Canadian Society of Animal Science Annual Meeting
Detailed Program

** Oral Presentation Number and Poster Presentation Number are indicated before title of abstract in each section

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**Wednesday, August 13**

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**Thursday, August 14**
Monday, August 11, 2008  
**Location:** Rozanski 103 University of Guelph  
**Time:** 08:15 to 16:45

**Kennedy Conference on Quantitative Genetics and Animal Breeding**

**Moderator:** L.R. Schaeffer  
University of Guelph

Sym = Symposium Paper  
BGO = Breeding and Genetics Oral Presentation

08:15  
Introduction and Welcome

08:30  
Sym1: **Animal breeding – meeting the needs of our society.** van Arendonk, J.A.M.*, Bijma, P., Bovenhuis, H.

09:30  
Sym2: **Challenges and opportunities in variance component estimation for animal breeding.** Thallman, R.M.*

**Henderson Lectureship Speaker**

10:30  
BREAK

**LUNCH BREAK**

13:15  
Sym3: **Nonparametric and machine learning procedures for genome-enabled prediction of genetic value for quantitative traits.** Gianola, D.*

14:15  
Sym4: **Integration of molecular and quantitative genetics for livestock improvement.** Dekkers, J.C.M.*, Habier, D., Toosi, A., Ibanez-Escriche, N., Fernando, R.L.

15:15  
BREAK

15:30  
BGO4: **Effect of number of markers and phenotyped animals on reliabilities of genomic breeding values.** van der Linde, C., Schrooten, C.*, de Roos, A.P.W.
Sym5: **Evolutionary history of cattle based on genomics.** Goddard, M.E.*, Hayes, B.J., MacEachern, S., Macleod I.  
*Raithby Memorial Lecturer*²

¹*Henderson Lectureship*
The Charles R. Henderson Lectureship in Statistics and Animal Breeding is to acknowledge accomplishments of scientists who have made significant contributions to animal breeding, genetics and bioinformatics. Dr. Henderson enjoyed the give and take of discussions with colleagues at conferences and believed strongly in the value of such exchanges. The Lectureship was established by Cornell University and the Department of Animal Science.

²*Raithby Memorial Lecture*
George Raithby graduated from the Ontario Agricultural College in 1922 and later became head of the Department of Animal Husbandry from 1954 to 1965. He had a significant influence on the beef, swine and dairy industries. The OAC Alumni Foundation established the George Raithby Memorial Lecture to support education and research in agriculture.
Tuesday, August 12, 2008
Location: Rozanski 103 University of Guelph
Time: 08:00 to 12:00

Breeding and Genetics Oral Presentations

Moderator: J.W. Wilton
University of Guelph

BGO = Breeding and Genetics Oral Presentation

08:00 BGO5: Extent and pattern of linkage disequilibrium in North American Holstein cattle evaluated using a 50k SNP panel. Sargolzaei, M.*, Schenkel, F.S.


08:45 BGO8: Effect of information source on estimates of SNP substitution effects. Vander Voort, G.E.*, Kelly, M.J., Miller, S.P.

09:00 BGO9: A deterministic procedure for defining the SNP phase in large pedigrees. Jafarikia, M.*, Sullivan, B., Maignel, L., Mathur, P.K.


09:30 BGO11: On the importance of QC measures in microarray analyses. Gondro, C.*, van der Werf, J.H.J.

09:45 BGO12: Phenotypic analysis of inbreeding depression for traits measured in Canadian dairy cattle breeds. Miglior, F.*, Van Doormaal, B.J., Kistemaker, G.

10:00 BREAK

10:30 BGO13: Genetic and phenotypic relationships between multi-marker molecular breeding values for feed intake and feed efficiency with their component traits in beef cattle. Nkrumah, J.D.*, Woodward, B.W., Basarab, J.A., Carstens, G.

10:45 BGO14: Genetic and phenotypic parameter estimates for bodyweight at different ages in turkeys. Wood, B.J.*
11:00  BGO15: Selection for alternative market weights in sire and dam lines of pigs. Quinton, V.M.*, Wilton, J.W.


11:45  BGO18: Heritability of natural infection of black mink by Aleutian mink disease virus. Farid, A.*, Fatehi, J.
Tuesday, August 12, 2008  
Location: Rozanski 102 University of Guelph  
Time: 08:00 to 11:45

Ruminant Nutrition and Metabolism Oral Presentations

Moderator: K.C. Swanson  
University of Guelph

RO = Ruminant Nutrition and Metabolism Oral Presentation

08:00  

08:15  

08:30  
RO3: Rumen protozoa can produce CLA from linoleic acid. Or-Rashid, M.M.*, AlZahal, O., McBride, B.W.

08:45  
RO4: Partial replacement of dietary starch with sucrose tended to increase ruminal pH of Holstein cows in early lactation. Penner, G.B., Oba, M.*

09:00  
RO5: Real-time PCR quantification of rumen bacteria, and ciliated protozoa during grain-induced subacute ruminal acidosis (SARA). Li, S.*, Khafipour, E., Plaizier, J.C., Krause, D.O.

09:15  

09:30  
RO7: Long-term metabolic and immune responses of dairy cows fed rolled barley grain treated with lactic acid. Ametaj, B.N.*, Dunn, S.M.

09:45  

10:00  
BREAK

10:30  
RO9: Nitrogen partitioning study with dairy cows fed red clover silage: unaccounted losses. Brito, A.F., Dewhurst, R.J., Berthiaume, R.*

10:45  
RO10: Effect of incorporating alfalfa and fertiliser on the carrying capacity and steer performance on meadow brome grass pastures. Block, H.C., Scott, S.L.*, Robins, C.D., McCaughey, W.P.
11:00  RO11: Effect of incorporating alfalfa and/or fertiliser into grass pastures on energy use efficiency of beef production systems. Khakbazan, M., Scott, S.L.*, Block, H.C., Robins, C.D., McCaughey, W.P.


Tuesday, August 12, 2008
Location: Rozanski Concourse University of Guelph
Time: 08:00 to 17:30 – Display Only; 13:00 to 14:00 – Presenter Available

Poster Presentations

BGP = Breeding and Genetics Poster
RP = Ruminant Nutrition and Metabolism Poster
MP = Meat Science Poster

Breeding and Genetics

BGP1: **QMSim** - Whole genome simulation software for mimicking livestock populations.
Schenkel, F.S.*, Sargolzaei, M.

BGP2: **Mapping quantitative trait loci by using haplotype blocks in granddaughter design families.**
Jafarikia, M.*, Robinson, J.A.B., Schaeffer, L.R., Sargolzaei, M.

BGP3: **Estimating breeding values using segments of chromosomes determined by lowest score criteria based on dense SNP data.**
Lu, D.T.*, Kelly, M.J., Sargolzaei, M., Miller, S.P.

BGP4: **F2 QTL mapping for prepulse inhibition in mice.**
Torkamanzehi, A.*, Boksa, P., Deguzzman, R., Joobr, R.

BGP5: **Inbreeding and selection response for genome-wide selection vs. traditional selection.**

BGP6: **Development of an equation to determine residual feed intake in first parity beef cows.**
Case, L.*, Kelly, M.J., Miller, S.P.

BGP7: **Effect of high milk production in beef cattle on subsequent fertility.**
Glover, P.*, Miller, S.P., Kelly, M.J.

BGP8: **Multiple trait models for genetic evaluation of lamb growth and ewe reproductive traits.**
Schaeffer, L.R., Wilton, J.W.*, Tosh, J.J.

BGP9: **Direct and maternal genetic effects estimation of number of lambs weaned in Kurdi sheep breed of Iran.**
Heydarpour, M.*

Ruminant Nutrition and Metabolism

RP1: **An assessment of polyethylene beads as an indicator of mix uniformity in total mixed rations for dairy cattle.**
von Vonderen, A.J., Anderson, D.M.*

RP2: **A study of calcium metabolism in sheep using a mathematical model.**
Dias, R.S.*, Roque, A.P., Vitti, D.M.S.S., Kebreab, E., France, J.

RP3: **Plasma fatty acid profile of gestating ewes supplemented with docosahexaenoic acid.**
Or-Rashid, M.M.*, Fisher, R., Karrow, N., AlZahal, O., McBride, B.W.
RP4: Fatty acid profile of colostrum and milk of ewes supplemented with docosahexaenoic acid and the subsequent plasma fatty acid status of their lambs. Or-Rashid, M.M.*, Fisher, R., Karrow, N., AlZahal, O., McBride, B.W.


RP11: Effects of alfalfa pellet and grain pellet induced subacute ruminal acidosis (SARA) on intakes of dry matter and water, and on milk production of dairy cows. Gakhar, N.*, Li, S., Krause, D.O., Ominski, K., Plaizier, J.C.

RP12: Replacement of barley grain with wheat dried distillers grains plus solubles may attenuate ruminal acidosis. Sheane, W.*, Penner, G.B., Oba, M., Corbett, R.


RP14: Feeding rolled barley treated with lactic acid modulated volatile fatty acids in the rumen fluid of dairy cows. Ametaj, B.N.*, Yang, W.Z., Dunn, S.M.

RP15: Diurnal metabolic and immune responses of dairy cows to feeding of rolled barley treated with lactic acid. Dunn, S.M., Ametaj, B.N.*

RP16: Milk composition in dairy cows fed rolled barley grain treated with lactic acid. Ametaj, B.N.*, Dunn, S.M.

RP17: Effect of incorporating alfalfa and fertiliser into meadow brome grass pastures on forage quality. Block, H.C., Scott, S.L.*, Robins, C.D., McCaughey, W.P.
RP18: Effect of incorporating alfalfa and/or fertiliser into grass pastures on net income of beef production systems. Khakbazan, M., Scott, S.L.*, Block, H.C., Robins, C.D., McCaughey, W.P.

RP19: Nutrient availability of four Crop Development Centre barley varieties for ruminants in comparison with two normal varieties (AC Metacalfe, McLeod). Liu, N.*, Yu, P., McKinnon, J.J., Christensen, D.A.

RP20: Using advanced synchrotron radiation based bioanalytical technique (SRFTIRM) to study inherent structures of six barley varieties within cellular and subcellular dimensions. Liu, N.*, Yu, P., McKinnon, J.J., Christensen, D.A.


RP22: Variation of gas production and fermentation with varying barley sources and processing in batch culture. Yang, W.Z.*, McAllister, T.A., Oba, M., Gibb, D.

RP23: Effects of moisture and a saponin-based surfactant during barley processing on growth performance and carcass quality of feedlot steers and on in vitro ruminal fermentation. Wang, Y.*, Greer, D., McAllister, T.A.

RP24: Effects of processed lignin on in vitro ruminal fermentation and on growth performance, carcass traits and fecal shedding of Escherichia coli by feedlot lambs. Wang, Y.*, Marx, T., Lora, J., McAllister, T.A.

RP25: The relation between in vitro gas production by rumen fungi and protozoa and low fat sunflower meal treated with sodium hydroxide or formaldehyde. Mohammadabadi, T., Rafiei, A., Danesh Mesgaran, M., Heravi Moussavi, A.R.*


Meat Science

MP1: Phenotypic correlations of fatty acid composition among subcutaneous, intermuscular and intramuscular fat tissues in beef cattle. Aldai, N., Dugan, M., Osoro, K., Wang, Z., Crews, D., Li, C.*


MP4: Effect of growth rate and diet on collagen characteristics and tenderness of Semitendinosus and Longissimus dorsi muscles. Archile, A.*, Mandell, I.B., Purslow, P.P.

Omics in Animal Science Symposium

Moderator: E.J. Squires
University of Guelph

Sym = Symposium Paper

14:00  Sym6: Omics - it's potential and pitfalls. Golovan, S.P.*


15:40  BREAK


Wednesday, August 13, 2008
Location: Rozanski 103 University of Guelph
Time: 08:00 to 10:30

Graduate Competition Oral Presentations

Moderator: C.F.M. de Lange
University of Guelph

OC = Graduate Oral Competition

08:00  OC1: Long-term monensin supplementation does not significantly affect quantity or diversity of methanogens in the rumen of lactating dairy cattle. Hook, S.E.*, Northwood, K.S., Wright, A.D.G., McBride, B.W.

08:15  OC2: Use of quantitative and conventional PCR to assess the biodegradation of bovine tissues including specified risk material in compost. Xu, W.*, Reuter, T., Xu, Y., Alexander, T.W., Stanford, K., McAllister, T.A.

08:30  OC3: Effects of hot boning and moisture enhancement on meat quality and taste panel evaluation of cull cow beef. Pivotto, L.M.*, Mandell, I.B., Campbell, C.P.


09:00  OC5: Genetic analysis of dairy calf heath traits and survival. Henderson, L.*, Miglior, F., Kelton, D., Robinson, J.A.B., Sewalem, A., Leslie, K.


10:00  OC9: Development of alternate markers for sub acute ruminal acidosis (SARA). Gakhar, N.*, Li, S., Krause, D.O., Ominski, K., Plaizier, J.C.

Wednesday, August 13, 2008
Location: Rozanski 103 University of Guelph
Time: 11:00 to 12:30

Physiology/Endocrinology Oral Presentations

Moderator: J.S. Walton
University of Guelph

PEO = Physiology/Endocrinology Oral Presentation

11:00 PEO1: Geographic linkage of lineage types and differences in virulence characteristics within shared lineages of *Escherichia coli* O157:H7 from cattle and clinical isolates from Alberta. Sharma, R.*, Stanford, K., Louie, M., Munns, K., McAllister, T.


11:45 PEO4: Shiga toxin 2 from enterohemorrhagic *Escherichia coli* O157:H7 enhances colonization in the intestine of cattle. Baines, D.*, Pang, A., McAllister, T.


Wednesday, August 13, 2008  
**Location:** Rozanski 102 University of Guelph  
**Time:** 11:00 to 12:30

**Monogastric Nutrition and Metabolism Oral Presentations**

**Moderator:** C.M. Nyachoti  
University of Manitoba

MGO = Monogastric Nutrition and Metabolism Oral Presentation

11:00  
MGO1: **Contributions of hormonal factors to the mammalian target of rapamycin (mTOR)-mediated and mTOR-independent postnatal decreases in skeletal muscle protein synthesis.** Yang, X.*, Liu, L., Yang, S.X., Du, M., France, J., Fan, M.Z.

11:15  
MGO2: **Effects of supplemental phospholipids in diets on growth performances and nutrient intakes of broilers.** Mu Y.Y.*, Wang Y., Srinongkote, S.

11:30  
MGO3: **Effect of phytase supplementation on greenhouse gas emissions from manure application.** Yitbarek, A.*, Tenuta, M., Nyachoti, C.M., France, J., Kebreab, E.

11:45  
MGO4: **Effects of feeding blends of grains naturally contaminated with Fusarium mycotoxins on brain aminergic neurochemistry of turkeys.** Girish, C.K.*, MacDonald, E.J., Scheinin, M., Smith, T.K.

12:00  
MGO5: **Growth performance and gut development characteristics of newly-weaned pigs fed lactic acid in combination with other acids.** Zhu, C.L.*, Niven, S., Cazemier, A., de Lange, C.F.M.

12:15  
MGO6: **Effect of phytase supplementation on the precaecal digestibility of crude protein, amino acids and phosphorus from cowpea (Vigna unguiculata) in broilers.** Iyayi, E.A.*, Kluth, H., Rodehutscord, M.
Tuesday, August 12, 2008
Wednesday, August 13, 2008
Location: Rozanski Concourse University of Guelph
Time: 08:00 to 17:30 – Display Only
Wednesday, August 13, 2008 13:30 to 14:30 – Presenter Available

Graduate Competition Poster Presentations

PC = Graduate Poster Competition


PC3: Identification of the osteopontin transcript during the early phases of intramammary infection caused by Escherichia coli and Staphylococcus aureus using subtractive suppressive hybridization. Alain, K.*, Lessard, M., Karrow, N., Mallard, B., Bissonnette, N.

PC4: Association of single nucleotide polymorphisms in the interleukin-12 receptor β-2 gene with Johne's disease and production traits in dairy cattle. Skelding, A.*, Sharma, B.S., Verschoor, C., Pant, S.D., Schenkel, F., Boermans, H., Karrow, N.

PC5: Detection of prolactin receptor protein in chicken bursa during embryogenesis and post-hatch period. Pizzey, H.*, Bédécarrats, G.Y.


PC7: Single nucleotide polymorphisms (SNPs) in bovine IL-10, IL-10 receptor, and TGF-β, and their association with milk somatic cell score and susceptibility to Mycobacterium avium paratuberculosis (MAP) infection. Verschoor, C.P.*, Pant, S.D., Sharma, B.S., Schenkel, F., Karrow, N.A.

PC8: Infrared images of distinct body locations have different relationships with residual feed intake in beef bulls. Montanholi, Y.R.*, Swanson, K.C., Schenkel, F.S., Caldwell T.R., Miller, S.P.


PC16: Variation in antibody and cell-mediated immune responses between Canadian Holsteins and Norwegian-Red crossbred first calf heifers. Cartwright, S.*, Burnside, E.B., Karrow, N.A., Schaeffer, L.R., Mallard, B.A.

PC17: Greener cattle: the effect of climate change on beef cattle breeding and production. Mujibi, F.D.N.*, Moore, S.S., Crews Jr., D.H.

PC18: Effect of oscillating dietary protein concentrations on nitrogen metabolism and microbial protein synthesis in growing lambs. Kiran, D., Mutsvangwa, T.*


**Wednesday, August 13, 2008**  
**Location:** Rozanski Concourse University of Guelph  
**Time:** 08:00 to 17:30 – Display Only; 13:30 to 14:30 – Presenter Available

**Poster Presentations**

PEP = Physiology/Endocrinology Poster  
MGP = Monogastric Nutrition and Metabolism Poster  
BWP = Animal Behaviour, Welfare and Management Poster

**Physiology/Endocrinology**

**PEP1:** Method development for collection and SDS-PAGE of uterine fluid proteins in laying hens. Rathgeber, B.M.*, McLaughlin, T., Kaur, R., Doncaster, K.L.

**PEP2:** Expression of genes involved in fatty acid metabolism in response to dietary omega-3 fatty supplementation in the lactating sow. MacInnis, C.E., Prithiviraj, K., Glover, K.E.*

**PEP3:** Analysis of *Sus scrofa* liver proteome with isotope tagging for relative and absolute quantification (iTRAQ). Golovan, S.P.*, Hakimov, H.A., Verschoor, C., Schenkel, F., Elsik, C., Wright, T., Walters, S., Gadish, M., Chiu, D.K.Y., Forsberg, C.W.

**PEP4:** *In vitro* translation of bovine mammary hexokinase I. Kim, J.*, Cant, J.P.

**PEP5:** Effect of diets containing soybean meal or canola meal on anaerobic fungal population in rumen using quantitative competitive PCR. Nassiry, M.R., Heravi Moussavi, A.*, Sekhavati, M.H., Hosseini, F., Farajollahi, H.

**PEP6:** Assessment of the health status of newborn dairy replacement and veal calves. Waalderbos, K.*, Leslie, K., Duffield, T., DeVries, T., McBride, B.

**PEP7:** Determining optimal lengths of calving intervals of dairy cows. van Veen, A.G., Plaizier, J.C.*

**PEP8:** Analysis of productive life in Iranian Holstein dairy cows. Heravi Moussavi, A.*, Danesh Mesgaran, M., Noorbakhsh, R.

**PEP9:** Characteristics of lactation function of Iranian buffalo ecotypes, using Wood's gamma function. Mirzaei, H.R.*, Rahmaninia, J., Farhangfar, H.

**PEP10:** Non-genetic factors affecting somatic cell count, milk urea content, test-day milk yield and protein percent in dairy cattle of the Czech Republic. Oudah, E.Z.M.*

**PEP11:** Association of Toll-like receptor 4 polymorphisms with Johne’s disease. Sharma, B.S.*, Pant, S.D., Verschoor, C., Schenkel, F., Karrow, N.A.

**PEP12:** The effect of ruminal protozoa on ruminal populations and shedding patterns of *Escherichia coli* O157:H7 using sheep as a model. Stephens, T.P.*, Stanford, K., McAllister, T.A.
The small intestinal alkaline phosphatase (IAP) digestive capacity is reduced due to a down regulation of its mRNA abundance in piglets with bowel inflammation. Lackeyram, D.*, Archbold, T., Yang, C., Mine, Y., Fan, M.Z.

Early-weaning reduces the digestive activity of intestinal alkaline phosphatase by down regulating its expression in the small intestine. Lackeyram, D.*, Fan, M.Z.


Response of ileal bacterial microbiota in broiler chickens to Clostridium perfringens infection. Feng, Y.*, Gong, J., Yu, H., Jin, Y., Zhu, J., Zhang, M., Zhao, L., Han, Y.


Changes in intestinal morphology in broiler breeder pullets fed Fusarium mycotoxin-contaminated diets in the absence or presence of a coccidial challenge. Girgis, G.N.*, Smith, T.K., Barta, J.R.

Ovarian follicular dynamics, LH profile, and progesterone concentrations in dairy heifers following "Ovsynch" ovulation synchronization protocol. AAli, M.A.*

Monogastric Nutrition and Metabolism

Effect of rare earth elements on mitogen-induced proliferation of splenocytes of Wistar rats. He, M.L.*, Yang, W.Z., Mir, P.S., McAllister, T.A.

Effect of dietary supplementation with rare earth elements on growth performance and glucose tolerance in Wistar rats. He, M.L.*, Yang, W.Z., McAllister, T.A.

Impact of immune system stimulation and sulfur amino acid intake on amino acid composition of selected tissues in pigs. Rakhshandeh, A.*, Htoo, J., de Lange, C.F.M.


Propionic acid and whey permeate to improve the nutritional value of stored high-moisture corn for swine liquid feeding. Niven, S.J., Zhu, C.L.*, de Lange, C.F.M.


Nutritive evaluation of hulless oats for swine. Rigaux, L.*, Woyengo, T.A., Nyachoti, C.M.

The effects of distillers dried grains with solubles inclusion level and gender on pig growth performance, feed intake and carcass composition. McEwen, P.L.*
MGP9: **Optimum isoleucine to lysine ratio in a barley and wheat based pig starter diet.** Zhu, C.L.*, Htoo, J.K., de Lange, C.F.M.


MGP12: **It pays to fine-tune feeding programs for individual growing-finishing pig units.** Zhu, C.L*, vander Voort, G., Squire, J., Rheaume, J., de Lange, C.F.M.

**Animal Behaviour, Welfare and Management**

BWP1: **Egg yolk and albumin corticosterone and excreta corticoid metabolite concentrations as non-invasive markers of stress in laying hens.** Cook, N.J.*, Renema, R., Wilkinson, C., Schaefer, A., Church, J.

BWP2: **Pain mitigation during branding, castration and dehorning of beef cattle.** Bergen, R.D.*, Schwartzkopf-Genswein, K.S.


BWP5: **Allowing feedlot steers to self select concentrate to forage ratio has no negative effects on performance.** Schwartzkopf-Genswein, K.S.*, Veira, D.M., von Keyserlingk, M.A.G.

BWP6: **Comparison of methods for preparing feed intake records for analysis of average daily intake from an automated feed intake monitoring system.** Kelly, M.J., Lu, D.T.*, Miller, S.P.

BWP7: **Microbiological evaluation of poultry house wall materials and industrial cleaning agents.** Rathgeber, B.M.*, Doncaster, K.L., Ronalds, C.M., Budgell, K.L., Anderson, D.M.

BWP8: **Effects of alfalfa pellet- and grain pellet-induced subacute ruminal acidosis (SARA) on feeding behavior of dairy cows.** Li, S.*, Gakhar, N., Krause, D.O., Plaizier, J.C.

BWP9: **Relationship between feeding behaviour and feed efficiency in composite steers fed low and high energy-dense diets.** Durunna, O.N.*, Mujibi, F.D.N., Moore, S.S., Wang, Z.
Wednesday, August 13, 2008
Location: Rozanski 103 University of Guelph
Time: 14:30 to 17:30

Current Issues in Equine Management Symposium

Moderator: L. Viel
University of Guelph

Sym = Symposium Paper

14:30   Sym11: Equine reproduction - problems in the field.  Colquhoun, J.K.*
15:10   Sym12: Cartilage development and regeneration in the horse.  Watts, A.*
15:50   BREAK
16:10   Sym13: Mycotoxins in equine nutrition.  Smith, T.K.*
16:50   Sym14: Nutrition for optimum performance.  Lawrence, L.M.*
Animal Behaviour, Welfare and Management Oral Presentations

Moderator: T.M. Widowski
University of Guelph

BWO = Animal Behaviour, Welfare and Management Oral Presentation


09:00  BWO5: Eye white percentage as a predictor of temperament in beef cattle. Core, S., Miller, S., Widowski, T., Mason, G., Caldwell, T., Quinton, M.

09:15  BWO6: Methods used in Ontario to wean foals and determination of breeder perception in terms of foal management and weaning. Gooding, M., Merkies, K.*
Thursday, August 14, 2008
Location: Rozanski 103 University of Guelph
Time: 10:00 to 13:00

Integrating Animal Behaviour With Other Animal Science Disciplines Symposium

Moderator: R. Bergeron
University of Guelph

Sym = Symposium Paper

10:00  Sym15: Behaviour-based grazing management for animal well-being, ecosystem diversity and enterprise adaptability. Provenza, F.*

10:40  Sym16: Genetic selection and behaviour. Muir, W.M.*

11:20  Sym17: The effects of early experience and stress on survivorship. Mason, G.J.*

12:00  Sym18: Housing and social behaviour in pigs. Gonyou, H.W.*
Analysis of productive life in Iranian Holstein dairy cows. Heravi Moussavi, A.*; Danesh Mesgaran, M., Noorbakhsh, R. Department of Animal Science, Ferdowsi University of Mashhad, Mashhad, Iran.

The objectives of this study were to evaluate the effect of sire, first parity production and reproduction traits and also culling year on length of productive life (LPL) in Iranian Holstein dairy cows. Records of Holstein-Friesian cows born from 1993 to 2006 on seven large-scale farms were analyzed. The length of productive life was defined as the number of days from first calving to the date of death or culling on the farm. The dependent variable analyzed was LPL. The model included herd, sire, milk yield and fertility traits in the first lactation, and also culling year. To provide a meaningful baseline, sires were grouped into various categories depending on their area of origin. In total, three groups were defined; Iran, Canada, and USA. Data were analyzed using General Linear Models. Length of productive life averaged 3.52±0.03 year. The results showed that LPL was different among the herds in accordance with the different management policies (P <0.01). LPL was decreased in recent years (P <0.01). Sire had a significant impact on LPL (P <0.001) and cows from Canadian sires had the greatest LPL. American sires were in the middle and Iranian sires had the lowest LPL. Length of productive life was impacted by 305-d adjusted milk yield (P <0.001) and the LPL was decreased in high producing cows compared with the average cows. The LPL was also higher in the cows with eutocia compared with dystocia and stillbirth groups in the first calving (P <0.01). Age at first calving had a significant effect on LPL (P =0.035) and the LPL was maximum for cows with the age of first calving at 23 mo and then decreased with an increase in age at first calving. The results of this study demonstrated that in addition to sire and herd effects, some first parity production and reproduction traits had a significant impact on LPL.

Key words: dairy cows, productive life, longevity