. Select Sires/COBA Elite Dairy Conference. Lubbock, TX. May 2, 2023.

Implant Responses in Beef × Dairy Cross Cattle. Zoetis Shortcourse. Lubbock, TX. April 25, 2023.

Managing the New Implant Regulations. NCBA Cattlemen's College. New Orleans, LA. February 1, 2023.

Making the Most of Dairy Pregnancies for Beef Production. Form-A-Feed Dairy Conference. Red Wing, MN. January 12, 2023.

Making the Most of Dairy Pregnancies for Beef Production. Purina/LOL Elite Dairy Producer Conference. Wisconsin Dells, WI. January 10, 2023.

Beef on Dairy: Influence of Calf Type and Calf Management on Growth and Development. CA ARPAS Invited Talk. Coalinga, CA. Oct. 26, 2022.

The Role of Trace Elements in Sustainable Beef Production. XXIII International Feedlot Simposio UANL. Monterrey, MX. October 4, 2022.

Interactions Between Cattle Feeding, Growth Promotion and Marbling Development and Consumer Topics Surrounding Growth Promotant Use in Cattle. TX Angus Assoc. Shortcourse. Lubbock, TX. September 22, 2022.

Nutritional and management strategies to increase marbling and carcass quality in feedlot cattle. TX Angus Assoc. Shortcourse. Lubbock, TX. September 21, 2022.

Influence of Calf Type and Calf Management on Growth and Development. TTU Beef × Dairy Symposium. Lubbock, TX. May 11, 2022.

Rumen Fermentation End Products: Influence on Growth, Development, and Carcass Characteristics. MS Biotec Feedlot Nutrition Meeting. Omaha, NE. October 29, 2021.

Interactive Effects of Trace Mineral Supplementation on Growth in Feedlot Cattle. Global Animal Products Beef Meeting. Boise, ID. September 15, 2021.

Feeding Cattle During a Pandemic: What We Learned and What's Next. CAB Quality Feeding Forum. Ft. Collins, CO. August 25, 2021.

Cultured Meat and Plant-Based Meat Production: Counterfeit Claims. CA/AZ Cattle Feeders Meeting (CCA). San Diego, CA. August 19, 2021.

Implants: New insights into label reading. CA/AZ Cattle Feeders Meeting (CCA). San Diego, CA. August 20, 2021.

Performance of Holstein, Beef-Dairy Cross, and Conventional Beef Cattle. CA/AZ Cattle Feeders Meeting (CCA). San Diego, CA. August 19, 2021.

Impact of Growth Promotion on Meat Quality Characteristics. Reciprocal Meat Conference Invited Talk. Reno, NV. August 16, 2021.

Marbling and Growth Promotants. AgriBeef Shortcourse. Lubbock, TX. June 22, 2021.

Managing beef cattle growth amidst a global pandemic: Lessons learned from 2020 and strategies for the future. Midwest ASAS Meeting (online) March 9, 2021.

What Is the Impact of Dairy Influenced Cattle on the Traditional Beef Industry Structure? Midwest ASAS Meeting (online) March 9, 2021.

Nutritional and management strategies to increase marbling and carcass quality in feedlot cattle. DSM Brazil (online). Lubbock, TX. March 2, 2021

Basics of Diet Formulation in Bison Production on the Great Plains. National Bison Convention. Rapid City, SD. February 19, 2021.

Beef on Dairy Production. Global Animal Products Beef on Dairy Roundtable. Clovis, CA. November 19, 2020.

Plant-based and Lab Grown “Fake Meat”. Bulls for the 21st Century Bull Sale. Snyder Livestock Co. Inc. Yerington, NV. March 7, 2020.

Skeletal Muscle Growth and Development. Graduate course (3 credits) in UNESP-Botucatu, SP Brazil, August 12-16, 2019.

Risk of Exposure to Growth Enhancing Compounds Used in Livestock Industry Through Meat Consumption. RMC 2019. Ft. Collins, CO. June 25, 2019.

Ractopamine Use and Mode of Action in Beef Cattle. U. S.-Egypt Veterinary Drug Workshop, Cairo, Egypt. Sept. 10-11, 2018.

Historical Overview of the Effects of β -Adrenergic Agonists on Global Beef Cattle Production. MSD South African Feedlot Congress. Pretoria, South Africa. July 25-26, 2018.

Lipid supplementation in feedlot diets. 8th Symposium on Beef Cattle- Feedlot Cattle Production. USP-ESALQ, Piracicaba, SP-Brazil. Dec. 8, 2017.

Fat deposition in beef cattle. 8th Symposium on Beef Cattle- Feedlot Cattle Production. USP-ESALQ, Piracicaba, SP-Brazil. Dec. 7, 2017.

Marbling in beef cattle. Meat School en espanol 2017. Lubbock, TX, July 18, 2017.

Marbling development in beef cattle. Cargill Beef 101 Program. Lubbock, TX, July 12, 2017.

Modification of fatty acid intake to alter carcass gain and composition. VI Brazilian Ruminant Nutrition Conference. NUTRIR. Botucatu, SP Brazil, April 27-28, 2017.

Molecular mechanisms regulating growth and differentiation of skeletal muscle in beef cattle. VI Brazilian Ruminant Nutrition Conference. NUTRIR. Botucatu, SP Brazil, Apr. 27-28, 2017.

Implant dose and payout pattern alters the response of skeletal muscle and adipose tissue. Merck Animal Health Advisory Meeting. San Antonio, TX, Apr. 11, 2017.

Marbling development in beef cattle. Philbro Beef Shortcourse. Lubbock, TX, Apr. 10, 2017.

The future of feedlot management tools: 2018 and beyond. South African Feedlot Association Meeting. Johannesburg, South Africa. March 9, 2017.

Ionophore strategy affects growth performance and carcass quality of feedlot steers. Zoetis Nutritionist Meeting NCBA. Nashville, TN, Feb. 1, 2017.

Opportunities for Akaushi Cattle in The U. S. American Akaushi Assoc. National Convention. Lubbock, TX, Oct. 29, 2016.

Trends in the use of technology and other management practices for modern beef production in North America. Brazil Feedlot Consultants. Lubbock, TX, Oct. 5, 2016.

Ionophore strategy affects growth performance and carcass quality of feedlot steers. Zoetis Cattlyst Summit. Chicago, IL, Sept. 27, 2016.

Implant dose and payout pattern alters the response of skeletal muscle and adipose tissue in feedlot cattle. Merck Animal Health Nutritionist Meeting. Omaha, NE, Sept. 23, 2016.

Interactive effects of trace mineral supplementation on β -adrenergic agonist response in feedlot cattle. Global Animal Products-Mexico. Amarillo, TX, Aug. 25, 2016.

Trends in the use of technology and other management practices for modern beef production in North America. Cargill-Brazil. Lubbock, TX, June 27, 2016.

Marbling in beef cattle. Meat School en espanol 2016. Lubbock, TX, June 27, 2016.

Alterations in gene expression that affect lean tissue accretion and meat quality in food producing animals. 1st International Meeting of Advances in Animal Science. Jaboticabal, SP, Brazil, June 10, 2016.

Alternatives to antimicrobial-based feed additives in beef feedlot diets. CA/AZ Cattle Feeders Meeting. San Diego, CA, May, 26, 2016.

Chromium propionate enhances feedlot performance and carcass quality through changes in nutrient metabolism. 2016 Plains Nutrition Conference. San Antonio, TX, Apr. 14, 2016.

Implant dose and payout pattern alters the response of skeletal muscle and adipose tissue. Merck Animal Health Advisory Meeting. San Antonio, TX, Apr. 12, 2016.

Modification of fatty acid intake to alter carcass gain and composition. 11^o Encontro de Confinamento da Coan Consultoria, Ribeirao Preto, (SP) Brazil.

β -adrenergic agonist effects on postnatal skeletal muscle growth. Lubbock Christian University, Lubbock, TX, Jan. 22, 2016.

Application of steroid hormones in beef production. USMEF Egyptian Experts. Denver, CO, Oct. 23, 2015

Marbling in beef cattle. Meat School en espanol 2015. Lubbock, TX, Oct. 6, 2015.

Steroid hormone payout patterns. Elanco Animal Health Advisory Board. Denver, CO, Oct. 2, 2015.

Mechanism of action of growth promotants. Zoetis Animal Health Shortcourse. Lubbock, TX, Aug. 18, 2015.

Steroid hormone residue avoidance. Zoetis Animal Health Advisory Board. Denver, CO, May 7, 2015.

Application of steroid hormones in beef production. USMEF/FAS Steroid Hormone Workshop. Cairo, Egypt, Apr. 26-27, 2015

Application of growth technologies; enhancing global food security and sustainability. AFIA Nutrition Symposium. Orlando, FL, March 10, 2015.

Interactive effects of trace mineral supplementation on β -adrenergic agonist response in feedlot cattle. Southwest Nutrition and Management Conference. Tempe, AZ, Feb. 19, 2015.

Lesaffre Technical Consultants Beef Meeting. Lesaffre Feed Additives. Lubbock, TX, Nov. 19, 2014.

Trends in the use of technology and other management practices for modern beef production in North America. Biomin World Nutrition Forum. Munich, Germany. Oct. 16, 2014.

Future of the Texas Beef Cattle Industry. Texas Cattle Industry Summit. Austin, TX. Oct. 7, 2014.

Factors affecting postnatal skeletal muscle growth in beef cattle. The 2nd HES International Symposium -The applications of novel technology to improve Hanwoo meat quality and quantity. NIAS, Hanwoo Experiment Station. Pyeongchang, South Korea. Sept. 29, 2014.

History of growth promotant use in beef cattle: Safety and efficacy. South Dakota Veterinary Medical Assoc. Sioux Falls, SD. Aug. 13, 2014.

Chromatin Grain Sorghum Training Webinar. Chromatin Inc. Lubbock, TX. July 30, 2014.

Beef quality vs. quantity in today's market. Beef Species Symposium. JAM 2014. Kansas City, MO. July 21, 2014.

β -Agonist Symposium: Muscle fat/biology: Muscle. JAM 2014. Kansas City, MO. July 20, 2014.

Como garantir adequado acabamento de carcaça em confinamento. Palestra Escrita - 9º Encontro de Confinamento da Coan Consultoria. Ribeirão Preto, SP Brazil. March 13, 2014.

Chromium Research Update. Kemin Industries. Des Moines, IA. Feb. 18, 2014.

Implant programs for calves: realizing a return on investment. 2014 Saskatchewan Beef and Forage Symposium. Saskatoon, SK. Canada. Jan. 22, 2014.

Lesaffre Technical Consultants Meeting. Lesaffre Feed Additives. San Antonio, TX, Jan. 8, 2014.

Update of β -adrenergic agonist research. Merck Animal Health Academic Meeting. Dallas, TX, Dec. 17, 2013.

Current beef production practices. TCFA Board of Directors. Amarillo, TX, Nov. 15, 2013.

Strategies to improve carcass gain in feedlot cattle. NERP Beef Cattle Workshop. Cuiaba, MT, Brazil, Nov. 11, 2013

Growth and development of meat animals. CA ARPAS Meeting. Coalinga, CA, Oct. 25, 2013.

Issues of β -adrenergic agonists usage in global beef production. 2013 TCFA and Allied Industries Key Decision Makers Meeting. Amarillo, TX, Sept 18, 2013.

Issues with beta agonist use in beef cattle. Liquid Feed Symposium. St. Louis, MO, Sept. 12, 2013.

A global perspective of beef production. Texas 4-H Livestock Ambassador Academy. Lubbock, TX, July 22, 2013.

Application of steroidal implants in beef cattle. IV Brazilian Ruminant Nutrition Conference. NUTRIR. Botucatu, SP Brazil, May 17-18, 2013.

Mode of action of β -adrenergic agonist in beef cattle. IV Brazilian Ruminant Nutrition Conference. NUTRIR. Botucatu, SP Brazil, May 17-18, 2013.

Lesaffre Technical Consultants Meeting. Lesaffre Feed Additives. Lubbock, TX, Jan. 4-5, 2013.

Skeletal Muscle Growth in Beef Cattle. Elanco Animal Health. Greenfield, IN, Dec. 13, 2012.

Chromium Research Update. Kemin Industries. Des Moines, IA, Oct. 23, 2012.

Metabolism of β -adrenergic agonists in cattle. Merck Animal Health Residue Avoidance Meeting. Lawrence, KS, Oct. 2, 2012.

Mode of action of β -adrenergic agonist in beef cattle. MSD Brazil Zilmax Launch Meeting. Sao Paulo, Brazil, Aug. 2, 2012.

Changes in cattle performance at the end of the feeding period. Pfizer/Dakotaland Feeds Seminar. Huron, SD, July 9, 2012.

Research Update in Beef Cattle Growth. Dekalb Feed Summer Seminar. Delavan, WI, June 29, 2012.

Increasing marbling gene expression in beef cattle with dietary lipids. 65th AMSA Reciprocal Meat Conference. Fargo, ND, June 18, 2012.

Changes in growth rate and carcass composition at the end of the feeding period. CA-AZ Cattle Feeders Council. San Diego, CA, May 17, 2012.

Marbling Development in Beef Cattle. 21st Century Beef Club. Lubbock, TX, Apr. 19, 2012.

Interactive effects of Zn and β -adrenergic agonist in beef cattle growth. ZinPro Pre-PNC Symposia. San Antonio, TX, Apr. 12, 2012.

Main factors influencing fat deposition in beef cattle. Philbro Brazilian Beef Shortcourse. Lincoln, NE, Apr. 10, 2012.

Growth Promotants and Carcass Gain. AgriBeef Livestock Management Meeting. Phoenix, AZ, Feb. 27-28, 2012.

Beta Agonist Mode of Action. ZinPro Beef Team. Nashville, TN, Jan. 31, 2012.

Lesaffre Technical Consultants Meeting. Lesaffre Feed Additives. Lubbock, TX, Jan. 3-5, 2012.

Practical Implications of Zilmax Serial Slaughter Studies in Feedlot Cattle. Merck Animal Health. Calagary, AB, Nov. 15, 2011.

Historical Overview of the Effects of β -Adrenergic Agonists on Beef Cattle Production. 4th Korea-U.S. International Symposium “Producing High-Quality Beef for the Global Market”. College Station, TX, Nov. 1-2, 2011.

Balancing Muscle Growth and Beef Quality. Chunbuk University and NIAS. Seoul, Suwan, and Cheongju, South Korea. Sept. 26-Oct. 3, 2011.

Marbling Development in Beef Cattle: 64th AMSA Reciprocal Meat Conference. Manhattan, KS, June 21, 2011.

Argentina Beef Producers Group: CREA. Lubbock, TX, May 23-24, 2011.

Texas Tech University Research Update. 2011 Plains Nutrition Council Spring Conference. San Antonio, TX, April 14, 2011.

Lesaffre Technical Consultants Meeting. Lesaffre Feed Additives. Lubbock, TX, Jan. 4-6, 2011.

Potential Mode of Action of β -agonists in Skeletal Muscle. The Application of Zilpaterol HCL in the Beef Industry. Intervet/Schering-Plough. Lubbock, TX, Sept. 22, 2010.

Argentina Beef Feedlot Group. Duhau Family Feedlot. Lubbock, TX, Sept. 8, 2010.

Current Techniques in Muscle Biology: 63rd AMSA Reciprocal Meat Conference. Lubbock, TX, June 21, 2010.

Factors Related to β -Agonist Response. Elanco Animal Health Independent Consultants Meeting. Albuquerque, NM, June 4, 2010.

South Korean Beef Group. Lubbock, TX, May 24, 2010.

Marbling Consultants Task Force. Intervet/Schering-Plough/CAB/TTU/TAMU. College Station and Lubbock, TX, May 17-20, 2010

Todd Staples and Texas Department of Agriculture. Texas Tech University. Lubbock, TX, May 10, 2010.

Beef Solutions Team Meeting/Sam’s Club. Lubbock, TX, March 26, 2010.

Marbling Development. Simplot Livestock. Boise, ID. March 30-31, 2010.

Current Research in Marbling Development. Angus Research Board. St. Joseph, MO, Feb. 18, 2010.

Technical Services Beef Research Program. Intervet/Schering-Plough. Lubbock, TX, Feb. 10-12, 2010.

Lesaffre Technical Consultants Meeting. Lesaffre Feed Additives. Lubbock, TX, Jan. 5-6, 2010.

Technical Services Beef Research Program. Intervet/Schering-Plough and the Camelot Consulting Group. Lubbock, TX, Dec. 15, 2009.

New Frontiers of Marbling Research. Meat and Livestock Australia. Lubbock, TX, Dec. 11, 2009.

Factors Affecting Marbling Development in Cattle. Academy of Veterinary Consultants 2009 Winter Conference. Denver, CO, Dec. 4, 2009.

U. S. Beef Cattle Feeding Industry. Colombian Beef Group Tour. Lubbock, TX, Oct. 9, 2009.

Balancing Productivity, Efficiency, and Quality in the Beef Industry. Cal Poly Bull Test Field Day. San Luis Obispo, CA, Oct. 3, 2009.

U. S. Beef Cattle Feeding/Growth Enhancing Compounds. Cochran Thai Fellows Program. Lubbock, TX, Sept. 28, 2009.

Beef Cattle Growth. Junior Shorthorn Assn. Key Conference. Lubbock, TX, August 1, 2009.

Cellular Differentiation: Muscle Growth and Marbling. 2009 JAM ADSA CSAS ASAS Meetings. Montreal CA, July 13, 2009.

Understanding the Zilmax Advantage. Intervet/Schering-Plough and the Beef Marketing Group. Lubbock TX, July 8, 2009.

Bovine Satellite Cells as Precursors of Intramuscular Adipocytes. 62nd Reciprocal Meat conference. Rogers AR, June 23, 2009.

Potential Mode of Action of β -agonists in Skeletal Muscle. The Application of Zilpaterol HCL in the Beef Industry: A Technical Symposium. Rogers AR, June 21, 2009.

Rev XS and Marbling in Beef Cattle. CAB/ISPAH-Rev XS Meeting, Kansas City MO, June 8, 2009.

Potential mode of action of β -adrenergic agonists. Kemin Industries. Des Moines IA, April 23, 2009.

Rev XS and Marbling in Beef Cattle. Intervet/Schering-Plough Advisory Group. San Antonio TX, April 17, 2009.

Adipocyte Biology Meeting. Pfizer Animal Health. Lubbock TX, March 26, 2009.

Marbling Enhancement Discussion. NCBA/CAB. Phoenix AZ, January 30, 2009.

Marbling 101. CAB Black Ink Basics Meeting. Lubbock TX, Aug. 21, 2008.

Zilpaterol HCl: Potential mode of action in cattle. Tyson, Inc. Dakota Dunes, SD, Aug. 5, 2008.

Effect of Cane Molasses on Absorptive Capacity of Rumen Papillae in Dairy Cows During the Dry Periods and Early Lactation. AFIA Liquid Feed Symposium. Scottsdale AZ, Sept. 5, 2007.

Application of Cellular Mechanisms to Growth and Development of Food Producing Animals. 2007 ADSA/PSA/AMPA/ASAS Joint Meeting. San Antonio TX, July 11, 2007.

Economics and management of beef cattle growth implants: Production efficiency and carcass merit. Fort Dodge Animal Health Elite Cattle Feeders Conference. Colorado Springs CO, June 29, 2007.

Current trends in satellite cell research. Reciprocal Meat Conference. Brookings SD, June 18, 2007.

Growth promotant product training: Food Safety Education Network. NCBA. Chicago IL, June 11, 2007.

Current trends in satellite cell research. NCCC-206 Feedlot Committee 2007 Annual Meeting and Regional Station Research Update. Manhattan KS, June 6, 2007.

Growth enhancement technologies for beef cattle: Mode of action. NCBA/GET IT Think Tank. Denver CO, May 21-22, 2007.

Cellular aspects of intramuscular adipogenesis: Competition for cells between muscle and marbling. Plains Nutrition Spring Conference, San Antonio TX, March 29, 2007.

Review of Zilpaterol in vitro muscle research. Intervet Muscle and Adipose Meeting. San Antonio TX, March 28, 2007.

Zilpaterol HCl: Potential mode of action in cattle. Intervet Nutritionist Advisory Meeting. San Antonio TX, March 27, 2007.

Growth enhancement technologies for beef cattle: Mode of action. NCBA/GET IT Think Tank. Dallas TX. Feb. 28, 2007.

Marbling development: Understanding the biology at the cellular level. NCBA Adipogenesis Workgroup. Stillwater OK, Dec. 11, 2006.

Cellular mechanisms regulating skeletal muscle growth in cattle. Diagnostic Medicine and Pathobiology Seminar. Manhattan KS, Nov. 30, 2006.

Marbling development: Understanding the biology at the cellular level. Cargill Meat Solutions. Wichita KS, Sept. 26, 2006.

Potential mode of action of ractopamine. Elanco Animal Health. Indianapolis IN, June 12, 2006.

Marbling development: Understanding the biology at the cellular level. Certified Angus Beef Think Tank. Des Moines IA, March 21, 2006.

Pattern of expression of genes in the IGF system during gestation in pigs. Billy N. Day Appreciation Club Symposium, Des Moines IA, March 21, 2006.

Future technologies for enhancing beef cattle growth. 93rd Annual Cattlemen's Day, Manhattan KS, March 3, 2006.

Influence of management techniques on feedlot performance and carcass composition. LOL Beef Cattle Shortcourse, Manhattan KS, July 20, 2005.

Mode of action of steroidal implants and β -adrenergic agonists in beef cattle. Intervet Technical Consultant Training Meeting, Lubbock TX, May 24-25, 2005.

Bovine growth and development: Composition of growth and mechanisms regulating growth. Dairy Calves and Heifers: Integrating biology and management, Syracuse, NY, January 25, 2005.

Growth of nursery pigs fed diets supplemented with live yeast at different dosages with or without antibiotics. VI International Seminar “Applied Microbiology in Animal Nutrition” Veracruz, Mexico, November, 2004

Interactive responses in gut immunity, and systemic and local changes in the IGF system in nursery pigs in response to *Salmonella enterica* serovar Typhimurium. 2004 Joint Annual Meeting (ASAS), St. Louis, MO, July 29, 2004.

Effect of L-carnitine on porcine embryonic myoblast proliferation and the IGF-system. Carnitine Conference EB 2004, Washington D.C., April 17, 2004.

β -Adrenergic agonists: Efficacy and potential mode of action in cattle. Proc. Plains Nutrition Spring Conference, San Antonio, TX, April 16, 2004.

In vitro adhesive effect of *Saccharomyces cerevisiae* on *E. coli* and Biosaf in beef receiving diets. Canadian Nutritional Feed Additives Seminar April, 2003

In vitro adhesive effect of *Saccharomyces cerevisiae* on *E. coli* and Performance of piglets inoculated with *Salmonella typhimurium* and supplemented with Saf Mannan
V International Seminar “Applied Microbiology in Animal Nutrition” November, 2002

Growth-Promoting Implants for Beef Cattle.
SAVMA National Convention, Ames, IA, March, 2001

Beef Cattle Receiving Diets
IV International Seminar “Applied Microbiology in Animal Nutrition” November, 2000

Use of alternative corn hybrids in feedlot diets.
Minnesota Cattle Feeder Days, December 1998

Safety Concerns with Growth-Promoting Implants in Beef Cattle.
National NEAFCS Convention, Rapid City, SD, October 1998

Implant/Protein Requirements.
Elanco Canada, Alberta, CA, September/October 1998

Nutrient Management in the Beef Feedlot.
College Livestock Feed Conference Board Meeting, Ft. Mitchell, KY, September 1998

Receiving Cattle Management.
Ralco Mix Inc., Marshall, MN, August 1998

Nutrient Management in the Beef Feedlot.
Land O Lakes BPS/BEC Training Meeting, Sioux City, IA, July 1998

Tailoring feedlot nutrition and management programs to cattle type and marketing strategy.
Minnesota Cattle Feeder Days, December 1997

Value-Based Marketing Seminar
Hubbard Feeds, Sleepy Eye, MN, October 1997

Value-Added Marketing
Land O Lakes Feed, Oacoma, SD, September 1997

Proposed mechanisms of trenbolone acetate in beef cattle.
NCR-185 Annual Meetings, Minneapolis, MN, June 16, 1995

Matching protein nutrition with cattle type.
Minnesota Cattle Feeder Days, Waseca, MN December 11, 1991

Extramural Support

A multi-omics approach to understanding marbling deposition variation between muscles.

Bradley J. Johnson

NCBA-\$14,947.65 (ORS credited amount for BJJ); Funded January 2024.

Modeling for genomic, blood, and microbiological markers for liver abscesses in fed beef cattle.

Bradley J. Johnson

Foundation for Food and Agriculture Research-\$30,000.00 (ORS credited amount for BJJ); Funded June 2023.

Unraveling molecular and cellular mechanisms underlying intramuscular, subcutaneous, and visceral adipose tissue growth in beef cattle.

Bradley J. Johnson

USDA-NIFA-\$97,500.00 (ORS credited amount for BJJ); Funded March 2023.

Residue analysis of prohibited anabolic agents in the U. S. meat supply chain.

Bradley J. Johnson

Partnership for Clean Competition -\$211,109.00; Funded July 2022.

Effects of *Saccharomyces cerevisiae* on beef cattle grower and finisher diets.

Bradley J. Johnson

Lallemand Specialties, Inc.-\$16,562.56 (ORS credited amount for BJJ); Funded June 2022.

Effects of implant status and breed type on feedlot performance, serum analyses, and biological responses in finishing steers.

Bradley J. Johnson

Merck Animal Health-\$130,000.00; Funded October 2021.

Quality and Food Safety Assessments of Cell Based Muscle Tissue

Bradley J. Johnson

New Harvest Inc.-\$9750.00 (ORS credited amount for BJJ); Funded February 2021.

Effects of direct fed microbials (selected *Bacillus* strains) on beef cattle ruminal fermentation and growth performance.

Bradley J. Johnson

Chr. Hansen-\$44,543.20 (ORS credited amount for BJJ); Funded August 2020.

Understanding the effect of phenotype expression in the dairy beef model on beef quality.

Bradley J. Johnson

NCBA-\$8764.00 (ORS credited amount for BJJ); Funded August 2020.

Effects of direct fed microbials (selected *Bacillus* strains) on in vitro ruminal fermentation.

Bradley J. Johnson

Chr. Hansen-\$17,592.00 (ORS credited amount for BJJ); Funded April 2020.

Quality and Food Safety Assessments of Cell Based Muscle Tissue

Bradley J. Johnson

New Harvest Inc.-\$5850.00 (ORS credited amount for BJJ); Funded January 2020.

Promotion of lipid accumulation in adipose tissue by GPR43 and oleic acid.

Bradley J. Johnson

USDA-NIFA-\$239,693.00; Funded May 2019

Muscle fiber distribution and steroid hormone receptor density in skeletal muscles of beef cattle over time.

Bradley J. Johnson

Merck Animal Health-\$40,000; Funded Aug. 2019

Understanding the influence of beef X dairy crossbred cattle on eating quality, retail display life, and chemical composition in beef strip loins.

Bradley J. Johnson (co-PI)

NCBA-\$6672.48; Funded May 2019

Evaluation of vitamin A status on sera metabolites, muscle fiber type, and carcass characteristics of feedlot cattle.

Bradley J. Johnson

SPRINT FAPESP/TTU International Grant-\$10,000; Funded May 2018

Evaluation of Revalor-XR, a new extended release, long-acting implant in beef steers: Supplement II

Bradley J. Johnson

Merck Animal Health-\$30,000; Funded Oct. 2017

Evaluation of Revalor-XR, a new extended release, long-acting implant in beef steers: Supplement I

Bradley J. Johnson

Merck Animal Health-\$51,228.70; Funded April 2017

Evaluation of Revalor-XR, a new extended release, long-acting implant in beef steers.

Bradley J. Johnson

Merck Animal Health-\$165,190; Funded May 2016

Comparison of the effects of Cattlyst/Aureomycin combination vs. Rumensin/Tylan with multiple beta-agonist feeding strategies.

Bradley J. Johnson

Zoetis Animal Health-\$85,080; Funded June 15, 2015

Effects of chromium propionate supplementation on skeletal muscle fiber and receptor characteristics in steers.

Bradley J. Johnson

Kemin Industries, Inc.-\$92,450; Funded June 1, 2014

Functional effects of natural growth promotants on development of bovine adipose and muscle tissue.

Bradley J. Johnson

National Institute of Animal Science. Republic of Korea- \$50,000; Funded Apr. 1, 2014

Muscle fiber distribution and β -adrenergic receptor density of ten different muscles from feedlot heifers fed zilpaterol HCl.

Bradley J. Johnson

Merck Animal Health-\$56,250; Funded Aug. 2014

Muscle fiber distribution and β -adrenergic receptor density of three different muscles from feedlot steers and heifers fed LY488756 or ractopamine HCl.

Bradley J. Johnson
Elanco Animal Health-\$56,000; Funded Oct. 2014

Multi-site dose confirmation clinical effectiveness study of the carcass leanness of confined finishing cattle administered zilmax at 4.0, 5.4, or 6.8 grams/ton on a 90% dry matter basis in a type C feed.

Bradley J. Johnson
Merck Animal Health- \$277,509; Funded Sept. 1, 2014

The role of DL-methionine and L-lysine on regulating muscle satellite cell growth and differentiation and their effects on finishing beef cattle performance.

Bradley J. Johnson
Kemin Industries, Inc.-\$106,312; Funded Aug. 1, 2013

Functional effects of natural growth promotants on development of bovine adipose and muscle tissue.

Bradley J. Johnson
National Institute of Animal Science. Republic of Korea- \$50,000; Funded Apr. 1, 2013

Repeat dose pharmacokinetics, formulation, palatability, and adipocyte gene marker measurements in cattle administered AH324519.

Bradley J. Johnson
Merck Animal Health- \$82,803; Funded Sept. 1, 2013

Effect of LY488756 and ractopamine on β -adrenergic receptor abundance in skeletal muscle and adipose tissue of feedlot steers.

Bradley J. Johnson
Elanco Animal Health-\$28,250; Funded Feb. 2013

Beef Cattle Receiving and Finishing Research

Bradley J. Johnson
Lesaffre Feed Additives-\$58,000; Funded Jan. 2013

The use of zinc to stabilize the β 2-adrenergic receptor and alter signal transduction in cultured muscle cells.

Bradley J. Johnson
Zinpro, Inc.-\$12,500; Funded Oct. 2013

Evaluation of the heat stress response in black hided cattle treated with zilpaterol HCl during the finishing phase.

Bradley J. Johnson
Merck Animal Health- \$42,755; Funded July, 2013

Effects of inoculants added to sorghum ethanol co-products and low-quality roughage blend silages on silage fermentation profile and losses.

Bradley J. Johnson
DeLaval Manufacturing-\$1,551; Funded July 2013

Enhancement of marbling in beef cattle with a novel MEB compound.

Bradley J. Johnson
Merck Animal Health- \$223,125; Funded Sept. 1, 2012

Interaction of Optaflexx and terminal implant window on growth performance and carcass characteristics in heifers: Supplement

Bradley J. Johnson
Elanco Animal Health-\$30,000; Funded January 2012

Interaction of Optaflexx and terminal implant window on growth performance and carcass characteristics in heifers

Bradley J. Johnson and Aaron Jennings

Elanco Animal Health-\$92,000; Funded January 2011

The use of zinc to stabilize the β 2-adrenergic receptor and alter signal transduction in cultured muscle cells.

Bradley J. Johnson, Ki Yong Chung, Andrew D. Hosford, and Tyler Harris

Zinpro, Inc.-\$36,600; Funded June 2011

Effects of supplemental methionine and lysine with zilpaterol hydrochloride on feedlot performance, carcass characteristics and tenderness on finishing feedlot cattle.

Bradley J. Johnson and Andrew D. Hosford

Kemin Industries, Inc.-\$66,188; Funded July 2011

The role of fatty acids at enhancing marbling development through bovine G coupled protein receptors.

Bradley J. Johnson and Ki Yong Chung

NCBA-\$80,000; Funded May 2010

Marbling Development Fund

Bradley J. Johnson

Angus Research Foundation-\$16,667; Funded Oct. 2010

Beef Cattle Receiving Research

Bradley J. Johnson

Lesaffre Feed Additives-\$25,000; Funded Dec 2010

Growth Promoters, Wind, and Human Ecological Health

Bradley J. Johnson

U. S. Department of Agriculture-\$119,464; Funded January 2010

Effects of supplemenatal chromium propionate on feedlot performance during the receiving period of stressed beef cattle.

Bradley J. Johnson

Kemin Industries, Inc.-\$27,772; Funded June 2010

The role of chromium propionate at enhancing adipogenic differentiation of bovine cells

Bradley J. Johnson

Kemin Industries, Inc.-\$17,580; Funded April 2010

Quantification of the relationship between distiller's grains co-products and E. coli O157:H7 load

Bradley J. Johnson

U. S. Department of Agriculture-\$48,507; Funded January 2010

Regulation of marbling development in beef cattle by specific fatty acids

Bradley J. Johnson, Stephen B. Smith, and Matthew E. Doumit

NCBA-\$150,000; Funded May 2009

Chemical marbling enhancement

Bradley J. Johnson

Intervet Inc.-\$33,144; Funded August 2009

Center for Food Industry Excellence, Texas-2009 (subaward)

Bradley J. Johnson

U. S. Department of Agriculture-\$76,991.04; Funded September 2009

Zilmax Carcass and Warner Bratzler Shear Tenderness

Bradley J. Johnson

Intervet Inc.-\$8,892; Funded July 2009

Zilmax Tenderness Modeling

Bradley J. Johnson

Intervet Inc.-\$17,556; Funded July 2009

Differential mobility cytometry to study apoptosis of cardiomyocytes

Dimitri Pappas and Bradley J. Johnson

NIH-\$1,515,310; submitted; not funded March 2009

Steroid receptor regulation in response to anabolic growth promotants

Bradley J. Johnson

Intervet Inc.-\$136,690; Funded August 2008

The role of oleic acid at enhancing adipogenic differentiation of bovine muscle-derived cells and preadipocytes

Bradley J. Johnson and Ki Yong Chung

NCBA-\$65,712; submitted Nov. 2008 Not funded.

The effect of calf-hood vaccination and morbidity on marbling development in finishing cattle

Tiffanie A. Brooks, Bradley J. Johnson, Mhairi Sutherland, and J. Chance Brooks

NCBA-\$75,000; submitted Nov. 2008 Not funded.

Reciprocal enhancement of beef production systems in Argentina and the United States

Bradley J. Johnson (PD), J. Ernest Minton, D. Nichols, J. Unruh, K. C. Dhuyvetter, and M. Ashlock

USDA/ISE Program.-\$100,000; Not Funded

Effects of zilpaterol HCl on cultured bovine muscle cells

Bradley J. Johnson

Intervet Inc.-\$15,000; Funded July 2007

Conversion of muscle-derived cells from beef cattle to adipocytes in a cell culture model

Bradley J. Johnson

Kansas Beef Council- \$30,000; Funded January 2007

Effects of ractopamine-HCl on protein synthesis and degradation in finishing cattle

Evan C. Titgemeyer and Bradley J. Johnson

Elanco Animal Health (T4V200611)-\$90,000; Funded Jan. 2007

Establishing K-State as the knowledge source for steroid waste management from beef feedlots

J. Ernest Minton, Bradley J. Johnson, Joel DeRouchey, and J. Scott Smith

KSRE Mini-Grant- \$39,800; Funded May 2007

Do rumen microbes alter milk and body composition in cattle through FIAF?

Barry Bradford and Bradley J. Johnson

KSRE Mini-Grant- \$35,000; Funded May 2007

Effect of cane molasses on absorptive capacity of rumen papillae in dairy cows in early and late lactation

Bradley J. Johnson

American Feed Industry Association- \$10,000; Funded May 2006

Defining the mechanisms of steroid-enhanced muscle growth in steers: Individual roles of trenbolone acetate, estradiol and IGF-I

Bradley J. Johnson, Michael E. White, William R. Dayton, and Marcia R. Hathaway

USDA NRICGP-\$399,978; Funded January 2006

Interaction of *Salmonella enterica* with the porcine gut mucosa.

J. Ernest Minton, Bradley J. Johnson, Steven S. Dritz, and Frank Blecha

USDA Animal Health – 1433 - \$95,281; Funded (2004)

Effect of L-carnitine on porcine embryonic muscle growth and differentiation.

Bradley J. Johnson and Kelly R. Lawrence

Lonza Inc. - \$136,000; Funded (2004)

Growth performance of weaned pigs fed diets containing yeasts, and binding of pathogenic bacteria by yeast *in vitro*.

J. Ernest Minton, Bradley J. Johnson, and Steven S. Dritz

LeSaffre Feed Additives - \$8,000; Funded (2004)

Fertilium and early pregnancy and fetal development in swine.

Duane L. Davis and Bradley J. Johnson

United Feeds Inc.- \$5,000; Funded (2004)

Animal health funds to purchase a fluorescent, inverted microscope for muscle growth research.

Bradley J. Johnson

USDA Animal Health – 1433 - \$7,055; Funded (2003)

Animal health funds to purchase a microgrinder to enhance umbilical cord stem cell studies.

Duane L. Davis, David Grieger, Bradley J. Johnson, and Deryl Troyer

USDA Animal Health – 1433 - \$4,925; Funded (2003)

Effect of yeast (Procreatin-7) and fibrolytic enzymes (FP800) on lactational performance of dairy cows.

Evan C. Titgemeyer, Bradley J. Johnson, and John Shirley

LeSaffre Feed Additives - \$25,000; Funded (2003)

Flaxseed as a component of finishing cattle diets.

James S. Drouillard and Bradley J. Johnson

North Dakota Oilseed Council - \$22,895; Funded (2003)

Effect of L-carnitine on porcine embryonic myoblast proliferation and differentiation.

Bradley J. Johnson

Lonza Inc. - \$9,894; Funded (2002)

Effect of L-carnitine on porcine embryonic muscle growth and development.

Bradley J. Johnson

Lonza Inc. - \$60,000; Funded (2002)

The effect of a *Salmonella typhimurium* disease challenge on porcine muscle growth.

Bradley J. Johnson, J. Ernest Minton, Steven S. Dritz, and Jerome Nietfeld
USDA Animal Health – 1433 - \$16,000; Funded (2002)

Can dietary mannanoligosaccharides and sodium chlorate alter the pathobiology and bacterial shedding of *Salmonella typhimurium*-infected pigs.

J. Ernest Minton, Bradley J. Johnson, Steven S. Dritz, and Jerome Nietfeld
USDA Animal Health – 1433 - \$16,000; Funded (2002)

Lactic acid-producing bacteria as feed additives in swine diets.

J. Ernest Minton, Steven S. Dritz, Bradley J. Johnson, and Joel DeRouchey
Chr Hansen Biosystems - \$18,000; Funded (2002)

In vitro evaluation of enzyme treatment of soybean hulls to increase their nutritive value.

Evan Titgemeyer and Bradley J. Johnson
SAF Agri - \$10,500; Funded (2002)

Effect of melengestrol acetate (MGA) on cultured bovine muscle satellite cell proliferation and differentiation.

Bradley J. Johnson and James S. Drouillard
Pharmacia Animal Health - \$17,600; Funded (2001)

The role of polyunsaturated fatty acids on proliferation and differentiation of cultured muscle cells.

Bradley J. Johnson
Bioserve Space Technologies - \$10,000; Funded (2001)

Flaxseed as a component of finishing cattle diets.

James S. Drouillard and Bradley J. Johnson
N.D. Oilseed Commission - \$105,080 + 24 Ton Flax; Funded (2001)

The effects of P7, fed during the receiving period, on subsequent carcass characteristics.

Bradley J. Johnson and James S. Drouillard
SAF Agri - \$22,000; Funded (2001)

Growth and immunomodulatory effects of dietary mannanoligosaccharides (SAF Mannan) in *Salmonella*-infected pigs.

Bradley J. Johnson, J. Ernest Minton, and Steven S. Dritz
SAF Agri - \$8,000; Funded (2001)

The effect of a *Salmonella typhimurium* disease challenge on porcine muscle growth.

Bradley J. Johnson, J. Ernest Minton, Steven S. Dritz, and Jerome Nietfeld
USDA Animal Health – 1433 - \$15,000; Funded (2001)

Can dietary mannanoligosaccharides and sodium chlorate alter the pathobiology and bacterial shedding of *Salmonella typhimurium*-infected pigs.

J. Ernest Minton, Bradley J. Johnson, Steven S. Dritz, and Jerome Nietfeld
USDA Animal Health – 1433 - \$15,000; Funded (2001)

Ascorbic acid supplementation: Effects on glycogen metabolism and carcass yield in beef cattle.

James S. Drouillard and Bradley J. Johnson
Roche Vitamins - \$32,000; Funded (2001)

Elucidation of factors predisposing steers to buller steer syndrome.

Dale A. Blasi and Bradley J. Johnson
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Tumor necrosis factor – α : Implications for glucose regulation and health in growing and finishing cattle.

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USDA Animal Health – 1433 - \$8,000; Funded (2001)

Assessment of blood constituents among feedlot heifers fed finishing rations with and without melengestrol acetate.

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Pharmacia Animal Health - \$36,960; Funded (2001)

Protection of micro-ingredient feedstuffs from microbial degradation with biodegradable coatings.

James S. Drouillard, Tom Herald, and Bradley J. Johnson

APUF - \$10,000; Funded (2001)

Application of Digestive Enzyme to Improve Soybean Hull Utilization in Cattle.

Evan Titgemeyer, James S. Drouillard, and Bradley J. Johnson

SAF Agri - \$6,500; Funded (2001)

Health and management factors affecting beef value.

S. W. Fausti, B. J. Johnson and W. B. Epperson.

USDA-NRICGP-Seed Grant 80.3 \$50,000 Funded (8/1/99)

Utilization of waxy endosperm corn in beef feedlot diets.

B. J. Johnson.

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Producing and feeding high-oil corn for integrated crop and livestock enterprises.

B. J. Johnson and R. Berg, Jr.

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R. J. Pruitt and B. J. Johnson.

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Evaluation of carcass tenderness and quality grade in a sample of South Dakota cattle.

B. J. Johnson.

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The effects of Biosaf on feedlot performance during the receiving period.

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SAF Products \$3520 Gift Funded (12/10/98)

Investigation of serologic titer related to vaccination and previous management.
W. B. Epperson, B. J. Johnson, D. Zalesky, and J. Walker.
Fort Dodge Animal Health. \$4,860 Funded (11/15/98)