

Karen A Beauchemin

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99
papers

2,200
citations

25
h-index

43
g-index

111
ext. papers

2,993
ext. citations

2.6
avg, IF

6.17
L-index

| # | Paper | IF | Citations |
|----|---|-----|-----------|
| 99 | Life cycle assessment of greenhouse gas emissions from beef production in western Canada: A case study. <i>Agricultural Systems</i> , 2010 , 103, 371-379 | 6.1 | 240 |
| 98 | Characterization of the core rumen microbiome in cattle during transition from forage to concentrate as well as during and after an acidotic challenge. <i>PLoS ONE</i> , 2013 , 8, e83424 | 3.7 | 208 |
| 97 | A review of feeding supplementary nitrate to ruminant animals: nitrate toxicity, methane emissions, and production performance. <i>Canadian Journal of Animal Science</i> , 2014 , 94, 557-570 | 0.9 | 97 |
| 96 | Methane abatement strategies for cattle: Lipid supplementation of diets. <i>Canadian Journal of Animal Science</i> , 2007 , 87, 431-440 | 0.9 | 96 |
| 95 | Review: Fifty years of research on rumen methanogenesis: lessons learned and future challenges for mitigation. <i>Animal</i> , 2020 , 14, s2-s16 | 3.1 | 93 |
| 94 | PSVIII-17 Effect of high-tannin sorghum grain on in vitro rumen fermentation and methane production. <i>Journal of Animal Science</i> , 2021 , 99, 427-428 | 0.7 | 78 |
| 93 | 68 Utility of 3-NOP in Beef Production Systems. <i>Journal of Animal Science</i> , 2021 , 99, 132-133 | 0.7 | 78 |
| 92 | PSXIV-21 Effect of high-tannin sorghum grain on rumen fermentation and methane production in vitro. <i>Journal of Animal Science</i> , 2019 , 97, 432-432 | 0.7 | 78 |
| 91 | Plant seed oil-bodies as an immobilization matrix for a recombinant xylanase from the rumen fungus <i>Neocallimastix patriciarum</i> . <i>Molecular Breeding</i> , 1997 , 3, 463-470 | 3.4 | 58 |
| 90 | Rumen development process in goats as affected by supplemental feeding v. grazing: age-related anatomic development, functional achievement and microbial colonisation. <i>British Journal of Nutrition</i> , 2015 , 113, 888-900 | 3.6 | 52 |
| 89 | Structures of free-living and protozoa-associated methanogen communities in the bovine rumen differ according to comparative analysis of 16S rRNA and mcrA genes. <i>Microbiology (United Kingdom)</i> , 2012 , 158, 1808-1817 | 2.9 | 47 |
| 88 | Enteric methane emissions from growing beef cattle as affected by diet and level of intake. <i>Canadian Journal of Animal Science</i> , 2006 , 86, 401-408 | 0.9 | 40 |
| 87 | Repeated inoculation of cattle rumen with bison rumen contents alters the rumen microbiome and improves nitrogen digestibility in cattle. <i>Scientific Reports</i> , 2017 , 7, 1276 | 4.9 | 39 |
| 86 | The combined effects of supplementing monensin and 3-nitrooxypropanol on methane emissions, growth rate, and feed conversion efficiency in beef cattle fed high-forage and high-grain diets. <i>Journal of Animal Science</i> , 2018 , 96, 2923-2938 | 0.7 | 38 |
| 85 | Greenhouse gas emission intensities of grass silage based dairy and beef production: A systems analysis of Norwegian farms. <i>Livestock Science</i> , 2013 , 152, 239-252 | 1.7 | 38 |
| 84 | The effects of feeding 3-nitrooxypropanol at two doses on milk production, rumen fermentation, plasma metabolites, nutrient digestibility, and methane emissions in lactating Holstein cows. <i>Animal Production Science</i> , 2017 , 57, 282 | 1.4 | 36 |
| 83 | Shifts in Rumen Fermentation and Microbiota Are Associated with Dissolved Ruminant Hydrogen Concentrations in Lactating Dairy Cows Fed Different Types of Carbohydrates. <i>Journal of Nutrition</i> , 2016 , 146, 1714-21 | 4.1 | 36 |

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| 82 | Redirection of Metabolic Hydrogen by Inhibiting Methanogenesis in the Rumen Simulation Technique (RUSITEC). <i>Frontiers in Microbiology</i> , 2017 , 8, 393 | 5.7 | 33 |
| 81 | Corn Forage Yield and Quality for Silage in Short Growing Season Areas of the Canadian Prairies. <i>Agronomy</i> , 2018 , 8, 164 | 3.6 | 33 |
| 80 | Review: Adaptation of ruminant livestock production systems to climate changes. <i>Animal</i> , 2018 , 12, s445-s456 | 3.5 | 32 |
| 79 | Potential of Molecular Weight and Structure of Tannins to Reduce Methane Emissions from Ruminants: A Review. <i>Animals</i> , 2019 , 9, | 3.1 | 32 |
| 78 | Effect of tannin-containing hays on enteric methane emissions and nitrogen partitioning in beef cattle ¹ . <i>Journal of Animal Science</i> , 2019 , 97, 3286-3299 | 0.7 | 30 |
| 77 | Effect of feeding condensed tannins in high protein finishing diets containing corn distillers grains on ruminal fermentation, nutrient digestibility, and route of nitrogen excretion in beef cattle. <i>Journal of Animal Science</i> , 2018 , 96, 4398-4413 | 0.7 | 26 |
| 76 | Bacterial communities in the rumen of Holstein heifers differ when fed orchardgrass as pasture vs. hay. <i>Frontiers in Microbiology</i> , 2014 , 5, 689 | 5.7 | 26 |
| 75 | Use of gallic acid and hydrolyzable tannins to reduce methane emission and nitrogen excretion in beef cattle fed a diet containing alfalfa silage ^{1,2} . <i>Journal of Animal Science</i> , 2019 , 97, 2230-2244 | 0.7 | 25 |
| 74 | Trichoderma enzymes promote <i>Fibrobacter succinogenes</i> S85 adhesion to, and degradation of, complex substrates but not pure cellulose. <i>Journal of the Science of Food and Agriculture</i> , 2004 , 84, 1083-1090 | 4.3 | 25 |
| 73 | Seaweed and Seaweed Bioactives for Mitigation of Enteric Methane: Challenges and Opportunities. <i>Animals</i> , 2020 , 10, | 3.1 | 24 |
| 72 | Effects of exogenous fibrolytic enzymes on epiphytic microbial populations and in vitro digestion of silage. <i>Journal of the Science of Food and Agriculture</i> , 2002 , 82, 760-768 | 4.3 | 23 |
| 71 | Effect of engineered biocarbon on rumen fermentation, microbial protein synthesis, and methane production in an artificial rumen (RUSITEC) fed a high forage diet. <i>Journal of Animal Science</i> , 2018 , 96, 3121-3130 | 0.7 | 22 |
| 70 | Feeding condensed tannins to mitigate ammonia emissions from beef feedlot cattle fed high-protein finishing diets containing distillers grains. <i>Journal of Animal Science</i> , 2018 , 96, 4414-4430 | 0.7 | 20 |
| 69 | A Pine Enhanced Biochar Does Not Decrease Enteric CH Emissions, but Alters the Rumen Microbiota. <i>Frontiers in Veterinary Science</i> , 2019 , 6, 308 | 3.1 | 19 |
| 68 | Effects of 3-nitrooxypropanol on enteric methane production, rumen fermentation, and feeding behavior in beef cattle fed a high-forage or high-grain diet ¹ . <i>Journal of Animal Science</i> , 2019 , 97, 2687-2699 | 0.7 | 19 |
| 67 | Molecular hydrogen generated by elemental magnesium supplementation alters rumen fermentation and microbiota in goats. <i>British Journal of Nutrition</i> , 2017 , 118, 401-410 | 3.6 | 17 |
| 66 | Demonstrating the Effect of Forage Source on the Carbon Footprint of a Canadian Dairy Farm Using Whole-Systems Analysis and the Holos Model: Alfalfa Silage vs. Corn Silage. <i>Climate</i> , 2017 , 5, 87 | 3.1 | 17 |
| 65 | Fermentation of Ammonia Fiber Expansion Treated and Untreated Barley Straw in a Rumen Simulation Technique Using Rumen Inoculum from Cattle with Slow versus Fast Rate of Fiber Disappearance. <i>Frontiers in Microbiology</i> , 2016 , 7, 1839 | 5.7 | 16 |

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| 64 | Effect of Encapsulated Nitrate and Microencapsulated Blend of Essential Oils on Growth Performance and Methane Emissions from Beef Steers Fed Backgrounding Diets. <i>Animals</i> , 2019 , 9, | 3.1 | 15 |
| 63 | New recombinant fibrolytic enzymes for improved in vitro ruminal fiber degradability of barley straw ¹ . <i>Journal of Animal Science</i> , 2018 , 96, 3928-3942 | 0.7 | 15 |
| 62 | In situ and in vitro evaluations of a slow release form of nitrate for ruminants: Nitrate release rate, rumen nitrate metabolism and the production of methane, hydrogen, and nitrous oxide. <i>Animal Feed Science and Technology</i> , 2017 , 231, 97-106 | 3 | 15 |
| 61 | Beef production and ecosystem services in Canada's prairie provinces: A review. <i>Agricultural Systems</i> , 2018 , 166, 152-172 | 6.1 | 15 |
| 60 | Pasture chemoscapes and their ecological services. <i>Translational Animal Science</i> , 2019 , 3, 829-841 | 1.4 | 14 |
| 59 | Optimum extent of barley grain processing and barley silage proportion in feedlot cattle diets: Growth, feed efficiency, and fecal characteristics. <i>Canadian Journal of Animal Science</i> , 2011 , 91, 411-422 | 0.9 | 14 |
| 58 | Synergism of Cattle and Bison Inoculum on Ruminal Fermentation and Select Bacterial Communities in an Artificial Rumen (Rusitec) Fed a Barley Straw Based Diet. <i>Frontiers in Microbiology</i> , 2016 , 7, 2032 | 5.7 | 13 |
| 57 | Evaluation of Different Yeast Species for Improving In vitro Fermentation of Cereal Straws. <i>Asian-Australasian Journal of Animal Sciences</i> , 2016 , 29, 230-40 | 2.4 | 13 |
| 56 | Prospects of Forage Production in Northern Regions under Climate and Land-Use Changes: A Case-Study of a Dairy Farm in Newfoundland, Canada. <i>Agronomy</i> , 2019 , 9, 31 | 3.6 | 11 |
| 55 | Urea plus nitrate pretreatment of rice and wheat straws enhances degradation and reduces methane production in in vitro ruminal culture. <i>Journal of the Science of Food and Agriculture</i> , 2018 , 98, 5205-5211 | 4.3 | 11 |
| 54 | Grazing diverse combinations of tanniferous and non-tanniferous legumes: Implications for beef cattle performance and environmental impact. <i>Science of the Total Environment</i> , 2020 , 746, 140788 | 10.2 | 11 |
| 53 | A partial life cycle assessment of the greenhouse gas mitigation potential of feeding 3-nitrooxypropanol and nitrate to cattle. <i>Agricultural Systems</i> , 2019 , 169, 14-23 | 6.1 | 11 |
| 52 | Feeding diets varying in forage proportion and particle length to lactating dairy cows: I. Effects on ruminal pH and fermentation, microbial protein synthesis, digestibility, and milk production. <i>Journal of Dairy Science</i> , 2020 , 103, 4340-4354 | 4 | 10 |
| 51 | Estimating gas volume from headspace pressure in a batch culture system. <i>Canadian Journal of Animal Science</i> , 2018 , 98, 593-596 | 0.9 | 10 |
| 50 | Comparison of two live <i>Bacillus</i> species as feed additives for improving in vitro fermentation of cereal straws. <i>Animal Science Journal</i> , 2016 , 87, 27-36 | 1.8 | 10 |
| 49 | Cloning, Phylogenetic Analysis, and Distribution of Free Fatty Acid Receptor GPR120 Expression along the Gastrointestinal Tract of Housing versus Grazing Kid Goats. <i>Journal of Agricultural and Food Chemistry</i> , 2016 , 64, 2333-41 | 5.7 | 10 |
| 48 | Beef cattle production impacts soil organic carbon storage. <i>Science of the Total Environment</i> , 2020 , 718, 137273 | 10.2 | 9 |
| 47 | Water use intensity of Canadian beef production in 1981 as compared to 2011. <i>Science of the Total Environment</i> , 2018 , 619-620, 1030-1039 | 10.2 | 9 |

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| 46 | Corn oil supplementation enhances hydrogen use for biohydrogenation, inhibits methanogenesis, and alters fermentation pathways and the microbial community in the rumen of goats. <i>Journal of Animal Science</i> , 2019 , 97, 4999-5008 | 0.7 | 9 |
| 45 | Comparison of greenhouse gas emissions from corn- and barley-based dairy production systems in Eastern Canada. <i>Agricultural Systems</i> , 2017 , 152, 38-46 | 6.1 | 8 |
| 44 | Farm scale modelling of greenhouse gas emissions from semi-intensive suckler cow beef production. <i>Agricultural Systems</i> , 2019 , 176, 102670 | 6.1 | 8 |
| 43 | Effects of urea plus nitrate pretreated rice straw and corn oil supplementation on fiber digestibility, nitrogen balance, rumen fermentation, microbiota and methane emissions in goats. <i>Journal of Animal Science and Biotechnology</i> , 2019 , 10, 6 | 6 | 8 |
| 42 | Effect of ammonia fiber expansion-treated wheat straw and a recombinant fibrolytic enzyme on rumen microbiota and fermentation parameters, total tract digestibility, and performance of lambs. <i>Journal of Animal Science</i> , 2020 , 98, | 0.7 | 8 |
| 41 | Liquid hot water treatment of rice straw enhances anaerobic degradation and inhibits methane production during in vitro ruminal fermentation. <i>Journal of Dairy Science</i> , 2020 , 103, 4252-4261 | 4 | 8 |
| 40 | Effects of feeding corn silage from short-season hybrids and extending the backgrounding period on production performance and carcass traits of beef cattle. <i>Journal of Animal Science</i> , 2018 , 96, 2490-2503 | 0.7 | 8 |
| 39 | Effect of a pine enhanced biochar on growth performance, carcass quality, and feeding behavior of feedlot steers. <i>Translational Animal Science</i> , 2020 , 4, 831-838 | 1.4 | 7 |
| 38 | Short-Term Eating Preference of Beef Cattle Fed High Forage or High Grain Diets Supplemented with 3-Nitrooxypropanol. <i>Animals</i> , 2019 , 10, | 3.1 | 7 |
| 37 | Milk production, nitrogen utilization, and methane emissions of dairy cows grazing grass, forb, and legume-based pastures. <i>Journal of Animal Science</i> , 2020 , 98, | 0.7 | 7 |
| 36 | Recent advances to improve nitrogen efficiency of grain-finishing cattle in North American and Australian feedlots. <i>Animal Production Science</i> , 2019 , 59, 2082 | 1.4 | 7 |
| 35 | Effects of a recombinant fibrolytic enzyme on fiber digestion, ruminal fermentation, nitrogen balance, and total tract digestibility of heifers fed a high forage diet ¹ . <i>Journal of Animal Science</i> , 2019 , 97, 3578-3587 | 0.7 | 6 |
| 34 | Recombinant fibrolytic feed enzymes and ammonia fibre expansion (AFEX) pretreatment of crop residues to improve fibre degradability in cattle. <i>Animal Feed Science and Technology</i> , 2019 , 256, 114260 ³ | | 6 |
| 33 | Combined effects of 3-nitrooxypropanol and canola oil supplementation on methane emissions, rumen fermentation and biohydrogenation, and total tract digestibility in beef cattle. <i>Journal of Animal Science</i> , 2021 , 99, | 0.7 | 6 |
| 32 | Optimum roughage proportion in barley-based feedlot cattle diets: total tract nutrient digestibility, rumination, ruminal acidosis, short-chain fatty absorption, and gastrointestinal tract barrier function. <i>Journal of Animal Science</i> , 2020 , 98, | 0.7 | 5 |
| 31 | Fecal bacterial community of finishing beef steers fed ruminally protected and non-protected active dried yeast. <i>Journal of Animal Science</i> , 2020 , 98, | 0.7 | 5 |
| 30 | 3-Nitrooxypropanol supplementation had little effect on fiber degradation and microbial colonization of forage particles when evaluated using the in situ ruminal incubation technique. <i>Journal of Dairy Science</i> , 2020 , 103, 8986-8997 | 4 | 5 |
| 29 | Inferring the Skeletal Muscle Developmental Changes of Grazing and Barn-Fed Goats from Gene Expression Data. <i>Journal of Agricultural and Food Chemistry</i> , 2016 , 64, 6791-800 | 5.7 | 4 |

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| 28 | Greenhouse gas and ammonia emissions from stored manure from beef cattle supplemented 3-nitrooxypropanol and monensin to reduce enteric methane emissions. <i>Scientific Reports</i> , 2020 , 10, 19310 | 4.9 | 4 |
| 27 | Use of 3-nitrooxypropanol in a commercial feedlot to decrease enteric methane emissions from cattle fed a corn-based finishing diet. <i>Journal of Animal Science</i> , 2021 , 99, | 0.7 | 4 |
| 26 | Effect of silage source, physically effective neutral detergent fiber, and undigested neutral detergent fiber concentrations on performance and carcass characteristics of finishing steers. <i>Translational Animal Science</i> , 2021 , 5, txaa236 | 1.4 | 4 |
| 25 | Treatment of feces from beef cattle fed the enteric methane inhibitor 3-nitrooxypropanol. <i>Water Science and Technology</i> , 2019 , 80, 437-447 | 2.2 | 3 |
| 24 | In situ rumen degradation of kernels from short-season corn silage hybrids as affected by processing. <i>Translational Animal Science</i> , 2018 , 2, 428-438 | 1.4 | 3 |
| 23 | Mitigation of greenhouse gas emissions from beef cattle production systems. <i>Acta Agriculturae Scandinavica - Section A: Animal Science</i> , 2020 , 69, 220-232 | 0.6 | 3 |
| 22 | The effect of diet of the donor cows on in vitro measurements of methane production from wheat and corn incubated in various forage-to-grain ratios. <i>Journal of the Science of Food and Agriculture</i> , 2019 , 99, 3451-3458 | 4.3 | 3 |
| 21 | 3-Nitrooxypropanol Decreased Enteric Methane Production From Growing Beef Cattle in a Commercial Feedlot: Implications for Sustainable Beef Cattle Production. <i>Frontiers in Animal Science</i> , 2021 , 2, | | 3 |
| 20 | Climate change impacts on corn heat unit for the Canadian Prairie provinces. <i>Agronomy Journal</i> , 2021 , 113, 1852-1864 | 2.2 | 3 |
| 19 | Effect of changes in management practices and animal performance on ammonia emissions from Canadian beef production in 1981 as compared with 2011. <i>Canadian Journal of Animal Science</i> , 2018 , 98, 833-844 | 0.9 | 3 |
| 18 | Alfalfa and Other Perennial Legume Silage. <i>Agronomy</i> , 2015 , 633-664 | 0.8 | 2 |
| 17 | Application of 3-nitrooxypropanol and canola oil to mitigate enteric methane emissions of beef cattle results in distinctly different effects on the rumen microbial community | | 2 |
| 16 | In Vitro Assessment of Enteric Methane Emission Potential of Whole-Plant Barley, Oat, Triticale and Wheat. <i>Animals</i> , 2021 , 11, | 3.1 | 2 |
| 15 | Effect of Manure from Cattle Fed 3-Nitrooxypropanol on Anthropogenic Greenhouse Gas Emissions Depends on Soil Type. <i>Agronomy</i> , 2021 , 11, 371 | 3.6 | 2 |
| 14 | A Review of 3-Nitrooxypropanol for Enteric Methane Mitigation from Ruminant Livestock.. <i>Animals</i> , 2021 , 11, | 3.1 | 2 |
| 13 | Increased Nitrogen Retention and Reduced Methane Emissions of Beef Cattle Grazing Legume vs. Grass Irrigated Pastures in the Mountain West USA. <i>Agronomy</i> , 2022 , 12, 304 | 3.6 | 0 |
| 12 | PSX-B-10 Effect of undigested neutral detergent fiber concentration and forage inclusion rate on ruminal pH, reticular motility, and total tract permeability for finishing beef heifers. <i>Journal of Animal Science</i> , 2021 , 99, 457-458 | 0.7 | 0 |
| 11 | 330 3-nitrooxypropanol Supplementation of a Forage Diet Decreased Enteric Methane Emissions from Beef Cattle Without Affecting Apparent Total-tract Digestibility. <i>Journal of Animal Science</i> , 2021 , 99, 186-187 | 0.7 | 0 |

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| 10 | PSXIV-11 Silage source, physically effective neutral detergent fiber, and undigested neutral detergent fiber concentrations affect eating behavior, ruminal pH and reticular motility of finishing heifers. <i>Journal of Animal Science</i> , 2021 , 99, 476-477 | 0.7 | o |
| 9 | Effect of Harvesting Corn after Frost in Alberta (Canada) on Whole-Plant Yield, Nutritive Value, and Kernel Properties. <i>Agronomy</i> , 2021 , 11, 459 | 3.6 | o |
| 8 | Control of Methanogenesis in Dairy Animals 2022 , 65-78 | | o |
| 7 | 72 Estimating the supply and movement of feed for beef production in Alberta, Canada. <i>Journal of Animal Science</i> , 2020 , 98, 46-46 | 0.7 | |
| 6 | 200 Effects of grain processing and undegradable fiber on rumen pH and fermentation of cattle fed high grain diets. <i>Journal of Animal Science</i> , 2020 , 98, 159-160 | 0.7 | |
| 5 | PSV-12 Impact of grain processing and undegradable fiber on chewing behavior and feed sorting of finishing beef cattle. <i>Journal of Animal Science</i> , 2020 , 98, 219-219 | 0.7 | |
| 4 | 94 President Oral Presentation Pick: Grazing diverse combinations of tanniferous and non-tanniferous legumes: Implications for beef cattle performance and environmental impact. <i>Journal of Animal Science</i> , 2020 , 98, 76-77 | 0.7 | |
| 3 | Effect of non-encapsulated and encapsulated active dried yeast on blood cell count, blood metabolites, and immune response of finishing beef heifers. <i>Canadian Journal of Animal Science</i> , 2021 , 101, 390-394 | 0.9 | |
| 2 | PSVI-11 Effects of nutrient management and cropping strategies in a dual-crop forage production system of silage corn and perennial grass on nutritional quality and predicted milk production of dairy cattle. <i>Journal of Animal Science</i> , 2020 , 98, 433-434 | 0.7 | |
| 1 | The Effect of Manure from Cattle Fed Barley- vs. Corn-Based Diets on Greenhouse Gas Emissions Depends on Soil Type. <i>Soil Systems</i> , 2022 , 6, 47 | 3.5 | |