2013 CSAS – CMSA Joint Meeting
June 17-20, 2013
Banff Park Lodge
Banff, Alberta, Canada
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GENERAL MEETING INFORMATION

Registration
The registration desk will be located in the Alpine Meadow Room. Pre-registration packets and onsite registration will be available during the hours listed below.

Monday, June 17  
6:30 pm – 9:00 pm

Tuesday, June 18  
7:30 am – 6:00 pm

Wednesday, June 19  
6:30 am – 5:00 pm

Thursday, June 20  
7:30 am – 12:30 pm

Meeting Location
The conference venue is the Banff Park Lodge & Conference Center, located in Banff, Alberta, Canada. Banff is a picturesque town located in the Rocky Mountains of western Canada, just one hour by shuttle bus from Calgary’s International Airport (to your hotel).

Transportation
Shuttle transport between Calgary Airport and the hotels can be made through Banff Airporter. CSAS-CMSA delegates receive a 15% discount on the Banff Airporter for shuttle requirements between the Calgary Airport and the Banff Park Lodge. Click www.banffairporter.com/book and type Science in the Apply Promotional Code section on the final payment page to receive your discount. This brings the price to $50.74 One Way and $101.47 Return.

Important Phone Numbers
Banff Park Lodge and Conference Center (800) 661-9266
Banff Airporter (888) 449-2901

Presentation Guidelines
Oral
Only PowerPoint presentations will be accommodated (i.e., no slides, no overheads, no alternative programs allowed).

1. All session rooms will have Master PCs running PowerPoint 2007/2010 in Windows 7.

2. Individual laptops may not be connected to the projectors in the session rooms.

3. Oral presenters must upload their presentation no later than one hour prior to the start of their session. The upload computer will be available at the registration area starting 2 hours prior to the first session of the day. Presentations for upload should be on flash drives.
**Poster**
Posters should be placed on the appropriate poster board by 7:00 am Wednesday, June 19 and remain up all day. Poster presenters should be at their poster for presentation at 7:30 am – 9:00 am on Wednesday, June 19. Posters may be removed at 5:00 pm. Posters may be attached to the board using tacks or velcro. Posters may be a maximum size of 44 in x 45 in (w x h).

**SPONSORS**
*As of May 31, 2013*

Agriculture Institute of Canada
Alberta Beef
Alberta Beef Magazine
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Aon
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Canadian Pork Council
Chicken Farmers of Canada
Dairy Farmers of Canada
Elanco Animal Health/Eli Lilly Canada Inc.
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Zoetis
SCHEDULE OF EVENTS

All events will meet at the Banff Park Lodge unless otherwise noted.

MONDAY, JUNE 17, 2013
1:00 pm – 5:00 pm Annual Executive Meeting

TUESDAY, JUNE 18, 2013
7:00 am – 8:30 am Video broadcast of AMSA keynote speaker: Temple Grandin, Summit Room
8:30 am – 3:00 pm Beef Symposium, Summit Room
10:15 am Coffee Break
12:00 pm – 1:00 pm Lunch
3:00 pm Coffee Break
3:15 pm – 5:30 pm Graduate Student Oral Competition Session 1, Summit Room

WEDNESDAY, JUNE 19, 2013
7:30 am – 9:00 am Poster Presentations, Assiniboine Room
8:30 am – 11:45 am Graduate Student Oral Competition Session 2, Summit Room
9:00 am – 11:00 am Video Link Presentations with AMSA, Castle Room
10:00 am Coffee Break
11:45 am – 1:15 pm Annual General Meeting & Lunch, Castle Room
1:15 pm – 3:00 pm Animal Health & Emerging Issues Oral Session, Summit Room
3:00 pm Coffee Break
3:15 pm – 5:00 pm Nonruminant Nutrition Oral Session, Castle Room
3:15 pm – 5:00 pm Ruminant Production & Management Oral Session, Summit Room
6:30 pm Reception, Summit Room
7:00 pm – 8:30 pm Banquet Dinner, Summit Room
8:30 pm – 10:30 pm Student Mixer

THURSDAY, JUNE 20, 2013
8:00 am – 10:45 am Food Safety and Meat Science Oral Session, Summit Room
9:45 am Coffee Break
10:45 am – 12:15 pm Breeding and Genetics Oral Session, Summit Room
12:15 pm – 1:15 pm Workshop, Summit Room
1:15 pm – 1:45 pm NSERC Presentation, Summit Room
SCIENTIFIC SESSIONS

Tuesday, June 18, 2013
Symposium & Oral Presentations

BEEF SYMPOSIUM
Chairs: Tim McAllister, Agriculture and Agri-Food Canada, Lethbridge and Karen Beauchemin, Agriculture and Agri-Food Canada, Lethbridge
Room: Summit

8:30 Welcome/Introduction - CSAS/CMSA presidents
8:45 Industry overview, new opportunities
   R. Bergen*, Beef Cattle Research Council, Calgary, AB, Canada
9:15 Industry economics, market stressors
   K. Larson*, Western Beef Development Centre, University of Saskatchewan, Saskatoon, SK, Canada
9:45 Genetic drivers of cow-calf profitability
   S. Miller*, Centre for the Genetic Improvement of Livestock, University of Guelph, Guelph, ON, Canada
10:15 Coffee break
10:30 Forage and water management in cow-calf systems
   B. Ladner*, Western Beef Development Centre, University of Saskatchewan, Saskatoon, SK, Canada
11:00 Bovine respiratory disease, predisposing factors for bacterial pneumonia
   A. Confer*, Oklahoma State University, Stillwater, OK, United States
11:30 Acidosis, mitigation strategies
   G. Penner*, University of Saskatchewan, Saskatoon, SK, Canada
12:00 Lunch
1:00 Welfare/management practices to increase production
   K. Schwartzkopf-Genswein*, Lethbridge Research Centre, Agriculture, Agriculture and Agri-Food Canada, Lethbridge, Canada
1:30 Food safety, mitigating pathogens
   T. Callaway*, USDA-ARS, College Station, TX, United States
2:00 Meat quality and improving carcass value
   J. Alhus*, Agriculture & Agri-Food Canada (AAFC) Research Centre, Lacombe, Alberta, Canada
2:30 Open Forum (Moderated by ALMA)
3:00 Coffee break
3:15  O01-GS  The potential of 3-nitrooxipropanol to lower enteric methane emissions from beef cattle  
A. Romero Perez\textsuperscript{1,2,*}, K. Beauchemin\textsuperscript{1}, S. McGinn\textsuperscript{1}, E. Okine\textsuperscript{2}, L. Guan\textsuperscript{2}, M. Oba\textsuperscript{2}, S. Duval\textsuperscript{3}, \textsuperscript{1}Agriculture and Agri-Food Canada, Research Centre, Lethbridge, Alberta, \textsuperscript{2}Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, Alberta, Canada, \textsuperscript{3}DSM Nutritional Products France, Research Centre for Animal Nutrition and Health, Saint Louis Cedex, France

3:30  O02-GS  Relationship of severity of sub-acute ruminal acidosis with rumen fermentation, chewing activities and milk fat concentration in lactating dairy cows when fed a common high grain diet  
X. Gao\textsuperscript{*}, M. Oba, AFNS, University of Alberta, Edmonton, Canada

3:45  O03-GS  Effect of Harvest Maturity of Whole-Crop Oat (Avena spp.) on Forage Intake, Rumen Fermentation and Total Tract Digestibility  
C. L. Rosser\textsuperscript{1,*}, A. D. Beattie\textsuperscript{2}, H. C. Block\textsuperscript{3}, J. J. McKinnon\textsuperscript{1}, H. A. Lardner\textsuperscript{1,4}, G. B. Penner\textsuperscript{1}, \textsuperscript{1}Department of Animal and Poultry Science, \textsuperscript{2}Department of Plant Science, University of Saskatchewan, Saskatoon, \textsuperscript{3}Brandon Research Center, Agriculture and Agri-Food Canada, Brandon, \textsuperscript{4}Western Beef Development Center, Humboldt, Canada

4:00  O04-GS  Management system and marine oil supplementation affect the milk fatty acid profile  
P. Vahmani\textsuperscript{5,*}, K. E. Glover\textsuperscript{2}, L. MacLaren\textsuperscript{3}, J. Green-Johnson\textsuperscript{4}, A. Fredeen\textsuperscript{3}, \textsuperscript{1}Department of Biology, Dalhousie University, Halifax, \textsuperscript{2}Azar Agriculture, \textsuperscript{3}Department of Plant and Animal Sciences, Dalhousie University, Truro, \textsuperscript{4}Department of Biology, University of Ontario Institute of Technology, Oshawa, Canada

4:15  O05-GS  Effects of frequency and level of energy supplementation on intake, rumen fermentation and digestibility of beef heifers fed low-quality forage  
F. Anez\textsuperscript{1,*}, G. B. Penner\textsuperscript{1}, P. G. Jefferson\textsuperscript{1,2}, H. A. Lardner\textsuperscript{1,2}, J. J. McKinnon\textsuperscript{1}, \textsuperscript{1}Animal & Poultry Science, University of Saskatchewan, Saskatoon, \textsuperscript{2}Western Beef Development Centre, Humboldt, Canada
4:30 O06-GS  Response of Different Types of Cereal Grains to Different Heating Methods in Ruminal and Intestinal Digestions in Dairy Cattle
Y. Ying*, D. A. Christensen, J. J. McKinnon, P. Yu,
Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, Canada

4:45 O07-GS  The effect of malt characteristics on in situ digestibility of malt barley grain harvested in three years
S. Ding1,2,*, M. Oba2, M.-L. Swift3, W. Z. Yang3, T. McAllister1, 1Research Centre, Agriculture and Agri-Food Canada, Lethbridge, 2Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, 3Research Centre, Alberta Agriculture and Food , Lacombe, Canada

5:00 O08-GS  Evaluation of canola meal derived from Brassica napus versus Brassica juncea for growing and finishing cattle.
J. Nair1,*, G. B. Penner1, P. Yu1, H. A. Lardner1,2, T. McAllister3, J. J. McKinnon1, 1Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK, 2Western Beef Development Centre, Humboldt, SK, 3Agriculture and Agri-Food Canada Research Centre, Lethbridge, AB, Canada

5:15 O09-GS  Ruminal epithelium barrier function following abrupt change to moderately fermentable diet
B. L. Schurmann1,*, M. E. Walpole1, P. Gorka1,2, C. H. Ching3, M. E. Loewen3, G. B. Penner1, 1Animal and Poultry Science, University of Saskatchewan, Saskatoon, Canada, 2Animal Nutrition and Feed Management, University of Agriculture, Krakow, Poland, 3Department of Biomedical Sciences, Western College of Veterinary Medicine, Saskatoon, Canada
Wednesday, June 19, 2013
Poster Presentations

Room: Assiniboine
Presentation Time: 7:30 am – 9:00 am

Posters should be placed on poster boards by 7:00 am and remain up all day.
Posters may be removed at 5:00 pm.

ANIMAL HEALTH AND BEHAVIOUR

P01 Non Invasive Surveillance of Bovine Respiratory Disease Using Infrared
A. Schaefer\textsuperscript{1,*}, C. Bench\textsuperscript{2}, N. Cook\textsuperscript{3}, K. Wynne-Edwards\textsuperscript{4}, M. Jelinski\textsuperscript{5}, R. Lewis\textsuperscript{6}, R. McCorkell\textsuperscript{7}, \textsuperscript{1}Lacombe Research Centre, Agriculture and Agri-Food Canada, Lacombe, \textsuperscript{2}AFNS, University of Alberta, Edmonton, \textsuperscript{3}Lacombe Research Centre, Alberta Agriculture, Lacombe, \textsuperscript{4}Vet Med, University of Calgary, Calgary, \textsuperscript{5}Vet Agri-Health, Airdrie, \textsuperscript{6}Westlock Vet, Westlock, \textsuperscript{7}Vet Med, University of Calgary, Calgary, Canada

P02-GS Age-dependent and site-specific effects on intestinal miRNA expression in young dairy calves
G. Liang\textsuperscript{1,*}, N. Malmuthuge\textsuperscript{1}, P. Stothard\textsuperscript{1}, P. Griebel\textsuperscript{2}, L. Guan\textsuperscript{1}, \textsuperscript{1}Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, \textsuperscript{2}Vaccine and Infectious Disease Organization, University of Saskatchewan, Saskatoon, Canada

P03 Infrared thermography of groups of pigs detects thermal responses to vaccination
N. J. Cook\textsuperscript{1}, C. Bench\textsuperscript{2,*}, A. Schaefer\textsuperscript{3}, \textsuperscript{1}Livestock Research and Innovation, Alberta Agriculture and Rural Development, Lacombe, \textsuperscript{2}Agriculture, Food and Nutritional Science, University of Alberta, Edmonton, \textsuperscript{3}Research Branch, Agriculture and Agri-Food Canada, Lacombe, Canada

P04 Comparison between a needle-free injection device (NFID) and a needle-syringe (NS) for vaccinating beef calves against infectious bovine rhinotracheitis (IBR) and Clostridium chauvoei
M. R. Rey\textsuperscript{1}, J. Rodriguez-Lecompte\textsuperscript{2}, M. Undi\textsuperscript{3,*}, T. Joseph\textsuperscript{3}, J. Morrison\textsuperscript{4}, A. Yitbarek\textsuperscript{1}, K. Wittenberg\textsuperscript{1}, R. Tremblay\textsuperscript{5}, K. Ominsinski\textsuperscript{1}, \textsuperscript{1}Animal Science, University of Manitoba, Winnipeg, \textsuperscript{2}Pathology and Microbiology, Atlantic Veterinary College, University of Prince Edward Island, Charlottetown, \textsuperscript{3}Veterinary Diagnostic Services, MAFRI, \textsuperscript{4}Biosystems Engineering, University of Manitoba, Winnipeg, \textsuperscript{5}Boehringer Ingelheim, Burlington, Canada
P05  Altered immune response in bovine paratuberculosis
P.-L. Dudemaine1,*, G. Fecteau2, M. Lessard3, G. Côté3, O. Labrecque3, S. Buczinski2, E. Doré2, J.-P. Roy2, N. Bissonnette1, 1Agriculture et Agroalimentaire Canada, Sherbrooke, 2Faculté de médecine vétérinaire, Université de Montréal, 3Ministère de l’Agriculture, Pêcheries et de l’Alimentation du Québec, St-Hyacinthe, Canada

BREEDING AND GENETICS

P06  Estimation Of Genetic Parameters For Ultrasound Measurement Traits And Carcass Traits In Hanwoo

P07  Genetic relationship between live animal ultrasound scanned traits and carcass traits in Korean native cattle (Hanwoo)
C. Lee1,*, Y. Park1, H. Hwang1, Y. Choy2, T. Choi2, Y. Park3, J. Choi4, K. Jung4, J. Kim5, 1Kangwon Livestock Research Institute, Hoengseonggun, 2National Institute of Animal Science, Cheonan, 3Korea National college of agriculture and fisheries, Hwasung, 4Chungbuk Livestock Research Institute, Cheongwongun, 5College of Animal Life Sciences, Kangwon National University, Chuncheon, Republic of Korea

P08  Comparison of genetic parameters from station test records or from commercial farm records for growth and carcass traits in Hanwoo (Korean beef cattle)
S. Na1,*, T. Choi1, Y. Choy1, S. Roh2, C. Lee3, H. Kim4, Y. Koo5, 1National Institute of Animal Science, Cheonan, 2Hanwoo Improvement Center, Seosan, 3Kangwon Livestock Research Institute, Hoengseonggun, 4Korea Institute for Animal Products Quality Evaluation, Gunpo, 5Korea Animal Improvement Association, Seoul, Republic of Korea

P09  Functional analyses of SNPs in the promoter regions of bovine genes
M. Vinsky1,*, X. Zhu1,2, X. Zhang2, C. Li1,3, 1Beef Genomics, Agriculture and Agri-Food Canada, Edmonton, Canada, 2Animal Science College, South China Agricultural University, Guangzhou, China, 3Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, Canada

P10  Effects of niche-market genotypes on pig performance traits
H. Zhang1,2, J. L. Aalhus1, I. L. Larsen1, S. Nelson1, J. Ye2, M. Juárez1,*, 1Lacombe Research Centre, Agriculture and Agri-Food Canada, Lacombe, Canada, 2Department of Livestock Production, Inner Mongolia Agricultural University, Hohhot, China
P11-GS  Possible involvement of epigenetic modifying enzymes in the regulation of nutrient effect on bovine milk fat synthesis
R. Li1,2,*, F. Beaudoin1, X. Zhao3, E. M. Ibeagha-Awemu1, 1Dairy and Swine Research and Development Centre, Agriculture and Agri-Food Canada, Sherbrooke, Canada, 2College of Animal Science and Technology, Northwest A&F University, Xi’an, China, 3Animal Science, McGill University, Ste-Anne-De Bellevue, Canada

P12-GS  Estimation of growth pattern and gene expression analyses of Korean native steer (Hanwoo) using the genomic breeding value of Korea
C.-D. Jeong1,*, L. L. Mamuad1, S.-H. Kim1, Y.-J. Choi1, A. P. Soriano1, K.-C. Nam1, J.-J. Kim2, S.-S. Lee1, 1Animal Science and Technology, Sunchon National University, Suncheon, 2School of Biotechnology, Yeungnam University, Gyeongbuk, Republic of Korea

P13  Repeated measures of residual feed intake in growing beef bulls fed forage and grain-based diets
S. Thompson1,*, T. Ullenboom1, G. Crow1, J. Basarab2, K. Wittenberg1, V. Baron3, C. Fitzsimmons4, K. Ominski1, 1Department of Animal Science, University of Manitoba, Winnipeg, 2Lacombe Research Centre, Alberta Agriculture and Rural Development, Lacombe, 3Agriculture and Agri-Food Canada, 4Department of Agricultural, Food, and Nutritional Science, University of Alberta, Edmonton, Canada

CARCASS QUALITY & CARCASS EVALUATION

P14  Energy partitioning in fat depots and the relationship between marbling score and whole carcass intramuscular fat relative to biological type and harvest age
N. P. Welegedara1,*, E. K. Okine1, J. A. Basarab2, Z. Wang1, C. Li1, H. Bruce1, S. Markus2, J. Stewart-Smith3, J. Aalhus4, R. W. Seneviratne2, L. Goonewardene2, 1Agricultural, Food and Nutritional Science, University of Alberta, 2Alberta Agriculture and Rural Development, Lacombe, 3BeefBooster Inc., Calgary, 4Agriculture and Agri-Food Canada, Lacombe, Canada

P15-GS  Factors Affecting the Prediction of Saleable Meat Yield in Lamb Carcasses Using Electronic Probe Technology
C. Mikel*, C. Campbell, B. McDougall, I. Mandell, Animal and Poultry Science, University of Guelph, Guelph, Canada

P16  Potential of near infrared reflectance spectroscopy to predict fatty acid composition in subcutaneous fat from pigs fed reduced-oil corn dried distillers grains with solubles
N. Prieto1,2,*, B. Uttaro2, C. Mapiye2, M. Dugan2, V. Zamora3, M. Young3, E. Beltranena4, 1CSIC, Leon, Spain, 2AAFC, Lacombe, 3Gowans Feed Consulting, Wainwright, 4Alberta Agriculture and Rural Development, Edmonton, Canada
CONTEMPORARY & EMERGING ISSUES

P17 Reliability and variability of 16S rRNA for microbial profiling of cattle feces
Y. Xu1,*, E. Dugat-Bony1,2, K. Munns2, L. Selinger2, T. A. McAllister3, B. Selinger1, 1Department of Biological Sciences, University of Lethbridge, 2Agriculture and Agri-Food Canada, 3Agriculture and Agri-Food Canada, Lethbridge, Canada

FOOD SAFETY

P18 Characterization of selected lactic acid bacterial isolates for controlling Salmonella infection in broilers
J. Gong1,*, X. Yang1, J. Brisbin2, Q. Wang2, F. Yin1, H. Yu1, S. Sharif2, 1Agriculture and Agri-Food Canada, 2University of Guelph, Guelph, Canada

P19 Rapid Determination of Total CLAs in Canadian Cheese by 1H NMR Spectroscopy
D. Prema1, J. L. Pilfold, J. Krauchi, J. S. Church, K. K. Donkor and B. Cinel, Faculty of Science, Thompson Rivers University, Kamloops, British Columbia, Canada

FOODS AND FOOD PRODUCTS

P20 Enriching hamburger with PUFA biohydrogenation products by supplementing steers fed high forage diets with either flaxseed or sunflower seed: Effects of adipose tissue source on palatability and fatty acid composition
T. D. Turner1,*, J. L. Aalhus1, C. Mapiye1, D. C. Rolland1, I. L. Larsen1, J. A. Basarab2, V. S. Baron1, T. A. McAllister3, H. C. Block4, B. Uttaro1, M. E. R. Dugan1, 1Agriculture & Agri-Food Canada, 2Alberta Agriculture and Rural Development, Lacombe, 3Agriculture & Agri-Food Canada, Lethbridge, 4Agriculture & Agri-Food Canada, Brandon, Canada

FORAGES AND PASTURES

P21 Withdrawn by author

P22 The ensilage dynamics and nutritive value of alfalfa silage produced using fibrolytic enzymes and a silage inoculant.
J. P. Lynch1,*, L. Jin1, E. C. Lara2, J. Baah1, K. A. Beauchemin1, 1AAFC, Lethbridge, Canada, 2São Paulo State University, São Paulo, Brazil
GROWTH AND DEVELOPMENT

P23 Impact of maternal nutrition during gestation on fetal longissimus dorsi muscle transcriptome in beef cattle
F. Paradis¹,²*, J. R. Grant¹, K. M. Wood³, K. Swanson⁴, I. Mandell⁵, S. P. Miller⁵, B. McBride⁵, C. Fitzsimmons¹,², ¹Agricultural, Food, and Nutritional Science, University of Alberta, ²Agriculture and Agri-Food Canada, Edmonton, AB, ³Animal and Poultry Science, University of Guelph, Guelph, ON, Canada, ⁴Animal Science, North Dakota State University, Fargo, ND, United States

P24 Non steady state thermal profiles used to rank RFI in cows
A. Schaefer¹,*, J. Basarab², J. Colyn¹, J. Webster³, M. Stewart³, ¹Lacombe Research Centre, Agriculture and Agri-Food Canada, ²Lacombe Research Centre, Alberta Agriculture, Lacombe, Canada, ³Ruakura Research Centre, AgResearch, Hamilton, New Zealand

P25 Investigating RFI and diet interactions on ADG, body weight, rib and back fat thickness in pregnant Angus heifers
C. Straathof¹,*, F. Paradis¹,², H. Block³, M. Colazo⁴, B. Yaremcio⁶, C. Li¹,², H. Bruce¹, C. Fitzsimmons¹,², ¹Agricultural, Food & Nutritional Science, University of Alberta, ²Agriculture and Agri-Food Canada, Edmonton, Alberta, ³Agriculture and Agri-Food Canada, Brandon, Manitoba, ⁴Alberta Agriculture and Rural Development, Edmonton, Alberta, Canada

P26 Modelling carcass dressing percentage in market weight pigs
H. R. Martínez-Ramírez¹,*, P. C. Morel², C. F. de Lange³, ¹Animal and Poultry Science, University of Guelph, Guelph, Canada, ²Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North, New Zealand

MEAT SCIENCE AND MUSCLE BIOLOGY

P27 Influence of carcass chilling rate on quality characteristics of pork loin meat
D. A. Omana¹,*, E. Goddard², G. Plastow³, Z. Pietrasik³, S. Anders², S. Moore⁴, H. Bruce¹, ¹Department of Agricultural, Food & Nutritional Science, ²Department of Resource Economics and Environmental Sociology, University of Alberta, Edmonton, ³Leduc Food Processing Centre, Alberta Agriculture and Rural Development, Leduc, Canada, ⁴Queensland Alliance for Agriculture & Food Innovation, The University of Queensland, St Lucia, Australia
Composition of biohydrogenation intermediates in intramuscular fat of yearling steers fed forage-based diets with supplemental flaxseed or sunflower-seed
C. Mapiye, T. D. Turner, D. C. Rolland, J. A. Basarab, V. S. Baron, T. A. McAllister, H. C. Block, B. Uttaro, J. L. Aalhus, M. E. R. Dugan, Agriculture and Agri-Food Canada, Alberta Agriculture and Rural Development, Lacombe Research Centre, Lacombe, Agriculture and Agri-Food Canada, Lethbridge Research Centre, Lethbridge, Agriculture and Agri-Food Canada, Brandon Research Centre, Brandon, Canada

Beef production and quality of yearling steers fed high-forage diets with flaxseed or sunflower-seed
C. Mapiye, T. D. Turner, D. C. Rolland, J. A. Basarab, V. S. Baron, T. A. McAllister, H. C. Block, B. Uttaro, J. L. Aalhus, M. E. R. Dugan, Agriculture and Agri-Food Canada, Alberta Agriculture and Rural Development, Lacombe Research Centre, Lacombe, Agriculture and Agri-Food Canada, Lethbridge Research Centre, Lethbridge, Agriculture and Agri-Food Canada, Brandon Research Centre, Brandon, Canada

Effects of electrical stimulation and nitrite film packaging on colour stability of bison steaks and ground meat

Effects of electrical stimulation on meat quality of Bison strip-loin steaks
A. R. Rodas-González, O. López-Campos, J. Galbraith, B. Uttaro, M. Juárez, J. Aalhus, Lacombe Research Centre, Agriculture and Agri-Food Canada, Lacombe, Livestock Business Development Branch, Alberta Agriculture, Camrose, Canada

Estimation of pork loin fatty acid composition from pigs fed reduced-oil corn dried distillers grains with solubles using near infrared reflectance spectroscopy and two sample treatments
N. Prieto, B. Uttaro, C. Mapiye, M. Dugan, V. Zamora, M. Young, E. Beltranena, CSIC, Leon, Spain, AAFC, Lacombe, Gowans Feed Consulting, Wainwright, Alberta Agriculture and Rural Development, Edmonton, Canada

Canadian Atlantic salmon quality characteristics
C. Ding, M. Juárez, I. Larsen, B. Swift, S. Fukui, P. McKenzie, J. Ye, J. Aalhus, Lacombe Research Centre, Agriculture & Agri-Food Canada, Lacombe, Canada, Department of Livestock Production,
Inner Mongolia Agricultural University, Hohhut, China, ³TRI-GEN Fish Improvement Ltd., Ponoka, ⁴Mainstream Canada, Campbell River, Canada

**P34-GS** Relationship between animal sex, production and carcass characteristics and the incidence of dark cutting beef
S. Mahmood¹*, J. A. Basarab², J. L. Aalhus³, G. Plastow¹, H. L. Bruce¹, ³Agriculture, Food and Nutritional Science, University of Alberta, Edmonton, ²Alberta Agriculture and Rural Development, ³Agriculture and Agri-Food Canada, Lacombe Research Centre, ⁶000 C & E Trail, Lacombe, Canada

**P35** Modification of pyridinoline concentration in m. Gluteus medius with steer age at slaughter, breed cross and growth promotants
B. C. Roy¹*, I. Girard², J. L. Aalhus³, J. A. Basarab⁴, I. L. Larsen⁵, G. Sedgewick¹, H. L. Bruce¹, ³Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, ²Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, Alberta, ³Agriculture and Agri-Food Canada, Agriculture and Agri-Food Canada, ⁴Alberta Agriculture and Rural Development, Alberta Agriculture and Rural Development, ⁵Agriculture and Agri-Food Canada, Lacombe, Canada

**P36-GS** Effect of Suckler Beef Production in British Columbia on Tenderness
I. Hartling*, J. S. Church, C. R. Friedman, B. Cinel, and K. K. Donkor, Faculty of Science, Thompson Rivers University, Kamloops, British Columbia, Canada

**NONRUMINANT NUTRITION**

**P37** Determination of the Efficacy of Feeding Yellow-Seeded Canola Products to Laying Hens
J. L. MacIsaac¹, D. M. Anderson²*, R. Savary², ¹Atlantic Poultry Research Institute, ²Plant & Animal Sciences, Dalhousie University, Faculty of Agriculture, Truro, Canada

**P38** Apparent digestibility of gross energy, crude protein, crude fat and amino acids in camelina seed, mechanically extracted camelina meal and prepress solvent extracted camelina meal by Rainbow trout (Oncorhynchus mykiss)
D. Anderson*, M. Fu, Animal Science, Dalhousie University, Faculty of Agriculture, Truro, Canada

**P39** Nutrient digestibility in different fish meals available in Atlantic Canada fed to Rainbow trout (Oncorhynchus mykiss)
D. Anderson*, X. Li, Animal Science, Dalhousie University, Faculty of Agriculture, Truro, Canada
P40 Dietary adaptation of the gastrointestinal tract of calves involves changes in the mass of forestomach tissues and length of the small intestine
P. Gorka1,2, B. L. Schurmann2, M. E. Walpole2, G. B. Penner2,*, 1Animal Nutrition and Feed Management, University of Agriculture in Krakow, Krakow, Poland, 2Animal and Poultry Science, University of Saskatchewan, Saskatoon, Canada

P41-GS Use of Principal Component Analysis to investigate relationships between methane emissions and nutrient composition of diets of beef cattle
C. Escobar1,*, K. Beauchemin2, M. Oba1, 1University of Alberta, Edmonton, 2Agriculture and Agri Food Canada, Lethbridge, Canada

P42 Greenhouse gas emissions from dairying in Eastern Canada – Effects of varying dairy cow replacement rate
E. J. McGeough, S. M. Little, H. H. Janzen, T. A. McAllister, S. M. McGinn, K. A. Beauchemin*, Agriculture and Agri-Food Canada, Lethbridge, Canada

P43-GS Farm-based life cycle assessment of greenhouse gas emissions from beef cattle fed dried distillers’ grains plus solubles
M. Hünerberg1,2,*, S. Little1, K. Beauchemin1, S. McGinn1, O. Harstad3, E. Okine2, T. McAllister1, 1Agriculture Agri-Food Canada , Lethbridge, 2University of Alberta, Edmonton, Canada, 3Norwegian University of Life Sciences, Ås, Norway

P44 Effects of protein sources on growth performance of backgrounded steers
W. Yang1,*, L. Xu1,2, C. Li3, K. Beauchemin1, 1AAFC, Research Centre , Lethbridge, AB, Canada, 2College of Food Science and Engineering, Inner Mongolia Agricultural University, Hohhot, Inner Mongolia, 3College of Animal Science and Technology, Inner Mongolia University for the Nationalities, Tongliao, Inner Mongolia, China

P45 Effect of Substituting Oat Grain by Wheat-based Dried Distillers Grains with Solubles on Nutritional Profiles, Energy Values, Rumen Degradation Kinetics and Balance, and Metabolizable Protein Supply in Cattle
D. Damiran1, A. Jonker2, J. McKinnon1, T. McAllister3, D. Christensen1, M. Yari1, H. B. Lardner1,*, P. Yu1, 1Department of Animal and Poultry
P46  Methane emissions in response to various Propionibacterium strains in beef heifers fed a high grain diet
D. Vyas1,*, E. J. McGeough1, S. M. McGinn1, T. A. McAllister1, K. A. Beauchemin1, A. H. Smith2, Agriculture and Agri-Food Canada, Lethbridge, Canada, 2Dupont Nutrition and Health, Waukesha, United States

P47  Methane emissions in response to various Propionibacterium strains in beef heifers fed high forage diet
D. Vyas1,*, E. J. McGeough1, S. M. McGinn1, T. A. McAllister1, A. H. Smith2, K. A. Beauchemin1, Agriculture and Agri-Food Canada, Lethbridge, Canada, 2Dupont Nutrition and Health, Waukesha, United States

P48  In vitro effects of echium oil and flaxseed oil on major rumen bacterial populations
L. Jin1,2,*, M. He1, Y. Wang1, T. Alexander1, J. Kraft3, C. Li1, Y. Zhang2, T. McAllister1, AAFC, Lethbridge, Canada, 2Northeast Agricultural University, Harbin, China, 3University of Vermont, Burlington, United States

P49  Effect of reduced-fat dried distillers grains with solubles on rumen fermentation, intestinal flow of microbial nitrogen and nutrient digestibility in Holstein cows
E. Castillo-Lopez1,*, P. Kononoff2, T. Klopfenstein2, Animal and Poultry Science, University of Saskatchewan, Saskatoon, Canada, 2Animal Science, University of Nebraska-Lincoln, Lincoln, United States

P50  Differential effects of nitrogen sources including Optigen II on in vitro rumen ammonia release
L. Jin1,*, J. Kouazounde1, Y. Wang1, P. Groenewegen2, T. McAllister1, AAFC, Lethbridge, 2Alltech, Guelph, Canada

P51  The effect of pregnancy on proteins relating to energy metabolism in mature beef cows.
K. M. Wood1,*, C. J. Fitzsimmons2,3, S. P. Miller1, B. W. McBride1, K. C. Swanson4, Department of Animal and Poultry Science, University of Guelph, Guelph, 2Dept. of Agriculture, Food, and Nutritional Sciences, University of Alberta, 3Agriculture and Agri-food Canada, Edmonton, Canada, 4Dept of Animal Science, North Dakota State University, Fargo, United States
P52 Effect of wheat vs barley and processing index on growth performance, eating behavior and carcass quality of finishing feedlot steers
M. He1,2, L. Jin1,*, Y. Wang1, G. Penner2, T. A. McAllister1, 1Agriculture and Agri-Food Canada, Lethbridge, 2University of Saskatchewan, Saskatoon, Canada

P53 Effect of replacing barley grain with wheat on rumen fermentation in finishing beef cattle
M. He1,2, L. Jin2,*, Y. Wang2, G. Penner1, T. A. McAllister2, 1University of Saskatchewan, Saskatoon, 2Agriculture and Agri-Food Canada, Lethbridge, Canada

P54 Fatty acids profile of goat meat fed diets with palm kernel cake derived from biodiesel production
R. L. Oliveira1,*, R. D. X. Ribeiro1, A. N. Medeiros2, G. G. L. Araújo3, B. R. Correia4, R. L. Oliveira1, 1Department of Animal Science, Federal University of Bahia, Salvador, 2Department of Animal Science, Federal University of Paraíba, Areia, 3Brazilian Agricultural Research Corporation of Tropical Semi arid (EMBRAPA), Petrolina, 4Department of Animal Science, State University of Southwest Bahia, Itapetinga, Brazil

P55-GS Relationship of sorting behavior with chewing activity, rumen fermentation and milk production in lactating dairy cows fed diets differing in the dietary forage-to-concentrate ratio
X. Gao1,*, M. Oba2, 1AFNS, University of Alberta, Edmonton, 2AFNS, University of Alberta, Edmonton, Canada

P56 Feeding tannins to reduce ammonia emissions from feedlot cattle fed high protein finishing diets containing corn distillers grains
K. M. Koenig*, S. M. McGinn, K. A. Beauchemin, Agriculture and Agri-Food Canada, Lethbridge, Canada

P57 Analysis of probiotic bacteria to inhibit the respiratory pathogen Mannheimia haemolytica and adhere to bovine bronchial epithelial cells in vitro
S. Subramanian1,*, T. A. McAllister1, J. Baah2, T. W. Alexander1, 1Beef Physiology, 2Ruminant Nutrition and Microbiology, Lethbridge Research Centre, Lethbridge, Canada

P58 Interactions of cattle leptin genotype and dietary oilseeds and dried distiller’s grain on fat accumulation, adipocyte size, and body fatty acid profile
M. He1, L. Jin1,*, T. A. McAllister1, F. Marquess2, 1Agriculture and Agri-Food Canada, Lethbridge, 2Quantum Genetix Canada Inc., Saskatoon, Canada
P59-GS  An optimal method for microbial total RNA isolation from rumen contents
F. Li*, M. Zhou, X. Sun, L. Guan, Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, Canada

P60-GS  In-Vitro Efficacy of Bacteriophages T5, T4, T1 and O1 against E. coli O157:H7
H. Liu1*, Y. Niu2, J. Li1, K. Stanford2, T. A. McAllister3, 1College of Animal Science, Inner Mongolia Agricultural University, Hohhot, China, 2Alberta Agriculture and Rural Development, 3Agriculture and Agri-Food Canada, Lethbridge, Canada

P61-GS  Heat-Induced Changes in Chemical and Nutrient Profiles of Different Types of Cereal Grains: Comparison of Control vs. Dry Heating vs. Moist Heating
Y. Ying*, D. A. Christensen, J. J. McKinnon, P. Yu, Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, Canada

P62  Alteration of Modeling Nutrient Supply of Different Types of Cereal Grains to Dairy Cattle through Different Heating Methods
Y. Ying*, D. A. Christensen, J. J. McKinnon, P. Yu, Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, Canada

P63  Ensiling properties of whole crop barley and intercropped barley-oat-spring triticale
L. Jin*, J. P. Lynch, L. Duniere, Y. Wang, J. Baah, K. A. Beauchemin, T. A. McAllister, AAFC, Lethbridge, Canada

P64  Effect of inoculant containing L.buchneri on ensiling fermentation of whole barley crop
L. Jin*, J. P. Lynch, L. Duniere, Y. Wang, J. Baah, K. A. Beauchemin, T. A. McAllister, AAFC, Lethbridge, Canada

P65-GS  Whole genome sequencing of Escherichia coli O157:H7 isolates from super-shedder and non-super-shedder cattle
K. Munns1,2,*, Y. Xu2, K. Stanford3, L. B. Selinger2, T. A. McAllister1, 1Agriculture and Agri-Food Canada, 2Department of Biological Sciences, University of Lethbridge, 3Agriculture and Rural Development, Lethbridge, Canada

P66  Replacement of dietary starch with strategically blended byproduct pellets for beef cattle
P. Gorka1,2, F. Joy1,*, G. E. Chibisa1, G. B. Penner1, 1Animal and Poultry Science, University of Saskatchewan, Saskatoon, Canada, 2Animal Nutrition and Feed Management, University of Agriculture in Krakow, Krakow, Poland
P67 Effects of feeding dry- or steam-rolled barley or corn in diets containing lactose on the performance of dairy cows
G. E. Chibisa1,*, G. Penner1, P. Gorka2, T. Mutsvangwa1, R. Berthiaume3, 1Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, Canada, 2Department of Animal Nutrition and Feed Management, University of Agriculture in Krakow, Krakow, Poland, 3Valacta, Quebec City, Canada

P68 Simultaneous Inhibition of E. coli O157:H7, O26:H11, O145:NM and Salmonella Using a Single Bacteriophage
Y. D. Niu1, H. Liu2,3, J. Li3, T. A. McAllister2, K. Stanford1,*, 1Alberta Agriculture and Rural Development, 2Agriculture and Agri-Food Canada, Lethbridge, Canada, 3College of Animal Science, Inner Mongolia Agricultural University, Hohhot, China

P69-GS Accuracy of Predicting Feed Efficiency from the Starch Concentration in the Feces of Feedlot Cattle
L. J. Jancewicz1,2,*, G. B. Penner1, M. L. Swift3, J. J. McKinnon3, K. A. Beauchemin2, T. A. McAllister4, 1Animal and Poultry Science, University of Saskatchewan, Saskatoon, 2Ruminant Nutrition, Agriculture and Agri-Foods Canada, Lethbridge, 3Livestock Research Branch, Agriculture and Rural Development, Lacombe, 4Ruminant Nutrition and Microbiology, Agriculture and Agri-Foods Canada, Lethbridge, Canada

P70-GS Apparent nutrient digestibility and rumen fermentation characteristics of finishing diets supplemented with canola meal derived from Brassica napus or Brassica juncea.
J. Nair1,*, G. B. Penner1, P. Yu1, H. A. Lardner1,2, T. McAllister3, J. J. McKinnon1, 1Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK, 2Western Beef Development Centre, Humboldt, SK, 3Agriculture and Agri-Food Canada Research Centre, Lethbridge, AB, Canada
ORAL PRESENTATIONS

GRADUATE STUDENT COMPETITION - ORAL (SESSION #2)
Chairs: Carolyn Fitzsimmons, University of Alberta, Edmonton and Leluo Guan, University of Alberta, Edmonton
Room: Summit

8:30 O10-GS Interaction Effects Of Chiller Temperatures, Electrical Stimulation And Ageing On Beef Quality
J. A. Puente, B. Uttaro, S. Samanta, J. Aalhus, A. Elezzabi, H. L. Bruce, Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, Lacombe Research Centre, Agriculture and Agri-Food Canada, Lacombe, Department of Electrical and Computer Engineering, University of Alberta, Edmonton, Canada

8:45 O11-GS Does monitoring of animal welfare parameters through the supply chain predict pork meat quality variation?
L. M. Rocha, A. Velarde, A. Dalmu, L. Saucier, L. Faucitano, Agriculture and Agri-Food Canada, Sherbrooke, Department of Animal Science, Université Laval, Quebec, Canada, IRTA, Monells Girona, Spain

9:00 O12-GS Validation of Rumination Collars for Beef Cattle
C. A. Goldhawk, K. S. Schwartzkopf-Genswein, K. A. Beauchemin, Faculty of Veterinary Medicine, University of Calgary, Calgary, Agriculture and Agri-Food Canada, Lethbridge, Canada

9:15 O13-GS Agents of Bovine Respiratory Disease in North American Feedlots
C. Klima, R. Zaheer, S. Hendrick, T. W. Alexander, T. A. McAllister, University of Saskatchewan, Saskatoon, Agriculture Agri-Food Canada, Lethbridge, Canada

9:30 O14-GS Effects of an esterase-producing inoculant and chop-length on silage fermentation, ruminal fermentation, growth performance and carcass characteristics of finishing feedlot steers
W. Addah, J. Baah, E. E. K. Okine, T. A. McAllister, Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, Agriculture and Agri-Food Canada, Lethbridge Research Centre, Lethbridge, Canada

9:45 O15-GS Dynamics of whole body nitrogen retention and blood urea nitrogen in young pigs challenged with bacterial lipopolysaccharide is not affected by diet complexity
M. Rudar, C. de Lange, Animal and Poultry Science, University of Guelph, Guelph, Canada
10:00 Break

10:15 O16-GS Mechanisms of urea transport across the isolated ruminal epithelium in bison (Bison bison) and beef cattle (Bos taurus)
M. Walpole1,*, P. Gorka1,2, M. Woodbury3, L. L. Guan4, G. Penner1, 1Animal and Poultry Science, University of Saskatchewan, Saskatoon, Canada, 2Department of Animal Nutrition and Feed Management, University of Agriculture in Krakow, Krakow, Poland, 3Large Animal Clinical Sciences, University of Saskatchewan, Saskatoon, 4Department of Animal Nutrition and Feed Management, University of Alberta, Edmonton, Canada

10:30 O17-GS Genome wide association for human nose score of boar taint using single-snp analysis
Y. G. Tesfayonas1,2,*, 1Animal Breeding and Genomics Center, Wageningen University, Wageningen, Netherlands, 2Animal Breeding and Genetics, Swedish University of Agricultural Sciences (SLU), Uppsala, Sweden

10:45 O18-GS Genetic influence of host animals on fatty acid composition in beef cattle tissues
C. Ekine1,*, L. Chen1, M. Vinsky1, Z. Wang1, P. Stothard1, E. Okine1, N. Aldai2, M. Dugan1, T. McAllister3, C. Li1, 1Agriculture Food and Nutritional Science, University of Alberta, Edmonton, Canada, 2Lascaray Research Centre, University of the Basque Country (UPV-EHU), Vitoria-Gasteiz, Spain, 3Agriculture and Agri-Food Canada, Lethbridge, Canada

11:00 O19-GS Bovine microRNAs: genomic organization and expression in subcutaneous adipose tissue
J. M. Romao1,*, W. Jin1, M. He2, T. McAllister2, L. Guan1, 1AFNS, University of Alberta, Edmonton, 2Lethbridge Research Centre, Agriculture and Agri-Food Canada, Lethbridge, Canada

11:15 O20-GS Predicting residual feed intake in beef bulls by measuring radiated heat loss through infrared thermography
S. Thompson1,*, A. Schaefer2, G. Crow3, J. Basarab4, J. Colyn2, K. Wittenberg2, V. Baron5, C. Fitzsimmons6, K. Ominski7, 1Department of Animal Science, University of Manitoba, Winnipeg, 2Lacombe Research Centre, Agriculture and Agri-Food Canada, Lacombe, 3Animal Science, University of Manitoba, Winnipeg, 4Lacombe Research Centre, Alberta Agriculture and Rural Development, Lacombe, 5Agriculture and Agri-Food Canada, 6Department of Agricultural, Food, and Nutritional Science, University of Alberta, Edmonton, Canada
11:30 O21-GS Residual feed intake, enteric methane and carbon dioxide emissions in growing beef bulls
T. R. Ullenboom1,*, G. H. Crow1, J. A. Basarab2, K. M. Wittenberg1, V. Baron1, K. H. Ominski1, 1Department of Animal Science, University of Manitoba, Winnipeg, 2Western Forage Beef Group, Alberta Agriculture, Food and Rural Development, 3Lacombe Research Centre, Agriculture and Agri-Food Canada, Lacombe, Canada

GLOBAL MEAT MARKET
Chair: Brian Sullivan, Canadian Centre for Swine Improvement, Ottawa
Room: Castle Room
This session will be presented via video link between the AMSA (Auburn) and CMSA (Banff) meetings.

9:00 The Roles that Sponsorships and Corporate Social Responsibility Play in Marketing and Public Relations
D. Pittman*, Smithfield Foods

9:40 Drivers of Global Meat Demand and Price
K. Grier*, George Morris Center

10:20 Meat Production by Tissue Engineering Methods
K. R. Jakab*, Modern Meadow, Inc

ANIMAL HEALTH AND EMERGING ISSUES
Chair: Karen Schwartzkopf-Genswein, Agriculture and Agri-Food Canada, Lethbridge
Room: Summit

1:15 O22 Mucosal Vaccination: Using Bacillus Spores for Antigen Delivery
S. M. Cutting*, School of Biological Sciences, Royal Holloway, University of London, Egham, UK.

1:45 O23 Welfare management practices to increase beef production and sustainability
K. S. Schwartzkopf-Genswein*, Agriculture and Agri-Food Canada, Lethbridge, Canada

2:15 O24 Microbial Biodegradation Of Recalcitrant Beta-Sheet Rich Protein By Shifting Communities Of Bacteria And Fungi During Composting
T. Reuter1,*, B. H. Gilroyed2, W. Xu3, T. A. McAllister4, K. Stanford1, 1Livestock Research Branch, Government of Alberta, Lethbridge, 2School of Environmental Sciences, University of Guelph, Ridgetown, Canada, 3Department of Medicine, Karolinska Institute, Stockholm, Sweden,
2:30 O25 Compost Temperatures Reduce Bacillus Endospore Viability
A. Harvey1,2,*, T. Reuter3, B. Selinger2, A. Kingsley4, T. A. McAllister1, 1Agriculture and Agri-Food Canada, 2University of Lethbridge, 3Agriculture and Rural Development, 4Animal Disease Research Institute, Lethbridge, Canada

2:45 O26 Boosting Molecular Assays To Detect Pathogenic Escherichia Coli in Cattle
C. C. Conrad1,*, K. Stanford2, T. A. McAllister3, J. E. Thomas1, T. Reuter2, 1Biological Sciences, University of Lethbridge, 2Livestock Research Branch, Government of Alberta, 3Ruminant Nutrition & Microbiology, Agriculture & Agri-Food Canada, Lethbridge, Canada

NONRUMINANT NUTRITION

Chair: Tim Reuter, Alberta Agriculture and Rural Development, Lethbridge
Room: Castle

3:15 O27 Egg Production and Quality of Laying Hens fed Leaf Composite Mix as Alternative Premix for Commercial Premix
M. Adegbenro1,*, J. O. Agbede1, V. A. Aletor2, 1Animal Production & Health, The Federal University of Technology, Akure, 2Office of the Vice Chancellor, Elizade University, Ilara Mokin, Nigeria

3:30 O28 Effects of graded corn cob levels on physicochemical properties of digesta and the size of visceral organs in weaner pigs
A. Wate, S. P. Ndou,*, M. Chimonyo, Animal and Poultry Science, University of KwaZulu-Natal, Pietermaritzburg, South Africa

3:45 O29 Prediction of scaled feed intake in finishing pigs using physicochemical properties of bulky feeds
M. Chimonyo*, S. P. Ndou, A. G. Bakare, Animal and Poultry Science, University of KwaZulu-Natal, Pietermaritzburg, South Africa

4:00 O30 The effects of crude glycerol dietary inclusion level on pig growth performance, carcass and meat quality
P. L. McEwen1,*, C. F. M. de Lange1, I. B. Mandell1, K. de Ridder1, G. Simpson2, 1University of Guelph, Guelph, 2Hypro Inc., Regina, Canada
Effects of butyrate glycerides on the lipid metabolism of broilers: a mechanistic study
J. Gong1,*, F. Yin1, X. Yang1, C. Yang1, H. Yu1, X. Shi2, Y. Hou3, Y. Yin4, S. Leeson5, K. de Lange5, 1Agriculture and Agri-Food Canada, Guelph, 2The UHN/MSH Gene Profiling Facility, Mount Sinai Hospital, Toronto, Canada, 3Wuhan Polytechnic University, Wuhan, 4Institute of Subtropical Agriculture, Chinese Academy of Sciences, Changsha, China, 5University of Guelph, Guelph, Canada

Whole body retention of 18:3n-3 and apparent conversion of 18:3n-3 to n-3 highly unsaturated fatty acids in pigs fed flaxseed or fish oil diets
H. R. Martínez-Ramírez1,*, J. K. Kramer2, C. F. de Lange1, 1Animal and Poultry Science, University of Guelph, 2Agriculture and Agri-Food Canada, Guelph, Canada

Influence of physicochemical properties of fibrous diets on behavioural reactions of individually housed pigs
A. G. Bakare, P. S. Ndou, M. Chimonyo*, Animal and Poultry Science, University of KwaZulu-Natal, Pietermaritzburg, South Africa

Ruminant Production and Management
Chair: John Baah, Agriculture and Agri-Food Canada, Lethbridge
Room: Summit

The Interaction Between Cow Nutrition and Neonatal Calf Health
G.P. Lardy* and G.L. Stokka, Department of Animal Sciences, North Dakota State University, Fargo, ND

Adaptation and Recovery of the Ruminal Epithelium
G. B. Penner1,*, J. R. Aschenbach2, 1Animal and Poultry Science, University of Saskatchewan, Saskatoon, Canada, 2Veterinary Physiology, Free University of Berlin, Berlin, Germany

Effect of rested grazing and alfalfa inclusion in bromegrass pastures on cow-calf productivity
H. C. Block3,*, O. N. Durunna3, C. D. Robins2, M. H. Entz3, M. Khakbazan1, S. L. Scott4, 1Brandon Research Centre, Agriculture and Agri-Food Canada, 2Manitoba 4H Council, Brandon, 3Department of Plant Science, University of Manitoba, Winnipeg, 4Alberta Livestock and Meat Agency, Edmonton, Canada
4:30 O37 Effect of harvest maturity and crop on forage yield and the productivity weaned beef calves strip-grazing annual swaths
H. C. Block¹, C. L. Rosser²,*, A. D. Beattie³, J. J. McKinnon², H. A. Lardner²,4, G. B. Penner², ¹Brandon Research Centre, Agriculture and Agri-Food Canada, Brandon, ²Department of Animal and Poultry Science, ³Department of Plant Science, University of Saskatchewan, Saskatoon, ⁴Western Beef Development Centre, Humboldt, Canada

4:45 O38 Milk fatty acid profile of organic dairy farms in Ontario
A. Fredeen¹,*, A. Tucker², L. Levison², R. Bergeron², P. Vahmani¹, T. Devries², ¹Plant and Animal Science, Dalhousie University, Truro, ²Animal and Poultry Science, University of Guelph, Guelph, Canada

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Thursday, June 20, 2013
Oral Presentations & Workshop

FOOD SAFETY AND MEAT SCIENCE
Chair: Kim Stanford, Alberta Agriculture and Rural Development, Lethbridge
Room: Summit

8:00 O39 Improving food safety in the live animal
T. Callaway*, Agricultural Research Service, USDA, College Station, United States

8:30 O40 Modern Technology: current and possible future applications in the pork industry
B. Uttaro*, Agriculture and Agri-Food Canada, Lacombe Research Centre, Lacombe, Alberta, Canada

9:00 O41 Variable efficacy of a vaccine and direct-fed microbial for controlling Escherichia coli O157:H7 in feces and on hides of feedlot cattle
K. Stanford¹,*, S. Hannon², C. W. Booker³, G. K. Jim², ¹Alberta Agriculture and Rural Development, Lethbridge, ²Feedlot Health Management Services Ltd, ³Feedlot Health Management Services Ltd, Okotoks, Canada

9:15 O42 Effect Of Forms Of Feed On Performance And Carcass Characteristics Of Broiler Chickens
A. O. Onakomaiya*, O. S. Akinola, Animal Production and Health, Federal University Of Agriculture, Abeokuta, Nigeria

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9:30 O43 Sensory qualities of pork from Large White and Wind-
snyer gilts prepared by different cooking methods
J. Madzimure1,*, M. Chimonyo2, V. Muchenje3, 1Animal
Production and Technology, Chinhoyi University of
Technology, Chinhoyi, Zimbabwe, 2Discipline of Ani-
mal and Poultry Science, University of KwaZulu-Natal,
Pietermaritzburg, 3Department of Livestock and Pasture
Science, University of Fort Hare, Alice, South Africa

9:45 Break

10:00 O44 The Phenomic Challenge – Integrating performance,
carcass and meat quality data with genomics
J. Aalhus1,*, J. Basarab2,3, I. Larsen1, O. López-Campos1,3,
M. Dugan3, N. Prieto1,4, B. Uttaro1, A. Schaefer1, N. Cook5,
G. Plastow3,4, C. Li1,3,4, C. Calkins6, M. Juárez1, 1Lacombe
Research Centre, Agriculture & Agri-Food Canada, 2Liv-
estock Research Branch, Alberta Agriculture & Rural Devel-
opment, Lacombe, AB, 3Livestock Gentec, 4Department
of Agricultural, Food & Nutritional Sciences, University of
Alberta, Edmonton, AB, 5Livestock Welfare Unit, Alberta
Agriculture & Rural Development, Lacombe, AB, Canada,
6Goldfinch Solutions LLC, Lincoln NE, United States

10:30 O45 Extended storage reduces n-3 PUFA content in trimmed
pork loins and bellies
H. R. Martínez-Ramírez1,*, J. K. Kramer2, C. F. de Lange1,
1Animal and Poultry Science, University of Guelph, 2Agri-
culture and Agri-Food Canada, Guelph, Canada

BREEDING AND GENETICS

Chair: TBD
Room: Summit

10:45 O46 Improvement of tenderness in Canadian Beef through
genomics
S. P. Miller1,2,3,*, G. VanderVoort1, B. D. Lu1, I. B. Mandell4,
J. E. Squires4, J. A. Basarab5, J. L. Aalhus6, C. Li6, P. Stothard4,
Z. Wang5, G. S. Plastow2, S. S. Moore3, 1Centre
for the Genetic Improvement of Livestock, University of
Guelph, Guelph, 2Livestock Gentec, University of Alberta,
Edmonton, Canada, 3Centre for Animal Science, Uni-
versity of Queensland, Brisbane, Australia, 4Animal and
Poultry Science, University of Guelph, Guelph, 5Lacombe
Research Station, Alberta Agriculture and Rural Develop-
ment, 6Lacombe Research Centre, Agriculture and Agri-
Food Canada, Lacombe, Canada
11:15  O47  Effects of within-litter birth weight variation of piglets on performance at three weeks of age and at weaning in a Large White x Landrace sow herd
T. J. Zindove1,*, E. F. Dzomba2, A. T. Kanengoni3, M. Chimonyo1, 1Animal and Poultry Science, 2Genetics, University of KwaZulu-Natal, Pietermaritzburg, 3Animal Production Institute, ARC, Irene, South Africa

11:30  O48  Preadjustment of Body Weight Growth and Ultrasound Body Tissue Development Traits and Genetic Parameters in Three Seedstock Pig Breed populations in Korea
Y. H. Choy1,*, J. G. Choi1, Y. L. Choi1, A. Mahboob1, 1Animal Breeding & Genetics, National Institute of Animal Science, Chonan, Republic of Korea

11:45  O49  Gene expression patterns in spleen of mink inoculated with the Aleutian mink disease virus
A. H. Farid1,*, U. Basu2, 1Plant and Animal Sciences, Dalhousie University, Truro, 2Agriculture, Food and Nutrition Science, University of Alberta, Edmonton, Canada

12:00  O50  Genomic prediction for residual feed intake and carcass merit traits in Angus and Charolais beef cattle
C. Li1,2,*, L. Chen2, M. Vinsky1, 1Lacombe Research Center, Agriculture and Agri-Food Canada, 2Department of AFNS, University of Alberta, Edmonton, Canada

WORKSHOP & NSERC PRESENTATION
Chair: Trevor Alexander, Agriculture and Agri-Food Canada, Lethbridge
Room: Summit

12:15  Session 1: DNA extraction and PCR methods.
T. Alexander*, Agriculture and Agri-Food Canada, Lethbridge, AB, Canada

12:45  Session 2: Next generation sequencing
R. Gruninger, Agriculture and Agri-Food Canada, Lethbridge, AB, Canada

1:15   Session 3: NSERC program overview and applications
G. Sabourin*, Natural Sciences and Engineering Research Council of Canada, Ottawa, ON, Canada
FUTURE MEETING:
July 20-24, 2014
Kansas City, Missouri, USA
With ADSA® and ASAS