

Jessica L. Sperber, Ph.D.

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EDUCATION

Doctor of Philosophy

December 2021
Ruminant Nutrition

University of Nebraska—Lincoln

Lincoln, Nebraska, United States

Master of Animal Science

December 2018
Major: Animal Science

West Texas A&M University

Canyon, Texas, United States

Bachelor of Science Degree

May 2016
Major: Biological Sciences

MacEwan University

Edmonton, Alberta, Canada

PROFESSIONAL EXPERIENCE

November 2022-
Present

UNIVERSITY OF NEBRASKA—LINCOLN

Assistant Professor and Feedlot Extension Specialist

Deliver relevant education and problem-solving targeted at feedlot owners, management, consultants, and allied industry. Organize the UNL beef feedlot extension team, coordinate feedlot roundtables, and contribute to UNL feedlot extension publications. Responsible for teaching

- ASCI 457 Beef Feedlot Management
- ASCI 490A Feedlot Internship Program
- ASCI 820 Feedlot Nutrition

March 2022-
October 2022

BULLSEYE FEEDS

Feedlot Nutrition Consultant & Technical Specialist

Support progressive feedlot customers by providing nutritional advice, management solutions, and service support. Provide strong technical support to the Bullseye team and their customers.

August 2019-
December 2021

UNIVERSITY OF NEBRASKA—LINCOLN

Graduate Assistant

Assist the Department of Animal Science in research initiatives and undergraduate teaching

- ASCI 181 Young Beef Scholars

Eastern Nebraska Research and Extension Center

Assist with research and learning initiatives at the University feedlot and forage unit

January 2019-
May 2019

TEXAS TECH UNIVERSITY

Graduate Assistant

Assist the Department of Agriculture in research initiatives and undergraduate teaching

Raider Red Meats

Custom and contracted slaughter and fabrication of cattle, sheep, and swine

January 2017-
December 2018

WEST TEXAS A&M UNIVERSITY

Graduate Assistant

Assist the Department of Agriculture in research initiatives and undergraduate teaching of

- ANSC 2376 Meat Animal Carcass Evaluation
- ANSC 3317 Meat Science
- ANSC 1319 Animal Science

Beef Carcass Research Center

Beef carcass data collection and analysis in beef packers across North America, collecting carcass and grade data on specific lots of cattle and evaluating liver health

West Texas A&M University Meat Lab

Custom and contracted slaughter and fabrication of cattle, sheep, and swine

**May 2016-
September 2016**

AGRICULTURE FINANCIAL SERVICES CORPORATION

Forage Specialist- Research Student

Aimed to create a variable pasture insurance program for the variety of climate conditions that Southern AB encounters. Research included collection, drying, weighing, and measurement of vegetative index

**May 2014/15-
Sept 2014/15**

AGRICULTURE FINANCIAL SERVICES CORPORATION

Crop Insurance Summer Student

Interacted with farmers, constructing and documenting land reports for seeded and unseeded crop acres. Assisted the loans officers with “on farm” and business inspections. Documented and sold hail and crop insurance, making educated decisions on behalf of farmers in regard to insurance coverage levels

2013-2015

STUDENTS ASSOCIATION OF MACEWAN UNIVERSITY

Students’ Councilor

Elected by the students of MacEwan University to make decisions as a member of the highest governing body of the University

- *Programs & Services Sub-Committee*
- *Awards Sub-Committee*

**May 2013-
September 2013**

PONOKA COUNTY

Crop Weed Inspector

Communicate with agricultural landowners concerning prohibited noxious weed infestation, and appropriate herbicide application to remedy the issue. Completed precise data entry and reports for documentation

SCIENTIFIC PUBLICATIONS

- 2022** **Sperber, J. L.,** G. E. Erickson, and A. K. Watson. 2022. Evaluation of the effects of wood-sourced biochar as a feedlot pen surface amendment on manure nutrient capture. *J. Transl. Anim. Sci.* 6: 1-10. doi:10.1093/tas/txac127
- 2022** **Sperber, J. L.** and T. E. Lawrence. 2022. “Carcass Cloning”. *Encyclopedia of Meat Science*. Submitted June 2022.
- 2022** **Sperber, J. L.,** B. C. Troyer, G. E. Erickson, and A. K. Watson. 2022. Evaluation of the effects of pine-sourced biochar on cattle performance and methane and carbon dioxide production from growing and finishing steers. *J. Transl. Anim. Sci.* June 2022. Submitted.

- 2021** **Sperber, J. L.** 2021. Impact of wood-sourced biochar on carbon and nitrogen capture in beef feedlot systems. PhD Diss. University of Nebraska, Lincoln.
- 2021** **Sperber, J. L.** 2021. Dietary strategies to reduce nitrogen and phosphorus excretion in feedlot cattle. *UNL Water Extension*.
- 2021** **Sperber, J. L.,** B. C. Troyer, M. M. Norman, L. J. McPhillips, G. E. Erickson, and A. K. Watson. 2021. Effect of biochar supplementation in beef cattle finishing diets on greenhouse gas emissions and carcass performance. *J. Anim. Sci.* March 2021. Abstract.
- 2021** **Sperber, J. L.,** B. C. Troyer, M. M. Norman, L. J. McPhillips, G. E. Erickson, and A. K. Watson. 2021. Effect of biochar supplementation in beef cattle growing diets on greenhouse gas emissions. *J. Anim. Sci.* March 2021. Abstract.
- 2020** **Sperber, J.,** T. Spore, G. Erickson, and A. Watson. 2020. Evaluation of biochar on nutrient loss from fresh cattle manure. 2021 Nebraska Beef Report.
- 2020** **Sperber, J.,** B. Troyer, L. McPhillips, A. Watson, and G. Erickson. 2020. Impact of biochar supplementation in growing diets on greenhouse gas emissions. 2021 Nebraska Beef Report.
- 2020** Herrick, R. T., T. P. Jones, **J. L. Sperber,** J. T. Richeson, T. R. Brown, and T. E. Lawrence. 2020. Assessment of changes in complete blood count and serum chemistry in fed Holstein steers with or without liver abscesses. *Applied Anim. Sci.* 36:256-264.
- 2019** Lust, D., T. Lawrence, and **J. Sperber.** 2019. Use of cloning in beef production – the WTAMU PrimeOne Project. *J. Anim. Sci.* July 2019. Abstract.
- 2019** **Sperber, J.,** M. Garrison, D. Lust and T. Lawrence. 2019. Projecting live cattle slaughter value based on Performance Cattle Company’s Cattle Classification and Sorting System. Plains Nutrition Council. April 2019. Abstract.
- 2018** Herrick, R., T. Jones, **J. Sperber,** J. Richeson, T. Brown, and T. Lawrence. 2018. Assessment of blood metabolites in fed Holstein steers with and without liver abscesses. *J. Anim. Sci.* July 2018.
- 2018** **Sperber, J.,** D. Lust, D. Hawkins, T. McEvers, and T. Lawrence. 2018. Live and carcass production traits for progeny of purebred sires in comparison with progeny of a Prime Yield Grade one carcass clone. *J. Anim. Sci.* July 2018. Abstract.

INVITED PRESENTATIONS

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| June 2022 | <i>Carcass growth and nutritional requirements from birth to harvest</i> , More Than Just Feeds Annual Sales Meeting, Kananaskis, AB |
| May 2022 | <i>The impacts of nutritional management on carcass growth and meat quality</i> , Canadian Limousin Association, Calgary, AB |
| Sept 2021 | <i>Utilizing cloning technology to improve beef carcass value</i> , Nebraska Beef Scholars, Lincoln, NE |
| June 2021 | <i>The beef packing industry</i> , Timmerman Feedyard Management Interns, Lincoln, NE |

March 2021	<i>The beef packing industry</i> , Nebraska Beef Industry Scholars, Lincoln, NE
February 2021	<i>The value under the hide</i> , Young Canadian Simmental Association TEAM Conference, Edmonton, AB
Oct 2020	<i>Importance of dietary carotenoids in maintaining human & livestock ocular health status</i> , University of Nebraska-Lincoln, NE
April 2020	<i>Utilizing cloning technology to improve beef carcass value</i> , University of Nebraska-Lincoln, NE
April 2019	<i>Utilizing cloning technology to improve beef carcass value</i> , University of Saskatchewan, Saskatoon, SK
Jan 2017 to Dec 2018	<i>West Texas A&M University PrimeOne Cloning Project</i> , West Texas A&M University, Canyon, TX
November 2016	<i>MacEwan University Alumni Address</i> , MacEwan University Fall Convocation, Edmonton, AB
May 2016	<i>Judging a beef market steer</i> , Rimbey & District 4-H Beef Show, Rimbey, AB
January 2016	<i>How to evaluate beef breeding females</i> , Camrose Bull Congress, Camrose, AB
September 2015	<i>Keynote Address: How to Survive MacEwan Residence</i> , MacEwan University Residence Move-In, Edmonton, AB
October 2014	<i>The Empowerment of Leadership</i> , presented at various High Schools in Edmonton, AB
September 2014	<i>Public Speaking: How to be confident and successful</i> , MacEwan University Student Ambassador Training, Edmonton, AB
November 2013	<i>Public Speaking: Finding your confidence</i> , High School Leadership, Devon, AB

INVITED MISTRESS OF CEREMONIES

April 2015	<i>Farewell</i> . Retirement event held for Cathryn Heslap, previous Vice President Student Services at MacEwan University, Edmonton, AB
May 2014	<i>Welcome and Presentations</i> . MacEwan Faculty Awards, Edmonton, AB
February 2014	<i>Welcome and Introductions</i> . Ponoka District 4-H Beef Club public speaking, Ponoka, AB

BEEF INDUSTRY EXPERIENCE

July 2022	Calgary Stampede International Youth Livestock Scholarship Committee – Calgary, AB Scholarship interview judge and steer show clerk
June 2022	Alberta Beef Industry Conference – Red Deer, AB
October 2021	Ireland’s Ag Mental Health Week – Virtual Panelist speaker
June 2021	Nebraska Beef Committee Annual Meeting – Lincoln, NE Presented PhD research and results
March 2021, 2020	Canadian Cattlemen’s Association Annual General Meeting – Ottawa, ON Young Cattlemen’s Council representative on CCA Foreign Trade Committee & hosted YCC Semi-Annual Meeting
March 2021	Midwest American Society of Animal Science Meeting- <i>PhD Graduate Student Oral Competition</i>, Omaha, NE (Virtual)

- August 2020** **Plains Nutrition Council Feedlot Bootcamp – Canyon, TX**
Intensive 5-day course designed for professional students in the field of feedlot nutrition
- February 2020, 2019** **National Cattlemen’s Beef Association Annual Meeting**
2019 W.D. Farr Scholarship Recipient
- January 2020** **National Western Stock Show Canadian Consulate – Young Cattlemen’s Council Affiliate**
Represented the Canadian Cattlemen’s Association during the 2020 NWSS, participating in industry tours and Canadian Consulate discussions
- October 2019** **Merck Animal Health Upper Midwest Nutritionist meeting – Sioux Falls, SD**
- August 2019** **Canadian Beef Industry Conference – Elected to Young Cattlemen’s Council, Calgary, AB**
- July 2019** **Calgary Stampede Premier Agriculture Event – Calgary, AB**
Invited by the Canadian Cattlemen’s Association
- April 2019** **Plains Nutrition Council Annual Conference – Poster Competition, San Antonio, TX**
Presented Masters graduate research
- March 2019** **High School BBQ Competition – Volunteer Coordinator, Lubbock, TX**
Hosted the inaugural High School BBQ competition at Texas Tech University
- July 2018** **American Society of Animal Science Meeting- Poster Competition, Vancouver, BC**
Presented preliminary research in the MS Graduate Student division
- June 2018, 2017** **Reciprocal Meat Conference- Graduate Student Attendee**
- March 2018** **International Livestock Congress Houston Stockshow - Student Fellow, Houston, TX**
Chosen as 1 of 12 International student fellows to participate in a conference focused on red meat and the obstacles in International trade that the beef industry faces
- January 2018** **National Western Stock Show Canadian Consulate – CYL Affiliate, Denver, CO**
- October 2017** **Texas Cattle Feeders Association Annual Convention – Scholarship Attendee, Amarillo, TX**
- August 2017** **Canadian Beef Industry Conference – CYL Alumni, Calgary, AB**
- February 2017** **National Cattlemen’s Beef Association Annual Meeting – Cattlemen’s Young Leader Representative, Nashville, TN**
Represented the Cattlemen’s Young Leaders program in the trilateral NCBA meeting, discussing NAFTA and International trade
- January 2017** **National Western Stock Show CAN-USA Round Table – Affiliate, Denver, CO**
Participated in round table discussions on International trade, licensing, and red meat production
- November 2016** **Royal Agricultural Winter Fair, Beef Farmers of Ontario- Affiliate, Toronto, ON**
Presented agriculture education to the urban public

November 2014 **International Ag Business Centre- *Affiliate, Edmonton, AB***
Hosted International Beef Industry members in the IABC room at Farmfair International.
Engaging in industry related discussions and an acting tour guide for genetics purchasers

OFFICIAL LIVESTOCK JUDGE

May 2022 Steer Conformation Judge Lacombe District 4-H Show, AB
November 2018 West Texas A&M University Little International, *Canyon, TX*
December 2016 Rimbey District Multi-Species Judging, *Rimbey, AB*
May 2016 Beef Livestock Judge Cardiff District 4-H Show, AB
May 2016, 2015 Beef Livestock Judge Rimbey District 4-H Show, AB
July 2015 Beef Livestock Judge Vermillion Stock Show, AB
November 2014 Beef Livestock Judge Farmfair International *Edmonton, AB*

LEADERSHIP

May 2022- Present **Animal Nutrition Association of Canada**
ANAC committee member

**August 2020 -
Sept 2021** **Young Cattlemen’s Council, Vice President**
Young leader representative on CCA Foreign Trade committee and head of promotions

**March 2020 –
March 2021** **Cattlemen’s Young Leaders Steering Committee**
Member of the selections and judging committee for CYL

**August 2019 -
August 2020** **Young Cattlemen’s Council, 2-Yr Member at Large Position**
Subsidiary of the Canadian Cattlemen’s Association. YCC is composed of beef enthusiasts aged 18-35, who are passionate about leadership in the industry in terms of policy and acting as a conduit between industry and young producers

July 2019 **International Agriculture & Agri-Food Committee – *Calgary Stampede***
Served as an ad-hoc committee volunteer in the International Ag room and UFA cattle alley

August 2016 **Canadian Cattlemen’s Association Cattlemen’s Young Leader**
One-year mentorship opportunity, participating in industry and at government levels, volunteering at events across the country, educating the public on the importance of environmental sustainability, agriculture, and international trade

2014-2016 **MacEwan University Faculty of Arts and Science Council- *Student Representative***
Selected by the Arts & Science faculty to represent the student body at departmental meetings

2009-2016 **Farmfair Junior Futurity Livestock Show Committee**

2010-2012 **Alberta Charolais Youth Association- *Treasurer***

VOLUNTEER

- 2022** **Crestomere 4-H Multi-Club Public Speaking Judge** – *Ponoka, AB*
- 2020** **Beaver Creek Ranch/Purina Cattle Fitting Clinic** – *Burlington, CO*
Instructed a steer fitting clinic for Colorado 4-H members
- 2018, 2017** **West Texas A&M University Little International Showmanship Clinic-** *Canyon, TX*
Instructed a three-day showmanship clinic to University freshmen
- 2018** **Randall County 4-H Club** – *Canyon, TX*
Acted as a mock interviewer and judge for 4-H members in preparation for their upcoming beef skill-a-thon competitions at San Antonio & Houston Stock Show
- 2018, 2017** **West Texas A&M University FFA Meats Judging Competition** – *Canyon, TX*
Group leader for High School Juniors and Seniors
- 2017** **Texas Cattle Feeder’s Association Feedyard Camp** - *Canyon, TX*
Assisted in putting on a clinic for High School Juniors and Seniors with an interest in pursuing a career in the beef industry
- 2014- 2017** **Summer Synergy Youth Livestock Show-** *Olds, AB*
Judged, marshalled, mentored, and ring-assisted
- 2013- 2017** **Classroom Agriculture Program**
Taught Grade 4 students in urban and rural Alberta schools the importance of agriculture
- 2015** **U19 Ladies Fastball Coach** – **Bentley Minor Ball Association** - *Bentley, AB*
- 2012-2015** **Hope Mission Homeless Shelter** – *Edmonton, AB*
Basic and emergency care and meals are provided to over 800 people daily. Volunteers prepare and serve meals, clean up, and help with events
- 2012-2015** **Student Ambassador, MacEwan University** – *Edmonton, AB*
Lead tours for prospective students, emceed University functions, organized/hosted events for less fortunate families, introduced conference speakers, lead information sessions for public at MacEwan Open Houses and Parent Orientation, assisted during Residence Move-In, volunteered at community events, worked alongside University President and marketing companies on an array of issues concerning students and student life
- 2014** **City of Edmonton Santa’s Anonymous Food Drive**
- 2014, 2013** **Habitat for Humanity-** *Edmonton, AB Chapter*
A program that utilizes volunteers and community partners to build and provide affordable housing and promote ownerships as a means to breaking the cycle of poverty
- 2010-2014** **Ponoka Hospital and Care Centre** – *Ponoka, AB*
Active volunteer on the long-term care unit, organized “Bingo”, operated the water cart, read to patients, and served meals

- 2011, 2010** **Canadian Cancer Society Youth Relay for Life- *Student Coordinator - Ponoka, AB***
Assisted in organizing and running the event to raise money for cancer research
- 2003-Present** **West Ponoka 4-H Beef Club – *Ponoka, AB***
Held a number of elected volunteer positions, including President, Vice President, and Treasurer. Active alumni, helping to organize and run the 4-H Show and Sale, assisting members with 4-H projects, Public Speaking workshops and competitions, highway cleanups, and various other events

AWARDS & HONORS

- 2021** **Ned S. and Esther B. Raun International Graduate Fellowship - University of Nebraska**
- 2021** **Midwest ASAS PhD Oral Presentation Competition – Second Place**
- 2020** **Dr. Karl C. Ivarson Agricultural Scholarship – Canadian Foundation for Food and Agricultural Education**
- 2020** **Dr. Allan A. Dixon Memorial Scholarship – Friends of Canadian Simmental Foundation**
- 2020** **Arthaud Graduate Student Oral Presentation Competition Winner – University of Nebraska**
- 2020** **Keith Gilmore Prize for Beef Cattle Innovation – Keith Gilmore Foundation**
- 2019** **W.D. Farr Scholarship – National Cattlemen’s Foundation**
- 2019** **Roy Family Scholarship – 4-H Canada**
- 2016-2019** **West Central 4-H Region Scholarship – 4-H Canada**
- 2018** **Paul Engler Endowment – West Texas A&M University**
- 2018** **Alberta Beef Producers Scholarship**
- 2018, 2017** **Texas Cattle Feeders Association Scholarship - TCFA Education Foundation**
- 2018** **S.L. and Mildred Garrison Scholarship – 4-H Canada**
- 2018** **Good Neighbor Scholarship**
- 2018** **International Stockmen’s Educational Foundation Scholarship Fellow – International Livestock Congress**
- 2017** **Friends of the Canadian Simmental Foundation Scholarship**
- 2016** **MacEwan University Bachelor of Science First Class Standing**
- 2016** **Elmer and Ona Hansen Memorial Fund Leadership Scholarship**
- 2016** **ERBS MacEwan Student’s Association Volunteer Award**
- 2016** **Edmonton Rotary Club Foundation Scholarship**
- 2014-2016** **MacEwan University Board of Governors’ Scholarship**
- 2012-2016** **Dr. Gary MacPherson Leadership Award – Government of Alberta**
- 2016** **Vermillion Little Royal Collegiate Livestock Judging Competition- Grand Champion Judge**
- 2015** **Canadian Charolais Association Scholarship**
- 2015, 2014** **Government of Alberta Laurence Decore Award for Student Leadership**
- 2012-2015** **Enbridge Environmental Sustainability Leadership Award**
- 2013** **“Ag for Life” Agriculture Ambassador**
- 2013** **Summer Synergy Grand Champion Livestock Judge**

2010-2013	Calgary Stampede International Youth Livestock Scholarship
2012	Norma Jean Gray Environmental Sustainability Award
2012	Encana Leaders of Tomorrow Award
2011	Team Canada Representative at NILE Livestock Judging Competition

PROFESSIONAL MEMBERSHIPS/CERTIFICATIONS

2022-Present	Animal Nutrition Association of Canada
2020-Present	American Registry of Professional Animal Scientists
2019-Present	Beef Quality Assurance Certified
2019-2021	IACUC Animal Handling Certified
2019-Present	ServSafe Manager Certified
2017-Present	American Meat Science Association
2017-Present	American Society of Animal Science
2016-Present	Young Cattlemen’s Council