Scientific Program
Table of Contents

(See pages 157-176 for an Author Index)

Sunday, July 24

SYMPOSIA AND ORAL SESSIONS

Monday, July 25

POSTER PRESENTATIONS

SYMPOSIA AND ORAL SESSIONS

Tuesday, July 26

POSTER PRESENTATIONS

Wednesday, July 27

POSTER PRESENTATIONS

OTHER EVENTS

SYMPOSIA AND ORAL SESSIONS

Thursday, July 28

SYMPOSIA AND ORAL SESSIONS

Sunday, July 24

SYMPOSIA AND ORAL SESSIONS

CSAS Mastitis Symposium

Udder health management: A Canadian perspective

Chair: Pierre Lacasse, Dairy and Swine R&D Centre, Lennoxville, QC, Canada

Sponsors: Agri-Marché, Balchem Encapsulates, CO-OP Fédérée de Québec, Kenpal Farm Products Inc., Pfizer Canada Inc., and Probiotiech International Inc.

Room 206

Time	Abstract #	
8:00 AM		Opening
8:05 AM	1	Research networks: The Canadian mastitis research experience. D. Scholl*, *University of Montreal*, *Saint-Hyacinthe, Quebec, Canada*.
8:35 AM	2	Epidemiology of mastitis: Changes in distribution of pathogens, bulk milk somatic cell count and preventative practices in the last decade. H. W. Barkema*[1], R. G. M. Olde Riekerink[1], R .N. Zadoks[2], and Y. H. Schukken[2], [1]*University of Prince Edward Island*, *Charlottetown, PEI, Canada*, [2]*Quality Milk Promotion Services, Cornell University*, *Ithaca, NY*.
9:20 AM	3	Mastitis vaccines: Past, present, and future. G. M. Tomita*[1], B. G. Talbot[2], P Lacasse[3], A. A. Potter[4], X Zhao[5], J Lee[5], and D. T. Scholl[1], [1]*University of Montreal*, *Saint Hyacinthe, Quebec, Canada*, [2]*University of Sherbrooke*, *Sherbrooke, Quebec, Canada*, [3]*AAFC-Dairy and Swine R&D*, *Lennoxville, Quebec, Canada*, [4]*University of Saskatchewan*, *Saskatoon, Saskatchewan, Canada*, [5]*McGill University*, *Montreal, Quebec, Canada*.
10:05 AM		Break
10:30 AM	4	Management strategies to maintain udder health. D. Kelton*, *University of Guelph*, *Guelph, ON, Cananda*.
11:15 AM	5	Mammary tissue damage during mastitis: causes and controls. X. Zhao*[1] and P. Lacasse[2], [1]*McGill University*, *Ste Anne de Bellevue, Quebec, Canada*, [2]*Agriculture and Agri-Food Canada*, *Lennoxville, Quebec, Canada*.
12:00 PM		Conclusion

CSAS Vitamin Symposium

Vitamin Nutrition of Livestock Animals

Chair: Johanne Chiquette, Dairy and Swine R&D Centre, Lennoxville, QC, Canada

Sponsors: Agri-Marché, Balchem Encapsulates, CO-OP Fédérée de Québec, Kenpal Farm Products Inc., Pfizer Canada Inc., and Probiotiech International Inc.

Room 206

Time	Abstract #	
1:00 PM		Opening
1:05 PM	6	Vitamin nutrition of livestock animals: Overview from vitamin discovery to today. L. McDowell*, *University of Florida*, *Gainesville*.
1:40 PM	7	Enhancing the vitamin content of meat and eggs: Implications for the human diet. A. Sahlin and J. D. House*, *University of Manitoba*, *Winnipeg, MB, Canada*.
2:15 PM	8	Impact of B-vitamin supply on major metabolic pathways of lactating dairy cows. C. L. Girard* and J. J. Matte, *Agriculture et Agroalimentaire Canada*, *Lennoxville, Québec, Canada*.
2:50 PM		Break
3:15 PM	9	Fat-soluble vitamins in reproducing animals: physiological and nutritional basis. F. J. Schweigert*, *University of Potsdam*, *Potsdam, Germany*.

3:50 PM	10	Choline metabolism for high-producing dairy cows: metabolic and nutritional basis. A. Baldi* and L. Pinotti, *University of Milan*, *Via Celoria, Milano, Italy*.
4:25 PM	11	Folic acid and vitamin B_{12} in reproducing sows: New concepts. J. J. Matte* and C. L. Girard, *Dairy and Swine R & D Centre, Agriculture and Agri-Food Canada*, *Lennoxville, QC, Canada*.
5:00 PM		Conclusion

Genomics Workshop

Functional Genomics for Livestock Improvement

Chair: Ted Ferris, Michigan State University

Room 207

Time	Abstract #	
2:00 PM	12	What is functional genomics? J. Pérez Laspiur* and T. Ferris, *Michigan State University*, *East Lansing*.
2:20 PM	13	Implications of functional genomics for animal breeding programs. J. C. M. Dekkers*, *Iowa State University*, *Ames*.
2:45 PM	14	Use of functional genomics in genetic selection programs for environmental stress tolerance in dairy cattle. R. Collier*[1], C. Stiening[1], B. Pollard[1], M. VanBaale[1], and P. Coussens[2], [1]*University of Arizona*, *Tucson*, [2]*Michigan State University*, *East Lansing*.
3:10 PM	15	Functional genomics of reproductive tissues: Creating new knowledge that can be used to solve infertility in farm animals. M. C. Lucy*, *University of Missouri*, *Columbia*.
3:35 PM		Break
3:50 PM	16	What has functional genomics taught us about Johne's disease in cattle? P. Coussens*[1], K. Skovgaard[2], and P. Heegaard[2], [1]*Michigan State University*, *East Lansing*, [2]*Danish Institute of Food and Veterinary Research*, *Copenhagen, Denmark*.
4:15 PM	17	Immunogenomics and the transition dairy cow: physiological insights and future possibilities for improving animal health. J. L. Burton*[1], S. A. Madsen[1], L-C. Chang[1], P. S. D. Weber[1], P. M. Coussens[1], G. J. M. Rosa[1], L. K. Matukumalli[2], T. S. Sonstegard[2], and T. P. Smith[3], [1]*Michigan State University*, *East Lansing*, [2]*USDA, ARS, BARC, Bovine Functional Genomics Laboratory*, *Beltsville, MD*, [3]*USDA, ARS, MARC*, *Clay Center, NE*.
4:40 PM		Discussion

Monday, July 25

POSTER PRESENTATIONS

Animal Health I

Exhibit Hall A

Abstract #	
M1	Influence of the mycotoxin fumonisin B_1 on intestinal physiology and immune function in piglets. M. Lessard*[1], J.-P. Lallés[2], G. Boudry[2], B. Séve[2], and I. P. Oswald[3], [1]*Agriculture and Agri-Food Canada, Dairy and Swine Research and Development Centre*, *Lennoxville, Qc, Canada,*, [2]*INRA Systémes d'Élevage, Nutrition Animale et Humaine*, *St-Gilles, France*, [3]*INRA Pharmacologie-Toxicologie*, *Toulouse, France*.
M2	Effects of age and nutrition on proliferation and activation of mitogen stimulated T cell subsets from neonatal calves. M. Foote*[1], B. Nonnecke[2], M. Fowler[3], B. Miller[3], D. Beitz[1], and W. Waters[2], [1]*Iowa State University*, *Ames*, [2]*USDA, ARS, National Animal Disease Center*, *Ames, IA*, [3]*Land O'Lakes, Inc.*, *St. Paul, MN*, [4]*Land O'Lakes, Inc.*, *Webster City, IA*.
M3	Gastrointestinal leukocyte and peripheral blood mononuclear cell populations within piglets nursing sows supplemented with phosphorylated mannan oligosaccharides during gestation and lactation. C. L. Bradley*[1], D. C. Brown[1], M. E. Davis[1], C. V. Maxwell[1], E. A. Halbrook[1], Z. B. Johnson[1], R. Dvorak[2], and B. Lawrence[3], [1]*University of Arkansas*, *Fayetteville*, [2]*Alltech, Inc.*, *Nicholasville, KY*, [3]*Hubbard Feeds, Inc.*, *Mankato, MN*.
M4	Gene identification in bovine neutrophils. M. Worku*, T. Harris, and P. Matterson, *North Carolina A&T State University*, *Greensboro*.

M5 Use of PCR to amplify RNA in bovine neutrophils. M. Worku* and P. L. Matterson, *North Carolina A&T State University*, *Greensboro*.

M6 In vitro effects of leptin on bovine immune cells. H. Florez-Diaz* and E. B. Kegley, *University of Arkansas*, *Fayetteville*.

M7 Tumor necrosis factor-a (TNF-a), nitric oxide (NO), and xanthine oxidase (XO) responses to endotoxin (LPS) challenge in heifers: effect of estrous cycle phase. S. Kahl* and T. H. Elsasser, *USDA, Agricultural Research Service*, *Beltsville, MD*.

M8 Microarray analysis of LPS-induced mastitis in a mouse model. J. Zheng*, A. Watson, and D. Kerr, *University of Vermont*, *Burlington*.

M9 Temporal response of signal transduction elements during endotoxin (LPS) challenge in cattle liver cells: effects of growth hormone treatment. C. Li*, T. Elsasser, S. Kahl, and D. Carbaugh, *Agricultural Research Service, USDA*, *Beltsville, MD*.

M10 The effects of anti-inflammatory agents on gene expression of bovine neutrophils. N. Cunningham, M. Worku*, and P. Matterson, *North Carolina A&T State University*, *Greensboro*.

M11 Microarray analysis of immunorelevant gene expression in LPS-challenged bovine mammary epithelial cells. R. S. Pareek*[1], O. Wellnitz[2], J. Burton[3], and D. Kerr[1], [1]*University of Vermont*, *Burlington*, [2]*Technical University of Munich*, *Munich, Germany*, [3]*Michigan State University*, *East Lansing*.

M12 Parenteral administration of glutamine modulates acute phase response in postparturient dairy cows. A. Jafari*[2,1], D. Emmanuel[1], J. Bell[1], R. Christopherson[1], G. Murdoch[1], J. Woodward[1], C. Field[1], and B. Ametaj[1], [1]*University of Alberta*, *Edmonton, Alberta, Canada*, [2]*Isfahan University of Technology*, *Isfahan, Iran*.

M13 Evaluation of two simple tests for the detection of cryptosporidium parvum oocysts in calf feces. L. Trotz-Williams[1], S. Martin[1], D. Martin[2], T. Duffield[1], K. Leslie*[1], D. Nydam[3], and A. Peregrine[4], [1]*University of Guelph*, *Guelph, ON, Canada*, [2]*Ontario Ministry of Health and Long-Term Care*, *Etobicoke, ON, Canada*, [3]*Cornell University*, *Ithaca, NY*, [4]*University of Guelph*, *Guelph, ON, Canada*.

Breeding & Genetics I

Exhibit Hall A

Abstract #

M14 Estimatives of heritability to time in different distances of race in Quarter Horse. S. Oliveira, M. Correa, and M. Mota*, *Unesp*, *Botucatu, SP, Brazil*.

M15 Estimatives of repeatibility to time in different distances of race in Quarter horse. M. Correa, S. Oliveira, and M. Mota*, *Unesp*, *Botucatu, SP, Brazil*.

M16 Simulation model of cashmere goat production system: I. A dynamic herd simulation model & breeding strategies for fiber quality. B. Tseveenjav*[1,2], D. J. Garrick[1], S. LeValley[1], and Z. Yondon[2], [1]*Colorado State University*, *Fort Collins*, [2]*Cashmere Goat Association of Mongolia*, *Ulaanbaatar, Mongolia*.

M17 Bayesian inference of the genetic trend for litter size in the Ripollesa breed of sheep in Spain. J. Casellas*, G. Caja, A. Ferret, and J. Piedrafita, *Universitat Autònoma de Barcelona*, *Bellaterra, Spain*.

M18 Estimation of genetic parameters for body weight in Rambouillet and Targhee lambs. J. M. Rumph*, K. C. Davis, P. G. Hatfield, and R. W. Kott, *Montana State University*, *Bozeman*.

M19 Genetic polymorphism of b-Lactoglobulin gene in Iranian Karakul sheep by DNA test. A. Javadmanesh*, M. R. Nassiry, H. Ghiasi, A. Samei, and A. Norouzy, *University of Mashhad*, *Mashhad, Khorasan, Iran*.

M20 Comparison of maturity rate for bull daughters in the United States and Canada. H. D. Norman[1], J. R. Wright*[1], R. L. Powell[1], P. M. VanRaden[1], and F. Miglior[2,3], [1]*Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*, [2]*Agriculture and Agri-Food Canada - Dairy and Swine Research and Development Centre*, *Lennoxville, QC, Canada*, [3]*Canadian Dairy Network*, *Guelph, ON, Canada*.

M21 Factors affecting heifer fertility in US Holsteins. M. Kuhn* and J. Hutchison, *Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*.

M22 Effectiveness of estimating individual herd heritabilities using regression techniques. C. D. Dechow*[1] and H. D. Norman[2], [1]*Penn State University*, *University Park*, [2]*Animal Improvement Programs Laboratory*, *Beltsville, MD*.

M23 Accounting for heterogeneous variances in multi-trait evaluation of Jersey type traits. N. Gengler[1], G. Wiggans[2], L. Thornton*[2], J. Wright[2], and T. Druet[1], [1]*National Fund for Scientific Research, B-1000*, *Brussels, Belgium*, [2]*Animal Improvement Programs Laboratory*, *Beltsville, MD*.

M24 Comparison of lifetime relative net income with and without adjustment for opportunity cost. E. Yook, R. Pearson*, and B. Cassell, *Virginia Polytechnic Institute and State University*, *Blacksburg*.

M25 A stochastic simulation study on validation of an approximate multitrait model for prediction of breeding values. J. Lassen*[1,2], M. K. Sorensen[1], and P. Madsen[1], [1]*Danish Institue of Agricultural Sciences*, *Foulum, Denmark*, [2]*The Royal Veterinary and Agricultural University*, *Frederiksberg, Denmark*.

M26 Genetic correlations between reproductive traits in swine. S.-H. Oh* and M. T. See, *North Carolina State University*, *Raleigh*.

M27 Heritability of daily feed intake in swine. S.-H. Oh*[1], W. O. Herring[2], M. Culbertson[2], and M. T. See[1], [1]*North Carolina State University*, *Raleigh*, [2]*Smithfield Premium Genetics*, *Roanoke Rapids, NC*.

M28 Genetic parameter estimates for insulin-like growth factor I concentration and growth traits in Angus beef cattle divergently selected for serum insulin-like growth factor I concentration. M. Davis*, *The Ohio State University*, *Columbus*.

M29 Association of single nucleotide polymorphisms in bovine somatostatin and somatostatin Receptor 2 genes with growth traits in divergent IGF-I selection lines of cattle. W. Huang*, H. Hines, and M. Davis, *The Ohio State University*, *Columbus*.

M30 Test duration for growth, feed intake and feed efficiency in beef cattle using the Growsafe® System. Z. Wang*[1], D. Nkrumah[1], C. Li[1], J. Basarab[2], L. Goonewardene[3], E. Okine[1], D. Crews[4], and S. Moore[1], [1]*University of Alberta*, *Edmonton, Alberta, Canada*, [2]*Lacombe Research Center, Alberta Agriculture, Food and Rural Development*, *Lacombe, Alberta, Canada*, [3]*Alberta Agriculture, Food and Rural Development*, *Edmonton, Alberta, Canada*, [4]*Lethbridge Research Centre, Agriculture and Agri-Food Canada*, *Lethbridge, Alberta, Canada*.

M31 Full genome scan of quantitative trait loci (QTL) for net feed efficiency in beef cattle. D. Nkrumah[1], C. Li*[1], Z. Wang[1], R. Bartusiak[1], B. Murdoch[1], J. Basarab[2], D Crews[3], and S. Moore[1], [1]*University of Alberta*, *Edmonton, Alberta, Canada*, [2]*Lacombe Research Center, Alberta Agriculture, Food and Rural Development*, *Lacombe, Alberta, Canada*, [3]*Lethbridge Research Centre, Agriculture and Agri-Food Canada*, *Lethbridge, Alberta, Canada*.

M32 Using simulation models to predict feed intake: Phenotypic and genetic relationships between observed and predicted values. C. B. Williams*, G. L. Bennett, T. G. Jenkins, L. V. Cundiff, and C. L. Ferrell, *USDA-ARS; U.S. Meat Animal Research Center*, *Clay Center, NE*.

M33 Genetic parameters and environmental factors for growth traits in Bali cattle. L. Praharani*[1], D. G. Riley[2], and T. A. Olson[2], [1]*Research Institute of Animal Production*, *Bogor, Indonesia*, [2]*University of Florida*, *Gainesville*.

M34 Sire x maternal grandsire interaction for pre-weaning growth traits in Brazilian Nellore cattle. A. de los Reyes[1], M. Elzo*[1], R. Lobo[2], and L. Bezerra[2], [1]*University of Florida*, *Gainesville*, [2]*University of Sao Paulo*, *Ribeirao Preto, SP, Brazil*.

M35 Gene expression profiling in bovine adipose tissues by serial analysis of gene expression. J. Bong[1], K. Cho[2], and M. Baik*[1], [1]*Chonnam National University*, *Gwangju, South Korea*, [2]*Jinju National University*, *Jinju, South Korea*.

M36 Somatic cell banking-an alternative technology for conservation of endangered livestock breeds. N. Gupta*, S. P. S. Ahlawat, and S. C. Gupta, *National Bureau of Animal Genetic Resources*, *Karnal, Haryana, India*.

Dairy Foods

Cheese

Exhibit Hall A

Abstract #

M37 Chemical, textural and sensory properties of fresh Turkish Kashar cheese. N. Koca*[1,2], M. Metin[1], and V. B. Alvarez[2], [1]*Ege University*, *Izmir, Turkey*, [2]*The Ohio State University*, *Columbus*.

M38 Yield enhancement of cottage cheese curd manufacture through milk protein fortification. Methods for quality evaluation. C. Kohen*[1,2], R. Hallab[1], A. Grandison[1], M. Lewis[1], and D. Marriott[2], [1]*The University or Reading*, *Reading, Berkshire, UK*, [2]*Creative Food Systems Limited*, *Marlow, Buckingamshire, UK*.

M39 A one-dimensional dynamic model of curd syneresis based on viscoelastic properties of curd. M. Castillo*, S. Torrealba, and F. Payne, *University of Kentucky*, *Lexington*.

M40 Study of the aqueous phase of Prato cheese. V. S. Monteiro and M. L. Gigante*, *State University of Campinas*, *Campinas, SP, Brazil*.

M41 Proteolysis of Piacentinu Ennese cheese made with different farm technologies. V. Fallico*, C. Pediliggieri, S. Carpino, and G. Licitra, *CoRFiLaC*, *Ragusa, Sicily, Italy*.

M42 Effect of somatic cell count on milk composition and the yield of Prato cheese. G. Mazal[1], M. V. Santos[2], and M. L. Gigante*[1], [1]*State University of Campinas*, *Campinas, SP, Brazil*, [2]*University of São Paulo*, *Pirassununga, SP, Brasil*.

M43 Standardization of the time and temperature conditions to evaluate the meltability of Cream cheese. R. R. Monteiro, A. S. Salles, and M. L. Gigante*, *State University of Campinas*, *Campinas, SP, Brazil*.

M44 Application of exopolysaccharide-producing cultures in making reduced fat Cheddar cheese. Cryo-scanning electron microscopy observations. A. Hassan* and S. Awad, *South Dakota State University*, *Brookings*.

M45 Sensory description of fresh Mozzarella cheese. M. Almena*, E. Valentine, P. Kindstedt, and A. Howard, *University of Vermont*, *Burlington*.

M46 Influence of calcium, phosphorus, residual lactose, and salt-to-moisture ratio (S/M) of Cheddar cheese on glycolysis during ripening. P. Upreti*, L. L. McKay, and L. E. Metzger, *MN-SD Dairy Food Research Center, University of Minnesota*, *St. Paul, MN*.

M47 Application of exopolysaccharide-producing cultures in making reduced fat Cheddar cheese. Textural and melting properties. S. Awad*, A. Hassan, and K. Muthukumarappan, *South Dakota State University*, *Brookings*.

M48 Application of exopolysaccharide-producing cultures in making reduced fat Cheddar cheese. Viscoelastic properties. S. Awad*, A. Hassan, and K. Muthukumarappan, *South Dakota State University*, *Brookings*.

M49 Mexican Mennonite-style cheese: Sensory profile of young cheeses from Chihuahua, Mexico. D. L. Van Hekken*[1], M. A. Drake[2], F. J. Molina Corral[3], V. M. Guerrero Prieto[3], and A. A. Gardea[3], [1]*USDA, ARS, Eastern Regional Research Center*, *Wyndmoor, PA*, [2]*North Carolina State University*, *Raleigh*, [3]*Centro de Investigacion en Alimentacion y Desarrollo*, *Cuauhtemoc, Chih, MX*.

M50 Organic acid profiling of commercially available Hispanic cheeses. N. Gonzalez*[1], K. Hein[2], M. Sancho-Madriz[1], H. Heymann[2], and K. Adhikari[1,3], [1]*California State Polytechnic University*, *Pomona*, [2]*University of California*, *Davis*, [3]*Kansas State University*, *Manhattan*.

M51 Effect of processing parameters on the rheological properties of cheese milk at cutting and its impact on cheese yield. R. Mishra*, S. Govindasamy-Lucey, M. Johnson, and J. Lucey, *University of Wisconsin*, *Madison*.

M52 Effects of various emulsifying salts on the rheological and texture properties of pasteurized process Cheddar cheese. N. Shirashoji*[1,2], J. J. Jaeggi[2], and J. A. Lucey[2], [1]*Food Research & Development Laboratory, Morinaga Milk Industry Co.*, *Kanagawa, Japan*, [2]*University of Wisconsin*, *Madison*.

M53 The dynamics of sequential casein hydrolysis: An analytical approach. P. Joseph*[1], D. McMahon[1], J. Broadbent[1], and C. Oberg[2], [1]*Utah State University*, *Logan*, [2]*Weber State University*, *Ogden, UT*.

M54 Effects of insoluble calcium phosphate content on rennet coagulating properties of milk. J. Choi*[1], D. S. Horne[2], and J. A. Lucey[1], [1]*University of Wisconsin*, *Madison*, [2]*Charis Food Research, Hannah Research Institute*, *Ayr KA6 5HL, Scotland*.

Extension Education

Exhibit Hall A

Abstract #

M55 WWW.Foragebeef.ca A new way to promote research. D. McCartney*, *Agriculture and Agri Food Canada*, *Alberta, Canada*.

M56 Factors influencing beef producers participation in preconditioned certified calf sales. M. D. Corro*, D. Lalman, R. P. Wettemann, and J. Evans, *Oklahoma State University*, *Stillwater*.

M57 Producer experiences in whole farm planning for the production of grass-finished beef. T. M. Johnson*[1], R. E. Morrow[2], C. A. Wells[3], and J. K. Apple[4], [1]*National Center for Appropriate Technology*, *Fayetteville, AR*, [2]*USDA-NRCS*, *Little Rock, AR*, [3]*Springpond Holistic Animal Health*, *Prairie Grove, AR*, [4]*University of Arkansas*, *Fayetteville*.

M58 Demonstration of organic burial composting of dead cattle. K. W. VanDevender[1], J. A. Pennington*[1], J. L. Gunsaulis[2], and M. R. Gross[2], [1]*University of Arkansas Cooperative Extension Service*, *Little Rock*, [2]*University of Arkansas Cooperative Extension Service*, *Fayetteville*.

M59 Use of coal combustion products (fly ash) for reducing mud problems in heavy use areas for dairy cattle. J. A. Pennington*[1], K. W. VanDevender[1], M. C. Andrews[2], and D. J. Griffin[3], [1]*University of Arkansas Cooperative Extension Service*, *Little Rock*, [2]*University of Arkansas Cooperative Extension Service*, *Clinton*, [3]*University of Arkansas Cooperative Extension Service*, *Marshall*.

M60 HOTCOW - An internet website for heat stress information from the International Dairy Heat Stress Consortium. W. Graves*[1], N. Graves[1], P. Hansen[2], J. Fain[1], and A. DeVries[2], [1]*University of Georgia*, *Athens*, [2]*Univerisity of Florida*, *Gainesville*.

M61 Financial performance of dairies in Florida and Georgia in 2003. A. de Vries[1], R. Giesy[1], L. Ely*[2], B. Broaddus[1], C. Vann[1], and B. Butler[1], [1]*University of Florida*, *Gainesville*, [2]*University of Georgia*, *Athens*.

M62 Association between bulk tank milk urea nitrogen and DHI production variables in southern California dairy herds. G. Higginbotham[1], W. VerBoort[2], N. Peterson*[3], and J. Santos[4], [1]*University of California Cooperative Extension*, *Fresno*, [2]*California DHIA*, *Fresno*, [3]*University of California Cooperative Extension*, *San Bernardino*, [4]*University of California, Davis*, *Tulare*.

M63 Survey of drinking water flow rates in tie-stall and stanchion dairy barns. I. Possin*[1], R. Shaver[2], and B. Holmes[3], [1]*University of Wisconsin-Extension*, *Fond du Lac*, [2]*University of Wisconsin*, *Madison*, [3]*University of Wisconsin*, *Madison*.

Growth and Development

Growth, Diet and Performance

Exhibit Hall A

Abstract #

M64 Performance of Holstein and Jersey calves compared with performance of Jersey ´ Holstein and Holstein ´ Jersey crossbred calves. J. V. Ware*[1], S. T. Franklin[1], A. J. McAllister[1], J. A. Jackson[1], and B. G. Cassell[2], [1]*University of Kentucky*, *Lexington*, [2]*Virginia Polytechnic Institute and State University*, *Blacksburg*.

M65 The effect of feeding three milk replacer regimens preweaning on first lactation performance of Holstein dairy cattle. C. Ballard*[1], H. Wolford[1], T. Sato[2], K. Uchida[2], M. Suekawa[2], Y. Yabuuchi[2], and K. Kobayashi[2], [1]*W.H. Miner Agricultural Research Institute*, *Chazy, NY*, [2]*Zen-Noh National Federation of Agricultural Co-operative Associations*, *Tokyo, Japan*.

M66 Improved prediction of retained energy in a dynamic beef cattle growth and composition model accounting for variable maintenance. L. G. Barioni*[2], J. W. Oltjen[1], and R. D. Sainz[1], [1]*University of California*, *Davis*, [2]*Embrapa Cerrados*, *Planaltina, DF, Brazil*.

M67 Comparison of modern commercial and low cholesterol swine crosses on performance characteristics. M. J. Anderson*, J. W. Johnson, J. R. Blanton Jr., and S. W. Kim, *Texas Tech University*, *Lubbock*.

M68 Dietary trans-9, trans-11 and trans-10, trans-12 CLA do not alter growth characteristics in mice. J. W. Perfield II*, S. L. Giesy, D. A. Dwyer, and D. E. Bauman, *Cornell University*, *Ithaca, NY*.

M69 Time course of growth factor mRNA expression during differentiation of porcine embryonic myogenic cells. G. Xi*, M. White, M. Hathaway, and W. Dayton, *University of Minnesota*, *St. Paul*.

M70 Effect of maternal age at first pregnancy on fetal and placental growth in Columbia and Romanov ewes. P. P. Borowicz*, J. S. Caton, K. A. Vonnahme, M. A. Ward, E. Borowczyk, A. T. Grazul-Bilska, D. A. Redmer, and L. P. Reynolds, *North Dakota State University*, *Fargo*.

M71 An evaluation of the accuracy of a heart girth tape and the CalfScale® foottape for eetermination of birth weight of newborn dairy calves. E. Vernooy*[1], D. Kelton[1], K. Leslie[1], T. Duffield[1], E. Wilkins[1], and L. Wright[2], [1]*University of Guelph*, *Guelph, ON, Canada*, [2]*Elora Dairy Research Station*, *Elora, ON, Canada*.

M72 Glucose oxidation and lipogenesis in hybrid striped bass fed diets with different starch ratios. S. Rawles*[1], T. G. Gaylord[2], and R. Lochmann[3], [1]*USDA/ARS - H. K. Dupree Stuttgart Nat'l Aquaculture Res. Ctr.*, *Stuttgart, AR*, [2]*USDA/ARS/SGPGR - Hagerman Fish Culture Exp. Sta.*, *Hagerman, ID*, [3]*University of Arkansas - Pine Bluff*, *Pine Bluff*.

M73 Allometry of postweaning growth in straightbred and crossbred Botucatu rabbits. E. Bianospino, A. S. A. M. T. Moura*, S. Fernandes, and F. E. Wechsler, *UNESP/ Faculdade de Medicina Veterinária e Zootecnia*, *Botucatu, SP, Brazil*.

M74 Effects of diet and bST on gene expression profile in the liver of heifers. B. J. Lew*[1,2], J. S. Liesman[1], T. E Van Dorp[1], M. D. S. Oliveira[2], S. Sipkovsky[1], and M. J. VaneHaar[1], [1]*Michigan State University*, *East Lansing*, [2]*Sao Paulo State University (UNESP)*, *Jaboticabal, SP, Brazil*.

M75 Leptin and leptin receptor expression in swine tissues in response to in vivo somatotropin treatment. T Ramsay* and M Richards, *USDA-ARS*, *Beltsville, MD*.

M76 Effects of Gammulin® on performance in non-stressed neonatal dairy calves. C. C. Stanley*, C. C. Williams, J. M. Heintz, E. M. Rees, and D. T. Gantt, *LSU AgCenter*, *Baton Rouge, LA*.

M77 Blood chemical and plasma amino acid profiles of old versus mature young beef cows. G. Sipe*[1], B. Zanghi[1], G. Wu[2], J. Boling[1], and J. Matthews[1], [1]*University of Kentucky*, *Lexington, KY*, [2]*Texas A&M University*, *College Station, TX*.

M78 The effects of feeding ad-lib fresh milk or milk replacer during nursing period on skeletal growth rates of Holstein heifers. U. Moallem*[1], D. Werner[2], H. Lehrer[1], M. Katz[1], L. Livshits[1], I. Bruckental[1], and A. Shamay[1], [1]*Institute of Animal Science, ARO*, *Israel*, [2]*Extension Service, Ministry of Agriculture*, *Israel*.

M79 Effects of in-ovo administration of monoclonal anti-myostatin antibody on post-hatch chicken growth and muscle mass. Y. S. Kim*[1] and H. Y. Jin[2], [1]*University of Hawaii*, *Honolulu*, [2]*Kangnung National University*, *Gangnung, Korea*.

M80 Impact of dietary-lysine restriction in early-finisher on subsequent growth response to dietary lysine level in late-finisher pigs. J. M. DeDecker*[1], M. Ellis[1], B. F. Wolter[2], and B. A. Peterson[1], [1]*University of Illinois*, *Urbana*, [2]*The Maschhoffs, Inc.*, *Carlyle, IL*.

Horse Species

Exhibit Hall A

Abstract #

M81 Jogging temporal variables as performed under 2005 stock horse breed association guidelines. J. Booker and M. Nicodemus*, *Mississippi State University*, *Mississippi State*.

M82 Assessment of calcium, phosphorus, and oxalate intake and excretion by horses grazing Kikuyu grass pastures in Hawaii. V. S. Gusman[1], J. R. Carpenter*[1], S. C. Miyasaka[1], and B. W. Mathews[2], [1]*University of Hawaii*, *Honolulu*, [2]*University of Hawaii*, *Hilo*.

M83 Fermentation in equine cecal cultures fed low and high starch diets with or without an enzyme supplement. P. M. Yocum*[1], V. Fellner[1], S. J. McLeod[1], and M. Schuler[2], [1]*North Carolina State University*, *Raleigh*, [2]*Enzitech, LLC*, *Troy, VA*.

M84 Pedigree effects on semen parameters in Tennessee Walking Horse stallions. P. E. Roberson*, F. Harper, and C. J. Kojima, *The University of Tennessee*, *Knoxville*.

Nonruminant Nutrition

Additives and Supplements

Exhibit Hall A

Abstract #

M85 A strawberry flavor in drinking water and feed improves water intake and growth of pigs at weaning. E. Roura*[1], D. Solà-Oriol[2], and D. Torrallardona[2], [1]*LUCTA SA*, *Barcelona, Spain*, [2]*IRTA*, *Centre Mas Bové, Reus, Spain*.

M86 Effect of oregano, cinnamon and chili pepper herbal extracts as growth promoters on growth performance of young pigs. G. Velazquez[1], A. G. Borbolla*[1], G. Mariscal-Landin[2], T. Reis de Souza[3], and A. Pinelli[4], [1]*Universidad Nacional Autonoma de Mexico*, *Mexico City, Mexico*, [2]*INIFAP CENID Fisiología*, *Ajuchitlan, Queretaro, Mexico*, [3]*Universidad Autonoma de Queretaro*, *Queretaro, Queretaro, Mexico*, [4]*Centro de Investigación en Alimentación y Desarrollo A.C.*, *Mexico City, Mexico*.

M87 Intestinal morphology of weaned pigs fed diets containing herbal extracts as growth promoters. G. Velazquez[1], A. G. Borbolla*[1], G. Mariscal-Landin[2], T. Reis de Souza[3], and A. Pinelli[4], [1]*Universidad Nacional Autonoma de Mexico*, *Mexico City, Mexico*, [2]*INIFAP CENID Fisiología*, *Ajuchitlan, Queretaro, Mexico*, [3]*Universidad Autonoma de Queretaro*, *Queretaro, Queretaro, Mexico*, [4]*Centro de Investigación en Alimentación y Desarrollo A.C.*, *Mexico City, Mexico*.

M88 Effect of essential oils (Fresta F Conc®) supplementation on growth performance, immune response and fecal noxious gas of weaned pigs. J. H. Cho*[1], Y. J. Chen[1], B. J. Min[1], K. S. Son[1], H. J. Kim[1], O. S. Kwon[1], S. J. Kim[2], and I. H. Kim[1], [1]*Dankook University*, *Cheonan, Korea*, [2]*Yuhan Co.*, *Korea*.

M89 The effect of dietary garlic and rosemary on grower-finisher pig performance and sensory characteristics of pork. S. Cullen, F. Monahan, and J. O'Doherty*, *University College Dublin*, *Ireland*.

M90 Effect of a commercial essential oil on growth performance, intestinal microfloral colony and digestive enzyme activities in broiler chickens. I. S. Jang*, Y. H. Ko, H. Y Yang, S. Y. Kang, J. K. Jin, S. S. Jun, and C. Y. Lee, *Jinju National University*, *Jinju, Korea*.

M91 Effect of dietary herb products (Animunin Powder®) on egg characteristic, blood components and nutrient digestibility in laying hens. K. S. Son*, O. S. Kwon, B. J. Min, J. H. Cho, Y. J. Chen, H. S. Kim, and I. H. Kim, *Dankook University*, *Cheonan, Korea*.

M92 Dietary nucleotides supplementation alleviates villus atrophy and improves immune response of early weaned piglets. D. Martínez-Puig*[1], E. Borda[1], E. G. Manzanilla[2], C. Chetrit[1], and J. F. Pérez[2], [1]*BIOIBERICA S.A.*, *Palafolls, Barcelona, Spain*, [2]*University Autònoma Barcelona*, *Barcelona, Spain*.

M93 Effect of blended organic acids on growth performance and intestinal microflora of post weaning piglets. V. Bontempo*, R. Maiorano, A. Agazzi, B. Tonini, and G. Savoini, *Dept Veterinary Sciences and Technology for Food Safety*, *Milan, Italy*.

M94 Large bowel fermentation of resistant starch and conventional fiber supplements in the growing boar. T. C. Rideout*[1], Q. Liu[2], and M. Z. Fan[1], [1]*University of Guelph*, *Guelph, Ontario, Canada*, [2]*Agriculture and Agri-Food Canada*, *Guelph, Ontario, Canada*.

M95 Effect of gluconic acid on swine in vitro caecal fermentation. A. Piva*, E. Grilli, G. Biagi, and G. Casadei, *University of Bologna*, *Bologna, Italy*.

M96 The effects of feeding trans-10, cis-12 and cis-9, trans-11 conjugated linoleic acid on broiler breeder growth. E. J. Clarke*[1], A. L. Lock[2], P. Garland[3], D. E. Bauman[2], and G. E. Mann[1], [1]*University of Nottingham*, *Sutton Bonington, Loughborough, UK*, [2]*Cornell University*, *Ithaca, NY*, [3]*BOCM Pauls*, *Tucks Mill, Burston, Diss, UK*.

M97 The effect of omega-3 fatty acids on sow and litter performance. S. A. Meers*, C. R. Dove, and M. J. Azain, *University of Georgia*, *Athens*.

M98 Blood analytes and performance of lactating sows fed diets added with $NaHCO_3$. J. Cruz[1], A. G. Borbolla*[1], J. Bouda[1], and G. Mariscal[2], [1]*Universidad Nacional Autonoma de Mexico*, *Mexico City, Mexico*, [2]*INIFAP CENID Fisiología*, *Ajuchitlan, Queretaro, Mexico*.

M99 Effects of supplemental inulin on utilization of iron in corn-soy diet by young pigs for hemoglobin synthesis. K. Yasuda*[1], K. R. Roneker[1], D. D. Miller[1], R. M. Welch[2], and X. G. Lei[1], [1]*Cornell University*, *Ithaca, NY*, [2]*USDA/ARS US Plant Soil & Nutrition Laboratory*, *Ithaca, NY*.

M100 Efficacy of pantothenic acid as a modifier of body composition in a porcine model of obesity development. C. A. Baldwin* and T. S. Stahly, *Iowa State University*, *Ames*.

Nonruminant Nutrition

Mannan-Oligosaccharides, Yeast Culture, and Probiotics

Exhibit Hall A

Abstract #

M101 Effects of feeding galactomannan oligosaccharides on growth performance, immune response and intestinal microflora in newly-weaned pigs. Z. P. Hou[1], Y. L. Yin*[1,2], E. A. Jeaurond[2], H. Namkung[2], and C. F. M. de Lange[2], [1]*The Chinese Academy of Sciences*, *Changsha, China*, [2]*University of Guelph*, *Guelph, Ontario, Canada*.

M102 Effect of adding a mannanoligosacchride product on performance of nursery pigs fed diets with or without antibiotics. H. Yang*[1], J. Less[2], T. Shipp[3], T. Radke[1], M. Cecava[1], and D. Holzgraefe[1], [1]*ADM Alliance Nutrition*, *Quincy, IL*, [2]*ADM Specialty Feed Ingredients*, *Decatur, IL*, [3]*ADM Animal Health and Nutrition*, *Quincy, IL*.

M103 Effect of dietary mannan-oligosaccharides and(or) organic zinc on growth performance and prevalence of post-weaning diarrhoea in piglets. M. Castillo*[1], G. Ferrini[1], E. G. Manzanilla[1], J. Roquet[2], J. A. Taylor-Pickard[3], J. F. Pérez[1], and S. M. Martín-Orúe[1], [1]*Departament de Ciència Animal i dels Aliments, Universitat Autònoma de Barcelona*, *Bellaterra, Barcelona, Spain*, [2]*Probasa*, *Barcelona, Spain*, [3]*Alltech Biotechnology Centre*, *Summerhill, Sarney, Ireland*.

M104 Influence of Bacillus subtilis supplementation on egg quality, blood characteristics and fecal NH_3-N in laying hens. H. J. Kim*, J. S. Yoo, O. S. Kwon, B. J. Min, K. S. Son, J. H. Cho, Y. J. Chen, and I. H. Kim, *Department of Animal Resource & Science, Dankook University*, *Cheonan, Korea*.

M105 Effect of milk supplementation with Lactobacillus brevis 1E1 on immune cell numbers in the small intestine of piglets. E. A. Halbrook*[1], C. V. Maxwell[1], D. C. Brown[1], M. E. Davis[1], and T. Rehberger[2], [1]*University of Arkansas*, *Fayetteville*, [2]*Agtech Products, Inc.*, *Waukesha, WI*.

M106 A quantitative micro-anatomical study to explain the effects of probiotics (Pediococcus acidilactici) upon growth performances of weaning piglets. A. Di Giancamillo[1], G. Savoini[1], V. Bontempo*[1], V. Dell'Orto[1], E. Chevaux[2], and C. Domeneghini[1], [1]*Department of Veterinary Sciences and Technologies for Food Safety*, *Milan, Italy*, [2]*Lallemand*, *Blagnac cedex, France*.

M107 Effects of dietary Enterococcus faecium on growth performance, nutrients digestibility, hematological change and fecal noxious gas content in finishing pigs. Y. J. Chen*, O. S. Kwon, B. J. Min, K. S. Son, J. H. Cho, H. J. Kim, and I. H. Kim, *Dankook University*, *Cheonan, Korea*.

M108 Effect of supplemental mixed yeast culture and antibiotics on growth performance of weaned pigs. Y. W. Shin, J. G. Kim*, and K. Y. Whang, *Korea University*, *Seoul, Korea*.

M109 Effect of supplemental mixed yeast culture and antibiotics on nitrogen balance of weaned pigs. Y. W. Shin, J. G. Kim*, and K. Y. Whang, *Korea University*, *Seoul, Korea*.

M110 Effect of supplemental mixed yeast culture and antibiotics on fecal characteristics of weaned pigs. Y. W. Shin, J. G. Kim*, and K. Y. Whang, *Korea University*, *Seoul, Korea*.

M111 Evaluation of yeast culture concentrates in weanling pig diets. A. Balfagon*[1], M. D. Lindemann[1], G. L. Cromwell[1], and G. Keller[2], [1]*University of Kentucky*, *Lexington*, [2]*Varied Industries Corporation (Vi-Cor)*, *Mason City, IA*.

M112 Digestibility of CP, AA, and energy in a novel yeast product by pigs. H. H. Stein*[1], M. L. Gibson[2], M. G. Boersma[1], and C. Pedersen[1], [1]*South Dakota State University*, *Brookings*, [2]*Dakota Gold Research Association*, *Sioux Falls, SD*.

Physiology & Endocrinology I

Exhibit Hall A

Abstract #

M113 Desert climatic effects on freezability and some biochemical constituents of Barki ram semen. M. Zeitoun*[1] and K. El-Bahrawy[2], [1]*Alexandria University*, *Alexadria, Egypt*, [2]*Mariyout Research Station, Desert Research Center, Ministry of Agriculture*, *Alexandria, Egypt*.

M114 The effects of Pulsatilla miniplex® administrations on some blood values in dairy cows. F. S. Hatipoglu*[1], M. S. Gulay[1], M. Findik[2], S. Aslan[2], C. Altinsaat[2], and G. Atintas[2], [1]*Akdeniz University*, *Antalya, Turkey*, [2]*Ankara University*, *Ankara, Turkey*.

M115 Estrogens and isoflavones affect porcine muscle satellite cell growth. C. Rehfeldt*, M. Mau, and T. Viergutz, *Research Institute for the Biology of Farm Animals*, *Dummerstorf, Germany*.

M116 Use of milk oestradiol in conjunction with milk progesterone analysis to quantify reproductive function in dairy cows. D. V. Scholey, N. R. Kendall*, A .P. F. Flint, and G. E. Mann, *University of Nottingham*, *Sutton Bonington Campus, Loughborough, UK*.

M117 Effect of dietary phosphorus on reproductive function and performance of Holstein cows. S. K. Tallam*, A. D. Ealy, K. A. Bryan, and Z. Wu, *Pennsylvania State University*, *University Park*.

M118 Progesterone (P4) Concentrations and Ovarian Response after Insertion of a New or a 7 d Used Intravaginal P4 Insert (IPI) in Proestrus Lactating Cows. R. L. A. Cerri*, H. M. Rutgliano, R. G. S. Bruno, and J. E. P. Santos, *University of California*, *Tulare*.

M119 Behavioral and endocrine responses to estradiol-17b (E) in ovariectomized Holstein cows. P. Reames*, T. Hatler, and W. Silvia, *University of Kentucky*, *Lexington*.

M120 Bovine uterine temperature measured by novel IC thermometer placed in the uterotubal junction. S. Kamimura*[1], E. Kurataki[1], N. Roa Avila[1], K. Hamana[1], K. Morita[1], and I. Shibata[2], [1]*Kagoshima University*, *Kagoshima, Japan*, [2]*Sanyo Electric*, *Tokyo, Japan*.

M121 Cloning and characterization of adsf/resistin in korean native cow. J. Park, H. Kang, C. Y. Lee, and Y. S. Moon*, *Jinju Nation University*, *Jinju, Gyung Nam, Korea*.

M122 Repeatability estimate for embryo survival following insemination at PG-induced heats in beef heifers. M. G. Diskin* and J. M. Sreenan, *Teagasc Research Centre*, *Athenry, Co. Galway, Ireland*.

M123 Reproductive performance following estrous synchronization of Angus, Brahman and Angus x Brahman crossbred cows. L Praharani*[1], D. O. Rae[2], and T. A. Olson[2], [1]*Research Institute of Animal Production*, *Bogor, Indonesia*, [2]*University of Florida*, *Gainesville*.

M124 The Crestar® protocol with estradiol benzoate, PGF2a, PMSG or GnRH to control estrus cycle and ovulation in beef cows. R. J. C. Moreira[1], A. V. Pires*[1], D. Z. Maluf[1], E. H. Madureira[2], M. Binelli[2], J. R. Gonçalves[3], L. G. Lima[3], and I. Susin[1], [1]*ESALQ/University of São Paulo*, *Piracicaba, SP, Brazil*, [2]*FMVZ/University of São Paulo*, *Pirassununga, SP, Brazil*, [3]*FEALQ*, *Londrina, PR, Brazil*.

M125 Conception rates and serum progesterone concentration in dairy cattle administered gonadotropin releasing hormone five days after artificial insemination. J. M. Howard*[1], R. Manzo[1], J. C. Dalton[2], and A. Ahmadzadeh[1], [1]*University of Idaho*, *Moscow*, [2]*University of Idaho*, *Caldwell*.

M126 Evaluation of progestagen implants reutilization on pharmacological control of estrus cycle and ovulation in beef cows. D. Z. Maluf[1], A. V. Pires*[1], R. J. C. Moreira[1], E. H. Madureira[2], M. Binelli[2], J. R. Gonçalves[3], L. G. Lima[3], and I. Susin[1], [1]*ESALQ/University of São Paulo*, *Piracicaba, SP, Brazil*, [2]*FMVZ/University of São Paulo*, *Pirassununga, SP, Brazil*, [3]*FEALQ*, *Londrina, PR, Brazil*.

M127 Myostatin inhibits the differentiation of bovine preadipocyte. S. Hirai*, H. Matsumoto, H. Kawachi, T. Matsui, and H. Yano, *Kyoto University*, *Kitashirakawa-oiwake, Sakyo-ku, Kyoto, 606-8502, Japan*.

M128 Interrelationships among parity, body condition score (BCS), milk yield, AI protocol, and cyclicity with embryonic survival in lactating dairy cows. H. M. Rutigliano* and J. E. P. Santos, *University of California*, *Tulare*.

M129 Ontogeny of hypothalamic gene expression during prepuberal development in the gilt. C. R. Barb*[1], R. L. Richardson[1], R. Rekaya[2], R. R. Kraeling[1], and G. J. Hausman[1], [1]*USDA-ARS*, *Athens, GA*, [2]*University of Georgia*, *Athens*.

M130 Effect of heat stress on the response to suprerovulation, embryo quality and survival, and the fertility of recipient cows in commercial dairy herds in Mexico. R. Lozano*[1], M. Aspron[3], C. Vasquez[2], and E. Gonzalez-Padilla[2], [1]*INIFAP-Mexico*, *Aguascalientes, Mexico*, [2]*UNAM*, *Mexico D.F.*, [3]*Private consultant*, *Queretaro, Mexico*.

M131 Relationship between milk lactoperoxidase, progesterone and estradiol concentrations during estrus in dairy cows. A. Ahmadzadeh*[1], M. L. Silber[2], and J. C. Dalton[1], [1]*University of Idaho*, *Moscow*, [2]*Washington State University*, *Pullman*.

M132 Assessing pregnancy status using digital infrared thermal imaging in Holstein heifers. M. Jones*[1], A. Denson[1], E. Williams[1], A. Dos Santos[1], K. Graves[1], A. Kouba[2], and S. Willard[1], [1]*Mississippi State University*, *Mississippi State,*, [2]*Memphis Zoo*, *Memphis, TN*.

M133 Thermography of the vulva in Holstein dairy cows: A comparison of estrus vs. diestrus. M. Jones*[1], A. Denson[1], S. Bowers[1], K. Moulton[1], E. Williams[1], K. Graves[1], A. Dos Santos[1], A. Kouba[1], and S. Willard[1], [1]*Mississippi State University*, *Mississippi State*, [2]*Memphis Zoo*, *Memphis, TN*.

M134 Activin inhibits the differentiation of bovine preadipocyte. H. Matsumoto*, S. Hirai, H. Kawachi, T. Matsui, and H. Yano, *Kyoto University*, *Kitashirakawa-oiwake, Sakyo-ku, Kyoto, 606-8502, Japan*.

M135 Effect of tumor necrosis factor a on the development of in vitro derived bovine embryos. L. Gast* and C. Whisnant, *North Carolina State University*, *Raleigh*.

M136 Effects of feeding yeast culture and propionibacteria on milk glucose, plasma glucose and plasma insulin concentrations in Holstein cows. K. V. Lehloenya[1], D. R. Stein[1], M. M. Aleman*[1], D. T. Allen[1], T. G. Rehberger[2], D. A. Jones[1], and L. J. Spicer[1], [1]*Oklahoma State University*, *Stillwater*, [2]*Agtech Products, Inc.*, *Wakesha, WI*.

M137 Supplemental feeding of propionibacteria to lactating dairy cows: Effects on plasma hormones and metabolites. M. M. Alemán*[1], D. R. Stein[1], D. T. Allen[1], K. W. Gates[1], K. J. Mertz[2], T. G. Rehberger[2], D. A. Jones[1], and L. J. Spicer[1], [1]*Oklahoma State University*, *Stillwater*, [2]*Agtech Products, Inc.*, *Waukesha, WI*.

Production, Management and the Environment

Environment and Economics

Exhibit Hall A

Abstract #

M138 Effects of population density on growth and vermicompost production of earthworms (Eisenia spp). J. Hernández*[1], S. Pietrosemoli[1], W. Echeverria[2], R. Palma[2], A. Faria[1], C. Contreras[2], and A. Gomez[1], [1]*La Universidad del Zulia*, *Maracaibo, Zulia, Venezuela.*, [2]*Proyecto FONACIT PS1-2000000792*, *Maracaibo, Zulia, Venezuela.*

M139 Effects of feeding frequency on growth and reproduction of earthworms (Eisenia spp). J. Hernández[1], S. Pietrosemoli*[1], A. Faria[1], R. Palma[2], and R. Canelón[2], [1]*La Universidad del Zulia.*, *Maracaibo, Zulia, Venezuela.*, [2]*Proyecto FONACIT PS1-2000000792*, *Maracaibo, Zulia, Venezuela.*

M140 Evaluation of advanced dairy systems shade tracker fans and korral kool coolers on a commercial dairy in Buckeye, Arizona. M. VanBaale[1], D. Ledwith[1], R. Burgos*[1], R. Collier[1], D. Armstrong[1], J. Smith[2], M. Brouk[2], and L. Baumgard[1], [1]*University of Arizona*, *Tucson*, [2]*Kansas State University*, *Manhattan*.

M141 Evaluation of cooling systems to improve lactating Holstein cows comfort in the sub-tropics. C. N. Lee* and N. Keala, *University of Hawaii-Manoa*, *Honolulu*.

M142 A comparison of methods for determining body temperature of Holstein cows during hot weather. C. Wildman*, J. West, and J. Bernard, *The University of Georgia*, *Tifton*.

M143 Influence of high temperatures on productive performance of sows. L .M. Ramǿrez[1], M. Aparicio[1], J. Morales[1], R. Lázaro*[2], and C. Piñeiro[1], [1]*PigCHAMP Pro Europa, S.A.*, *Segovia, Spain*, [2]*U. P. Madrid*, *Spain*.

M144 Component and factor analysis of pork farm odor using neural networks. K. Janes, S. Yang, and R. Hacker*, *University of Guelph*, *Guelph, Ontario, Canada*.

M145 Chemical and environmental treatment of whole tree juniper bedding to lower fecal coliform counts. M. Gamroth*[1] and L. Swan[2], [1]*Oregon State University*, *Corvallis*, [2]*U.S. Forest Service*, *Klamath Falls, OR*.

M146 Effect of season on ammonia volatilization from urine and beef and dairy feces on pasture. P. Tyler*, K. Cummins, C. Wood, and B. Wood, *Auburn University*, *Auburn University, AL*.

M147 Validating N to P ratio for estimating N volatilization from dairy manure. V. Moreira* and C. Coxe, *LSU AgCenter SERS*, *Franklinton, LA*.

M148 Effects of selected environmental factors on feed intake of three breeds of beef bulls during feedlot performance tests. G. T. Tabler, Jr.*, A. H. Brown, Jr., E. E. Gbur, Jr., I. L. Berry, Z. B. Johnson, D. W. Kellogg, and K. C. Thompson, *University of Arkansas*, *Fayetteville*.

M149 Effect of dietary nitrogen on estimates of nitrogen emission during manure collection in a freestall barn. M. Aguerre*[1], T. Hunt[2], C. Weigel[2], and M. Wattiaux[1], [1]*University of Wisconsin*, *Madison*, [2]*University of Wisconsin*, *Platteville*.

M150 The use of bioaugmentation to reduce odor and enhance nutrient profile in stored dairy manure. C. Ballard*[1], K. Cotanch[1], J. Darrah[1], E. Thomas[1], S. Kramer[1], W. Donohue[2], and W. Campion[2], [1]*W.H. Miner Agricultural Research Institute*, *Chazy, NY*, [2]*Pro-Act Microbial, Inc.*, *Portsmouth, RI*.

M151 Using nonlactating cattle to improve the transition of lactating cows into a new freestall barn. C. Hill*, M. Greenwood, C. Ballard, and R. Grant, *W.H. Miner Agricultural Research Institute*, *Chazy, NY*.

M152 An adjustment of the empirical Bayes prediction of milk production. J. Villagómez-Cortés* and A. de Vries, *University of Florida*, *Gainesville*.

M153 Economic evaluation of pre-synchronization and resynchronization protocols in lactating dairy cows. R. C. Chebel*[1], H. M. Rutigliano[2], R. L. A. Cerri[2], R. Bruno[2], and J. E. P. Santos[2], [1]*University of Idaho*, *Caldwell*, [2]*University of California-Davis*, *Tulare*.

M154 Prediction of profitability using milking center data in dairy farms. E. Zimmerman*, J. Delahoy, L. Holden, J. Hyde, B. Hilty, and C. Dechow, *Penn State University*, *University Park*.

M155 A partial budget for change in milking frequency and cow numbers with constrained parlor use. B. Carr[1], M. McGilliard*[1], W. White[1], G. Bethard[2], and R. Pearson[1], [1]*Virginia Polytechnic Institute and State University*, *Blacksburg*, [2]*G&R Dairy Consulting, Inc.*, *Wytheville, VA*.

Ruminant Nutrition

Beef Cattle

Exhibit Hall A

Abstract #

M156 Effects of replacing corn grain and urea with condensed corn distillers solubles in diets for finishing steers. D. Pingel* and A. Trenkle, *Iowa State University*, *Ames*.

M157 Effect of clinoptilolite zeolite on cattle performance and manure nitrogen. D. Sherwood*, G. Erickson, T. Klopfenstein, and D. Schulte, *University of Nebraska*, *Lincoln*.

M158 Variation in digestibility of undegradable intake protein among feedstuffs. J. MacDonald*, T. Klopfenstein, and G. Erickson, *University of Nebraska*, *Lincoln*.

M159 Starch digestion by feedlot cattle: Predictions from analysis of feed and feces for N and starch. R. Zinn*, L. Corona, F. Owens, and R. Ware, *University of California*, *El Centro*.

M160 Influence of corn vitreousness and processing on site and extent of digestion by feedlot cattle. L. Corona* and R. Zinn, *University of California*, *El Centro*.

M161 Corn or soybean hull incorporation into haylage-based backgrounding diets; effect on growth and efficiency during the backgrounding and finishing phases. M. Ko*, C. J. Mader, and K. C. Swanson, *University of Guelph*, *Guelph, Ontario, Canada*.

M162 Withdrawn by Author.

M163 Energy required by beef calves was more accurately predicted by effective energy than net energy calculations. J. W. Golden* and M. S. Kerley, *University of Missouri*, *Columbia*.

M164 Evaluating the prediction of dry matter intake and average daily gain in backgrounding cattle. M. S. Whetsell*[1], E. B. Rayburn[1], J. P. S. Neel[2], J. P. Fontenot[3], and W. M. Clapham[2], [1]*West Virginia University*, *Morgantown*, [2]*United State Department of Agriculture- Agriculture Researchg Service, Apalachian Farming System Research Center*, *Beaver, WV*, [3]*Virginia Tech*, *Blacksburg*.

M165 Application of Lineweaver-Burk data transformation to explain animal and plant performance as a function of nutrient supply. R. P. Lana*[1,2], R. H. T. B. Goes[3], L. M. Moreira[1], A. B. Mâncio[1], and D. M. Fonseca[1], [1]*Universidade Federal de Viçosa-DZO*, *Viçosa, MG, Brazil*, [2]*CNPq*, *Brasília, DF, Brazil*, [3]*Universidade Estadual de Maringá*, *Umuarama, PR, Brazil*.

M166 Screening for the effects of natural plant extracts at two pH levels on in vitro rumen microbial fermentation of a high-concentrate beef cattle diet. P. W. Cardozo[1], S. Calsamiglia*[1], A. Ferret[1], and C. Kamel[2], [1]*Universidad Autonoma de Barcelona*, *Bellaterra, Spain*, [2]*Axiss France SAS*, *Bellegarde-sur-Valserine, Cedex, France*.

M167 Treatment of ground wheat with tannins: Effects on VFA production during in vitro ruminal incubation. T. F. Martinez[1,2], Y. Wang[1], T. Reuter*[1], and T. A. McAllister[1], [1]*Agriculture and Agri-Food Canada Research Centre*, *Lethbridge, AB, Canada*, [2]*Departamento de Biologia Aplicada, Universidad de Almeria*, *Almeria, Spain*.

M168 Effect of mixed culture of Lactobacillus paracasei and Lactobacillus lactis and their fermentation products on ruminal fermentation of a barley grain/barley silage diet. Y. Wang*, J. Baah, L. J. Yanke, and T. A. McAllister, *Agriculture and Agri-Food Canada Research Centre*, *Lethbridge, AB, Canada*.

M169 Effect of Lactobacilli on performance and carcass characteristics of finishing beef steers. J. Baah*, Y. Wang, D. J. Gibb, L. J. Yanke, F. H. Van Herk, and T. A. McAllister, *Agriculture and Agri-Food Canada Research Centre*, *Lethbridge, AB, Canada*.

M170 Withdrawn by Author.

M171 Evaluation of the incidence of liver abscess in feedlot cattle fed a dietary antioxidant (Agrado®). M. Vazquez-Anon*[1], F. Scott[1], B. Miller[1], and T. Peters[2], [1]*Novus International, Inc*, *St Louis, MO*, [2]*Dekalb Feeds*, *Rock Falls, IL*.

M172 Response by steers fed high-forage diets to oral doses of a polyclonal antibody preparation against Streptococcus bovis on target bacteria populations and rumen fermentation products. N. DiLorenzo*, R. K. Gill, F. Diez-Gonzalez, J. E. Larson, and A. DiCostanzo, *University of Minnesota*, *St. Paul*.

M173 Effect of receiving diet on early feedlot health, growth performance and subsequent carcass traits of Angus X Continental cross steer calves. P. Walker*[1], K. Earing[2], J. Ringler[2], A. Antas[3], and R. Hall[4], [1]*Illinois State University*, *Normal*, [2]*University of Kentucky*, *Lexington*, [3]*University of Illinois*, *Urbana*, [4]*Animal Feed and Nutrition Consulting*, *Richmond, IN*.

M174 Efficiency of use of concentrate ration for growing animals, under tropical pastures. R. H. T. B. Goes*, R. P. Lana, A. B. Mancio, and D. D. Alves, *Universidade Federal de Viçosa-DZO*, *Viçosa, MG, Brazil*.

M175 A computing system for adjustment and simulation of growth models and estimation of nutrient requirement for grazing Brahman cattle. M. Pereda-Solís[1], S. González*[2], E. Arjona-Suárez[2], G. Bueno-Aguilar[2], and G. Mendoza-Martínez[2], [1]*Universidad Juárez del Estado de Durango*, *Durango, Durango, México*, [2]*Colegio de Postgraduados*, *Montecillo, Estado de México, México*.

M176 Quantitative assessment of visceral energy metabolism in beef steers consuming graded levels of forage. N. Elam*, C. Taylor, S. Kitts, K. McLeod, D. Harmon, and E. Vanzant, *University of Kentucky*, *Lexington*.

M177 Effect of alternate diets containing corn straw or corn silage as roughage on growth performance of growing bull calves. R. Barajas*[1], B. J. Cervantes[1], R. J. Virgilio[2], J. C. Barraza[1], and P. A. Castro[2], [1]*FMVZ-Universidad Autonoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*, [2]*Tecnologia de Maxima Produccion, S.A. de C.V.*, *Culiacan, Sinaloa, Mexico*.

M178 Effect of feed restriction during the growth phase on performance of Aberdeen Angus steers fed different concentrate levels during finishing. E. R. Prates*[1], J. R. P. Rosa[1], J. Restle[2], J. Lopez[1], J. O. J. Barcellos[1], and L. F. G. Menezes[1], [1]*Universidade Federal do Rio Grande do Sul*, *Porto Alegre, RS, Brazil*, [2]*Universidade Federal de Santa Maria*, *Santa Maria, RS, Brazil*.

M179 Delaying daily feed delivery time: intake, water consumption, ruminal pH and stress response. L. González*, A. Ferret, X. Manteca, J. de la Torre, and S. Calsamiglia, *Universitat Autònoma de Barcelona*, *Bellaterra, Barcelona, Spain*.

M180 Performance, carcass traits and feed efficiency in Nellore bulls, steers and heifers. P. V. R. Paulino*[1], S. C. Valadares Filho[1], M. I. Marcondes[1], M. A. Fonseca[1], A. M. Araújo[1], D. M. Oliveira[1], E. Detmann[1], and R. D. Sainz[2], [1]*Universidade Federal de Viçosa*, *Viçosa, Minas Gerais, Brazil*, [2]*University of California*, *Davis*.

M181 Conjugated linoleic acid content in meat of crossbreed bulls grazing in tropical Mexico. M. Montero[1], F. Juarez*[1,2], and H. Garcia[3], [1]*INIFAP*, *Veracruz, Ver. México*, [2]*Facultad de Medicina Veterinaria y Zootecnia, Universidad Veracruzana*, *Veracruz, Ver. México*, [3]*UNIDA-ITV*, *Veracruz, Ver. México*.

M182 Improvement of omega 3 fatty acid content of meat from young Holstein bulls receiving a high-concentrate diet. N. Mach*[1], M. Devant[1], A. Bach[2,1], I. Diaz[3], M. Font[4], M. A. Oliver[4], and J. A. Garcia[3], [1]*Unitat de Remugants-IRTA (Institut de Recerca i Tecnologia Agroalimentàries)*, *Barcelona, Spain*, [2]*ICREA (Institució Catalana de Recerca i Estudis Avançats)*, *Barcelona, Spain*, [3]*Unitat de Quhímica Alimentària-IRTA*, *Girona, Spain*, [4]*Unitat de Qualitat de la Canal i Carn-IRTA*, *Girona, Spain*.

M183 The effect of feeding sunflower oil alone or in combination with fish oil on the expression of the D9-desaturase gene in the liver and subcutaneous adipose tissue of heifers. F. Mulligan*[1], K. Thornton[1], T. Sweeney[1], and A. Moloney[2], [1]*Department of Animal Husbandry and Production*, *Belfield, Dublin, Ireland*, [2]*Teagasc, Grange Research Centre*, *Dunsany, Co. Meath, Ireland*.

M184 The effects of feeding saponified fatty acids on duodenal fatty acid flow. D. O. Alkire*, M. S. Kerley, and J. H. Clark, *University of Missouri*, *Columbia*.

M185 Effect of high oil corn on finishing cattle performance. G. J. Depetris*[1], F. J. Santini[1,2], E. L. Villarreal[1], E. E. Pavan[1], and D. H. Rearte[1], [1]*INTA EEA Balcarce*, *Argentina*, [2]*Fac. Cs. Agrarias. UNMdP*, *Argentina*.

M186 Performance and serum glucose, insulin, IGF-1, and NEFA concentrations of calves nursing beef cows consuming high-linoleate or high-oleate safflower seed supplements. S. Lake[1], E. Scholljegerdes[1], V. Nayigihugu[1], R. Atkinson[1], G. Moss[1], E. Van Kirk[1], D. Hallford[2], D. Rule[1], and B. Hess*[1], [1]*University of Wyoming*, *Laramie*, [2]*New Mexico State University*, *Las Cruces*.

M187 Mammary lipid metabolism in primiparous beef cows fed high-linoleate safflower seeds. C. Murrieta*[1], E. Scholljegerdes[1], B. Hess[1], D. Rule[1], T. Engle[2], and K Hossner[2], [1]*University of Wyoming*, *Laramie*, [2]*Colorado State University*, *Fort Collins*.

M188 Age, body condition, and calf sex effects on maternal conversion and circulating NEFA levels. E. Felton* and J. Warren, *West Virginia University*, *Morgantown*.

M189 Effects of trace mineral source and growth implants on trace mineral status and immune response of steers. K. Dorton*, T. Engle, and R. Enns, *Colorado State University*, *Fort Collins*.

M190 Phosphorus metabolism in steers fed high grain diets. N. Meyer*, A. Trenkle, D. Pingel, and K. Barrett, *Iowa State University*, *Ames*.

Ruminant Nutrition

Dairy I

Exhibit Hall A

Abstract #

M191 Effect of level of encapsulated vitamin C in starters fed to Holstein calves. J. Garrett*[1], D. Putnam[1], T. Hill[2], J. Aldrich[2], and R. Schlotterbeck[2], [1]*Balchem Encapsulates*, *New Hampton, NY*, [2]*Akey*, *Lewisburg, OH*.

M192 Effect of feeding medium chain triglycerides on calf growth, insulin responsiveness and body composition. J. K. Mills*, M. E. van Amburgh, and D. A. Ross, *Cornell University*, *Ithaca, NY*.

M193 The effect of milk replacer protein, fat content and feeding amount on performance of Holstein heifer calves. B. Ziegler*[1], J. Linn[2], D. Ziegler[3], H. Chester-Jones[3], C. Soderholm[1], and S. Hayes[4], [1]*Hubbard Feeds*, *Mankato, MN*, [2]*University of Minnesota*, *St. Paul*, [3]*University of Minnesota*, *Waseca*, [4]*Milk Products*, *Chilton, WI*.

M194 The effect of milk replacer feeding programs on calf growth and health. B. L. Miller*, T. E. Johnson, H. B. Perry, and M. A. Fowler, *Land O' Lakes, Inc.*, *Webster City, IA*.

M195 Psyllium in milk replacer increases intestinal volatile fatty acids and tissue mass in neonatal dairy calves. S. J. Cannon*[1], B. L. Miller[2], G. C. Fahey[1], L. L. Bauer[1], and J. K. Drackley[1], [1]*University of Illinois*, *Urbana*, [2]*Land O'Lakes, Inc.*, *Webster City, IA*.

M196 Number of lactations have no effect on immunoglobulin G concentration of heifer and cow colostrum. S. I. Kehoe*, M. L. Moody, A. J. Heinrichs, and M. R. Long, *The Pennsylvania State University*, *University Park*.

M197 A mechanistic model on glucose and lipid metabolism in periparturient cows. J. Guo*, R. Peters, and R. Kohn, *University of Maryland*, *College Park*.

M198 Effects of supplementation with propylene glycol or protected fats containing low or high ratio of unsaturated fatty acids to transition cows on production and metabolism. M. Katz*[1,2], H. Lehrer[1], L. Livshits[1], D. Sklan[2], and U. Moallem[1], [1]*ARO*, *Israel*, [2]*Hebrew University*, *Israel*.

M199 Absorption and metabolism of propylene glycol, propanal, and n-propanol in dairy cows dosed intraruminally with propylene glycol. B. Raun, B. Røjen, and N. Kristensen*, *Danish Institute of Agricultural Sciences*, *Tjele, Denmark*.

M200 Plasma concentration of glucagon-like peptide-1 (7-36) amide (GLP-1) increases after calving in dairy cows. A. Relling* and C. Reynolds, *The Ohio State University*, *Wooster*.

M201 Metabolic profile of transition dairy cows from northwestern Portugal. J. A. A. Pires*[1], P. L. Ruegg[1], M. D. Salgueiro[2], and A. Dias-da-Silva[3], [1]*University of Wisconsin*, *Madison*, [2]*AGROS*, *Vila do Conde, Portugal*, [3]*CECAV-UTAD*, *Vila Real, Portugal*.

M202 Effect of anionic salt source on peripartal dry matter intake, milk production, and blood mineral concentrations in Holstein cows. D. B. Carlson*, J. W. McFadden, and J. K. Drackley, *University of Illinois*, *Urbana*.

M203 Effect of growth conditions on mineral composition of rumen microbes. N. Singh*, E. Ungerfeld, and R. Kohn, *University of Maryland*, *College Park*.

M204 Relationship among ruminal strong ions and ruminal pH. C. S. Mooney* and M. S. Allen, *Michigan State University*, *East Lansing*.

M205 Evaluation of a dynamic mechanistic model of phosphorus metabolism in dairy cows. E. Kebreab*, J. France, N. Odongo, V. R. Osborne, and B. W. McBride, *University of Guelph*, *Guelph, Ontario, Canada*.

M206 Quantification of net splanchnic inorganic phosphate recycling in lactating dairy cows. N Kristensen*, B Røjen, B Raun, P Lund, and J Sehested, *Danish Institute of Agricultural Sciences*, *Tjele, Denmark*.

M207 Effect of manganese level in water on the performance of dairy calves from birth to 70 days of age. M. L. Raeth-Knight*, K. M. Steffenhagen, and J. G. Linn, *University of Minnesota*, *St. Paul*.

M208 Effect of Sel-Plex™ supplementation on milk production, composition and somatic cell count of lactating dairy cows in commercial dairy herds. G. A. Harrison*, J. M. Tricarico, and S. A. Elliott, *Alltech Biotechnology, Inc.*, *Nicholasville, KY*.

M209 Effect of chromium on intravenous glucose tolerance test results in growing dairy heifers. J. Sumner*[1], J. McNamara[1], and F. Valdez[2], [1]*Washington State University*, *Pullman*, [2]*Kemin Agri Foods North America, Inc*, *Des Moines, IA*.

M210 Effects of rumen protected choline and dry propylene glycol on feed intake and blood metabolites of Holstein dairy cows. Y.-H. Chung*[1], T. W. Cassidy[1], I. D. Girard[2], P. Cavassini[3], and G. A. Varga[1], [1]*The Pennsylvania State University*, *University Park*, [2]*Probiotech International Inc.*, *Québec, Canada*, [3]*Ascor Chimici s.r.l.*, *Via Piana, Italy*.

M211 Effects of rumen protected choline and dry propylene glycol on production responses of periparturient Holstein dairy cows. Y.-H. Chung*[1], T. W. Cassidy[1], I. D. Girard[2], P. Cavassini[3], and G. A. Varga[1], [1]*The Pennsylvania State University*, *University Park*, [2]*Probiotech International Inc.*, *Québec, Canada*, [3]*Ascor Chimici s.r.l.*, *Via Piana, Italy*.

M212 Secretion of choline in milk is depressed in dairy cows in early lactation. J. R. Newbold*[1], E. C. L. Bleach[2], P. C. Aikman[2], and D. E. Beever[2], [1]*Provimi Research and Technology Centre*, *Sint-Stevens-Woluwe, Belgium*, [2]*University of Reading*, *Reading, Berkshire, United Kingdom*.

M213 Plasma a-tocopherol levels during the transition period in grazing Jersey cows. J. M. l. Sanchez*[1,2] and A. Zuniga[1,2], [1]*Universidad de Costa Rica*, *San Jose, Costa Rica*, [2]*Centro de Investigacion en Nutricion Animal y Escuela de Zootecnia*, *San Jose, Costa Rica*.

M214 Meta-analysis of dietary niacin supplementation trials in lactating dairy cows. E. Schwab*, D. Caraviello, and R. Shaver, *University of Wisconsin*, *Madison*.

Sheep Species

Exhibit Hall A

Abstract #

M215 Estimation of the apparent digestibility of soybean hulls in diets containing increasing concentrations of soybean hulls to replace corn fed to growing lambs. T. Johnson*[1] and J. Rekhis[2], [1]*Purdue University*, *West Lafayette, IN*, [2]*Manouba University*, *Sidi Thabet, Tunisia*.

M216 Effect of substitution of alfalfa hay with dehydrated pig manure on apparent digestibility of growing diets for sheep. A. Estrada-Angulo*, A. Terrazas, J. F. Obregon, A. B. Perez, C. H. Ramos, and E. Vazquez-Garcia, *FMVZ-Universidad Autonoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*.

M217 The effects of feeding dried poultry manure on weight gain, feed conversion rates and some blood values in lambs. F. S. Hatipoglu*[1], M. S. Gulay[1], F. Karakas Oguz[1], N. Oguz[1], U. R. Fidanci[2], and G. Yildiz[2], [1]*Akdeniz University*, *Antalya, Turkey*, [2]*University of Ankara*, *Ankara, Turkey*.

M218 Effect of Zilpaterol clorhidrate on growth performance and carcass traits in finishing sheep. A. Felix, A. Estrada-Angulo*, F. G. Rios, C. H. Ramos, and A. B. Perez, *FMVZ-Universidad Autonoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*.

M219 Effect of joint chromium and zinc supplementation on performance of growing Pelibuey hair sheep. L Almeida and R. Barajas*, *FMVZ-Universidad Autonoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*.

M220 Carcass traits of hair breed ram and wether lambs on moderate or high level of supplement. J. Burke*[1] and J. Apple[2], [1]*USDA, Agricultural Research Service*, *Booneville, AR*, [2]*University of Arkansas*, *Fayetteville*.

M221 Cholesterol, CLA and fat content of lamb loin chops by breed type. S. Duckett*[1], S. Greiner[2], and D. Notter[2], [1]*University of Georgia*, *Athens*, [2]*Virginia Polytechnic Institute and State University*, *Blacksburg*.

M222 Growth and parasite resistance of pasture-raised purebred Katahdin and Katahdin crossbred lambs. D. J. Jackson*[1], N. C. Whitley[1], J. W. Lemaster[2], and S. Schoenian[2,3], [1]*University of Maryland Eastern Shore*, *Princess Anne*, [2]*Maryland Cooperative Extension*, *College Park, MD*, [3]*Western Maryland Research and Education Center*, *Keedysville, MD*.

M223 Effects of deworming hair sheep, wool sheep and meat goats with avermectin and herbs. H. Swartz*[1], F. Wulff[1], A. Stewart[1], and M. Ellersieck[2], [1]*Lincoln University*, *Jefferson City, MO*, [2]*University of Missouri*, *Columbia*.

M224 Survival analysis from birth to slaughter of Ripollesa lambs. J. Casellas*, J. Piedrafita, G. Caja, and A. Ferret, *Universitat Autònoma de Barcelona*, *Bellaterra,Spain*.

M225 Analysis of associations between genotypes at codon 171 and 136 of the prion protein gene and production traits in a survey of market lambs. J. M. Evoniuk*[1], P. T. Berg[1], M. L. Johnson[1], C. L. Stoltenow[1], C. S. Schauer[1], K. I. O'Rourke[2], and D. A. Redmer[1], [1]*North Dakota State University*, *Fargo*, [2]*USDA, ARS, ADRU*, *Pullman, WA*.

M226 Impact of nutrition and body condition score at conception on gestation length. D. Brake* and J. Daniel, *South Dakota State University*, *Brookings*.

M227 The effect of Bio-Mos supplementation on the performance of ewes in late pregnancy and on subsequent lamb performance. M. Foley[1], T. M. Boland[1], M. Guinan[1], S. Andrieu*[2], and T. F. Crosby[1], [1]*University College Dublin*, *Belfield, Dublin, Ireland*, [2]*Alltech Ireland*, *Dunboyne, Co. Meath, Ireland*.

M228 The effects of dietary inclusion of organic selenium (Sel-Plex) on ewe milk selenium level and lamb growth. M. Foley[1], T. M. Boland[1], S. Andrieu*[2], M. Guinan[1], and T. F. Crosby[1], [1]*University College Dublin*, *Belfield, Dublin, Ireland*, [2]*Alltech Ireland*, *Dunboyne, Co. Meath, Ireland*.

M229 Milk yield and milk composition of Santa Ines ewes. I. Susin*, A. V. Pires, C. Q. Mendes, I. U. Packer, and R. C. Araujo, *ESALQ/University of São Paulo*, *Piracicaba, SP, Brazil*.

Swine Species

Swine Nutrition and Management

Exhibit Hall A

Abstract #

M230 The use of a modified farrowing pen: Effects on lactation performance of heat-stressed sows. C. Farmer*[1], T. Widowski[2], and D. Massé[1], [1]*Agriculture and Agri-Food Canada*, *Lennoxville, QC, Canada*, [2]*University of Guelph*, *Guelph, ON, Canada*.

M231 Effect of low energy diets fed to high lean pigs slaughtered at 115 kg of body weight. I. Moreira*, T. Voorsluys, D. Paiano, I. M. Sartori, M. A. A. Silva, and G. Jacob, *Universidade Estadual de Maringá*, *Maringá, Paraná, Brazil*.

M232 Pig manure production (qualitative and quantitative) of finishing pigs fed on diets containing different levels of energy and fiber. I. Moreira*, R. M. Martins, D. Paiano, A. C. Furlan, E. N. Martins, and L. S. Perdigão, *Universidade Estadual de Maringá*, *Maringá, Paraná, Brazil*.

M233 Avilamycin in the diet affects intestinal mucosal architecture and mucosa-associated bacteria in weaned pigs. B. Kleessen[3,2], R. Brunner[1], J. Kluess[1], W. Souffrant[1], U. Hennig[1], and C. Metges*[1], [1]*Research Institute for the Biology of Farm Animals*, *Dummerstorf, Germany*, [2]*German Institute of Human Nutrition (DIFE) Potsdam*, *Nuthetal, Germany*, [3]*Institute of Bacteriology and Mycology, University of Leipzig*, *Leipzig, Germany*.

M234 A high-resolution radiation hybrid map for swine. W.-S Liu*[1], K. Eyer[1], H. Yasue[2], B. Roelofs[1], H. Hiraiwa[2], T Shimogiri[3], E. Landrito[1], J. Ekstrand[1], M. Treat[1], and C. W. Beattie[1], [1]*University of Nevada*, *Reno*, [2]*National Institute of Agrobiological Sciences*, *Ikenodai, Tsukuba, Ibaraki, Japan*, [3]*Kagoshima University*, *Korimoto, Kagoshima, Japan.*

M235 Effects of operator and interpreter effects on real-time ultrasonic measures of backfat thickness and longissimus muscle area in pigs. L. L. Lo*, C. Y. Fang, H. C. Chung, Y. Y. Lin, and C. Y. Lien, *Chinese Culture University*, *Taipei, Taiwan*.

M236 Piglet performance and meat quality at slaughter in response to increased maternal feed allowance during mid gestation. A. Cerisuelo*[1], M. Baucells[1], J. Bonet[2], D. Carrión[3], S. Tibble[4], J. Gasa[1], and R. Sala[1], [1]*Universitat Aut&ogravee;noma de Barcelona*, *Spain*, [2]*Vall Companys Group*, *Spain*, [3]*PIC España, S.A.*, *Spain*, [4]*SCA Ibérica*, *Spain*.

M237 Effect of additional feed allowance during mid gestation on body reserves changes and feed intake during lactation in lean sow genotype. A. Cerisuelo*[1], R. Sala[1], D. Carrión[2], J. Coma[3], S. Tibble[4], J. Gasa[1], and M. Baucells[1], [1]*Universitat Autònoma de Barcelona*, *Spain*, [2]*PIC España, S.A.*, *Spain*, [3]*Vall Companys Group*, *Spain*, [4]*SCA Ibérica*, *Spain*.

M238 Analysis of the association between farrowing and subsequent breeding performance with lactation feed intake. S. S. Anil*[1], L. Anil[1], J. Deen[1], S. K. Baidoo[2], and R. D. Walker[2], [1]*University of Minnesota*, *Saint Paul*, [2]*University of Minnesota*, *Waseca*.

M239 Effect of different levels of soybean hulls in growing and finishing pigs diets. I. Moreira*[1], A. R. B. Quadros[2,1], A. R. P. Parra[3,1], C. R. Ribeiro[1], N. Silvestrin[1], and C. Scherer[1], [1]*Universidade Estadual de Maringá*, *Maringá, Paraná, Brazil*, [2]*Universidade Federal de Santa Maria*, *Santa Maria, Rio Grande do Sul, Brazil*, [3]*Universidad del Tolima*, *Ibagué, Tolima, Colombia*.

M240 Hematology and blood biochemistry of Enviropig™. R. G. Meidinger[1], A. Ajakaiye*[1], D. A. Murray[1], S. P. Golovan[1], M. Z. Fan[1], J. P. Phillips[1], J. Zhang[1], R. R. Hacker[1], J. M. Kelly[2], and C. W. Forsberg[1], [1]*University of Guelph*, *Guelph, Ontario, Canada.*, [2]*MaRS Landing*, *Guelph, Ontario, Canada.*

M241 Effects of feeding grains naturally-contaminated with Fusarium mycotoxins to first parturition sows on pre-parturition performance and metabolism. G. Diaz-Llano* and T. K. Smith, *University of Guelph*, *Guelph, Ontario, Canada*.

M242 Effects of feeding grains naturally-contaminated with Fusarium mycotoxins to first parturition sows on post-parturition performance and metabolism. G. Diaz-Llano* and T. K. Smith, *University of Guelph*, *Guelph, Ontario, Canada*.

M243 Changes in dietary preferences in piglets due to different cereals. D Solà-Oriol[1], E Roura*[2], and D Torrallardona[1], [1]*IRTA-Centre de Mas Bové*, *Reus, Spain*, [2]*Lucta SA*, *Barcelona, Spain*.

M244 Changes in dietary preferences in piglets due to different protein sources. D Solà-Oriol[1], E Roura*[2], and D Torrallardona[1], [1]*IRTA-Centre de Mas Bové*, *Reus, Spain*, [2]*Lucta, SA*, *Barcelona, Spain*.

M245 Litter size of naturally bred and artificially inseminated sows from commercial swine production units in North-Central Mexico. L. A. Ruvalcaba, F. De la Puente-Ocampo, F. J. Escobar-Medina*, and C. F. Arechiga, *Universidad Autonoma de Zacatecas*, *Zacatecas, Zac. Mexico*.

M246 Reproductive function of sows inseminated using diluted semen in Androhep EnduraGuard and Androhep Plus. M. E. Vergara-Zambrano, F. J. Escobar-Medina*, J. Becerril-Ángeles, G. Rocha-Chavez, and F. De la Colina, *Universidad Autonoma de Zacatecas*, *Zacatecas, Zac. Mexico*.

M247 Body-weight gain of piglets according to birth timing, mammary gland selection and litter size. M. G. Correa-Aguayo, F. J. Escobar-Medina*, and J. J. Hernandez-Berumen, *Universidad Autonoma de Zacatecas*, *Zacatecas, Zac. Mexico*.

M248 Fertility of artificially-inseminated sows presenting abnormal vaginal secretions. F. Medina-Jimenez[1], F. J. Escobar-Medina*[1], C. F. Arechiga[1], J. J. Hernandez-Berumen[1], G. Rocha-Chavez[2], and J. Becerril[2], [1]*Universidad Autonoma de Zacatecas*, *Zacatecas, Zac. Mexico.*, [2]*Minitube Mexico*.

M249 Effect of gender, group size, and time of first removal for slaughter on pig performance in a wean-to-finish production system. J. M. DeDecker*, M. Ellis, C. R. Bertelsen, B. A. Peterson, and M. J. Ritter, *University of Illinois*, *Urbana*.

M250 Estimation of carcass compositional differences in live breeding swine using real-time ultrasound. T. Perkins*, *Southwest Missouri State University*, *Springfield*.

M251 Efficacy of two natuaral additives, SUPROL® and RepaXOL® as growth promotants for grow-finish pigs. R. Thaler[1], B. Rops[1], B. Christopherson*[2], and E. Cerchiari[3], [1]*South Dakota State University*, *Brookigns*, [2]*SODA Feed Ingredients LLC*, *Brookings, SD*, [3]*SODA Feed Ingredients Ltd.*, *Ireland*.

SYMPOSIA AND ORAL SESSIONS

SYMPOSIUM

ALPHARMA Beef Cattle Nutrition

Challenging the Limits of Caloric Intake in Feedlot Cattle

Chair: Robbi Pritchard, South Dakota State University

Sponsors: Alpharma and ASAS Foundation

Ballroom A

Time	Abstract #	
9:30 AM		Introduction. Robbi Pritchard, *South Dakota State University*.
9:40 AM	18	Sites, rates, and limits of starch digestion and glucose metabolism in growing cattle. G. Huntington*[1], C. Richards[2], and D. Harmon[3], [1]*North Carolina State University*, *Raleigh*, [2]*The University of Tennessee*, *Knoxville*, [3]*The University of Kentucky*, *Lexington*.
10:20 AM	19	Ruminal dynamics during adaptation of beef cattle to high-concentrate diets. M. S. Brown*[1,2], [1]*West Texas A&M University*, *Canyon*, [2]*Texas Agricultural Experiment Station*, *Amarillo*.
11:00 AM		Overview of various methods used commercially to adapt cattle to finishing diets. T. Milton, *Midwest PMS*, *Grand Island, NE.*
11:40 AM	20	An upper limit for caloric density of finishing diets. C. Krehbiel*, J. Cranston, and M. McCurdy, *Oklahoma State University*, *Stillwater*.

Breeding and Genetics

Statistical Methods I

Chair: Filippo Miglior, Agriculture and Agri-Food Canada / Canadian Dairy Network

Room 203

Time	Abstract #	
9:30 AM	21	Joint modeling of age of dam and age of animal for growth in Gelbvieh by the random regression model. K. Robbins*, I. Misztal, and J. Bertrand, *University of Georgia*, *Athens*.
9:45 AM	22	Analysis of first insemination success subject to uncertainty in Australian Angus cattle. M. L. Spangler*, R. L. Sapp, R. Rekaya, and J. K. Bertrand, *The University of Georgia*, *Athens*.
10:00 AM	23	Properties of random regression models using linear splines. I. Misztal*, *University of Georgia*, *Athens*.
10:15 AM	24	Calculating the distribution of the correlation between estimated breeding values from different analyses. D. Garrick*, *Colorado State University*, *Fort Collins*.
10:30 AM	25	A bivariate quantitative genetic model for a linear Gaussian trait and a survival trait. L. H. Damgaard* and I. R. Korsgaard, *Research Centre Foulum, Dept. Genetics and Biotechnology, Bioinformatics and Statistical Genetics*, *Tjele, Denmark*.
10:45 AM		Break
11:00 AM	26	Bivariate recursive and simultaneous models for milk yield and somatic cell scores. G. de los Campos*[1], D. Gianola[1], and B. Heringstad[2], [1]*University of Wisconsin-Madison*, *Madison*, [2]*Norwegian University of Life Sciences*, *Aas, Norway*.
11:15 AM	27	Standard errors of solutions in large scale mixed models, application to linear and curvilinear effects of inbreeding on production traits. N. Gengler*[1,2] and C. Croquet[1,2], [1]*National Fund for Scientific Research*, *Brussels, Belgium*, [2]*Gembloux Agriculture University*, *Gembloux, Belgium*.
11:30 AM	28	Predictions of test day yields for milk production traits in cattle by partial least squares multiple regression. N. P. P. Macciotta*[1], D. Vicario[2], C. Dimauro[1], N. Bacciu[1], and A. Cappio-Borlino[1], [1]*Università di Sassari*, *Sassari, Italia*, [2]*Italian Association of Simmental Cow breeders*, *Udine, Italia*.
11:45 AM	29	Genetic parameters of latent variables related to main traits of lactation curve shape. N. P. P. Macciotta*[1], D. Vicario[2], and A. Cappio-Borlino[1], [1]*Università di Sassari*, *Sassari, Italia*, [2]*Italian Association of Simmental Cow Breeders*, *Udine, Italia*.
12:00 PM	30	Simultaneous estimation of environmental values and genetic parameters in reaction norm model. G. Su*, P. Madsen, M. S. Lund, D. Sorensen, I. R. Korsgaard, and J Jensen, *Danish Institute of Agricultural Sciences, Department of Genetics and Biotechnology*, *Tjele, Denmark*.

Dairy Foods

Dairy Chemistry

Chair: Kayanush Aryana, Louisana State University

Room 241

Time	Abstract #	
9:30 AM	31	Influence of lipolysis and proteolysis of calibration milks on infrared milk analyzer performance. K. E. Kaylegian* and D. M. Barbano, *Cornell University*, *Ithaca, NY*.
9:45 AM	32	Comparing a gas chromatography/mass spectrometry technique with sensory evaluation in relation to the acceptability of fluid milk. A. A. Glueck-Chaloupka*[1], C. H. White[2], and W. E. Holmes[3], [1]*The Kroger Company*, *Cincinnati, OH*, [2]*Mississippi Agricultural & Forestry Experiment Station*, *Mississippi State, MS*, [3]*Mississippi State Chemical Lab*, *Mississippi State, MS*.
10:00 AM	33	Novel technique for the differentiation of caseins and whey proteins in confocal scanning laser microscopy. A. Dubert-Ferrandon*, A. Grandison, and K. Niranjan, *The University of Reading*, *Whiteknights, Reading, UK*.
10:15 AM	34	Effect of heat and homogenization pressure on activity of xanthine oxidase isolated from buttermilk. C. van den Berg and D. Everett*, *University of Otago*, *Dunedin, New Zealand*.

10:30 AM	35	Residues 69-74 of beta-lactoglobulin are responsible for a monoclonal antibody binding to thermal denatured lactoglobulin. C. Y. Song*, M. C. Yang, and S. J. T. Mao, *National Chiao Tung University*, *HsinChu, Taiwan*.
10:45 AM	36	Properties of lactoperoxidase isolated from individual cow's milk by ion-exchange chromatography. A. Grandison*[1], F. Fonteh[2], and M. Lewis[1], [1]*The University of Reading*, *Reading, Berkshire, UK*, [2]*University of Dschang*, *Dschang, Cameroon*.
11:00 AM	37	Evolution and regulation of the casein gene cluster region: A genomics approach. M. Rijnkels*[1], T. Le[1], and J. Thomas[2], [1]*Baylor College of Medicine*, *Houston, TX*, [2]*Emory University School of Medicine*, *Atlanta, GA*.
11:15 AM	38	Distinguish between native and thermally denatured b-lactoglobulin using a monoclonal antibody as a probe. S. J. T. Mao*, W. L. Chen, M. C. Yang, and W. T. Liu, *National Chiao Tung University*, *Hsinchu, Taiwan*.

SYMPOSIUM

Dairy Foods

Extended Shelf Life of Fluid Milk

Chairs: MaryAnne Drake, North Carolina State University and Dave Barbano, Cornell University

Room 242

Time	Abstract #	
9:30 AM	39	Influence of raw milk quality on fluid milk shelf life. D. M. Barbano*[1], Y. Ma[1], and M. V. Santos[2], [1]*Cornell University*, *Ithaca, NY*, [2]*Universidade de São Paulo*, *Pirassununga, SP, Brazil*.
10:00 AM	40	Current status of commercial fluid milk quality. K. Boor*, N. Carey, S. Murphy, and R. Zadoks, *Cornell University*, *Ithaca, NY*.
10:30 AM	41	Extending refrigerated shelf life of fluid milk using a novel HTST system. M. A. Drake* and G. Cartwright, *North Carolina State University*, *Raleigh*.
11:00 AM	42	Application of microwave processing to extend shelf life of fluid milk. J. Simunovic*, P. Coronel, and D. Clare, *North Carolina State University*, *Raleigh*.
11:30 AM	43	Use of microfiltration (MF) to improve fluid milk quality. D. M. Barbano* and M. W. Elwell, *Cornell University*, *Ithaca, NY*.
12:00 PM	44	Dairy applications for microfiltration. H. Iversen*, *Tetra Pak*, *Vernon Hills, IL*.

Graduate Student Competition

ADSA Dairy Production Graduate Student Paper Competition

Chair: Susan Eicher, USDA-ARS

Room 207

Time	Abstract #	
9:30 AM	45	Processing barley grain for midlactation dairy cows: Steam-rolling versus grinding. A. Nikkhah*[1], H. Sadri[2], M. Alikhani[2], and G. Ghorbani[2], [1]*University of Manitoba*, *Winnipeg, MB, Canada*, [2]*Isfahan University of technology*, *Isfahan, Iran*.
9:45 AM	46	Evaluation of dried and wet distillers grains included at two concentrations in the diets of lactating dairy cows. J. M. Ladd*, D. J. Schingoethe, K. F. Kalscheur, and A. R Hippen, *South Dakota State University*, *Brookings*.
10:00 AM	47	Increasing time on a high energy diet increases expression of leptin in the mammary gland of prepubertal heifers. L. Davis*[1], M. Weber Nielsen[1], D. Keisler[2], L. Chapin[1], J. Liesman[1], and M. VandeHaar[1], [1]*Michigan State University*, *East Lansing*, [2]*University of Missouri*, *Columbia*.
10:15 AM	48	Effects of short-term glucagon administration on gluconeogenic enzymes in the liver of mid-lactation dairy cows. E. L. Williams*[1], S. Rodriguez[1], D. C. Beitz[2], and S. S. Donkin[1], [1]*Purdue University*, *West Lafayette, IN*, [2]*Iowa State University*, *Ames*.
10:30 AM	49	Effect of biotin supplementation on biotin status of lactating dairy cows of different milk yields. G. Ferreira*, W. P. Weiss, and L. B. Willett, *The Ohio State University*, *Wooster*.

10:45 AM	50	Effects of milk feeding period and anthelmintic treatment on fecal egg counts and growth in pastured dairy steers. B. M. Thompson*, S. P. Washburn, B. A. Hopkins, J.-M. Luginbuhl, H. M. Glennon, and C. Brownie, *North Carolina State University*, *Raleigh*.

SYMPOSIUM

Horse Species

Emerging Equestrian Varsity Competition

Chair: Martha Vogelsang, Texas A&M University

Room 212

Time	Abstract #	
9:30 AM	51	Integration of academic equine sciences and intercollegiate equestrian programs. G. Potter*, *Texas A&M University*, *College Station*.
10:15 AM		Cooperative Efforts of Athletic and Academic Departments in Establishing Equestrian as a Varsity Sport. Wally Groff, *Texas A&M University, College Station*.
11:00 AM		Development of Varsity Equestrian Teams. Greg Williams, *Auburn University, AL*.

SYMPOSIUM

Lactation Biology

Lactation Persistency

Chair: Lance Baumgard, The University of Arizona

Sponsor: EAAP and Monsanto Company

Symposium meets AAVSB's RACE requirements for 3 hr CE.

Room 205

Time	Abstract #	
9:30 AM	52	Albumin, a mammary gland secreting cell keeper. A. Shamay* and Y. Feuermann, *Agricultural Research Organization (ARO), the Volcani Center, Institute of Animal Science*, *Bet Dagan, Israel*.
10:15 AM	53	Increased mammary gland oxidative damage and apoptosis during prolonged lactation in the mouse is little affected by overexpression of des(1-3)hIGF-I. D. Hadsell*[1,2], D. Torres[1,2], and J. George[1,2], [1]*USDA/ARS Children's Nutrition Research Center*, *Houston TX*, [2]*Baylor College of Medicine*, *Houston TX*.
10:30 AM	54	Endocrine regulation of mammary function and persistency of lactation. T. B. McFadden*, *University of Vermont*, *Burlington*.
11:15 AM	55	Effect of increased milking frequency (4X followed by 2X vs. 3X) in early lactation and its effects on future milk yield. R. Burgos*, L. Odens, L. Baumgard, and M. VanBaale, *University of Arizona*, *Tucson*.
11:30 AM	56	Peak and persistency: The mathematics of the lactation curve. I. Vetharaniam*[1], S. R. Davis[2], and E. S. Kolver[3], [1]*AgResearch Limited*, *Hamilton, New Zealand*, [2]*ViaLactia Biosciences (NZ) Limited*, *Newmarket, Auckland, NewZealand*, [3]*Dexcel Limited*, *Hamilton, New Zealand*.

Nonruminant Nutrition

Dietary Supplements and Additives

Chairs: L. Lee Southern, Louisiana State University Agricultural Center and Joe D. Crenshaw, APC, Inc.

Room 202

Time	Abstract #	
9:30 AM	57	Growth performance and intestinal morphology responses to diet supplementation with spray-dried plasma protein and organic complex copper in weanling pigs housed under sanitary and sub-sanitary conditions. A. Harper*, J. Zhao, M. Estienne, K. Webb, Jr., and A. McElroy, *Virginia Polytechnic Institute and State University*, *Blacksburg*.

9:45 AM	58	Dietary spray-dried plasma and lactating sow feed intake. J. Crenshaw*[1], J. Mencke[2], R. Boyd[2], J. Campbell[1], B. Allen[1], and L. Russell[1], [1]*APC Incorporated*, *Ankeny, IA*, [2]*The Hanor Company*, *Franklin, KY*.
10:00 AM	59	Effects of Bio-Mos® and carbadox on gastrointestinal pH, organ weight and morphology of nursery pigs. J. Miguel* and J. Pettigrew, *University of Illinois*, *Urbana*.
10:15 AM	60	Effect of mannan-oligosaccharides and(or) organic zinc on the intestinal microbiota and immune response of early-weaned pigs. M. Castillo*[1], C. Rodríguez[1], S. M. Martín-Peláez[1], J. Roquet[2], J. A. Taylor-Pickard[3], J. F. Pérez[1], and S. M. Martín-Orúe[1], [1]*Departament de Ciència Animal i dels Aliments, Universitat Autònoma de Barcelona*, *Bellaterra, Barcelona, Spain*, [2]*Probasa*, *Barcelona, Spain*, [3]*Alltech Biotechnology Centre*, *Summerhill, Sarney, Ireland*.
10:30 AM	61	Effect on nursery pig growth performance from phosphorylated mannan oligosaccharide supplementation to the sow and to pigs during the nursery phase. C. L. Bradley*[1], M. E. Davis[1], D. C. Brown[1], C. V. Maxwell[1], E. A. Halbrook[1], Z. B. Johnson[1], R. Dvorak[2], and B. Lawrence[3], [1]*University of Arkansas*, *Fayetteville*, [2]*Alltech, Inc.*, *Nicholasville, KY*, [3]*Hubbard Feeds, Inc.*, *Mankato, MN*.
10:45 AM	62	Holo-analysis of the effects of genetic, managemental, chronological and dietary variables on the efficacy of a pronutrient mannanoligosaccharide in pigs. G. Rosen*, *Pronutrient Services Ltd.*, *London, England*.
11:00 AM	63	Effect of an E. coli F4 (K88) probiotic, liquid acidifier, dry acidifier, or plant extract on early-weaned pigs challenged with enterotoxigenic E. coli F4 (K88). Y. Han*[1], M. Vignola[2], and J. Brennan[1], [1]*Maple Leaf Foods Agresearch*, *Guelph, Ontario, Canada*, [2]*Shur-Gain Quebec*, *St-Romuald, Quebec, Canada*.
11:15 AM	64	Effect of L-carnitine on growth performance in segregated early weaned pigs. D. C. Brown*[1], M. E. Davis[1], C. V. Maxwell[1], E. A. Halbrook[1], Z. B. Johnson[1], and J. Woodworth[2], [1]*University of Arkansas*, *Fayetteville*, [2]*Lonza*, *Fairlawn, NJ*.
11:30 AM	65	Effect of supplemental chromium level and source on fasting plasma nonesterified fatty acid concentrations in growing pigs. E. B. Kegley*[1] and T. M. Fakler[2], [1]*University of Arkansas*, *Fayetteville*, [2]*Zinpro Corp.*, *Eden Prairie, MN*.
11:45 AM	66	The effects of feeding inorganic zinc or zinc amino acid complex to sows during gestation and lactation, and the subsequent effects on the progeny during lactation and the nursery period. R. Payne[1], T. Bidner[1], L. Southern*[1], and T. Fakler[2], [1]*Louisiana State University Agricultural Center*, *Baton Rouge*, [2]*Zinpro Corp.*, *Eden Prairie, MN*.
12:00 PM	67	Effect of fat level in late finishing barrows fed ractopamine HCl (Paylean®). A. M. Gaines*[1], B. W. Ratliff[1], P. Srichana[1], G. L. Allee[1], and J. L. Usry[2], [1]*University of Missouri*, *Columbia*, [2]*Ajinimoto Heartland LLC*, *Chicago, IL*.
12:15 PM	68	The effects of a carbohydrate- and protein-based feed supplement on sow and litter performance. W. Browning*, C. Fontenot, R. Guillory, M. Leger, and F. LeMieux, *McNeese State University*, *Lake Charles, LA*.

Physiology and Endocrinology I

Chair: Graham C. Lamb, University of Minnesota, Grand Rapids

Ballroom B

Time	Abstract #	
9:30 AM	69	A comparison of progestin-based protocols to synchronize ovulation prior to fixed-time artificial insemination in postpartum beef cows. D. J. Schafer*[1], J. F. Bader[1], J. P. Meyer[1], J. K. Haden[2], M. R. Ellersieck[1], M. F. Smith[1], and D. J. Patterson[1], [1]*University of Missouri*, *Columbia*, [2]*MFA Inc.*, *Columbia, MO*.
9:45 AM	70	Resynchronizing estrus with a progesterone (P4) insert and estradiol cypionate (ECP) in cows of unknown pregnancy status. K. N. Galvao*[1], R. L. A. Cerri[1], H. M. Rutigliano[1], R. G. S. Bruno[1], R. C. Chebel[1,2], and J. E. P. Santos[1], [1]*University of California*, *Tulare*, [2]*University of Idaho*, *Caldwell*.
10:00 AM	71	Synchronization of ovulation for timed AI (TAI) in Bos indicus-influenced cattle using CIDR-based, GnRH-prostaglandin combinations I: ovarian follicular, luteal and hormonal events associated with suboptimal reproductive outcomes. J. Saldarriaga*[1], D. Cooper[1], J. Cartmill[1], R. Stanko[1,2], and G. Williams[1], [1]*Texas A&M University*, *Beeville*, [2]*Texas A&M University*, *Kingsville*.
10:15 AM	72	Synchronization of ovulation for timed AI (TAI) in Bos indicus-influenced cattle using CIDR-based, GnRH-prostaglandin combinations II: Assessment of estrual and ovulatory distributions with Select Synch + CIDR to optimize TAI with Co-Synch + CIDR. J. Saldarriaga*, J. Zuluaga, J. Cartmill, D. Cooper, and G. Williams, *Texas A&M*, *Beeville*.

10:30 AM	73	Effect of artificial insemination (AI) protocol on fertilization and embryo quality in high-producing dairy cows. R. L. A. Cerri*[1], H. M. Rutigliano[1], R. G. S. Bruno[1], R. C. Chebel[1,2], and J. E. P. Santos[1], [1]*University of California*, *Tulare*, [2]*University of Idaho*, *Caldwell*.
10:45 AM	74	Effect of pre-synchronization and resynchronization with CIDR on reproductive performance of lactating dairy cows. R. C. Chebel*[1,2], H. M. Rutigliano[2], R. L. A. Cerri[2], R. G. S. Bruno[2], and J. E. P. Santos[2], [1]*University of Idaho*, *Caldwel*, [2]*University of California*, *Tulare*.
11:00 AM		Break
11:15 AM	75	Effect of GnRH or CIDR inserts administered early after first timed insemination on fertility of lactating dairy cows. R. A. Sterry*[1], M. L. Welle[2], and P. M. Fricke[1], [1]*University of Wisconsin*, *Madison*, [2]*Miltrim Farms, Inc.*, *Athens, WI*.
11:30 AM	76	The effect of a progesterone releasing intravaginal device (PRID) on estrus activity and pregnancy rate in non-cycling postpartum dairy cattle. R. B. Walsh*[1], S. J. Leblanc[1], T. F. Duffield[1], D. F. Kelton[1], P Gadbois[2], and K. E. Leslie[1], [1]*University of Guelph*, *Guelph, Ontario, Canada*, [2]*Vetoquinol N.A Inc*, *Lavaltrie, Quebec, Canada*.
11:45 AM	77	Effect of addition of a CIDR insert prior to a timed AI protocol on pregnancy rates and pregnancy losses in dairy cows. R. G. S. Bruno*, H. M. Rutigliano, R. L. A. Cerri, and J. E. P. Santos, *University of California*, *Tulare*.
12:00 PM	78	Prevalence and risk factors for postpartum anestrus in dairy cattle. R. Walsh, J. Walton, K. Leslie, and S. LeBlanc*, *University of Guelph*, *Guelph, Ontario, Canada*.
12:15 PM	79	Endometrial thickness affects ovulation rate and conception rate in lactating Holstein cows. A. H. Souza*, A. Gümen, E. P. B. Silva, A. P. Cunha, J. N. Guenther, D. Z. Caraviello, and M. C. Wiltbank, *University of Wisconsin*, *Madison*.

Ruminant Nutrition

Dairy - Protein and Amino Acids

Chair: Clay Zimmerman, Blue Seal Feeds, Inc.

Room 206

Time	Abstract #	
9:30 AM	80	A review of the 2001 dairy cattle NRC protein and amino acid model - A European perspective. P. Huhtanen*, *MTT Agrifood Research*, *Finland*.
10:00 AM	81	Use of NRC (2001) to examine the relationships between predicted supplies of metabolizable protein (MP), MP-methionine (MP-Met), and MP-lysine (MP-Lys) and actual yields of milk and milk protein. R. Ordway*, N. Whitehouse, and C. Schwab, *University of New Hampshire*, *Durham*.
10:15 AM	82	Effect of lysine (Lys) supply on its utilization by the mammary gland (MG). H. Lapierre*[1], L. Doepel[2], E. Milne[3], and G. E. Lobley[3], [1]*Agriculture and Agri-Food Canada*, *Lennoxville, Quebec, Canada*, [2]*University of Alberta*, *Edmonton, Alberta, Canada*, [3]*Rowett Research Institute*, *Aberdeen, UK*.
10:30 AM	83	Ruminal outflow of soluble amino acid fractions in lactating dairy cows. S. M. Reynal*[1], I. R. Ipharraguerre[2], M. Lineiro[2], A. F. Brito[1], G. A. Broderick[3], and J. H. Clark[2], [1]*University of Wisconsin*, *Madison*, [2]*University of Illinois*, *Urbana*, [3]*US Dairy Forage Research Center*, *Madison, WI*.
10:45 AM	84	Supplementing rumen-protected methionine to reduce dietary crude protein in dairy cows. G. A. Broderick*[1], M. J. Stevenson[2], R. A. Patton[3], N. E. Lobos[4], and J. J. Olmos Colmenero[4], [1]*U.S. Dairy Forage Research Center*, *Madison, WI*, [2]*Degussa Corp.*, *Kennesaw, GA*, [3]*Nittany Dairy Nutrition, Inc.*, *Mifflinburg, PA*, [4]*University of Wisconsin*, *Madison*.
11:00 AM	85	Determination of ruminal escape and metabolizable methionine values of 2-hydroxy-4 (methylthio) butanoic acid (HMB) as a function of dose and mode of supply. J. C. Robert*, C. Richard, and B. Graulet, *Adisseo France SAS*, *Antony, France*.
11:15 AM	86	Effects of soy gum application to soybean meal on protein degradation by ruminal microbes and intestinal protein digestion. M. D. Stern*[1], T. K. Miller-Webster[2], W. H. Hoover[2], M. Ruiz Moreno[1], and C. A. Macgregor[3], [1]*University of Minnesota*, *St. Paul*, [2]*Rumen Fermentation Profiling Laboratory, West Virginia University*, *Morgantown, WV*, [3]*Grain States Soya, Inc.*, *West Point, NE*.
11:30 AM	87	Effect of abomasal pectin infusion on digestion and nitrogen balance in dairy cows. T. F. Gressley* and L. E. Armentano, *University of Wisconsin*, *Madison*.

11:45 AM	88	Comparison among microbial markers for quantifying microbial protein flow from the rumen of lactating dairy cows. S. M. Reynal*[1], G. A. Broderick[2], and C. Bearzi[3], [1]*University of Wisconsin*, *Madison*, [2]*US Dairy Forage Research Center*, *Madison, WI*, [3]*Universidad de Buenos Aires*, *Buenos Aires, Argentina*.
12:00 PM	89	Effects of daily variation in dietary protein concentration on milk production in mid-lactation cows. N. R. St-Pierre* and D. Gerstner, *The Ohio State University*, *Columbus*.
12:15 PM	90	Relationship between milk urea nitrogen (MUN) and days open in early lactation dairy cows. M. Nowrozi*, M. Raisianzadeh, and M. Abazari, *Agriculture and Natural Resources Research Center of Khorasan, IRAN*, *Mashhad, Khorasan, IRAN*.

SYMPOSIUM

Swine Species

Effects of Maternal Nutrition on Offspring Performance

Chair: Hans H. Stein, South Dakota State University

Sponsor: Archer Daniels Midland, EAAP, and Hypor

Room 200

Time	Abstract #	
9:30 AM		The need for proper selection of production animals. Tim Safranski, *University of Missouri*.
10:15 AM		The biological basis for prenatal programming of postnatal performance. George Foxcroft, *University of Alberta, Edmonton, Alberta, Canada*.
10:55 AM	91	Consequences of birth weight for postnatal growth performance. C. Rehfeldt*, *Research Institute for the Biology of Farm Animals*, *Dummerstorf, Germany*.
11:35 AM		Segregated parity management of sows to improve offspring performance. Dean Boyd, *Hanor Inc., Kentucky*.

Breeding and Genetics

Dairy Crossbreeding

Chair: Daryl Nash, Ferrum College

Room 244

Time	Abstract #	
10:00 AM	92	Improving lowly heritable traits in dairy cattle by crossbreeding. T. Steine* and A. G. Larsgard, *Geno Breeding and A.I. Association*, *Hamar, N-2326, Norway*.
10:15 AM	93	Comparison of the production, liveweight, feed intake, health and reproductive performance of Holstein and Jersey Holstein crossbred cows in Australian pasture-based herds. M. Pyman*[1], M. Auldist[2], C. Grainger[2], and K. Macmillan[1], [1]*University of Melbourne*, *Werribee, Victoria, Australia*, [2]*University of Melbourne*, *Ellinbank, Victoria, Australia*.
10:30 AM	94	Birth weights, mortality, and dystocia in Holsteins, Jerseys, and their reciprocal crosses in the Virginia Tech and Kentucky crossbreeding project. B. Cassell*[1], A. McAllister[2], R. Nebel[1], S. Franklin[2], K. Getzewich[1], J. Ware[2], J. Cornwell[1], and R. Pearson[1], [1]*Virginia Polytechnic Institute and State University*, *Blacksburg*, [2]*University of Kentucky*, *Lexington*.
10:45 AM	95	Crossbreds of Normande-Holstein, Montbeliarde-Holstein, and Scandinavian Red-Holstein compared to pure Holsteins for production during the first 150 days of first lactation. B. J. Heins, L. B. Hansen*, and A. J. Seykora, *University of Minnesota*, *St. Paul*.
11:00 AM	96	Crossbreds of Normande-Holstein, Montbeliarde-Holstein, and Scandinavian Red-Holstein compared to pure Holsteins for dystocia and stillbirths. B. J. Heins*, L. B. Hansen, and A. J. Seykora, *University of Minnesota*, *St. Paul*.
11:15 AM	97	Crossbreds of Normande-Holstein, Montbeliarde-Holstein, and Scandinavian Red-Holstein compared to pure Holsteins for days to first breeding, first service conception rate, days open, and survival. B. J. Heins*, L. B. Hansen, and A. J. Seykora, *University of Minnesota*, *St. Paul*.

Ruminant Nutrition

Dairy - Grazing

Chair: Steve Washburn, North Carolina State University

Room 243

Time	Abstract #	
10:00 AM	98	Genotype and feed effects on BW and BCS profiles for grazing dairy cows. J. R. Roche*[1], D. P. Berry[2], and E. S. Kolver[1], [1]*Dexcel*, *Hamilton, New Zealand*, [2]*Teagasc Moorepark*, *Ireland*.
10:15 AM	99	Genotype and feed effects on annual milk production and reproduction of grazing dairy cows. E. S. Kolver*, C. R. Burke, and J. R. Roche, *Dexcel Ltd.*, *Hamilton, New Zealand*.
10:30 AM	100	Genotype and feed effects on milk production profiles for grazing dairy cows. J. R. Roche*[1], D. P. Berry[2], and E. S. Kolver[1], [1]*Dexcel*, *Hamilton, New Zealand*, [2]*Teagasc Moorepark*, *Ireland*.
10:45 AM	101	Extending lactation in pastoral systems using divergent Holstein-Friesian genotypes and levels of nutrition. E. S. Kolver* and J. Roche, *Dexcel Ltd.*, *Hamilton, New Zealand*.
11:00 AM	102	Performance of lactating dairy cows fed varying levels of total mixed rations and pasture. R. Vibart*, V. Fellner, J. Burns, and M. Gumpertz, *North Carolina State University*, *Raleigh*.
11:15 AM	103	Acidosis in pasture-fed dairy cows: Risk factors and outcomes. E. Bramley[1], I. J. Lean*[2], N. D. Costa[3], and W. J. Fulkerson[1], [1]*University of Sydney*, *Camden, NSW, Australia*, [2]*Bovine Research Australaisa*, *Camden, NSW, Australia*, [3]*Murdoch University*, *Murdoch, WA, Australia*.
11:30 AM	104	Changes of b-carotene content in plasma of cows following different diets: Influence of pasture and farm location. S. Carpino*[1], P. Palozza[2], A. Valdannini[1], and G. Licitra[1,3], [1]*CoRFiLaC, Regione Siciliana*, *Ragusa, Italy*, [2]*Institute of General Pathology, Cattolica University*, *Rome, Italy*, [3]*D.A.C.P.A, Catania University*, *Catania, Italy*.
11:45 AM	105	Omega-3 and conjugated linoleic acid contents in blood plasma of cows grazing on native pasture plants. S. La Terra*[1], S. Carpino[1], S. Banni[2], L. Curdeddu[2], M. Caccamo[1], and G. Licitra[1,3], [1]*CoRFiLaC, Regione Siciliana*, *Ragusa, Italy*, [2]*Cagliari University*, *Cagliari, Italy*, [3]*D.A.C.P.A. Catania University*, *Catania, Italy*.
12:00 PM	106	Lipid content and fatty acid composition of grasses sampled on different dates through the first 139 d in 2004. P. Mir*[1], S. Bittman[2], D. Hunt[2], T. Entz[1], and B. Yip[1], [1]*Agriculture and Agri-Food Canada*, *Lethbridge, AB, Canada*, [2]*Agriculture and Agri-Food Canada*, *Agassiz, BC, Canada*.

ADSA-SAD-Original Research

Chair: Ed Jaster, Cal Poly University

Room 261

Time	Abstract #	
11:00 AM	107	On-farm Rota-Coronavirus prevention methods. A. Nelkie*, *North Carolina State University*, *Raleigh*.
11:15 AM	108	Effect of sunflower oil delivery method on conjugated linoleic acid (CLA) content in milk. G. McGregor*, A. Meszaros, Y. Parrott, S. Tam, M. Oba, and L. Doepel, *University of Alberta*, *Edmonton, Alberta, Canada*.
11:30 AM	109	Prostaglandin-induced luteolysis: Effects of dosage and route of administration in lactating Holstein cows. J. Brinkerhoff* and R. Silcox, *Brigham Young University*, *Provo, UT*.
11:45 AM	110	Effect of ground canola seed on milk production and composition, and blood metabolites of lactating Holstein cows. F. M. Lewis*, D. R. Bae, M. S. Laubach, W. L. Keller, D. E. Schimek, and C. S. Park, *North Dakota State University*, *Fargo*.
12:00 PM	111	Case study of prevention and therapy strategies in a high somatic cell count herd. L. Schultz* and L. Timms, *Iowa State University*, *Ames*.

Graduate Student Competition

Southern ADSA Division Paper Competition

Chair: Donna M. Amaral-Phillips, University of Kentucky

Room 207

Time	Abstract #	
11:15 AM	112	Use of formaldehyde-treated protein capsules as a means to protect conjugated linoleic acid from ruminal biohydrogenation. P. J. Myers*, S. E. Ellis, K. J. L. Burg, and T. C. Jenkins, *Clemson University*, *Clemson, SC*.
11:30 AM	113	Effect of combining GnRH and ECP with a CIDR-PGF_{2a} protocol on pregnancy rates in Holstein Heifers submitted to timed AI. J. L. Fain*, W. M. Graves, J. M. Haslett, S. C. Nickerson, and J. K. Bernard, *University of Georgia*, *Athens*.
11:45 AM	114	Evaluation of immunological differences among Jersey, Holstein, and crossbred calves. J. V. Ware*[1], S. T. Franklin[1], A. J. McAllister[1], J. A. Jackson[1], K. I. Meek[1], and B. G. Cassell[2], [1]*University of Kentucky*, *Lexington*, [2]*Virginia Polytechnic Institute and State University*, *Blacksburg*.
12:00 PM	115	Effect of supplemental energy source on the performance of lactating dairy cows fed diets based on sorghum and ryegrass silage. J. Boyd* and J. Bernard, *The University of Georgia*, *Athens*.
12:15 PM	116	Effects of starch sources on nitrogen capture in dairy cows on pasture. A. M. Gehman*, J. A. Bertrand, T. C. Jenkins, and B. W. Pinkerton, *Clemson University*, *Clemson, SC*.

Graduate Student Competition

ADSA/ASAS Northeast Paper Competition

Chair: Thomas G. Hartsock, University of Maryland

Room 211

Time	Abstract #	
11:00 AM	117	The effects of damaging ears of corn in the field and the use of potassium sorbate on the fermentation, aerobic stability, and production of mycotoxins in corn silage. R. S. Teller*[1], R. J. Schmidt[1], B. M. Moulder[1], C. N. Mulrooney[1], V. R. Veenema[1], L. Kung, Jr.[1], and L. S. Whitlow[2], [1]*University of Delaware*, *Newark*, [2]*North Carolina State University*, *Raleigh*.
11:15 AM	118	Effects of energy status, breed and plasma metabolites on new intramammary infections in periparturient Holstein and Jersey dairy cows during the transition period. P. Rezamand*[1], S. M. Andrew[1], K. M. Moyes[2], and R. M. Clark[1], [1]*University of Connecticut*, *Storrs*, [2]*University of Illinois*, *Urbana*.
11:30 AM	119	Effect of ruminally degraded protein source on production performance in Holstein cows. A. B. Peterson*[1], R. L. Baldwin, VI[2], and R. A. Kohn[1], [1]*University of Maryland*, *College Park*, [2]*USDA-ARS*, *Beltsville, MD*.
11:45 AM	120	Effect of forage processing and corn particle size on milk production and composition, and nutrient digestibility for high producing Holstein dairy cows. N. E. Brown*, V. A. Ishler, Y.-H. Chung, T. W. Cassidy, K. S. Hyler, and G. A. Varga, *Pennsylvania State University*, *University Park*.
12:00 PM	121	Lactoferrin addition to an intensified milk replacer feeding regimen. K. Cowles*, R. White, N. Whitehouse, and P. Erickson, *University of New Hampshire*, *Durham*.

ADSA-SAD-Dairy Production

Chair: Ed Jaster, Cal Poly University

Room 261

Time	Abstract #	
2:00 PM	122	Shorter dry periods: A different approach to dry cow management. C. Lilly*, *Virginia Polytechnic Institute and State University*, *Blacksburg*.
2:15 PM	123	Manure as Energy: Converting an abundant waste product to a beneficial energy source. A. Bush*, *University of Kentucky*, *Lexington*.

2:30 PM	124	Accelerated calf growth: You make the call. T. Bridges* and C. Williams, *Louisiana State University*, *Baton Rouge*.
2:45 PM	125	Prevention and control of the Bovine Viral Diarrhea virus. J. Sackmann*, *Washington State University*, *Pullman*.
3:00 PM	126	The effects of heat stress on reproductive efficiency in dairy cattle. L. Buttles*, *University of Wisconsin*, *River Falls*.
3:15 PM	127	Management considerations with shortened dry periods. D. Maulfair*, *Penn State University*, *University Park*.
3:30 PM	128	National Animal Identification: What is its future? M. Aguiar* and E. Jaster, *California Polytechnic State University*, *San Luis Obispo*.

Breeding and Genetics

Sheep, Swine, and Dog Breeding

Chair: David Casey, Pig Improvement Company

Room 212

Time	Abstract #	
2:00 PM	129	Assessing connectedness in across-flock genetic evaluations. R. M. Lewis*[1,3], R. E. Crump[2], L. A. Kuehn[1], G. Simm[3], and R. Thompson[4], [1]*Virginia Polytechnic Institute and State University*, *Blacksburg*, [2]*AGBU, University of New England*, *Armidale, Australia*, [3]*Scottish Agricultural Colle*, *Edinburgh, UK*, [4]*IACR-Rothamstead*, *Harpenden, UK*.
2:15 PM	130	Evaluating connectedness over time in a group breeding scheme using a sheep paradigm. L. A. Kuehn*[1], R. M. Lewis[1], and G. J. Nieuwhof[2], [1]*Virginia Polytechnic Institute and State University*, *Blacksburg*, [2]*Meat and Livestock Commission*, *Milton Keynes, UK*.
2:30 PM	131	Evaluating parameters affecting on economical attributes of kordian sheep in order to estimating of genetic trend in shirvan station. S. A. Shiri*, *Agricultural & Natural Resources Research Center of Khorasan*, *Mashhad, Iran*.
2:45 PM	132	Genetic (co)variance components for ewe productivity traits in Katahdin sheep. H. B. Vanimisetti*, D. R. Notter, and L. A. Kuehn, *Virginia Polytechnic Institute and State University*, *Blacksburg*.
3:00 PM		Break
3:15 PM	133	Genetic factors influencing body weights and condition scores in adult Targhee ewes. R. C. Borg*[1], D. R. Notter[1], R. W. Kott[2], and L. A. Kuehn[1], [1]*Virginia Polytechnic Institute and State University*, *Blacksburg*, [2]*Montana State University*, *Bozeman*.
3:30 PM	134	Genomic organization and six exonic polymorphisms of the pig SLC11A1 gene. W. Zhen-Fang*, L. Wen-Hua, Z. Xi-Chuan, and Y. Guan-FU, *South China Agricultural University*, *Guangzhou, Guangdong, China*.
3:45 PM	135	Detection of imprinted quantitative trait loci for growth, carcass, and meat quality traits in swine. N. Vukasinovic*[1], A. Clutter[1], F. Du[1], M. Lohuis[1], L. Messer[1], J. Bennewitz[2], N. Borchers[2], N. Reinsch[2], G. Otto[2], K. Sanders[2], and E. Kalm[2], [1]*Animal AG, Monsanto*, *St. Louis, MO*, [2]*University of Kiel*, *Kiel, Germany*.
4:00 PM	136	Discrete time survival analysis of longevity in a colony of dog guides. J. Cole*[1], B. Southey[2], D. Franke[3], and E. Leighton[4], [1]*Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*, [2]*University of Illinois*, *Urbana*, [3]*Louisiana State University*, *Baton Rouge*, [4]*Seeing Eye, Inc.*, *Morristown, NJ*.

Breeding and Genetics

Statistical Methods II

Chair: Jack Dekkers, Iowa State University

Room 203

Time	Abstract #	
2:00 PM	137	Bayesian inferences on major genes affecting polygenic binary traits: comparison of models and application to osteochondral diseases in pigs. H. N. Kadarmideen*[1] and L. L. G. Janss[2], [1]*Swiss Federal Institute of Technology*, *Zurich, Switzerland*, [2]*Wageningen University and Research Centre*, *Lelystad, The Netherlands*.
2:15 PM	138	Statistical analysis of relative quantification of gene expression using real time RT-PCR data. J. Steibel*, R. Poletto, and G. Rosa, *Michigan State University*, *East Lansing*.
2:30 PM	139	Exploiting non-additive effects of imprinted QTL in marker-assisted selection by genetic algorithm. Y. Li*[1], H. N. Kadarmideen[1], J. H. J. van der Werf[2], and B. P. Kinghorn[2], [1]*Swiss Federal Institute of Technology, ETH-Zentrum*, *Zurich, Switzerland*, [2]*University of New England*, *Armidale, Australia*.
2:45 PM	140	Experimental design for estimation of breed, heterosis, and QTL effects in cattle. R. M. Thallman*, L. V. Cundiff, and G. L. Bennett, *USDA-ARS-USMARC*, *Clay Center, NE*.
3:00 PM	141	Hierarchical Bayesian model for analysis of gene expression data. R. Rekaya* and W. Zhang, *University of Georgia*, *Athens*.
3:15 PM		Break
3:30 PM	142	A simulation study for analysis of uncertain binary responses using fuzzy logic classification. R. L. Sapp*, M. L. Spangler, R. Rekaya, and J. K. Bertrand, *The University of Georgia*, *Athens*.
3:45 PM	143	Dealing with extreme case problem in the analysis of binary responses. W. Zhang*, R. Rekaya, and K. Bertrand, *The University of Georgia*, *Athens*.
4:00 PM	144	Analysis of binary responses in presence of extreme case problem classes. R. Rekaya, R. L. Sapp*, and J. K. Bertrand, *The University of Georgia*, *Athens*.
4:15 PM	145	Investigation into a regression model for crossbred performance. T. Lewis*[1,2], J. Woolliams[2], and J. Wiseman[1], [1]*University of Nottingham*, *Loughborough, Leicestershire, UK*, [2]*Roslin Institute*, *Roslin, Midlothian, UK*.
4:30 PM	146	Blup with SAS. Z. Zhang*, *Cornell University*, *Ithaca, NY*.

Dairy Foods

Dairy Products and Dairy Processing

Chair: Charles Boeneke, Louisana State University

Room 241

Time	Abstract #	
2:00 PM	147	Development of cold resistant strains of bifidobacteria by natural selection. S. Ibrahim*, *North Carolina Agricultural and Technical State University*, *Greensboro*.
2:15 PM	148	A unique Japanese functional yogurt containing specific egg yolk immunoglobulin to suppress Helicobacter pylori in humans. A. M. Abdou*[1], K. Horie[1], N. Horie[1], Y. Kodama[2], Y. Hoshikawa[3], T. Yamane[4], A. Hansen[2], and M. Kim[1], [1]*Pharma Foods International Company, Ltd.*, *Kyoto , Japan*, [2]*Ghen Corporation*, *Gifu-City, Japan*, [3]*Glico Dairy Products Company, Ltd.*, *Tokyo, Japan*, [4]*Matsushita Memorial Hospital*, *Osaka, Japan*.
2:30 PM	149	Evaluation of process cheese food funtionality using various melt-tests. A. C. Biswas*[1], R. Kapoor[2], L. E. Metzger[2], and K. Muthukumarrapan[1], [1]*South Dakota State University*, *Brookings*, [2]*University of Minnesota*, *St. Paul*.
2:45 PM	150	Influence of brine concentration, brine temperature, and presalting on salt uptake by Ragusano cheese. C. Melilli[1], D. M. Barbano[2], M. Caccamo[1], G. Licitra*[1,3], and S. Carpino[1], [1]*CORFiLaC*, *Ragusa, Italy*, [2]*Cornell University*, *Ithaca, NY*, [3]*D.A.C.P.A., Catania University*, *Catania, Italy*.
3:00 PM	151	Flow cytometry enumeration of individual bacteria in bulk tank raw milk produced in Minas Gerais, Brazil. C. Fonseca, L. Fonseca*, W. Santos, and R. Rodrigues, *Laboratory of Milk Quality Analysis-DTIPOA, School of Veterinary Medicine, UFMG/FUNDEP*, *Belo Horizonte-MG-Brazil*.
3:15 PM		Break

3:30 PM	152	Pilot-scale production and characterization of liquid virgin whey protein concentrate. P. A. Marcelo* and S. S. H. Rizvi, *Cornell University*, *Ithaca, NY*.
3:45 PM	153	Tangential microfiltration of skim milk for removal of Bacillus anthracis spores. N. Datta[1], P. Tomasula*[2], J. Call[2], and J. Luchansky[2], [1]*University of Queensland*, *Australia*, [2]*United States Department of Agriculture*, *Wyndmoor, PA*.
4:00 PM	154	Somatic cell counts and composition of bulk tank raw milk produced in Minas Gerais, Brazil. C. Fonseca, L. Fonseca*, W. Santos, and R. Rodrigues, *Laboratory of Milk Quality Analysis-DTIPOA, School of Veterinary Medicine, UFMG/FUNDEP*, *Belo Horizonte-MG-Brazil*.
4:15 PM	155	Effect of formulation and manufacturing parameters on process cheese food functionality-II. Di-Sodium Phosphate. S. K. Garimella Purna*, A. Pollard, and L. E. Metzger, *MN-SD Dairy Food Research Center, University of Minnesota*, *St. Paul*.

SYMPOSIUM

Dairy Foods

Forum on Cheese Ripening

Chair: W. James Harper, The Ohio State University

Room 242

Time	Abstract #	
	156	Combined abstract for forum on cheese ripening symposium presentations. W. J. Harper*[1], M. Johnson[2], J. Broadbent[3], J. Lucey[2], and M. Drake[4], [1]*The Ohio State University*, *Columbus*, [2]*University of Wisconsin*, *Madison,*, [3]*Utah State University*, *Logan,*, [4]*North Carolina State University*, *Raleigh*.
3:30 PM		Cheese Ripening - An Historical Perspective. W. J. Harper, *The Ohio State University, Columbus.*
4:15 PM		Sensory. M. A. Drake, *North Carolina State University, Raleigh*.
4:30 PM		Microbiology. J. R. Broadbent, *Utah State University, Logan.*
4:45 PM		Chemistry/Biochemistry. J. Lucey, *University of Wisconsin, Madison.*
5:00 PM		Panel Discussion with Audience Participation.

Graduate Student Competition

National ADSA Dairy Foods

Chair: David W. Everett, University of Otago, New Zealand

Room 243

Time	Abstract #	
2:00 PM	157	Identification of genes associated with Mycobacterium avium subsp. paratuberculosis entry into cultured bovine epithelial cells. D. Patel*, L. Meunier-Goddik, and L. E. Bermudez, *Oregon State University*, *Corvallis*.
2:15 PM	158	Flavor profiles of full fat, reduced fat and cheese fat made from aged Cheddar with the fat removed using a novel process. M. Carunchia Whetstine*[1], M. Drake[1], B. Nelson[2], and D. Barbano[2], [1]*North Carolina State University*, *Raleigh*, [2]*Cornell University*, *Ithaca, NY*.
2:30 PM	159	Development and application of an image analysis method to quantify calcium lactate crystals on cheddar cheese. P. Rajbhandari* and P. Kindstedt, *University of Vermont*, *Burlington*.
2:45 PM	160	Effect of formulation and manufacturing parameters on process cheese food functionality- I. tri-sodium citrate. S. K. Garimella Purna*, A. Pollard, and L. E. Metzger, *University of Minnesota*, *St. Paul*.
3:00 PM	161	Effect of calcium and moisture on rheological and melting properties of Mozzarella. C. Udayarajan*[1], D. S. Horne[2], and J. Lucey[1], [1]*University of Wisconsin*, *Madison*, [2]*Charis Food Research*, *Ayr, Scotland*.
3:15 PM	162	Variations in the trans and CLA content of Ontario milk fat. H. Thomsen*[1], M. Hernandez[2], A. Hill[1], and J. Kramer[2], [1]*University of Guelph*, *Guelph, Ontario, Canada*, [2]*Agriculture and Agri-Food Canada, Food Research Program*, *Guelph, Ontario, Canada*.

Growth and Development

Growth Promoters and Growth Measures

Chair: Hugh Chester-Jones, University of Minnesota

Room 200

Time	Abstract #	
2:00 PM	163	Dose titration of Optaflexx®(ractopamine HCl) evaluating the effects on growth performance in feedlot steers. A. Schroeder*, D. Hancock, D. Mowrey, S. Laudert, G. Vogel, and D. Polser, *Elanco Animal Health*, *Greenfield, IN*.
2:15 PM	164	Dose titration of Optaflexx® (ractopamine HCl) evaluating the effects on standard carcass characteristics in feedlot steers. A. Schroeder*, D. Hancock, D. Mowrey, S. Laudert, G. Vogel, and D. Polser, *Elanco Animal Health*, *Greenfield, IN*.
2:30 PM	165	Dose titration of Optaflexx® (ractopamine HCl) evaluating the effects on composition of carcass soft tissues in feedlot steers. A. Schroeder, D. Hancock, D. Mowrey*, S. Laudert, G. Vogel, and D. Polser, *Elanco Animal Health*, *Greenfield, IN*.
2:45 PM	166	Effects of ractopamine fed to finishing steers, I - summary of six studies - growth performance. S. Laudert*, G. Vogel, A. Schroeder, W. Platter, and M. Van Koevering, *Elanco Animal Health*, *Greenfield, IN*.
3:00 PM	167	Effects of ractopamine fed to finishing steers, II - summary of six studies - carcass traits. S. Laudert, G. Vogel, A. Schroeder, W. Platter*, and M. Van Koevering, *Elanco Animal Health*, *Greenfield, IN*.
3:15 PM	168	Effect of ractopamine on growth performance of calf-fed Holstein steers. G. Vogel*[1], A. Schroeder[1], W. Platter[1], M. Van Koevering[1], A. Aguilar[1], S. Laudert[1], J. Beckett[2], J. Droulliard[3], G. Duff[4], and J. Elam[5], [1]*Elanco Animal Health*, *Greenfield, IN*, [2]*California Polytechnic State University*, *San Luis Obispo*, [3]*Kansas State University*, *Manhattan*, [4]*University of Arizona*, *Tuscon*, [5]*Agricultural Technology*, *Santa Ynez, CA*.
3:30 PM	169	Effect of ractopamine on carcass characteristics of calf-fed Holstein steers. G. Vogel*[1], A. Schroeder[1], W. Platter[1], M. Van Koevering[1], A. Aguilar[1], S. Laudert[1], J. Beckett[2], R. Delmore[2], J. Droulliard[3], G. Duff[4], and J. Elam[5], [1]*Elanco Animal Health*, *Greenfield, IN*, [2]*California Polytechnic State University*, *San Luis Obispo*, [3]*Kansas State University*, *Manhattan*, [4]*University of Arizona*, *Tuscon*, [5]*Agricultural Technology*, *Santa Ynez, CA*.
3:45 PM	170	Dose titration of Optaflexx® (ractopamine HCl) evaluating the effects on growth performance in feedlot heifers. A. Schroeder*, D. Hancock, D. Mowrey, S. Laudert, G. Vogel, and D. Polser, *Elanco Animal Health*, *Greenfield, IN*.
4:00 PM	171	Dose titration of Optaflexx® (ractopamine HCl) evaluating the effects on standard carcass characteristics in feedlot heifers. A. Schroeder*, D. Hancock, D. Mowrey, S. Laudert, G. Vogel, and D. Polser, *Elanco Animal Health*, *Greenfield, IN*.
4:15 PM	172	Dose titration of Optaflexx® (ractopamine HCl) evaluating the effects on composition of carcass soft tissues in feedlot heifers. A. Schroeder, D. Hancock, D. Mowrey, S. Laudert, G. Vogel, and D. Polser*, *Elanco Animal Health*, *Greenfield, IN*.
4:30 PM	173	Effects of ractopamine and steroidal implantation on nitrogen retention and blood metabolites in holstein steers. D. K. Walker*, E. C. Titgemeyer, B. J. Johnson, and J. J. Higgins, *Kansas State University*, *Manhattan*.
4:45 PM	174	Using ultrasound measurements to determine body composition of yearling bulls. M. Baker*[1], L. Tedeschi[1], D. Fox[1], W. Henning[2], and D. Ketchen[1], [1]*Cornell University*, *Ithaca, NY*, [2]*Penn State University*, *Statel College*.

SYMPOSIUM

Meat Science and Muscle Biology

Novel Technologies in Muscle Biology/Fresh Meat Research

Chair: Elisabeth Huff-Lonergan, Iowa State University

Sponsors: Elanco Animal Health and USDA-NRI

Ballroom A

Time	Abstract #	
2:00 PM		Introduction
2:05 PM	175	Adipocytes, myofibers, and cytokine biology: New horizons in the regulation of growth and body composition. M. Spurlock*, S. Jacobi, J. Davis, N. Gabler, and K. Ajuwon, *Purdue University*, *West Lafayette, IN*.
3:00 PM	176	Gene expression profiling: Insights into skeletal muscle growth and development. D. Moody, C. Stahl, and J. Reecy*, *Iowa State University*, *Ames*.
3:55 PM		Break
4:10 PM	177	Use of transgenic mouse models to understand proteolytic degradation systems in muscle. M. Spencer*, *University of California*, *Los Angeles*.
5:05 PM	178	Application of proteomics in meat research. R. Lametsch*, *The Royal Veterinary and Agricultural University, Department of Food Science*, *Frederiksberg, Denmark*.

Nonruminant Nutrition

Weanling Pig Nutrition and Methodology

Chairs: John F. Patience, Prairie Swine Centre Inc., and Douglas R. Cook, Akey

Room 202

Time	Abstract #	
2:00 PM	179	Fermented soybean meal as a protein source in nursery diets replacing dried skim milk. S. W. Kim*, R. D. Mateo, and F. Ji, *Texas Tech University*, *Lubbock, TX*.
2:15 PM	180	Comparative efficacy of plant and animal protein sources on the growth performance, nutrient digestibility and intestinal morphology of the early-weaned pigs. J. H. Yun, I. K. Kwon, J. D. Lohakare, W. T. Cho, and B. J. Chae*, *Kangwon National University*, *Chunchon, Kangwondo, Korea*.
2:30 PM	181	Growth performance, gut health and digestive function in newly weaned pigs fed fermentable proteins and carbohydrates. E. A. Jeaurond* and C. F. M. deLange, *University of Guelph*, *Guelph, Ontario, Canada*.
2:45 PM	182	The interaction of net energy concentration and feeding level in weaned pigs. I. Growth, nutrient digestibility and energy utilization. T. F. Oresanya[1,2], A. D. Beaulieu[1], and J. F. Patience*[1], [1]*Prairie Swine Centre Inc.*, *Saskatoon, Saskatchewan, Canada*, [2]*University of Saskatchewan*, *Saskatoon, Saskatchewan, Canada*.
3:00 PM	183	The interaction of net energy concentration and feeding level in weaned pigs. II. Body composition, nutrient deposition rates and plasma IGF-I concentration. T. F. Oresanya[1,2], A. D. Beaulieu[1], and J. F. Patience*[1], [1]*Prairie Swine Centre Inc.*, *Saskatoon, Saskatchewan, Canada*, [2]*University of Saskatchewan*, *Saskatoon, Saskatchewan, Canada*.
3:15 PM	184	Genetic background impacts growth performance and endocrine parameters during dietary phosphorus deficiency in young gilts. S. Cutler*, L. Grapes, M. Rothschild, and C. Stahl, *Iowa State University*, *Ames*.
3:30 PM	185	Dietary and ontogenetic regulation of digestive enzyme mRNAs in the small intestine of weanling pigs. J. Zhao*, X. Xiao, E. A. Wong, K. E. Webb, Jr., A. F. Harper, E. Gilbert, and D. M. Denbow, *Virginia Polytechnic Institute and State University*, *Blacksburg*.
3:45 PM	186	Effect of oral N-carbamylglutamate (NCG) supplementation on growth and tissue protein synthesis in piglets. J. Frank*[1], J. Escobar[1], A. Suryawan[1], C. Liu[1], H. Nguyen[1], T. Davis[1], and G. Wu[2], [1]*USDA/ARS CNRC, Baylor College of Medicine*, *Houston, TX*, [2]*Texas A&M University*, *College Station*.
4:00 PM	187	Evaluation of culture independent quantitative real-time PCR of S. bovis in weaning pig. H. B. Lee*, C. S. Kong, M. S. Yun, L. G. Piao, and Y. Y. Kim, *Seoul National University*, *Seoul, South Korea*.

4:15 PM	188	Validation of an in vitro analysis to determine energy digestibility of barley for grower pigs. R. T. Zijlstra*[1], W. C. Sauer[1], J. H. Helm[2], D. N. Overend[3], and R. W. Newkirk[4], [1]*University of Alberta*, *Edmonton, AB, Canada*, [2]*Field Crop Development Centre*, *Lacombe, AB, Canada*, [3]*Ridley Inc.*, *Mankato, MN, Canada*, [4]*Canadian International Grains Institute*, *Winnipeg, MB, Canada*.
4:30 PM	189	Dietary strategy to suppress ochratoxicosis in piglets. G. Schatzmayr*[1], S. Nitsch[1], D. Schatzmayr[1], M. Mezes[2], and E. Binder[1], [1]*Biomin GmbH*, *Herzogenburg, Austria*, [2]*Szent István University, Faculty of Agricultural and Environmental Sciences*, *Gödöllö, Hungary*, [3]*Erber AG*, *Herzogenburg, Austria*.
4:45 PM	190	Effect of feeding reduced crude protein and phosphorus diets on pig compartmental and whole body mineral masses and accretion rates. R. Hinson*[1], B. Hill[1], M. Walsh[1], D. Sholly[1], S. Trapp[1], J. Radcliffe[1], A. Sutton[1], A. Schinckel[1], B. Richert[1], G. Hill[2], and J. Link[2], [1]*Purdue University*, *West Lafayette, IN*, [2]*Michigan State University*, *East Lansing*.
5:00 PM	191	Pigs housed under deep litter and conventional housing systems have different growth paths to a similar carcass composition. D. Suster[1], D. J. Henman[2], D. J. Cadogan[3], and F. R. Dunshea*[1,4], [1]*Primary Industries Research Victoria*, *Werribee, Victoria, Australia*, [2]*QAF Meat Industries*, *Corowa, NSW, Australia*, [3]*Feedworks*, *Hamilton, Qld, Australia*, [4]*University of Melbourne*, *Parkville, Victoria, Australia*.

Physiology and Endocrinology II

Chair: Brian Crooker, University of Minnesota, St. Paul

Room 205

Time	Abstract #	
2:00 PM	192	Differential expression of superoxide dismutases (SODs) in bovine corpus luteum during estrous cycle and pregnancy. R. K. Putluru*, C. N . Lee, and Y. S. Kim, *University of Hawaii at Manoa*, *Honolulu*.
2:15 PM	193	Effects of changes in systemic progesterone in the first few days after ovulation on uterine retinol binding protein and folate binding protein gene expression in cattle. R. McNeill[1,2], R. Fitzpatrick[1], J. Sreenan[1], and D. Morris*[1], [1]*Teagasc, Research Centre*, *Athenry, Co. Galway, Ireland*, [2]*National Diagnostics Centre, National University of Ireland Galway*, *Galway, Ireland*.
	194	Withdrawn by Author.
2:30 PM	195	Hepatic gene expression profiling in cows with early postpartum ketosis using a bovine 13,000 oligonucleotide microarray. J. J. Loor*, R. E. Everts, H. M. Dann, D. E. Morin, S. L. Rodriguez-Zas, H. A. Lewin, and J. K. Drackley, *University of Illinois*, *Urbana*.
2:45 PM	196	Mammary gene expression profiling in cows fed a milk fat-depressing diet using a bovine 13,000 oligonucleotide microarray. J. J. Loor*[1], L. Piperova[2], R. E. Everts[1], S. L. Rodriguez-Zas[1], J. K. Drackley[1], R. A. Erdman[2], and H. A. Lewin[1], [1]*University of Illinois*, *Urbana*, [2]*University of Maryland*, *College Park*.
3:00 PM	197	Transcriptional regulation of mammary gland sensitivity to thyroid hormones during the transition from pregnancy to lactation. A. V. Capuco*, E. E. Connor, and D. L. Wood, *USDA-ARS, BARC, Bovine Functional Genomics Laboratory*, *Beltsville, MD*.
3:15 PM		Break
3:30 PM	198	Influence of parity, seasonal acclimatization, and recombinant bovine somatotropin (rbST), on diurnal patterns of physiological responses to thermal stress in cattle. B. C. Pollard*, M. D. Estheimer, M. E. Dwyer, P. C. Gentry, E. L. Annen, D. A. Henderson, C. M. Stiening, and R. J. Collier, *University of Arizona*, *Tucson*.
3:45 PM	199	The influence of parity, acclimatization to season, and recombinant bovine somatotropin (rbST) on diurnal patterns of prolactin and growth hormone in Holsteins exposed to heat stress. B. C. Pollard*[1], M. D. Estheimer[1], M. E. Dwyer[1], P. C. Gentry[1], W. J. Weber[2], E. Lemke[2], L. H. Baumgard[1], D. A. Henderson[1], B. A. Crooker[2], and R. J. Collier[1], [1]*University of Arizona*, *Tucson*, [2]*University of Minnesota*, *Saint Paul*.
4:00 PM	200	Leaking cows: Physiological and anatomical reasons. M. Rovai*, M. Kollmann, and R. M. Bruckmaier, *Techn. Univ. Munich*, *Germany*.
4:15 PM	201	Effect of extended lactation on fertility of divergent Holstein-Friesian genotypes within a seasonal pasture-based dairy system. C. Burke*, J. Roche, and E. Kolver, *Dexcel Limited*, *Hamilton, New Zealand*.
4:30 PM	202	Localization of Interleukin-18 and its receptor in somatotrophs of bovine anterior pituitary gland. Y. Nagai*, T. Nochi, K. Watanabe, K. Watanabe, and T. Yamaguchi, *Tohoku University*, *Sendai, Japan*.

4:45 PM	381	Assessing the relationship between ruminal perchlorate infusion in dairy cows and its concentration in milk. A. V. Capuco*, R. L. Baldwin, C. P. Rice, W. Hare, M. J. Paape, D. D. Bannerman, A. Kauf, G. W. McCarty, A. M. Sadeghi, J. L. Starr, L. L. McConnell, C. J. Hapeman, and C. P. Van Tassell, *USDA-ARS*, *Beltsville, MD*.

SYMPOSIUM

Production, Management and the Environment

Impact of Culling Rate on Dairy Profitability

Chair: Ellen Jordan, Texas A&M University

Sponsors: Arm & Hammer Animal Nutrition and Elanco Animal Health

Ballroom B

Time	Abstract #	
2:00 PM		Introduction. E. Jordan, *Texas A&M University*.
2:10 PM	203	Historical examination of culling of dairy cows from herds in the United States. H. D. Norman* and E. Hare, *Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*.
2:55 PM	204	The impact of timing of the culling event on profitability in dairy herds. R. Cady*, *Monsanto*, *St. Louis, MO*.
3:25 PM	205	Culling: nomenclature, definitions and some observations. J. Fetrow*[1], K. Nordlund[2], and D. Norman[3], [1]*Univeristy of Minnesota*, *St. Paul*, [2]*University of Wisconsin*, *Madison*, [3]*USDA AIPL*, *Beltsville, MD*.
3:55 PM	206	The effect of animal removal on herd internal growth rate. A. Skidmore*, *Blue Seal Feeds, Inc.*, *Londonderry, NH*.
4:25 PM	207	A bankers view on culling. G. Sipiorski*, *Citizens State Bank of Loyal*, *Loyal, WI*.
4:55 PM	208	Genetics of longevity and productive life. K. Weigel*, *University of Wisconsin*, *Madison*.
5:25 PM	209	Culling from a dairyman's perspective: a function of goals and management. J. Nocek*, *Spruce Haven Farm and Research Ctr*, *Auburn, NY*.
5:45 PM		Question and Answer Period

SYMPOSIUM

Ruminant Nutrition

Exploring the Boundaries of Efficiency in Lactation: Metabolic Relationships in Supply of Nutrients in Lactating Cows

Chair: Tilak Dhiman, Utah State University

Sponsor: West Central

Room 206

Time	Abstract #	
2:00 PM	210	Metabolic relationships in supply of nutrients in lactating cows. H. Tyrrell*[1] and K. Cummins[2], [1]*USDA/CSREES*, *Washington, DC*, [2]*Auburn University*, *Auburn, AL*.
2:30 PM	211	Integration of ruminal metabolism in dairy cattle. J. L. Firkins*[1], A. N. Hristov[2], M. B. Hall[3], and G. A. Varga[4], [1]*Ohio State University*, *Columbus*, [2]*University of Idaho*, *Moscow*, [3]*USDA*, *Madison, WI*, [4]*Pennsylvania State University*, *University Park*.
3:00 PM	212	Regulation of key metabolic processes in lactation. S. Donkin*[1], J. Knapp[2], M. VandeHaar[3], and B. Bequette[4], [1]*Purdue University*, *West Lafayette, IN*, [2]*University of Vermont*, *Burlington*, [3]*Michigan State University*, *East Lansing*, [4]*University of Maryland*, *College Park*.
3:30 PM		Break

3:45 PM	213	Nutrient supply for milk production by splanchnic tissues in dairy cows. C. Reynolds*[1], B. Bequette[2], and J. Knapp[3], [1]*The Ohio State University*, *Wooster*, [2]*University of Maryland*, *College Park*, [3]*J.D. Heiskell & Co.*, *Tulare, CA*.
4:15 PM	214	Metabolic models of ruminant metabolism: Recent improvements and current status. M. D. Hanigan*, H. G. Bateman, J. G. Fadel, and J. P. McNamara, *Land O' Lakes, Inc.*, *St. Paul, MN*.

Ruminant Nutrition

Beef – Feedstuffs and Predicting Feed Intake

Chair: Cody Wright, South Dakota State University

Room 207

Time	Abstract #	
2:00 PM	215	Feedlot performance of a new distillers byproduct (Dakota Bran) for finishing cattle. V. Bremer*[1], G. Erickson[1], T. Klopfenstein[1], M. Gibson[2], K. Vander Pol[1], and M. Greenquist[1], [1]*University of Nebraska*, *Lincoln*, [2]*Dakota Gold Research Association*, *Sioux Falls, SD*.
2:15 PM	216	Optimal level of corn distillers dried grains in no roughage diet for pre-conditioned calves. J. Williams*, F. Farias, and M. Kerley, *University of Missouri*, *Columbia*.
2:30 PM	217	Grazed forage supplementation with dried distillers grains, corn oil, or corn gluten meal. J. MacDonald*, T. Klopfenstein, and G. Erickson, *University of Nebraska*, *Lincoln*.
2:45 PM	218	Effect of dried distillers grains plus solubles or sunflower meal on performance and body condition score on beef cows consuming poor-quality forage. H. Doering-Resch*, C. Wright, K. Tjardes, and K. Bruns, *South Dakota State University*, *Brookings*.
3:00 PM	219	Predicting forage intake of steers supplemented dried distillers grains while grazing native summer sandhill's range. S. Morris*, T. Klopfenstein, and D. Adams, *University of Nebraska*, *Lincoln*.
3:15 PM	220	A new equation to predict feed intake by Bos indicus cattle. R. Almeida*[1,2], C. Boin[2], P. R. Leme[3], R. F. Nardon[4], G. F. Alleoni[4], G. M. Cruz[5], M. M. Alencar[5], and D. P. D. Lanna[2], [1]*UFPR & PUCPR*, *Brazil*, [2]*ESALQ/USP*, *Brazil*, [3]*FZEA/USP*, *Brazil*, [4]*IZ Nova Odessa*, *Brazil*, [5]*Embrapa São Carlos*, *Brazil*.
3:30 PM	221	Use of chromic oxide and alkane controlled release capsules to estimate intake and digestibility by beef steers. I. Lopez-Guerrero*, J. Fontenot, and G. Scaglia, *Virginia Polytechnic Institute and State University*, *Blacksburg*.
3:45 PM	222	The effect of silage microbial inoculant with and without additional preservatives on the aerobic stability of maize silage. S. Hall[1], P. Moscardo Morales[1], J. K. Margerison*[1], D. Wilde[2], P. Light[2], M. Smith[2], and N. Adams[2], [1]*University of Plymouth*, *Plymouth, Devon, UK*, [2]*Alltech (UK) Ltd*, *Stamford, Lincs, UK*.

SYMPOSIUM

Sheep Species

Management of Gastrointestinal Nematodes in Sheep

Chair: Joan Burke, USDA, Agricultural Research Service

Sponsor: National Sheep Industry Improvement Center

Room 211

Time	Abstract #	
2:00 PM		Introduction. J.M. Burke, *USDA, Agricultural Research Service.*
2:05 PM	223	Epidemiology of sheep gastrointestinal nematodes in the U.S. R. Kaplan*, *University of Georgia*, *Athens*.
2:35 PM	224	Immunological aspects of nematode parasite control. J. Miller*[1] and D. Horohov[2], [1]*Louisiana State University*, *Baton Rouge*, [2]*University of Kentucky*, *Lexington*.
3:05 PM	225	Use of QTL to determine parasite resistance in sheep. N. Cockett*[1], S. Bishop[2], G. Davies[2], T. Hadfield[1], S. Eng[1], and J. Miller[3], [1]*Utah State University*, *Logan, UT*, [2]*Roslin Institute*, *Midlothian, UK*, [3]*Louisiana State University*, *Baton Rouge*.

3:35 PM	226	The effects of forages/plants on Haemonchus contortus infection. T. Terrill*, *Fort Valley State University*, *Fort Valley, GA*.
4:05 PM	227	Biological control of nematode parasites in sheep. M. Larsen*, *Danish Center for Experimental Parasitology, The Royal Veterinary and Agricultural University*, *Frederiksberg C, Denmark*.
4:35 PM		Discussion

ADSA-SAD-Dairy Foods

Chair: Ed Jaster, Cal Poly University

Room 261

Time	Abstract #	
4:00 PM	228	Tres Al Dia. J. Bechtel*, *Penn State University*, *University Park*.
4:15 PM	229	Consuming three to four servings of dairy products a day may help end the plague of obesity. D. Cotterill*, *University of Kentucky*, *Lexington*.
4:30 PM	230	The power of fortification. B. Lyons* and C. Boeneke, *Louisiana State University*, *Baton Rouge*.
4:45 PM	231	Food pyramid's dairy group minimum level rises to three servings: Two doesn't cut it. B. House*, *Virginia Polytechnic Institute and State University*, *Blacksburg*.

Tuesday, July 26

POSTER PRESENTATIONS

Animal Behavior and Well-being

Behavior, Health and Nutrition

Exhibit Hall A

Tuesday Posters

Abstract #	
T1	Ingestive behavior of Holstein steers fed with differents particle sizes of Tifton 85 hay. E. S. Pereira*[1], A. M. V. Arruda[1], and I. Y. Mizubuti[2], [1]*Universidade Estadual do Oeste do Parana*, *Marechal Candido Rondon, Parana, Brasil*, [2]*Universidade Estadual de Londrina*, *Universidade Estadual de Londrina,Parana, Brasil*.
T2	Relationship between feeding behavior, morbidity and vaccination in feedlot cattle. K. S. Schwartzkopf-Genswein*[1], M. A. Shah[1], T. A. McAllister[1], B. M. A. Genswein[1], M. Streeter[2], M. Branine[3], and S. Swingle[3], [1]*Agriculture and Agri-Food Canada*, *Lethbridge, AB, Canada*, [2]*Alpharma Inc.*, *Delaware*, [3]*Cactus Research Ltd.*, *Amarillo, TX*.
T3	Do changes in conductivity measures reflect variation in somatic cell count in bovine milk? A. M. Hurt*, F. C. Gwazdauskas, R. E. Pearson, A Becvar, C. O. Wilkes, K. J. Pence, S. C. Wilson, and L Harris, *Virginia Polytechnic Institute and State University*, *Blacksburg*.
T4	Stimulation of consumption in lambs trough variations in food flavor. J. Merino[1], R. Distel*[1,2], R. Rodriguez-Iglesias[1,2], and J. Arroquy[2,3], [1]*Universidad Nacional del Sur*, *Bahia Blanca, Buenos Aires, Argentina*, [2]*CONICET*, *Bahia Blanca, Buenos Aires, Argentina*, [3]*INTA*, *Santiago del Estero, Argentina*.

Animal Behavior and Well-being

Exhibit Hall A

T5	Comparison of ethograms between penned and ranged young beef cattle. K. Uetake*[1], T. Ishiwata[1], R. J. Kilgour[2], Y. Eguchi[1], and T. Tanaka[1], [1]*Azabu University*, *Sagamihara, Kanagawa, Japan*, [2]*Agricultural Research Centre, NSW Agriculture*, *Trangie, NSW, Australia*.
T6	Choice of attractive conditions by beef cattle in a Y-maze following release from restraint: effects of sheep. T. Ishiwata*[1], K. Uetake[1], R. J. Kilgour[2], Y. Eguchi[1], and T. Tanaka[1], [1]*Azabu University*, *Sagamihara, Kanagawa, Japan*, [2]*Agricultural Research Centre, NSW Agriculture*, *Trangie, NSW, Australia*.

T7 Effect of tagging site in chicks on broiler performance, pecking behavior, and tag retention. J. E. Wohlt*[1], D. B. Imwalle[1], L. S. Katz[1], and E. W. Zirkle[2], [1]*Rutgers University*, *New Brunswick, NJ*, [2]*Zirkle Animal Health LLC*, *Fairton, NJ*.

T8 Determination of piglets' preferences for drinker types at two weaning ages. S. Torrey* and T. Widowski, *University of Guelph*, *Guelph, ON, Canada*.

T9 Effects of intermittent lighting on resting behavior by newly weaned piglets. S. T. Millman*, K. C. Sheppard, M. Madden, and A. E. Valliant, *University of Guelph*, *Guelph, ON, Canada*.

Animal Health II

Exhibit Hall A

Abstract #

T10 Continuous measurement of reticular and ruminal pH in dairy cows using a wireless pH system. K. M. Krause*[1], G. R. Oetzel[1], D. Kohn[2], D. Kuhn[2], and D. Frost[2], [1]*University of Wisconsin*, *Madison*, [2]*DK2Solutions, LLC*, *Cave Creek, AZ*.

T11 Correlation among ruminal pH and short chain fatty acids in dairy cows affected by Subacute Ruminal Acidosis (SARA). M. Morgante*[1], C. Stelletta[1], M. Gianesella[1], P. Berzaghi[2], M. Badan[1], A. Lotto[3], and I. Andrighetto[2], [1]*Dipartimento di Scienze Cliniche Veterinarie*, *Legnaro (PD), Italy*, [2]*Dipartimento di Scienze Zootecniche*, *Legnaro (PD), Italy*, [3]*Cortal Extrasoy S.p.A.*, *Cittadella (PD), Italy*.

T12 Acid-base status, and the pH of feces, urine, muzzle and uterus in dairy cows affected by Subacute Rumen Acidosis (SARA). C. Stelletta[1], M. Badan[1], M. Morgante*[1], M. Gianesella[1], P. Berzaghi[2], L. Ravarotto[3], A. Lotto[4], and I. Andrighetto[2], [1]*Dipartimento di Scienze Cliniche Veterinarie*, *Legnaro (PD), Italy*, [2]*Dipartimento di Scienze Zootecniche*, *Legnaro (PD), Italy*, [3]*Istituto Zooprofilattico Sperimentale delle Venezie*, *Legnaro (PD), Italy*, [4]*Cortal Extrasoy S.p.A.*, *Cittadella (PD), Italy*.

T13 Effects of Johne's disease status on production, reproduction, and health traits in US Holsteins. M. Gonda*, Y. Chang, G. Shook, M. Collins, and B. Kirkpatrick, *University of Wisconsin*, *Madison*.

T14 Prevalence of foot lesions observed in dairy herds in Sicily and North Italy. J. D. Ferguson*[1], G. Azzaro[2], C. Scollo[2], R. Petriglieri[2], A. Cappa[4], and G. Licitra[2,3], [1]*University of Pennsylvania*, *Kennett Square, PA*, [2]*CoRFiLaC , Regione Siciliana*, *Ragusa, Italy*, [3]*D.A.C.P.A. University of Catania*, *Catania, Italy*, [4]*APA*, *Vicenza, Italy*.

T15 The use of infrared and exercise to non-invasively determine lameness in dairy cattle. D. B. Haley*[1], C. J. Bench[2], A. M. de Passille[3,4], J. Rushen[3,4], P. Lepage[5], J. Coplyn[5], and A. L. Schaefer[5], [1]*Alberta Agriculture, Food & Rural Development*, *Red Deer, AB, Canada*, [2]*University of Sasakatchewan*, *Saskatoon, SK, Canada*, [3]*Agriculture & Agri-Food Canada*, *Lennoxville, QC, Canada*, [4]*Agriculture & Agri-Food Canada*, *Agassiz, BC, Canada*, [5]*Agriculture & Agri-Food Canada*, *Lacombe, AB, Canada*.

T16 Highly sensitive and specific PCR assay for routine mastitis diagnostics: a comparative study of DNA and bacterial culture based methods. L. Salmikivi, P. Bredbacka, and M. Koskinen*, *Finnzymes Diagnostics*, *Espoo, Finland*.

T17 Modified Mannitol Salt Agar for Isolation and Enumeration of Staphylococcus aureus and Coagulase Negative Staphylococci from raw milk. A. Gurjar*, S. Larson, A. Sawant, B. Straley, N. Hegde, and B. Jayarao, *Pennsylvania State University*, *University Park*.

T18 Use of in-line milk sampling for monitoring milk quality and udder health on herds of large dairy operations. B. Straley*, A. Sawant, A. Gurjar, N. Hegde, D. Wolfgang, and B. Jayarao, *Pennsylvania State University*, *University Park*.

T19 An approach to evaluate effects of gene expression of Escherichia coli associated with bovine mastitis. J. Bowman, M. Worku*, and P. L. Matterson, *North Carolina A&T State University*, *Greensboro*.

T20 Effects of acute experimental mastitis on clinical and productive variables in early-lactation dairy cows. M. R. Waldron*, A. E. Kulick, and T. R. Overton, *Cornell University*, *Ithaca, NY*.

T21 Appearance of insulin resistance in dairy cows following a four-day fast to induce hepatic lipidosis. S. Oikawa*[1,2] and G. R. Oetzel[2], [1]*Rakuno Gakuen University*, *Ebetsu, Japan*, [2]*University of Wisconsin*, *Madison*.

Breeding & Genetics II

Exhibit Hall A

Abstract #

T22 Fine mapping of a bovine twinning rate QTL. E. S. Kim*[1], J. Cruickshank[1], M. Dentine[1], P. J. Berger[2], and B. W. Kirkpatrick[1], [1]*University of Wisconsin*, *Madison,*, [2]*Iowa State University*, *Ames*.

T23 Massive verification and mapping of SNP in cattle using the Illumina® BeadStation 500G genotyping system. C. Li*[1], B. Murdoch[1], Z. Wang[1], S. Mckay[1], J. Williams[2], R. Stone[3], S. Hennig[4], and S. Moore[1], [1]*University of Alberta*, *Edmonton, Alberta, Canada*, [2]*Roslin Institute*, *Roslin, United Kingdom*, [3]*USDA, ARS, US Meat Animal Research Center*, *Clay Center, NE*, [4]*Max Planck Institut fuer Molekulare Genetik*, *Ihnestr. Berlin, German*.

T24 Characterization of bovine functional genes from full-length cDNA libraries. M. Taniguchi*, L. L. Guan, Y. Meng, J. Yu, Z. Wang, and S. Moore, *University of Alberta*, *Edmonton, Alberta, Canada*.

T25 Precision of estimated QTL positions in half-sib designs using combined haplotype sharing TDT and linkage analysis. D. Kolbehdari*[1,2] and L. R. Schaeffer[1], [1]*University of Guelph*, *Guelph, Ontario, Canada*, [2]*University of Tehran*, *Tehran, Iran*.

T26 QTL mapping in complex pedigrees: Focusing on inbreeding and overlapping generations. G. Freyer*[1] and N. Vukasinovic[2], [1]*Research Institute for the Biology of Farm Animals (FBN)*, *Dummerstorf, Germany*, [2]*Monsanto Animal AG*, *St. Louis, MO*.

T27 The incidence of programmed cell death after in vitro fertilization (IVF) with morphologically abnormal bovine spermatozoa. A. Walters*, R. Saacke, R. Pearson, and F . Gwazdauskas, *Virginia Polytechnic Institute and State University*, *Blacksburg*.

T28 X- and Y-chromosome bearing sperm ratio in individual bull ejaculates. J. Schenk, M. Meyers*, and E. Crichton, *XY, Inc.*, *Fort Collins, CO*.

T29 Karyological profile of bovine clones. S. C. Gupta*[1], N. Gupta[1], C. X. Tian[2], and X. Yang[2], [1]*National Bureau of Animal Genetic Resources*, *Karnal, Haryana, India*, [2]*University of Connecticut*, *Storrs*.

T30 Within breed selection of boars for a gene bank. H. Blackburn*[1], C. Welsh[1], and T. Stewart[2], [1]*USDA-ARS-NAGP*, *Ft Collins, CO*, [2]*Purdue University*, *West Lafayette, IN*.

T31 Association of a single nucleotide polymorphism in the leptin receptor gene with carcass and meat quality traits in beef cattle. F. Schenkel*[1], S. Miller[1], S. Moore[2], C. Li[2], A. Fu[2], S. Lobo[2], I. Mandell[1], and J. Wilton[1], [1]*University of Guelph*, *Guelph, Ontario, Canada*, [2]*University of Alberta*, *Edmonton, Ontario, Canada*.

T32 Fat deposition in Angus cattle and its relation to animal age and body weight measures. A. Hassen*, D. E. Wilson, G. H. Rouse, R. G. Tait, Jr., and J. M. Reecy, *Iowa State University*, *Ames*.

T33 Estimation of genetic parameters for image analysis traits on M. longissimus dorsi and M. trapezius of carcass cross section in Japanese Black steers. T. Osawa*[1], Y. Motohira[1], T. Sewaki[1], Y. Hirayama[1], K. Okamoto[1], K. Kuchida[1], and T. Kato[2], [1]*Obihiro University of Agriculture and Veterinary Medicine*, *Obihiro-shi, Hokkaido, Japan*, [2]*Tokachi Federation of Agricultural Cooperative*, *Obihiro-shi, Hokkaido, Japan*.

T34 Beef carcass characteristics and sex hormone levels in the longissimus dorsi and adipose tissue in Hanwoo. Y. H. Choy*[2], O. S. Han[1], S. K. Son[2], C. W. Lee[2], and M. G. Baik[1], [1]*Chonnam University*, *Kwangju, Republic of Korea*, [2]*National Livestock Research Institute*, *Suwon, Republic of Korea*.

T35 Factors associated with ELISA likelihood s/p ratio scores for paratuberculosis in an Angus-Brahman multibreed herd of beef cattle. M. Elzo*, D. Rae, S. Lanhart, J. Wasdin, P. Dixon, and J. Jones, *University of Florida*, *Gainesville*.

T36 Differential effects of dietary phosphorus levels on gene expression in two lines of pigs. L. Grapes*, A. Qu, L. Hittmeier, M. Rothschild, and C. Stahl, *Iowa State University*, *Ames*.

T37 Estimation of genetic parameters in Korean swine populations. S.-H. Oh*[1], D. H. Lee[2], and M. T. See[1], [1]*North Carolina State University*, *Raleigh*, [2]*Hankyong National University*, *Ansung, Kyeonggi-Do, Korea*.

T38 Selection intensity for yield traits, somatic cell score, and days open when culling dairy cows. H. D. Norman*, J. L. Hutchison, M. T. Kuhn, J. R. Wright, and E. Hare, *Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*.

T39 Effects of complex vertebral malformation gene on production and reproduction. M. Kuhn*, J. Hutchison, and C. Van Tassell, *Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*.

T40 Allele effect for calf survival estimated for US Holstein Population. H. N. Schlesser*[1], R. D. Shanks[1], P. J. Berger[2], and M. H. Healey[2], [1]*University of Illinois*, *Urbana*, [2]*Iowa State University*, *Ames*.

T41 Applying restricted maximum likelihood and bayesian methods to estimate variance components for milk yield in Brazil. A. Falcão*[1], E. Martins[2], C. Costa[3], E. Sakaguti[2], and J. Mazucheli[2], [1]*Pontifical Catholic University*, *Toledo, PR, Brazil*, [2]*Maringá State University*, *Maringá, PR, Brazil*, [3]*Brazilian Agricultural Research Corporation, Dairy Cattle*, *Juiz de Fora, MG, Brazil*.

T42 The survey of Sistani cows dairy characteristics in rural production conditions. M. R. Birjandi*, *Agricultural and Natural Research Resources Center of Khorasan*, *Mashhad, Khorasan, Iran*.

T43 Crossbreed dairy cattle production in the tropical area in Bolivia. J. A. C. Pereira*[1], J. S. Romero[1], Z. B. Johnson[2], D. W. Kellogg[2], and A. H. Brown[2], [1]*Gabriel Rene Moreno University*, *Santa Cruz, Bolivia*, [2]*University of Arkansas*, *Fayetteville*.

T44 Mature equivalent protein yield in daughters of Holstein sires selected for high and average fat plus protein yield. P. J. Berger, M. H. Healey, G. A. Gutierrez*, and A. E. Freeman, *Iowa State University*, *Ames*.

T45 Estimation of genetic parameters and breeding values for persistency of lactation in Japanese Holsteins. Y. Masuda* and M. Suzuki, *Obihiro University of A & VM*, *Obihiro, Hokkaido, Japan*.

Dairy Foods

Dairy Chemistry and Dairy Products

Exhibit Hall A

Abstract #

T46 Rapid determination of Swiss cheese composition by infrared spectroscopy. N. Koca*[1,2], W. J. Harper[2], L. Rodriguez-Saona[2], and V. B. Alvarez[2], [1]*Ege University*, *Izmir, Turkey*, [2]*The Ohio State University*, *Columbus*.

T47 Development of a combined sensor technology for monitoring coagulation and syneresis operations in cheese making. M. Castillo*, F. Payne, and A. Shea, *University of Kentucky*, *Lexington*.

T48 Effect of the pH on the proteolysis of Prato cheese during ripening. V. S. Monteiro, R. T. A. N. Risse, and M. L. Gigante*, *State University of Campinas*, *Campinas, SP, Brazil*.

T49 Effect of NaCl and pH on curd firmness, residual coagulant activity and chemical composition of soft white cheese. S. Awad*, *Alexandria University*, *Alexandria, Egypt*.

T50 The effect of calcium removal from milk on casein micelle stability and structure. H. Grimley*, A. Grandison, and M. Lewis, *The University of Reading*, *Reading, UK.*

T51 A review of the models for the structure of the casein micelle. E. Ferrandini[1], M. Castillo*[2,1], M. B. López[1], and J. Laencina[1], [1]*University of Murcia*, *Murcia, Spain*, [2]*University of Kentucky*, *Lexington*.

T52 Porcine milk proteins throughout lactation and isolation of lactoferrin and immunoglobulin. J. Gunness*[1], M. Monaco[1], B. Lonnerdal[2], and S. Donovan[1], [1]*University of Illinois*, *Urbana*, [2]*University of California*, *Davis*.

T53 Interactions of whey proteins during heat treatment of oil-in-water emulsions formed with whey protein isolate and hydroxylated lecithin. A. Ye[2], H. Singh[2], and R. Jimenez-Flores*[1], [1]*California Polytechnic State University, DPTC.*, *San Luis Obispo*, [2]*Riddet Crntre, Massey University.*, *Palmerston North, New Zealand*.

T54 A novel two-dimentional gel electrophoresis for studing the cress-linking between b-Lactoglobulin and milk proteins. W. L. Chen*, M. T. Huang, and S. J. T. Mao, *National Chiao Tung University*, *Hsinchu, Taiwan*.

T55 Concentration of polar MFGM lipids from buttermilk using supercritical carbon dioxide. A. Spence*[1,2], J. Yee[1], M. Qian[2], and R. Jimenez-Flores[1], [1]*California Polytechnic State Universtiy*, *San Luis Obispo*, [2]*Oregon State University*, *Corvalis*.

T56 Quantitative determination of thermally derived volatile compounds in milk using solid-phase microextraction and gas chromatography. P. Vazquez-Landaverde*[1], G. Velazquez[1,2], J. Torres[1], and M. Qian[1], [1]*Oregon State University*, *Corvallis.*, [2]*Universidad Autonoma de Tamaulipas*, *Reynosa, Tamaulipas, Mexico.*

T57 Quantification of volatile sulfur compounds in milk by solid-phase microextraction and gas chromatography coupled to pulsed-flame photometric detection. P. Vazquez-Landaverde*[1], G. Velazquez[1,2], J. Torres[1], and M. Qian[1], [1]*Oregon State University*, *Corvallis*, [2]*Universidad Autonoma de Tamaulipas*, *Reynosa, Tamaulipas. Mexico.*

T58 Novel reporter molecule for the development of rapid assay probes. I. Surjawan*, H. Karacelik, S. Neelakantan, P. A. Crooks, and C. L. Hicks, *University of Kentucky*, *Lexington*.

T59 Spectrophotometry and DSC correlate with fatty acid differences in milk fat crystallization behavior. L. Lassonde*[1], E. DePeters[2], and R. Jimenez-Flores[1], [1]*California Polytechnic State University, DPTC*, *San Luis Obispo*, [2]*University of California*, *Davis*.

T60 Optimization of cholesterol removal in milk by crosslinked b-cyclodextrin. E. M Han, S. H. Kim, J. Ahn, and H. S. Kwak*, *Sejong University*, *Seoul, Korea*.

T61 Effect of crosslinked b-cyclodextrin on cholesterol removal in cream. E. M. Han, S. H. Kim, J. Ahn, and H. S. Kwak*, *Sejong University*, *Seoul, Korea*.

T62 The comparison of freeze drying and stirring processes for recycling of crosslinked b-cyclodextrin used for cholesterol removal in milk and cream. S. H. Kim, E. M. Han, J. Ahn, and H. S. Kwak*, *Sejong University*, *Seoul, Korea*.

T63 Microencapsulated isoflavone to apply into milk and hypocholesterolemic effect. B. J Jeon, N. C. Kim, E. M. Han, and H. S. Kwak*, *Sejong University*, *Seoul, Korea*.

T64 Hydrolysis of isoflavone glycoside by b-galactosidase and stability in the form of microcapsule. N. C. Kim, B. J. Jeon, J. Ahn, and H. S. Kwak*, *Sejong University*, *Seoul, Korea*.

Forages and Pastures

Additives, Nutrient Content, and Quality

Exhibit Hall A

Abstract #

T65 Addition of enzyme or/and wheat bran on fermentation characteristics and in vitro gas production of rice straw silage. J.-M. Lv*, W.-L. Hu, and J.-X. Liu, *Zhejiang University*, *Hangzhou, China*.

T66 Effect of adding enzyme on fermentation quality and nutritive value of corn stover silage. J.-M. Lv*, W.-L. Hu, and J.-X. Liu, *Zhejiang University*, *Hangzhou, China*.

T67 Dietary cation-anion difference of forage grasses as affected by species and chlorine fertilization. G. F. Tremblay*[1], S. Pelletier[1,2], H. Brassard[1,2], G. Bélanger[1], P. Seguin[3], R. Drapeau[1], A. Brégard[2], R. Michaud[1], and G. Allard[2], [1]*Agriculture and Agri-Food Canada*, *Québec, QC, Canada*, [2]*Université Laval*, *Québec, QC, Canada*, [3]*McGill University*, *Montréal, QC, Canada*.

T68 Ruminal dry matter, crude protein, neutral detergent fiber and acid detergent fiber degradation parameter kinetics of Vicia villosa, Festuca ovina, and Taeniatherum caput-medusaen. P. Shawrang*[1], A. Nikkhah[1], and A. A. Sadeghi[2], [1]*Tehran University*, *Karaj, Iran*, [2]*Islamic Azad University*, *Tehran,Iran*.

T69 Evaluation of yield and nutritive value of Hairy indigo (Indigofera hirsuta L.) in Venezuela. Omar Araujo-Febres*, *La Universidad del Zulia*, *Maracaibo, Zulia, Venezuela*.

T70 The effect of Lactobacillus buchneri on aerobic stability, fungal growth, and mycotoxin concentrations of corn silages. C. Iglesias*[1], A. Bach[1,2], C. Adelantado[3], and M. A. Calvo[3], [1]*Unitat de Remugants, Institut de recerca i tecnologia agroalimentàries (IRTA)*, *Barcelona, Spain*, [2]*Institució catalana de recerca i estudis avançats (ICREA)*, *Barcelona, Spain*, [3]*Departament de Sanitat i Anatomia Animal, Universitat Autònoma de Barcelona (UAB)*, *Barcelona, Spain*.

T71 Inoculum source effects on in vitro gas production of forages. E. Grings* and R. Waterman, *USDA-ARS*, *Miles City, MT*.

T72 Predictability of Streptomyces griseus RUP, methionine and lysine content of randomly selected alfalfa silages. M. J. Stevenson*[1], W. Heimbeck[2], and R. A. Patton[3], [1]*Degussa Corporation*, *Kennesaw, GA*, [2]*Degussa AG*, *Hanau, Germany*, [3]*Nittany Dairy Nutrition*, *Mifflinburg, PA*.

T73 Nutrition implications of differences in amino acid composition between crude and true protein in randomly selected alfalfa silages. W. Heimbeck*[1], M. J. Stevenson[2], and R. A. Patton[3], [1]*Degussa AG*, *Hanau, Germany*, [2]*Degussa Corporation*, *Kennesaw, GA*, [3]*Nittany Dairy Nutrition*, *Mifflinburg, PA*.

T74 Relationships between alfalfa silage nutrient content and in vitro NDF digestibility. R. A. Patton*[1], M. J. Stevenson[2], and R. L. Spitzer[3], [1]*Nittany Dairy Nutrition*, *Mifflinburg, PA*, [2]*Degussa Corporation*, *Kennesaw, GA*, [3]*Gladwin A. Read Company*, *Omaha, NE*.

T75 Vacuum-sealed polyethylene bags as mini-silos to assess differences in grasses. D. J. R. Cherney*[1], M. A. Alessi[2], and J. H. Cherney[1], [1]*Cornell University*, *Ithaca, NY*, [2]*Universita Degli Studi Di Palermo*, *Palermo, Italy*.

T76 Alfalfa yield and nutritive quality as influenced by air quality in west-central Alberta. J. Lin*[1], M. Nosal[2], R. Muntifering[1], and S. Krupa[3], [1]*Auburn University*, *Auburn, AL*, [2]*University of Calgary*, *Calgary, Alberta, Canada*, [3]*University of Minnesota*, *St. Paul*.

T77 In situ DM and N disappearance of ryegrass (Lolium multiflorum)-rye (Secale cereale) mixed swards fertilized with different N rates. J. M. B. Vendramini*[1], L. E. Sollenberger[1], J. D. Arthington[2], A. Adegbola[1], J. C. B. Dubeux, Jr.[1], S. M. Interrante[1], and R. L. Stewart, Jr.[3], [1]*Univeristy of Florida*, *Gainesville,*, [2]*University of Florida*, *Ona*, [3]*Virginia Polytechnic Institute and State University*, *Blacksburg*.

T78 Effects of lactic acid bacteria and formic acid on the silage quality of whole crop rice. B. W. Kim*[1], G. S. Kim[1], K. A. Albrecht[2], and K. I. Sung[1], [1]*Kangwon National University*, *Chunchon, Kangwon-Do, South-Korea*, [2]*University of Wisconsin*, *Madison*.

T79 Harvesting alfalfa at different stage of growth on nutrient concentrations and digestibility. G. Ayangbile*, K. Kammes, D. Spangler, R. Smith, and K. Thompson, *Agri-King Inc.*, *Fulton, IL*.

T80 The effects of temperature, rainfall, month of harvest, and/or pasture management on the mineral composition of kikuyu grass (Pennisetum clandestinum). V. T. Humphreys*[1], J. R. Carpenter[1], and B. W. Mathews[2], [1]*University of Hawaii at Manoa*, *Honolulu*, [2]*University of Hawaii*, *Hilo*.

T81 Effect of dry versus plastic wrapped hay on concentration of crude protein and digestible dry matter in large round baled hay. E. Rayburn[1], W. Shockey*[1], J. Hatton[2], and B. O'Doherty[3], [1]*West Virginia University*, *Morgantown*, [2]*USDA, NRCS*, *Kingwood, WV*, [3]*WVCA*, *Morgantown*.

T82 Factors affecting the quality of corn silage grown in hot, humid areas 3: Effect of maturity at harvest of corn hybrids differing in staygreen ranking. K. G. Arriola*, A. T. Adesogan, D. B. Dean, S. C. Kim, N. K. Krueger, S Chikagwa-Malunga, T Ososanya, and M Huisden, *University of Florida*, *Gainesville*.

T83 Effect of maturity at harvest on the nutritive value and biomass yield of Mucuna pruriens. S. Chikagwa-Malunga*, A. Adesogan, N. Krueger, D. Dean, and L. Sollenberger, *University of Florida*, *Gainesville*.

Goat Species

Growth, Genetics, Physiology, Health, and Products

Exhibit Hall A

Abstract #

T84 Predictive models for goat cheese yield using milk composition. S. S. Zeng*[1], K. Soryal[2], B. Fekadu[3], and M. Villaquiran[1], [1]*School of Agric. & Applied Sciences, Langston University*, *Langston, OK*, [2]*Desert Research Center*, *Matareya, Cairo, Egypt*, [3]*Debub University*, *Awassa, Ethiopia*.

T85 Distribution of conjugated linoleic acids and trans-fatty acids in longissimus muscles of sheep and goats. J. H. Lee*, G. Kannan, K. R. Eega, B. Kouakou, W. R Getz, and Y. W Park, *Fort Valley State University*, *Fort Valley, GA*.

T86 Prediction of meat goat body weight from heartgirth measurement, body condition score and sex. M. Villaquiran*, S. Hart, T.A. Gipson, G. Detweiler, R. M. Merkel, A. Patra, and T. Ngwa, *E (Kika) de la Garza American Institute for Goat Research, Langston University*, *Langston, OK*.

T87 Effect of feeding system on performance test traits of young meat bucks in a central performance test. T. A. Gipson*[1], L. J. Dawson[2], and T. Sahlu[1], [1]*E (Kika) de la Garza American Institute for Goat Research, Langston University*, *Langston, OK*, [2]*Oklahoma State University*, *Stillwater*.

T88 Factors influencing urea space estimates in goats. A. Asmare[1,2], L. J. Dawson[3], R. Puchala[1], T. A. Gipson[1], M. Villaquiran[1], I. Tovar-Luna[1], G. Animut[1,3], T. Ngwa[1], R. C. Merkel[1], G. Detweiler[1], and A.L. Goetsch*[1], [1]*Langston University*, *Langston, OK*, [2]*Alemaya University*, *Dire Dawa, Ethiopia*, [3]*Oklahoma State University*, *Stillwater,*.

T89 Effects of insulin administered to a perfused area of skin on mohair growth in Angora goats. R. Puchala*, S. G. Pierzynowski, A. L. Goetsch, and T. Sahlu, *E (Kika) de la Garza American Institute for Goat Research, Langston University*, *Langston, OK*.

T90 Heritability of kidding rates and the effect of number of offspring per litter on kid birth weights in the Caprine species. N. Buzzell*, J. Altbuch, S. Blash, D. Melican, and W. Gavin, *GTC Biotherapeutics*, *Spencer, MA*.

T91 Cholesterol-loaded cyclodextrin improves post-thaw goat sperm motility. M. H. Barrera-Compean*[1], P. H. Purdy[2], J. M. Dzakuma[1], G. R. Newton[1], and L. C. Nuti[1], [1]*Prairie View A&M University*, *Prairie View, TX*, [2]*National Animal Germplasm Program, USDA-ARS*, *Fort Collins, CO*.

T92 Factors influencing pregnancy rate after AI with fresh and chilled semen in meat goats treated with melengestrol acetate. S. Wildeus* and J. R. Collins, *Virginia State University*, *Petersburg*.

T93 Phenotypic and genotypic aspects of Staphylococcus aureus isolated from chronic subclinical infections in dairy goats. P. Moroni[1], G. Pisoni[1], C. Vimercati[1], M. Antonini[2], B. Castiglioni[2], P. Cremonesi[2], and P. Boettcher*[2], [1]*University of Milan*, *Milan, Italy*, [2]*Institute of Agricultural Biology and Biotechnology, National Research Council*, *Milan, Italy*.

Graduate Student Competition

CSAS Only

Exhibit Hall A

Abstract #

T94 Validation of a new equation predicting digestible energy of forage for sheep. M. Vachon*[1,2], J. F. Bernier[1], G. Allard[1], A. Brégard[1], and D. Pellerin[1], [1]*Université Laval*, *Québec, Québec, Canada*, [2]*Centre d'expertise en production ovine du Québec*, *La Pocatière, Québec, Canada*.

T95 Nutrient digestibility of diets containing graded levels of meat and bone meal for pigs and ducks. S. A. Adedokun* and O. Adeola, *Purdue University*, *West Lafayette*.

T96 Growth performance, carcass characteristics and fat quality of pigs fed Manitoba-grown corn cultivars. F. O. Opapeju*, C. M. Nyachoti, and J. D. House, *University of Manitoba*, *Winnipeg, MB, Canada*.

T97 Bioavailability of phosphorus in peas for growing pigs. A. M. Hawkins*[1], C. M. Nyachoti[1], B. A. Slominski[1], and H. A. Weiler[2], [1]*Department of Animal Science, University of Manitoba*, *Winnipeg, MB, Canada*, [2]*Department of Human Nutritional Sciences, University of Manitoba*, *Winnipeg, MB, Canada*.

T98 True phosphorus digestibility and the endogenous phosphorus losses associated with barley for pigs. Y. Shen*, R. R. Hacker, and M. Z. Fan, *University of Guelph*, *Guelph, Ontario, Canada*.

T99 Estimation of true phosphorus digestibility and the endogenous phosphorus losses associated with wheat for pigs. Y. Shen*, R. R. Hacker, and M. Z. Fan, *University of Guelph*, *Guelph, Ontario, Canada*.

T100 Persistence of the cp4 epsps transgene in ruminal and duodenal fluids from sheep fed diets containing Roundup Ready® canola meal. T. Alexander*[1,2], R. Sharma[1], W. Dixon[2], E. Okine[2], and T. McAllister[1], [1]*Agriculture and Agri-Food Canada Research Centre*, *Lethbridge, AB, Canada*, [2]*University of Alberta*, *Edmonton, AB, Canada*.

Meat Science and Muscle Biology

Meat Quality Prediction and Enhancement

Exhibit Hall A

Abstract #

T101 Prediction of monounsaturated fatty acid in the rib eye marbling of Japanese Black by image analysis using high resolution digital image. K. Kuchida*[1], Y. Hirayama[1], A. Oka[2], E. Iwamoto[2], and M. Fukushima[3], [1]*Obihiro University of Agriculture and Veterinary Medicine*, *Obihiro-shi, Hokkaido, Japan*, [2]*Hyogo Prefectural Agricultural Institute*, *Kasai-shi, Hyogo, Japan*, [3]*Hyogo Prefectural Hokubu Agricultural Institute*, *Wadayama-cho, Hyogo, Japan*.

T102 Development of photography equipment for the cross section of beef and its use in the evaluation of beef marbling and color of rib eye. K. Takahashi*[1], K. Kuchida[1], T. Hori[2], M. Nami[2], T. Honma[2], H. Kotaka[3], and H. Tsukuda[4], [1]*Obihiro University of Agriculture and Veterinary Medicine*, *Obihiro, Hokkaido, Japan*, [2]*Hokkaido Industrial Research Institute*, *Sapporo, Hokkaido, Japan*, [3]*Hayasaka Science and Engneering Corporation*, *Sapporo, Hokkaido, Japan*, [4]*Livestock Improvement Association of Japan*, *Makubetsu, Hokkaido, Japan*.

T103 Prediction of BMS number by image analysis and comparison of estimated BMS numbers in different cross sections of Holstein steers. Y. Hamasaki*, K. Kuchida, S. Hidaka, K. Shimada, and M. Sekikawa, *Obihiro University of Agriculture & Veterinary Medicine*, *Obihiro-shi, Hokkaido, Japan*.

T104 Prediction of total and regional carcass lean content by DXA cross-sectional analysis of pork carcasses. A. Mitchell*[1], A. Scholz[2], and V. Pursel[1], [1]*USDA, Agricultural Research Service*, *Beltsville, MD*, [2]*Ludwig Maximillians University-Munich*, *Oberschleissheim, Germany*.

T105 Potential of an electronic nose based on mass spectrometry to sort out boar tainted carcasses. S. Ampuero, P.-A. Dufey, and G. Bee*, *Agroscope Liebefeld-Posieux, Swiss Federal Research Station for Animal Production and Dairy Products (ALP)*, *Posieux, Fribourg, Switzerland*.

T106 Relationship of pork longissimus muscle fatty acid profile with pork loin texture and sensory traits. S. Lonergan*[1], K. Stalder[1], T. Knight[1], R. Goodwin[2], K. Prusa[1], and D. Beitz[1], [1]*Iowa State University*, *Ames*, [2]*Goodwin Family Farms*, *Ames, IA*.

T107 Effect of dietary conjugated linoleic acids (CLA) and sex on intramuscular collagen and bone characteristics in heavy pig. G. Maiorano*[1], A. Manchisi[1], K. Paolone[1], L. Costanza[1], M. Musella[2], and C. Corino[2], [1]*University of Molise*, *Campobasso, Italy*, [2]*University of Milano*, *Milano, Italy*.

T108 Histochemical properties and meat quality traits of porcine muscles during growth: Effect of feed restriction in pigs slaughtered at the same weight and different age. G. Bee*, M. Calderini, C. Biolley, G. Guex, and W. Herzog, *Agroscope Liebefeld-Posieux, Swiss Federal Research Station for Animal Production and Dairy Products (ALP)*, *Posieux, Fribourg, Switzerland*.

T109 Effect of sire line and sex on productive performance and carcass quality of Iberian pigs. M. P. Serrano[1], D.G. Valencia[1], R. Lázaro[1], A. Fuentetaja[2], and G.G. Mateos*[1], [1]*Universidad Politécnica de Madrid*, *Madrid, Spain*, [2]*Copese*, *Segovia, Spain*.

T110 Comparison of mineral content in beef, lamb and pig meat. G. Maiorano*[1], C. Cavone[1], C. Tarasco[2], L. De Tullio[2], and E. Gambacorta[3], [1]*University of Molise*, *Campobasso, Italy*, [2]*ARPA Molise*, *Campobasso, Italy*, [3]*University of Basilicata*, *Potenza, Italy*.

T111 Effect of sex and castration ages on fatty acids composition of longissimus muscle in Hanwoo. N. H. Park*[1], J. Jeong[1], S. S. Lee[1], K. C. Lee[2], and C. B. Choi[2], [1]*Livestock Research Institute, National Agricultural Cooperative Federation*, *Ansung, Korea*, [2]*Yeungnam University*, *Kyungsan, Korea*.

T112 Eating quality of forage-finished beef produced in Hawaii as compared to the imported mainland beef. M. DuPonte*, J. Dobbs, H. M. Zaleski, and Y. S. Kim, *University of Hawaii*, *Honolulu*.

T113 Effect of dietary lipid supplement on the performance and muscle fatty acid composition of beef bulls. D. A. Kenny*[1], R. P. Malone[1], E. Jordan[1], M. G. Diskin[2], B. Murray[4], and A. P. Moloney[3], [1]*University College Dublin*, *Belfield, Dublin, Ireland.*, [2]*Teagasc Research Centre*, *Athenry Co. Galway, Ireland.*, [3]*National Food Centre*, *Ashtown, Co. Dublin, Ireland*, [4]*Grange Research Centre*, *Dunsany, Co. Meath, Ireland*.

T114 Meat quality on female calves feeding high oil corn. G. J. Depetris*[1], F. J. Santini[1,2], E. L. Villarreal[1], E. E. Pavan[1], and D. H. Rearte[1], [1]*INTA EEA Balcarce*, *Balcarce, Argentina*, [2]*Fac. Cs. Agrarias, UNMdP*, *Argentina*.

T115 Predicting beef tenderness: the relationship between myosin light chain 1 and fast myosin heavy chain fragments. R. Johnson*, J. Sawdy, M. Updike, N. St-Pierrre, and M. Wick, *The Ohio State University*, *Columbus*.

T116 Enhancement with varying phosphate types, concentrations, and pump rates, without sodium chloride on beef biceps femoris quality and sensory characteristics. R. T. Baublits*, F. W. Pohlman, A. H. Brown, and Z. B. Johnson, *University of Arkansas*, *Fayetteville*.

T117 Enhancement effects of phosphate type, concentration, and pump rate, without sodium chloride on beef biceps femoris instrumental color characteristics. R. T. Baublits*, F. W. Pohlman, A. H. Brown, and Z. B. Johnson, *University of Arkansas*, *Fayetteville*.

T118 Withdrawn by Author.

Nonruminant Nutrition

Amino Acids and Dietary Restrictions

Exhibit Hall A

Abstract #

T119 Development of the enzymes of homocysteine metabolism from birth through weaning in the pig. D. M. Ballance* and J. D. House, *Department of Animal Science*, *University of Manitoba, Winnipeg, MB, Canada*.

T120 Effects of increasing true ileal digestible amino acid to lysine ratios on grower pig performance. A. Yager*, D. Sholly, L. Wilson, J. Beagle, R. Hinson, K. Saddoris, M. Walsh, B. Richert, A. Sutton, and J. S. Radcliffe, *Purdue University*, *West Lafayette, IN*.

T121 Effect of dietary L-Arginine inclusion rate on stress responses in pigs subjected to a high-intensity handling model. M. J. Ritter*[1], M. Ellis[1], D. H. Baker[1], C. R. Bertelsen[1], and K. K. Keffaber[2], [1]*University of Illinois*, *Urbana-Champaign*, [2]*ELANCO Animal Health*, *Greenfield, IN*.

T122 Effects of protein source and metabolizable energy concentration on the growth of the pancreas, stomach, and small intestine in early-weaned pigs. T. Buhay*, S. Carter, R. Cueno, M. Lachmann, J. Park, and J. Schneider, *Oklahoma State University*, *Stillwater*.

T123 Impact of spray-dried plasma form and feeding duration on broiler performance. J. M. Campbell*[1], J. D. Crenshaw[1], L. E. Russell[1], and H. J. Koehnk[2], [1]*APC, Inc.*, *Ankeny, IA*, [2]*ARKO Laboratories, Ltd.*, *Jewell, IA*.

T124 Effect of mash conditioning temperature on performance of broilers fed pellets containing spray-dried plasma. J. M. Campbell*[1], J. D. Crenshaw[1], L. E. Russell[1], K. C. Behnke[2], and P. M. Clark[2], [1]*APC, Inc.*, *Ankeny, IA*, [2]*Kansas State University*, *Manhattan*.

T125 A spreadsheet program for identifying the limiting amino acids in various combinations of feed ingredients for swine. G. L. Cromwell* and B. G. Kim, *University of Kentucky*, *Lexington*.

T126 Apparent and true digestibility and endogenous urinary excretion of amino acids in adult roosters. L. Babinszky*[1], J. Tossenberger[1], and A. Lemme[2], [1]*University of Kaposvár, Department of Animal Nutrition*, *H-7400 Kaposvár, POB 16, Hungary*, [2]*Degussa AG, Feed Additives*, *D-63457 Hanau, Germany*.

T127 Protein restriction during the weaner phase affects subsequent feed intake, growth performance and carcass characteristics. C. L. Collins*[1,3], D. J. Henman[2], B. J. Leury[3], R. G. Campbell[4], B. G. Tatham[1], and F. R. Dunshea[1,3], [1]*Primary Industries Research Victoria*, *Werribee, Victoria, Australia*, [2]*QAF Meat Industries*, *Corowa, NSW, Australia*, [3]*Faculty of Land and Food Resources, University of Melbourne*, *Parkville, Victoria, Australia*, [4]*Ausgene International*, *Gridley, IL*.

T128 Effect of early dietary amino acid restrictions on serum metabolites in pigs selected for lean growth efficiency. H. R. Mule*, L. I. Chiba, J. Fabian, D. L. Kuhlers, S. B. Jungst, L. T. Frobish, K. Nadarajah, W. G. Bergen, and E. G. Welles, *Auburn University*, *Auburn, AL*.

T129 Effect of early feed restriction on carcass yield, carcass components and gonads of Japanese quail breeder. G. Contreras*, C. B. Castro, J. J. Portillo, and F. G. Rios, *FMVZ-Universidad Autónoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*.

T130 Effect of early feed restriction on productive and reproductive performance of Japanese quail breeder. G. Contreras*, C. B. Castro, J. J. Portillo, and F. G. Rios, *FMVZ-Universidad Autónoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*.

Nonruminant Nutrition

Feedstuffs and Processing

Exhibit Hall A

Abstract #

T131 The effects of fermented soy protein in creep diet on growth performance in piglets and backfat loss in lactating sows. B. J. Min*[1], O. S. Kwon[1], K. S. Son[1], J. H. Cho[1], Y. J. Chen[1], I. H. Kim[1], S. S. Lee[2], and W. T. Cho[2], [1]*Department of Animal Resource & Science, Dankook University*, *Cheonan, Korea*, [2]*Genebiotech Co. Ltd.*, *Korea*.

T132 Effect of wheat gluten and spray-dried egg protein on growth performance of nursery pigs. H. Yang[1], T. Shipp*[2], J. Less[3], T. Radke[1], M. Cecava[1], and D. Holzgraefe[1], [1]*ADM Alliance Nutrition*, *Quincy, IL*, [2]*ADM Animal Health and Nutrition*, *Quincy, IL*, [3]*ADM Specialty Feed Ingredients*, *Decatur, IL*.

T133 Productive performance of early-weaned pigs fed different vegetable protein sources. D. G. Valencia, M. P. Serrano, R. Lázaro, and G. G. Mateos*, *Universidad Politécnica de Madrid*, *Spain*.

T134 The effect of dietary crude protein level, cereal type and exogenous enzyme supplementation on nutrient digestibility, nitrogen excretion, faecal volatile fatty acid concentration and ammonia emissions from pigs. J. M. O'Connell, J. J. Callan, and J. V. O'Doherty*, *University College Dublin*, *Ireland*.

T135 Effect of ground flaxseeds on the performance and carcass traits of finishing pigs. K. Sasaki*[1], S. K. Baidoo[2], and Q. Yang[2], [1]*Akita Prefectural Livestock Experiment Station*, *Jinguji-aza, Kamioka-machi, Senboku-gun, Akita-ken 019-1701, Japan*, [2]*University of Minnesota*, *Waseca*.

T136 Effect of barley substitution for corn on pigs fed diets containing ractopamine. B. Kremer*[1] and B. Zimprich[2], [1]*Elanco Animal Health*, *Greenfield, IN*, [2]*Ransom County Extension Service*, *Ransom County, ND*.

T137 Condensed corn distillers' solubles in swine liquid feeding: growth performance and carcass quality. J. M. Squire*, C. L. Zhu, E. A. Jeaurond, and C. F. M. de Lange, *University of Guelph*, *Guelph, ON, Canada*.

T138 Ileal amino acid digestibility in wheat dried distillers' grains with solubles fed to growing pigs. Y. Lan*, F. O. Opapeju, and C. M. Nyachoti, *University of Manitoba*, *Winnipeg, MB, Canada*.

T139 True phosphorus digestibility associated with lentils for growing pigs. Z. R. Wang*[1], C. B. Yang[2], Y. Shen[3], Y. L. Yin[2], T. Archbold[3], and M. Z. Fan[3], [1]*College of Animal Science*, *Xinjiang Agricultural University, Urumqi, Xinjiang, China*, [2]*The Chinese Academy of Sciences*, *Changsha, Hunan, China*, [3]*University of Guelph*, *Guelph, Ontario, Canada*.

T140 Additivity of apparent and true fecal phosphorus digestibility measured in soybean meal, peas, faba bean, corn, oats, broken rice meal, rough rice meal, buckwheat, and sorghum for growing pigs. R. J. Fang*[1], K. N. Wang[2], C. H. Huang[1], J. H. He[3], J. R. Wang[1], Y. L. Yin[1], and M. Z. Fan[4], [1]*The Chinese Academy of Sciences*, *Changsha, Hunan, China*, [2]*Sichuan University of Agriculture*, *Yaan, Sichuan, China*, [3]*Hunan Agricultural University*, *Changsha, Hunan, China*, [4]*University of Guelph*, *Guelph, Ontario, Canada*.

T141 Nutritional evaluation of sorghum for pigs and broiler chicks. E. K. D. Nyannor*[1], S. A. Adedokun[1], B. R. Hamaker[2], G. Ejeta[3], and O. Adeola[1], [1]*Purdue University*, *West Lafayette, IN*, [2]*Purdue University*, *West Lafayette, IN*, [3]*Purdue University*, *West Lafayette, IN*.

T142 Amino acid digestibility in dry extruded-expelled soybean meal fed to pigs and poultry. F. O. Opapeju*, C. M. Nyachoti, A. Golian, and L. D. Campbell, *University of Manitoba*, *Winnipeg, MB, Canada*.

Physiology & Endocrinology II

Exhibit Hall A

Abstract #

T143 Daylength induces changes in leptin and leptin receptors gene expression in adipose tissue of lactating dairy cows. U. Bernabucci*[1], N. Lacetera[1], L. Basiricò[1], F. Rueca[2], D. Pirazzi[1], B. Ronchi[1], E. Seren[3], and A. Nardone[1], [1]*Dipartimento Produzioni Animali*, *Viterbo, Italy*, [2]*Dipartimento Patologia, Diagnostica e Clinica Veterinaria*, *Perugia, Italy*, [3]*Dipartimento Morfofisiologia Veterinaria e Produzioni Animali*, *Bologna, Italy*.

T144 Relationship between serum leptin concentration and BW, feed intake, ultrasound traits and carcass merit of hybrid beef cattle. J. D. Nkrumah*[1], C. Hansen[1], D. H. Keisler[2], C. Li[1], B. Irving[1], Z. Wang[1], and S. S. Moore[1], [1]*University of Alberta*, *Edmonton, Alberta, Canada*, [2]*University of Missouri*, *Columbia*.

T145 Failure of short term feed restriction to effect leptin secretion and subcutaneous adipose tissue expression of leptin or long form leptin receptor (Ob-r) in the prepuberal gilt. H. A. Hart*[1], M. J. Azain[1], G. J. Hausman[2], D. E. Reeves[1], and C. R. Barb[1], [1]*University of Georgia*, *Athens*, [2]*USDA-ARS*, *Athens, GA*.

T146 Sequencing, chromosomal mapping and expression of the bovine deiodinase type II (DIO2) and deiodinase type III (DIO3) genes. E. E. Connor*[1], E. C. Laiakis[1], V. M. Fernandes[1], J. L. Williams[2], and A. V. Capuco[1], [1]*USDA-ARS, BARC, Bovine Functional Genomics Laboratory*, *Beltsville, MD*, [2]*Roslin Institute (Edinburgh)*, *Midlothian, Scotland, UK*.

T147 Cloning and expression of bovine sodium/glucose cotransporter SGLT2. F.-Q. Zhao*, T. B. McFadden, E. H. Wall, B. Dong, and Y.-C. Zheng, *University of Vermont*, *Burlington*.

T148 Molecular cloning and expression of bovine leptin receptor isoforms. H. Kawachi*, A. Hamano, S. H. Yang, T. Matsui, and H. Yano, *Kyoto University*, *Kitashirakawa-oiwake, Sakyo-ku, Kyoto, 606-8502, Japan*.

T149 Effect of interval from timed AI to initiation of resynchronization of ovulation using Ovsynch on fertility of lactating dairy cows. R. A. Sterry*[1], M. L. Welle[2], and P. M. Fricke[1], [1]*University of Wisconsin*, *Madison*, [2]*Miltrim Farms, Inc.*, *Athens, WI.*

T150 Effects of the time of PGF2a in fixed time embryo transfer protocol on synchronization and conception rates in IVF fresh embryo recipients. O. G. SáFilho, J. L. M. Vasconcelos*, R. M. Santos, E. Oba, and G. C. Perez, *FMVZ-UNESP*, *Brazil*.

T151 Effect of duration of Norgestomet implant during CRESTAR protocol in Nellore cows. G. C. Perez*, R. M. Santos, and J. L. M. Vasconcelos, *FMVZ-UNESP*, *Brazil*.

T152 Effects of post-insemination CIDR on embryonic loss associated with heat stress in dairy cattle. R. E. Carothers* and C. S. Whisnant, *North Carolina State University*, *Raleigh*.

T153 Influence of reducing the interval between GnRH and PGF_{2a} to 5 days on reproductive performance of cows synchronized with GnRH-CIDR- PGF_{2a} programs. G. A. Bridges, C. L . Gasser*, D .E. Grum, M. L. Mussard, L. A. Helser, and M. L. Day, *The Ohio State University*, *Columbus*.

T154 Effects of supplemental progesterone administration on pregnancy rate and resynchronization in lactating dairy cattle during mild heat stress and non-heat stress conditions. A. Denson*, M. Jones, S . Bowers, A. Dos Santos, K. Graves, K. Moulton, and S. Willard, *Mississippi State University*, *Mississippi State*.

T155 Leptin gene polymorphisms and selection for milk yield in Holstein cows. S. H. Wu*[1], W. J. Weber[1], Y. Da[1], H. Chester-Jones[1], L. B. Hansen[1], Y. R. Boisclair[2], and B. A. Crooker[1], [1]*University of Minnesota*, *St. Paul*, [2]*Cornell University*, *Ithaca, NY.*

T156 Efficacy and economic value of estrous synchronization. K. Evenson*, J. Johnson, S. Prien, and J. Blanton, *Texas Tech University*, *Lubbock*.

T157 Effect of estradiol-17bsupplementation before the last GnRH of the Ovsynch protocol in high producing dairy cows. A. H. Souza*, A. Gümen, E. P. B. Silva, A. P. Cunha, J. N. Guenther, C. M. Peto, D. Z. Caraviello, and M. C. Wiltbank, *University of Wisconsin*, *Madison*.

T158 Effect of GnRH after artificial insemination on conception rates in lactating dairy cows. A. P. Cunha*, A. H. Souza, A. Gümen, E. P. B. Silva, C. M. Peto, J. N. Guenther, D. Z. Caraviello, and M. C. Wiltbank, *University of Wisconsin*, *Madison*.

T159 Effect of GnRH between Pre-Synch injections and estradiol 17b during the Ovsynch protocol on conception rates in lactating dairy cows. A. Gümen*, A. H. Souza, A. P. Cunha, E. P. B. Silva, J. N. Guenther, and M. C. Wiltbank, *University of Wisconsin*, *Madison*.

Production, Management and the Environment

Nutrition and Management

Exhibit Hall A

Abstract #

T160 Electronic identification of young lambs with mini-bolus and effects on intake and digestibility during fattening. J. J. Ghirardi[1], G. Caja*[1], C. Flores[1], and D. Garín[2], [1]*Universitat Autònoma de Barcelona*, *Bellaterra, Spain*, [2]*Universidad de la República*, *Montevideo, Uruguay*.

T161 Comparison of half- and full-duplex electronic ear tags and intraperitoneally injected transponders in the implementation of traceability under commercial conditions in pigs. C. Santamarina[1], M. Hernández-Jover[2], D. Babot[1,3], and G. Caja*[2], [1]*Universitat de Lleida*, *Lleida, Spain*, [2]*Universitat Autònoma de Barcelona*, *Bellaterra, Spain*, [3]*Centre UdL-IRTA*, *Lleida, Spain*.

T162 Struvite crystallizer product as a phosphorus supplement for growing chicks. R. Kincaid*[1], J. Harrison[2], T. Benson[1], K. Bowers[3], and D. Davidson[2], [1]*Washington State University*, *Pullman*, [2]*Washington State University*, *Puyallup*, [3]*Multiform Harvest Inc.*, *Seattle, WA*.

T163 Multivariate factor analysis of electrical conductivity in dairy cattle. N. P. P. Macciotta*[1], M. Mele[2], R. Steri[1], and P. Secchiari[2], [1]*Università di Sassari*, *Sassari, Italia*, [2]*Università di Pisa*, *Pisa, Italia*.

T164 Effects of pre-weaning management on performance beef steers during a 30-d feedlot receiving period. R. Cooke*[1], X. Qiu[1], E. Pereira[3], G. Marquezini[3], J. Vendramini[1], C. Chase[2], S. Coleman[2], and J. Arthington[1], [1]*University of Florida, Range Cattle Research and Education Center*, *Ona*, [2]*USDA-ARS*, *Brooksville, FL*, [3]*Universidade Estadual Paulista*, *Botucatu, SP, Brazil*.

T165 Effects of pre-weaning management on the acute phase protein response of transported beef steers during a 30-d feedlot receiving period. X. Qiu*[1], R. Cooke[1], E. Pereira[3], G. Marquezini[3], J. Vendramini[1], C. Chase[2], S. Coleman[2], and J. Arthington[1], [1]*University of Florida, Range Cattle Research and Education Center*, *Ona*, [2]*USDA-ARS*, *Brooksville*, [3]*Universidade Estadual Paulista*, *Botucatu, SP, Brazil*.

T166 Fiber characteristics of U.S. Huacaya alpacas. C. J. Lupton[1], A. McColl[2], F. A. Pfeiffer*[1], and R. H. Stobart[3], [1]*Texas Agricultural Experiment Station*, *San Angelo*, [2]*Yocom-McColl Testing Labs*, *Denver, CO*, [3]*University of Wyoming*, *Laramie*.

T167 Evaluation of the nutritive value of ensiled beet pulp for ruminant animals. C. W. Hunt*, J. C. Dalton, and N. R. Rimbey, *University of Idaho*, *Moscow*.

T168 Evaluation of substitution value of barley grain for conventional forage on growth and reproductive performance of beef heifers. P. A. Szasz*, C. W. Hunt, A. Ahmadzadeh, R. Manzo, and J. I Szasz, *University of Idaho*, *Moscow*.

T169 Advantages of complex and chelated forms of zinc fed to bulls in a forage-fed bull test. R. C. Vann*[1], F. Holmes[2], H. Maxwell[3], C. G. Beyer[4], A. Denson[5], and S. T. Willard[5], [1]*MAFES-Brown Loam Experiment Station*, *Raymond, MS*, [2]*Mississippi Forage Bull Test*, *Tylertown, MS*, [3]*Columbia Animal Hospital*, *Columbia, MS*, [4]*Trouw Nutrition*, *Highland, IL*, [5]*Mississippi State University*, *Mississippi State*.

T170 Fate of Fusarium graminearum on barley grain during in vitro and in situ ruminal incubation. Y. Wang*[1], S. L. Scott[2], D. L. McLaren[2], Z. Matic[1], G. D. Inglis[1], and T. A. McAllister[1], [1]*Agriculture and Agri-Food Canada Research Centre*, *Lethbridge, AB, Canada*, [2]*Agriculture and Agri-Food Canada Research Centre*, *Brandon, MB, Canada*.

T171 Effect of feed distribution frequency on intake, water consumption and ruminal pH in finishing beef heifers. V. Robles, L. González*, A. Ferret, X. Manteca, and S. Calsamiglia, *Universitat Autònoma de Barcelona*, *Bellaterra, Barcelona, Spain*.

T172 The effect of feeding time on tympanic temperature of steer calves during winter. S. M. Holt* and R. H. Pritchard, *South Dakota State University*, *Brookings*.

T173 Performance of Holstein heifer calves fed three different concentrate grower diets with free-choice hay. J. Linn*[1], C. Soderholm[2], R. Larson[2], D. Ziegler[3], and H. Chester-Jones[3], [1]*University of Minnesota*, *St. Paul*, [2]*Hubbard Feeds*, *Mankato, MN*, [3]*University of Minnesota Southern Research and Outreach Center*, *Waseca*.

T174 The effects of dietary antibiotics on growth performance and morbidity and mortality of pigs from primi-parous and multi-parous dams housed in a commercial wean-to-finish facility. B. A. Peterson*[1], M. Ellis[1], C. R. Bertelsen[1], J. M. DeDecker[1], M. J. Ritter[1], B. F. Wolter[2], J. Lowe[2], and R. Bowman[2], [1]*University of Illinois*, *Urbana*, [2]*The Maschhoffs, Inc.*, *Carlyle, IL*.

T175 Performance of Holstein heifer calves fed texturized calf starters varying in molasses content. D. Ziegler*[1], H. Chester-Jones[1], B. Ziegler[2], R. Larson[2], and J. Linn[3], [1]*University of Minnesota Southern Research and Outreach Center*, *Waseca*, [2]*Hubbard Feeds*, *Mankato, MN*, [3]*University of Minnesota*, *St. Paul*.

T176 Effect of feed refusal amount on feeding behavior and production in Holstein cows. P. French*[1], J. Chamberlain[1], and J. Warntjes[2], [1]*Oregon State University*, *Corvallis*, [2]*University of California-Davis*, *Davis*.

Ruminant Nutrition

Dairy II

Exhibit Hall A

Abstract #

T177 Effects of OmniGen-AF on milk production and on lactation persistence in a commercial dairy setting. J. Chapman*[1], S. Puntenney[2], J. Verano[3], J. Heeg[4], Y. Wang[2], and N. Forsberg[2], [1]*Prince-Agri Products Inc.*, *Quincy, IL*, [2]*Oregon State University*, *Corvallis*, [3]*Larson Dairy Inc.*, *Okeechobee, FL*, [4]*Lakeland Animal Nutrition Inc.*, *Lakeland, FL*.

T178 Principal component and multivariate analysis of milk fatty acid composition data from experiments designed to induce dietary milk fat depression in lactating cows. A. K. G. Kadegowda*, L. S. Piperova, and R. A. Erdman, *University of Maryland*, *College Park*.

T179 In sacco forage fiber degradation in the rumen of lactating cows fed high- or low-forage diets supplemented with flaxseed or flaxseed oil. C. Benchaar*[1], H. V. Petit[1], T. A. McAllister[2], and P. Y. Chouinard[3], [1]*Agriculture and Agri-Food Canada, Dairy and Swine R&D Centre*, *Lennoxville, QC, Canada.*, [2]*Agriculture and Agri-Food Canada*, *Lethbridge, AB, Canada*, [3]*Laval University*, *Quebec, QC, Canada.*

T180 Effects of flaxseed and flaxseed oil supplementation on ruminal fermentation characteristics, and ruminal ciliate protozoal populations in cows fed high- or low- forage diets. C. Benchaar*[1], H. V. Petit[1], T. A. McAllister[2], and P. Y. Chouinard[3], [1]*Agriculture and Agri-Food Canada, Dairy and Swine R&D Centre*, *Lennoxville, QC, Canada*, [2]*Agriculture and Agri-Food Canada, Lethbridge Research Centre*, *Lethbridge, AB, Canada*, [3]*Laval University*, *Quebec, QC, Canada.*

T181 Effect of flaxseed and flaxseed oil supplementation on digestion, milk production, and milk composition in dairy cows fed diets with different forage levels. C. Benchaar*[1], H. V. Petit[1], T. A. McAllister[2], and P. Y. Chouinard[3], [1]*Agriculture and Agri-Food Canada, Dairy and Swine R&D Centre*, *Lennoxville, QC, Canada*, [2]*Agriculture and Agri-Food Canada*, *Lethbridge, AB, Canada*, [3]*Laval University*, *Quebec, QC, Canada.*

T182 Effect of increasing oil from distillers grains or corn oil on lactation performance. C. Leonardi*, S. Bertics, and L. Armentano, *University of Wisconsin*, *Madison*.

T183 Effects of forage and oil supplementation on milk fatty acid composition in ewes. C. Reynolds*, V. Cannon, S. Loerch, G. Lowe, D. Clevenger, and P. Tirabasso, *The Ohio State University*, *Wooster*.

T184 Effect of supplemental fat source on production, immunity, and reproduction of periparturient Holstein cows in summer. B. C. do Amaral*, C. R . Staples, O. Sa Filho, T. R. Bilby, J. Block, F. Silvestre, F. M. Cullens, C. E. Alosilla, Jr., L. Badinga, and W. W. Thatcher, *University of Florida*, *Gainesville*.

T185 Effect of feeding different levels of lauric acid on ruminal protozoa, and milk production in dairy cows. A. Faciola*[1], G. Broderick[2,1], A. Hristov[3], and M. Leão[4], [1]*University of Wisconsin*, *Madison*, [2]*U. S. Dairy Forage Research Center*, *Madison, WI*, [3]*University of Idaho*, *Moscow*, [4]*Universidade Federal de Viçosa*, *Viçosa, MG, Brazil*.

T186 Effect of feeding ground versus whole safflower seed and safflower oil on milk fatty acid composition in cows. R. Mohammed, D. Lee, E. Tong, S. Parmley, G. Khorasani, and L. Doepel*, *University of Alberta*, *Edmonton, Alberta, Canada*.

T187 Effects of bST and dietary fat in early lactation on lactational performance of Holstein cows. M. Carriquiry*, W. J. Weber, C. R. Dahlen, G. C. Lamb, and B. A. Crooker, *University of Minnesota*, *St. Paul*.

T188 Effect of varying levels of free fatty acids from palm oil on milk production and feed intake in Holstein cows. S. Mosley*[1], E. Mosley[1], B. Hatch[1], J. Szasz[1], A. Corato[2], N. Zacharias[1], D. Howes[3], and M. McGuire[1], [1]*University of Idaho*, *Moscow*, [2]*University of Padova*, *Padova, Italy*, [3]*Howes Management Services*, *Nampa, ID*.

T189 Effects of intravenous infusion of tallow emulsion on responses to glucose and insulin challenges of Holstein cows. J. A. A. Pires*, A. H. Souza, and R. R. Grummer, *University of Wisconsin*, *Madison*.

T190 Intake, duodenal flow and ruminal biohydrogenation of fatty acids in Holstein steers fed canola supplemented dairy lactation diets. S. E. Bedgar*, J. W. Schroeder, M. L. Bauer, and W. L. Keller, *North Dakota State University*, *Fargo*.

T191 Effect of supplementation with Ca-salts of fish oil on omega-3 fatty acids in milk fat. E. Castaneda-Gutierrez*[1], W. R. Butler[1], M. J. de Veth[1], A. L. Lock[1], D. A. Dwyer[1], D. Luchini[2], and D. E. Bauman[1], [1]*Cornell University*, *Ithaca, NY*, [2]*Bioproducts Inc.*, *Fairlawn, OH*.

T192 Rumen vs. abomasal infusion of fish oil as a novel approach to determine the extent of rumen biohydrogenation of omega-3 fatty acids and their transfer into milk fat. C. McConnell, A. L. Lock, and D. E. Bauman*, *Cornell University*, *Ithaca, NY*.

T193 The effect of docosahexaenoic acid on the production of vaccenic acid and conjugated linoleic acid from unsaturated C18 fatty acids in rumen cultures. A. AbuGhazaleh*, G. Apgar, and B. Jacobson, *Southern Illinois University*, *Carbondale*.

T194 The effect of low pH on the production of trans monoenes and conjugated linoleic acid in rumen cultures containing docosahexaenoic acid and unsaturated 18 carbons fatty acids. A. AbuGhazaleh*, G. Apgar, and B. Jacobson, *Southern Illinois University*, *Carbondale*.

T195 Production of trans monoenes and conjugated linoleic acid in continuous cultures fed diets containing fish oil and sunflower oil with decreasing levels of forage. A. AbuGhazaleh*[1], B. Jacobson[1], R. Buckles[1], and K. Kalscheur[2], [1]*Southern Illinois University*, *Carbondale*, [2]*South Dakota State University*, *Brookings*.

T196 Conjugated linoleic acid (CLA) content of milk and meat products and its intake in humans. T. R. Dhiman*, A. L. Ure, and S. Nam, *Utah State University*, *Logan*.

T197 Conjugated linoleic acid from water buffaloes milk fat in tropical region. S. Fernandes[1,2], W. Mattos[1,2], S. Matarazzo[1,2], D. Lanna*[1,2], and M. Gama[1,2], [1]*Universidade Estadual do Sudoeste da Bahia*, *Itapetinga, Bahia, Brazil*, [2]*Universidade de São Paulo*, *Piracicaba, São Paulo, Brazil*.

T198 [13]C studies on glucose metabolism in dairy cows fed a fat-enriched diet. P. Junghans*[1], K. Gaafar[1], F. Schneider[2], C. C. Metges[1], G. Gäbel[3], J. R. Aschenbach[3], and J. Voigt[1], [1]*Research Institute for the Biology of Farm Animals (FBN), Research Unit Nutritional Physiology*, *Dummerstorf, Germany*, [2]*Research Unit Reproductive Biology*, *Dummerstorf, Germany*, [3]*University Leipzig*, *Leipzig, Germany*.

T199 Glucose rate of appearance (Ra) responses to isoenergetic infusions of glucose (GLC), propionic acid (C3) and non essential amino acids (NEAA) in dairy cows. S. Lemosquet*[1], E. Delamaire[1], J. Guinard-Flament[1], and H. Lapierre[2], [1]*UMR INRA Agrocampus Rennes Production du Lait*, *St-Gilles, France*, [2]*AAC*, *Lennoxville, Canada*.

T200 Effect of casein (Cas) and propionate (C3) supply on whole body protein kinetics in lactating dairy cows. G. Raggio*[1], G. E. Lobley[2], S. Lemosquet[3], H. Rulquin[3], and H. Lapierre[4], [1]*Laval University*, *Quebec, QC, Canada*, [2]*Rowett Research Institute*, *Aberdeen, UK*, [3]*INRA*, *Saint Gilles, France*, [4]*Agriculture and Agri-Food Canada*, *Lennoxville, QC, Canada*.

T201 Effects of short-term glucagon administration on gluconeogenic enzymes in the liver of mid-lactation dairy cows. E. L. Williams*[1], S. Rodriguez[1], D. C. Beitz[2], and S. S. Donkin[1], [1]*Purdue University, West Lafayette, IN,* [2]*Iowa State University, Ames.*

T202 Effect of rumen energy and nitrogen balance on milk urea nitrogen in Chinese Holstein cows. S. W. Zhai*[1] and Y. Ma[2], [1]*Zhejiang University*, *Hangzhou, Zhejiang, China*, [2]*Northwest Sci-Tech University of Agriculture and Forestry*, *Yangling, Shaanxi, China*.

T203 Effects of monensin on diurnal rhythmicity of blood metabolites in dairy cows at different stages of lactation. J. C. Plaizier*[1], A. Fairfield[2], P. A. Azevedo[1], T. F. Duffield[2], G. H. Crow[1], R. Bagg[3], P. Dick[3], and B. W. McBride[2], [1]*University of Manitoba*, *Winnipeg, MB, Canada*, [2]*University of Guelph*, *Guelph, ON, Canada*, [3]*Provel, A Dvision of Eli Lilly, Inc.*, *Guelph, ON, Canada*.

T204 Effects of monensin and dietary soy oil on milk fat percentage in lactating cows. O. Alzahal*[1], N. E. Odongo[1], T. Mutsvangwa[2], T. F. Duffield[1], R. Bagg[3], P. Dick[3], G. Vessie[3], and B. W. McBride[1], [1]*University of Guelph*, *Guelph, Ontario*, [2]*University of Saskatchewan*, *Saskatoon, Saskatchewan*, [3]*Elanco Animal Health, Division Eli Lilly Canada Inc.*, *Guelph, Ontario, Canada.*

T205 Monensin and oil can have additive and synergistic effects on performance and milk fatty acid profiles. E. da Costa Eifert[2], R. de Paula Lana[3], D. P. D. Lanna*[2], M. I. Leão[3], and P. B. Arcuri[4], [1]*Supported by*, *CNPq, Brasil*, [2]*LCNA-ESALQ/USP*, *Piracicaba, Brasil*, [3]*DZO-UFV*, *Viçosa, Brasil*, [4]*Embrapa*, *Dairy Cattle*.

T206 Diet composition determines the type of response of cows fed monensin. K. McGuffey* and J. Wilkinson, *Elanco Animal Health Research*.

T207 Performance of dairy cows fed ensiled high moisture corn of a flint or a dent hybrid. F. M. J. Costa, J. F. dos Santos, and M. N. Pereira*, *Universidade Federal de Lavras*, *Lavras, Minas Gerais, Brazil*.

T208 Balancing grass silage based rations to dairy cows with regards to rumen degradable fiber. M. Murphy[1], T. Andersson*[1], and I. Andersson[2], [1]*Lantmännen Animal Feeds*, *Stockholm, Sweden*, [2]*Swedish University of Agricultural Sciences*, *Uppsala, Sweden*.

T209 Effects of physically effective NDF on ruminal pH and nutrient digestion of dairy cows fed diets based on corn silage. W. Z. Yang* and K. A. Beauchemin, *Research Center, Agriculture and Agri-Food Canada*, *Lethbridge, AB, Canada*.

T210 Evaluation of kernel hardness parameters and degradabilities of Zimbabwean commercial and research corn hybrids. D. Ngonyamo-Majee*[1], R. Shaver[1], J. Coors[1], D. Sapienza[2], J. Lauer[1], and X. Mhike[3], [1]*University of Wisconisn*, *Madison*, [2]*Sapienza, Analytica*, *Johnston, IA*, [3]*Crop Breeding Institute, AREX*, *Zimbabwe*.

T211 The effect of silage additives and delayed filling on the fermentation of ryegrass silage. R. Schmidt*, D. Kleinschmit, R. Teller, and L. Kung, *University of Delaware*, *Newark*.

T212 Effect of corn silage harvest method on intake and production by mid lactation dairy cows. G. I. Zanton*, M. J. Vassallo, D. R. Buckmaster, and A. J. Heinrichs, *Pennsylvania State University*, *University Park*.

T213 Adding value to corn through the use of a corn grazing system on dairy farms. T. R. Smith*[1], M. Boyd[1], G. Triplett[1], A. Chapa[1], C. Herndon[1], J. Murphy[2], and B. J. McClenton[1], [1]*Mississippi State University*, *Starkville*, [2]*Coastal Plain Branch Experiment Station*, *Newton, MS.*

T214 Ruminal and intestinal digestibility of distillers grains with solubles varies by source. D. H. Kleinschmit, J. M. Ladd*, D. J. Schingoethe, K. F. Kalscheur, and A. R. Hippen, *South Dakota State University*, *Brookings*.

T215 Feedstuff stability, intake, and performance of dairy cows fed wet distillers grains treated with a preservative. K. F. Kalscheur*, J. Baez, and D. R. Henning, *South Dakota State University*, *Brookings*.

T216 Evaluation of dried and wet distillers grains included at two concentrations in the diets of lactating dairy cows. J. M. Ladd*, D. J. Schingoethe, K. F. Kalscheur, and A. R Hippen, *South Dakota State University, Brookings.*

T217 Effects of time of feeding and forage to concentrate ratio on rumen fermentation and productivity of lactating dairy cows. A. Nikkhah*, J. C. Plaizier, C. Furedi, and A. D. Kennedy, *University of Manitoba*, *Winnipeg, MB, Canada*.

T218 Effect of free stall pen design on feeding behavior. R. Mentink*, K. Nordlund, T. Bennett, and N. Cook, *University of Wisconsin*, *Madison*.

T219 Effect of feed intake variation on the performance of dairy cows in early lactation. M. A. Shah*[1], K. S. Schwartzkopf-Genswein[1], P. S. Mir[1], and M. R. Murphy[2], [1]*Agriculture and Agri-Food Canada*, *Lethbridge, AB, Canada*, [2]*University of Illinois*, *Urbana*.

T220 Effect of forage particle size on sorting dietary particles by dairy cows. W. Z. Yang* and K. A. Beauchemin, *Research Center, Agriculture and Agri-Food Canada*, *Lethbridge, AB, Canada*.

T221 Effects of corn grain endosperm type and conservation method on milk production and feeding behavior of lactating dairy cows. Y. Ying* and M. S. Allen, *Michigan State University*, *East Lansing*.

T222 Effects of feeding time and forage to concentrate ratio on water intake and drinking behavior of dairy cows. J. Plaizier*, D. Fulawka, A. Nikkhah, and A. Kennedy, *University of Manitoba*, *Winnipeg, MB, Canada*.

Ruminant Nutrition

Methodology and Modeling

Exhibit Hall A

Abstract #

T223 Influence of fermentation method on NDF degradation parameter estimates. D. Bossen[1], D. R. Mertens*[2], and M. R. Weisbjerg[1], [1]*Danish Institute of Agricultural Sciences*, *Foulum, Denmark*, [2]*US Dairy Forage Reseach Center*, *Madison, WI.*

T224 The application of a novel, wireless, automated system for determining the fermentation gas production kinetics of feeds. A. Adesogan*[1], S. Kim[1,2], and N. Krueger[1], [1]*University of Florida*, *Gainesville*, [2]*Gyeongsang National University*, *Jinju, South Korea*.

T225 Comparison of two molecular methods to assess the shift in bacterial population in continuous culture receiving fresh alfalfa or hay with different concentrations of sucrose. C. Ribeiro*, S. Karnati, J. Sylvester, Z. Yu, and M. Eastridge, *The Ohio State University*, *Columbus*.

T226 Measurement of volatile fatty acid interconversion as a means to study the role of thermodynamics in the control of fermentation. E. Ungerfeld*, B. Bequette, S. Owens, and R. Kohn, *University of Maryland*, *College Park*.

T227 Dry matter determination by conventional oven drying and by semi-automatic halogen moisture analyzer methods. C. T. Kadzere*, Z. Liu, and H. Krebs, *North Carolina A&T State University*, *Greensboro*.

T228 A cordless system for continuous ruminal pH recording in dairy cows. O. Alzahal*, B. Rustomo, T. F. Duffield, and B. W. McBride, *University of Guelph*, *Guelph, Ontario, Canada.*

T229 Effect of sampling time on blood metabolites to dairy cows given amino acids, starch and glucose infusions. I. Schei*[1,2], I. A. Boman[1], L. T. Mydland[1], and H. Volden[1,2], [1]*Norwegian University of Life Sciences*, *Aas, Norway*, [2]*TINE BA*, *Aas, Norway*.

T230 Estimating methane emissions from grazing dairy cattle using the SF6 tracer technique. S. Cooper*[1], M. Main[1], C. Benchaar[1,2], D. Lynch[3], and A. H. Fredeen[1], [1]*Nova Scotia Agricultural College*, *Truro, Nova Scotia, Canada*, [2]*Agriculture and Agri-Food Canada, Dairy and Swine R&D Centre*, *Lennoxville, Quebec, Canada*, [3]*Organic Agriculture Centre of Canada*, *Truro, Nova Scotia, Canada*.

T231 Development and evaluation of empirical equations to predict feed passage rate in cattle. S. Seo*[1], L. O. Tedeschi[1], C. G. Schwab[2], and D. G. Fox[1], [1]*Cornell University*, *Ithaca, NY*, [2]*University of New Hampshire*, *Durham*.

T232 Potential of NIR spectroscopy to predict grain vitreousness using whole-plant corn samples. J. Goeser*[1,2], B. A. L. Justen[3], J. Coors[1], and R. Shaver[1], [1]*University of Wisconsin*, *Madison*, [2]*U.S. Dairy Forage Research Center*, *Madison, WI*.

T233 A comparison of three techniques for determining the physical effectiveness factor for use in calculating physically effective NDF. K. W. Cotanch*[1], J. W. Darrah[1], H. M. Dann[1], R. J. Grant[1], and J. Audy[2], [1]*W.H. Miner Agricultural Research Institute*, *Chazy, NY*, [2]*Feed Commodities International*, *Vergennes, VT*.

T234 Pool size and flux of vaccenic acid during in vitro incubation of fresh alfalfa modeled by SAAM II. C. Ribeiro*, M. Eastridge, and D. Palmquist, *The Ohio State University*, *Columbus*.

T235 Rate of disappearance of linoleic and linolenic acids from fresh alfalfa during in vitro incubations estimated by SAAM II. C. Ribeiro*, M. Eastridge, and D. Palmquist, *The Ohio State University*, *Columbus*.

T236 Modeling nutrient supply to ruminants using NRC-2001 with inputs based on in situ and mobile bag techniques measurements. P. Yu*, *University of Saskatchewan*, *Saskatoon, SK, Canada*.

T237 Comparison between nylon bag method and gas production method in determination of feedstuff nutritive value. A. Nikkhah* and A. Mahdavi, *University of Tehran*, *Karaj, Tehran, Iran*.

Ruminant Nutrition

Small Ruminants

Exhibit Hall A

Abstract #

T238 Effect of dietary copper supplementation on fatty acid profile of muscle, mesenteric, and subcutaneous adipose tissue in goat kids. E. Ellis[1], W. Bergen[1], S. Solaiman[2], and K. Cummins*[1], [1]*Auburn University*, *Auburn*, [2]*Tuskegee University*, *Tuskegee, AL*.

T239 The effect of dietary n-6/n-3 fatty acid ratio on feed intake, digestibility, and fatty acid profiles in muscle of growing lambs. S. C. Kim*[1,2], A. T. Adesogan[1], C. R. Staples[1], and L. Badinga[1], [1]*University of Florida*, *Gainesville*, [2]*Gyeongsang National University*, *Jinju, Gyeongsangnam-do, Korea*.

T240 The effect of supplemental feeding duration on performance of Balouchi ewes. V. Kashki*[1], M. R. Kianzad[2], M. Raisianzadeh[1], M. Nowrozi[1], and A. Davtalabzarghi[1], [1]*Agriculture and Natural Resources Research Center of Khorasan*, *Mashhad, Khorasan, Iran*, [2]*Animal Science Research Institute of Iran*, *Karaj, Tehran, Iran*.

T241 Vitamin E improves the number of transferable embryos and born lambs in superovulated ewes. H. Luo*, S. Zhu, and Z. Jia, *China Agricultural University*, *Beijing, PR. China*.

T242 Effects of mild heat stress and sub-acute ruminal acidosis on acid-base balance and gastrointestinal tissue histology in lambs. N. Odongo*, O. Alzahal, M. Lindinger, T. Duffield, E. Valdes, S. Terrell, and B. McBride, *University of Guelph*, *Guelph, Ontario, Canada*.

T243 Assessment of milk yield and milk composition using soybean hulls as a roughage replacer for Santa Ines ewes. R. C. Araujo, A. V. Pires*, I. Susin, C. Q. Mendes, G. H. Rodrigues, I. U. Packer, and L. V. Gerage, *ESALQ/University of São Paulo*, *Piracicaba, SP, Brazil.*

T244 Apparent digestibility of pomegranate seed fed to sheep. R. Feizi*[1], A. Ghodratnama[1], M. Zahedifar[2], M. Danesh Mesgaran[3], and M. Raisianzadeh[1], [1]*Agricultural and Natural Resources Research Center of Khorasan*, *Mashhad, Khorasan, Iran*, [2]*Animal Science Research Institute Iran*, *Karaj, Tehran, Iran*, [3]*Ferdowsi University of Mashhad*, *Mashhad, Khorasan, Iran*.

T245 Effect of feeding pistachio skins on feed intake, milk yield and milk composition in lactating saanen goats. A. A. Naserian and P. Vahmani*, *Ferdowsi University of Mashhad*, *Khorasan, Iran*.

T246 Dried citrus pulp as a replacement for corn in diets for feedlot lambs. G. H. Rodrigues, I. Susin*, A. V. Pires, C. Q. Mendes, R. C. Araujo, I. U. Packer, and M. F. Ribeiro, *ESALQ/University of São Paulo*, *Piracicaba, SP, Brazil*.

T247 Comparative effects of soybean meal, canola meal, cull chickpeas and cull chickpeas-meat meal on apparent digestibility of diet for sheep. J. F. Obregón*, J. A. Moroyoqui, J. L. Verdugo, and A. Estrada, *FMVZ-Universidad Autónoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*.

T248 The effect of treated wheat straw with molasses, urea and calcium hydroxide on performance of feedlot lambs. R. Feizi*[1] and A. Mohrrery[2], [1]*Agricultural and Natural Resources Research Center of Khorasan*, *Mashhad, Khorasan, Iran*, [2]*Shahrekord University*, *Shahrekord, Chaharmahal Bakhtiari, Iran*.

T249 Growth performance of sheep fed with diets containing soybean meal, cull chickpeas or cull chickpeas-fish meal as protein source. J. F. Obregon*, E. Ibarra, A. Gomez, A. Estrada, and F. G. Rios, *FMVZ-Universidad Autonoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*.

Teaching/Undergraduate and Graduate Education

Exhibit Hall A

T250 Determining graduation rate of students who initially enrolled as animal science majors at the University of Missouri during a consecutive four-year period. G. Jesse* and M. Ellersieck, *University of Missouri*, *Columbia*.

T251 Digital image gallery to sssist learning animal, dairy and poultry sciences: Photos and illustrations solicited. J. Riesen*[1], H. Hafs[2], L. Katz[2], G. McCone[3], P. Schoknecht[4], and M. Stokes[5], [1]*University of Connecticut*, *Storrs*, [2]*Rutgers University*, *New Brunswick, NJ*, [3]*National Agricultural Library*, *Beltsville, MD*, [4]*University of Richmond*, *Richmond, VA*, [5]*University of Maine*, *Orono*.

T252 Perceptions of high school students towards Advanced Life Science: Animals, academic honors curricula. A. Huerta*, B. Hains, and M. Balschweid, *Purdue University*, *West Lafayette, IN*.

SYMPOSIA AND ORAL SESSIONS

ADSA Foundation Scholar Award Lecture - Dairy Foods

Chair: Wendy Powers, Iowa State University

Sponsor: ADSA Foundation

Room 240

9:30 AM Process cheese: Identification of critical formulation and manufacturing parameters that can be used to control functionality. L. Metzger, University of Minnesota, St. Paul.

Animal Health I

Chair: R.L. Larson, University of Missouri

Room 212

Time	Abstract #	
9:30 AM	232	Terminal restriction fragment length polymorphism analysis of gastrointestinal bacteria from conventional and segregated early weaned pigs: colonization and succession of putative pathogens and potential direct fed microbials. M. King*[1], D. Brown[2], E. Davis[2], J. Rehberger[1], J. Spencer[3], D. Webel[3], C. Maxwell[2], and T. Rehberger[1], [1]*Agtech Products Inc.*, *Waukesha, WI*, [2]*University of Arkansas*, *Fayetteville*, [3]*United Feeds*, *Sheridan, IN*.
9:45 AM	233	Herd level risk factors for non-infectious and infectious causes of lameness for Ontario dairy herds. G. Cramer*[1], K. Lissemore[1], D. Kelton[1], C. Guard[2], and K. Leslie[1], [1]*University of Guelph*, *Guelph, ON, Canada*, [2]*Cornell University*, *Ithaca, NY*.
10:00 AM	234	Lactate Dehydrogenase and N-acetyl-b-D-glucosaminidase activities in bovine milk as measures of clinical mastitis. M. G. G. Chagunda*, T. Larsen, M. Bjerring, and K. L. Ingvartsen, *Danish Instituite of Agricultural Sciences, Department of Animal Health, Welfare and Nutrition*, *Tjele, Denmark*.
10:15 AM	235	Acute experimental mastitis perturbs plasma macromineral and a-tocopherol concentrations in early-lactation dairy cows. M. R. Waldron*[1], B. J. Nonnecke[2], R. L. Horst[2], A. E. Kulick[1], and T. R. Overton[1], [1]*Cornell University*, *Ithaca, NY*, [2]*National Animal Disease Center, USDA.ARS*, *Ames, IA*.
10:30 AM	236	Evaluation of the PetrifilmÔ Culture System forthe identification of mastitis bacteria as compared to standard bacteriological methods. K. Leslie*[1], M. Walker[2], E. Vernooy[1], and A. Bashiri[1], [1]*University of Guelph*, *Guelph, Ontario, Canada*, [2]*Atlantic Veterinary College, University of Prince Edward Island*, *Charlottetown, Prince Edward Island, Canada*.
10:45 AM	237	Association between local (udder) clinical signs and important outcomes of clinical mastitis episodes in dairy cattle. J. Wenz*, R. Elia, K. Whitman, and F. Garry, *Colorado State University*, *Ft. Collins*.
11:00 AM		Break

11:15 AM	238	Plasma paraoxonase could be a good index of liver activity in dairy cows. M. Bionaz*, E. Trevisi, A. Ferrari, and G. Bertoni, *Istituto di Zootecnica, Facoltà di Agraria, U.C.S.C.*, *Piacenza, Italy*.
11:30 AM	239	A model to predict the reproductive status of cattle throughout the reproductive cycle. N. C. Friggens* and M. G. G. Chagunda, *Danish Institute of Agricultural Sciences*, *Tjele, Denmark*.
11:45 AM	240	The effects of glucosamine and chondroitin sulfate on long term cartilage explants. P. S. Chan and M. W. Orth*, *Michigan State University*, *East Lansing*.
12:00 PM	241	Performance and health of group-housed dairy calves fed milk automatically verses manually. R. Engelbrecht Pedersen*[1], F. Skjøth[1], J. Tind Sørensen[2], and J. Hindhede[2], [1]*Danish Agricultural Advisory Service*, *Denmark*, [2]*Danish Institute of Agricultural Sciences*, *Denmark*.
12:15 PM	242	Impact of subclinical metabolic disease on risk of early lactation culling. T. Duffield*, S. LeBlanc, and K. Leslie, *University of Guelph*, *Guelph, Ontario, Canada*.

SYMPOSIUM

Beef Species

Vertical Coordination in the Beef Industry:

Implications for Animal, Information, and Enterprise Management

Chair: Chris Reinhardt, Intervet, Inc.

Ballroom A

Time	Abstract #	
9:30 AM	243	National Animal Identification: An update. V. E. Ragan*, *USDA APHIS*, *Washington, DC*.
10:00 AM	244	Implications of beef system vertical coordination on animal identification and data handling. D. A. Blasi*, *Kansas State University*, *Manhattan*.
10:30 AM	245	Creating systems to produce high quality beef. D. B. Faulkner* and L. L. Berger, *University of Illinois*, *Urbana*.
11:00 AM	246	Managing a beef production unit as part of a vertically coordinated supply chain. W. L. Mies*, *eMerge Interactive*, *College Station, TX*.
11:30 AM		Implications of Beef System Vertical Coordination: a Latin American Perspective. J. Barrio.

Breeding and Genetics

Dairy Cattle Breeding for Non-Production Traits I

Chair: Gary Rogers, University of Tennessee

Room 203

Time	Abstract #	
9:30 AM	247	Detection of QTL affecting mastitis resistance traits and SCS in Canadian Holsteins. J. Moro-Mendez* and J. F. Hayes, *McGill University*, *Ste-Anne-de-Bellevue, QC, Canada*.
9:45 AM	248	Characterization of FEZL effects on SCS in a sample of North American Holsteins. T. S. Sonstegard*, C. P. Van Tassell, and R. Li, *USDA, ARS, Bovine Functional Genomics Laboratory*, *Beltsville, MD*.
10:00 AM	249	Danish Holstein show inbreeding depression for udder health. A. C. Sørensen*[1,2], P. Madsen[1], M. K. Sørensen[1], and P. Berg[1], [1]*Danish Institute of Agricultural Sciences*, *Tjele, Denmark*, [2]*Royal Veterinary and Agricultural University*, *Frederiksberg C, Denmark*.
10:15 AM	250	Effects of ancestral consanguinity on inbreeding depression for yield traits and somatic cell score in Jersey cows. D. Gulisija*, D. Gianola, and K. A. Weigel, *University of Wisconsin*, *Madison*.
10:30 AM	251	Between-founder heterogeneity in inbreeding depression for production and somatic cell score in Jersey cows. D. Gulisija*[1], D. Gianola[1], K. A. Weigel[1], and M. A. Toro[2], [1]*Department of Dairy Science, University of Wisconsin-Madison*, [2]*Departamento de Mejora Genética y Biotecnología, INIA*, *Madrid, Spain*.

10:45 AM	252	Variance components of test-day milk, fat, and protein production, and somatic cell score from all parities of dairy cows in South-eastern Sicily estimated with a random regression model. A. P. W. De Roos*[1], M. H. Pool[2], M. Caccamo[3], G. Azzaro[3], J. D. Ferguson[4], and G. Licitra[3], [1]*NRS*, *Arnhem, The Netherlands*, [2]*Animal Sciences Group*, *Lelystad, The Netherlands*, [3]*CoRFiLaC*, *Regione Siciliana, Ragusa, Italy*, [4]*University of Pennsylvania*, *Kennett Square*.

Forages and Pastures

Beef Cattle and Pastures

Chair: Gary Hill, University of Georgia

Room 207

Time	Abstract #	
9:30 AM	253	Timing of herbage allocation 1. Effect on daily grazing pattern of beef heifers. P. Gregorini*[1,2], M. Eirin[1], R. Refi[1], M. Ursino[1], R. Flores[2], and O. Ansin[2], [1]*FCAyF Universidad Nacional de La Plata*, *La Plata, Buenos Aires, Argentina*, [2]*University of Arkansas*, *Fayeteville*.
9:45 AM	254	Timing of herbage allocation 2. Effect on beef heifer weight gain, body condition score and daily herbage intake. M. Eirin[1], P. Gregorini*[1,2], C. Masino[1], R. Refi[1], M. Ursino[1], and O. Ansin[1], [1]*FCAyF Universidad Nacional de La Plata*, *La Plata, Buenos Aires, Argentina*, [2]*University of Arkansas*, *Fayeteville*.
10:00 AM	255	Fatty acid composition in subcutaneous and intramuscular fat of steers grazing pasture supplemented with corn oil. E. Pavan*[1,2] and S. Duckett[1], [1]*University of Georgia*, *Athens*, [2]*Instituto Nacional de Tecnología Agropecuaria*, *Balcarce, Bs. As., Argentina*.
10:15 AM	256	Corn oil supplementation to pasture fed steers: in vivo digestibility, performance and carcass traits. E. Pavan*[1,2], S. Duckett[1], and J. Long[1], [1]*University of Georgia*, *Athens*, [2]*Instituto Nacional de Tecnología Agropecuaria*, *Balcarce, Bs. As., Argentina*.
10:30 AM	257	Effects of winter stocker growth rate and finishing diet on beef rib composition and color. R. N. Sonon, Jr.*[1], S. K. Duckett[1], J. Neel[2], C. Realini[1], J. Fontenot[3], and W. Clapham[2], [1]*University of Georgia*, *Athens*, [2]*USDA-ARS*, *Beaver, WV*, [3]*Virginia Polytechnic Institute and State University*, *Blacksburg*.
10:45 AM	258	Cow-calf performance on Coastal or Tifton 85 pastures with access to aeschynomene for creep grazing. V. A. Corriher*[1], G. M. Hill[1], J. G. Andrae[2], M. A. Froetschel[1], and B. G. Mullinix, Jr.[1], [1]*University of Georgia*, *Tifton*, [2]*University of Georgia*, *Athens*.
11:00 AM	259	Coastal, Russell, and Tifton 85 bermudagrass hay and supplement intake and digestion by steers. G. M. Hill*[1], J. G. Andrae[2], B. C. Hand[1], and B. G. Mullinix, Jr.[1], [1]*University of Georgia*, *Tifton*, [2]*University of Georgia*, *Athens*.
11:15 AM	260	Effects of winter stocker growth rate and finishing diet on beef longissimus fatty acid composition. R. N. Sonon, Jr.*[1], S. K. Duckett[1], J. Neel[2], C. Realini[1], J. Fontenot[3], and W. Clapham[2], [1]*University of Georgia*, *Athens*, [2]*USDA-ARS*, *Beaver, WV*, [3]*Virginia Polytechnic Institute and State University*, *Blacksburg*.
11:30 AM	261	Volatile flavor compounds in beef from cattle finished on pastures or concentrates. S. Duckett*[1], J. Neel[2], W. Clapham[2], and J. Fontenot[3], [1]*University of Georgia*, *Athens*, [2]*USDA-ARS*, *Beaver, WV*, [3]*Virginia Polytechnic and State University*, *Blacksburg*.
11:45 AM	262	Using stockpiled non-toxic endophyte-infected tall fescue to develop beef heifers in the Piedmont of North Carolina. E. J. Oliphant*, M. H. Poore, J. T. Green, and M. E. Hockett, *North Carolina State University*, *Raleigh*.
12:00 PM	263	Effect of condensed corn distiller soluble supplementation on the fatty acid composition of ribeye steaks from pasture-fed and feedlot steers. H. Koknaroglu*[1], P. Tsengeg[2], T. Knight[2], D. Beitz[2], and P. Hoffman[2], [1]*Suleyman Demirel University*, *Isparta, Turkey*, [2]*Iowa State University*, *Ames*.
12:15 PM	264	Characterization of protein degradability and diet nutritive value of beef cows grazing native range in eastern colorado. V. A. Aznarez*, J. C. Whittier, T. E. Engle, P. A. G. A Sampaio, and W. S. Mackay, *Colorado State University*, *Fort Collins*.

Graduate Student Competition

CSAS Only

Chair: Johanne Chiquette, Agriculture Canada

Room 243

Time	Abstract #	
9:30 AM	265	Diurnal Variation of Blood Metabolites in Response to Time of Feeding and Dietary Forage to Concentrate Ratio in Lactating Dairy Cows. A. Nikkhah*, J. C. Plaizier, C. Furedi, and A. D. Kennedy, *University of Manitoba*, *Winnipeg, MB, Canada*.
9:45 AM	266	Citrulline synthesis limits whole-body arginine synthesis in piglets fed an arginine deficient diet. K. L. Urschel*[1], A. K. Shoveller[1], R. Uwiera[2], P. B. Pencharz[1,3], and R. O. Ball[1,3], [1]*Department of Agricultural, Food and Nutritional Science, University of Alberta*, *Edmonton, Alberta, Canada*, [2]*Health and Laboratory Animal Sciences, University of Alberta*, *Edmonton, Alberta, Canada*, [3]*Departments of Paediatrics and Nutritional Science, University of Toronto*, *Toronto, Ontario, Canada*.
10:00 AM	267	Early weaning up-regulates the capacity of the small intestinal sucrase-isomaltase and maltase-glucoamylase hydrolysis of maltose in the neonatal pig. D. Lackeyram*[1], D. Pham[1], Q. Liu[2], Y. Mine[1], M. Bakovic[1], B. L. Nichols[3], and M. Z. Fan[1], [1]*University of Guelph*, *Guelph, Ontario, Canada*, [2]*Agri-Food Canada*, *Guelph, Ontario, Canada*, [3]*Baylor College of Medicine*, *Houston, Tx*.
10:15 AM	268	Ultrasonic evaluation of intramuscular fat content in yearling beef bulls. R. Bergen*, S. Miller, I. Mandell, and C. Campbell, *University of Guelph*, *Guelph, Ontario, Canada*.
10:30 AM	269	Evaluation of the NRC (1996) model for predicting feed requirements for beef cows in western Canada. J. L. Bourne*[1], J. J. McKinnon[1], H. C. Block[1], and H. A. Lardner[2], [1]*University of Saskatchewan*, *Saskatoon, SK, Canada*, [2]*Western Beef Development Centre*, *Humboldt, SK, Canada*.
10:45 AM	270	Postnatal changes of pancreatic and hepatic fractional protein synthesis rates in piglets measured by an intraperitoneal flooding dose of L-[ring-2H5]phenylalanine. X. Yang*[1], L. Liu[1], G. Werchola[1], Y. Mine[1], Q. Liu[2], and M. Fan[1], [1]*University of Guelph*, *Guelph, ON, Canada*, [2]*Agriculture and Agri-Food Canada*, *Guelph, ON, Canada*.
11:00 AM	271	Changes in the plasma citrulline concentration are a predictor of alterations in gut mucosal morphology and functions in the piglet. D. Lackeyram*[1], D. G. Burrin[2], Y. Mine[1], and M. Z. Fan[1], [1]*University of Guelph*, *Guelph, ON, Canada*, [2]*Baylor College of Medicine*, *Houston, TX.*
11:15 AM	272	Effect of pelleted barley on performance and carcass quality of feedlot steers. L. M. Williams*[1], J. J. McKinnon[1], V. R. Racz[1], D. A. Christensen[1], and K. Ataku[2], [1]*University of Saskatchewan*, *Saskatoon, SK, Canada*, [2]*Rakuno Gakuen University*, *Ebetsu, Hokkaido, Japan*.

SYMPOSIUM

Growth and Development

Postnatal Development as a Harbinger of Future Performance

Chair: Mike Akers, Virginia Tech

Sponsor: EAAP

Room 200

Time	Abstract #	
9:30 AM		Introduction. Mike Akers, *Virgina Tech*.
9:35 AM	273	Hormone and growth factor regulation of tissue remodeling in the mammary gland. D. Flint*[1], G. Allan[1], J. Beattie[1], M. Travers[1], M. Barber[1], A. Kolb[1], C. Whitelaw[2], M. Boutinaud[3], N. Binart[4], and P. Kelly[4], [1]*Hannah Research Institute*, *Ayr, UK*, [2]*Roslin Institute*, *Midlothian, Edinburgh, UK*, [3]*INRA Unite Mixte de Recherches Sur la Production du Lait*, *Saint Gilles, France*, [4]*Inserm Unit 584, Hormone Targets*, *Faculty of Medicine Rene Descartes, Paris 5.*

10:20 AM	274	Effects of modified calf growth on mammary development, endocrine physiology, and performance. M. Vestergaard*[1], S. Purup[1], M. S. Weber Nielsen[2], Y. R. Boisclair[3], and K. Sejrsen[1], [1]*Danish Institute of Agricultural Sciences*, *Tjele, Denmark*, [2]*Michigan State University*, *East Lansing*, [3]*Cornell University*, *Ithaca, NY*.
11:05 AM	275	Tissue proteolytic enzymes: Modifiers of muscle and adipose tissue. G. Hausman*, *USDA ARS*, *Athens, GA*.
11:50 AM	276	Tumor necrosis factor-a (TNF-a) decreases media content of epithelial cell-derived insulin-like growth factor binding proteins (IGFBP) in part through increased proteolytic degradation of IGFBP-3. T. H. Elsasser*[1], T. J. Caperna[1], J. L. Sartin[2], C. Li[1], and S. Kahl[1], [1]*USDA, Agriculture Research Service*, *Beltsville, MD*, [2]*Auburn University*, *Auburn, AL*.
12:05 PM	277	Effects of diet and bST on expression of leptin and leptin-receptor in mammary parenchyma of heifers. B. J. Lew*[1,2], J. S. Liesman[1], M. D. S. Oliveira[2], and M. J. VandeHaar[1], [1]*Michigan State University*, *East Lansing*, [2]*Sao Paulo State University (UNESP)*, *Jaboticabal, SP, Brazil*.
12:20 PM	278	Beta-adrenergic receptor agonist-induced skeletal muscle hypertrophy is fiber type-specific through differential involvement of the MAPK signaling pathway. H. Shi*, A. Ricome, K. Hannon, A. Grant, and D. Gerrard, *Purdue University*, *West Lafayette, IN*.

Lactation Biology

Conjugated Linoleic Acid

Chair: Lance Baumgard, The University of Arizona

Room 211

Time	Abstract #	
9:30 AM	279	Direct assessment of the conversion of trans-vaccenic acid (TVA) to cis-9, trans-11 conjugated linoleic acid (CLA) in lactating dairy cattle. E. Mosley* and M. McGuire, *University of Idaho*, *Moscow*.
9:45 AM	280	Quantitative importance of endogenous cis-9, trans-11 conjugated linoleic acid synthesis in dairy cows. K. Shingfield*, S. Ahvenjärvi, V. Toivonen, A. Vanhatalo, and P. Huhtanen, *MTT Agrifood Research Finland*, *Jokioinen, Finland*.
10:00 AM	281	Trans-10, cis-12 conjugated linoleic acid reduces milk fat synthesis in lactating sheep. A. L. Lock[1], J. W. Perfield II*[1], B. M. Teles[2], D. E. Bauman[1], and L. A. Sinclair[2], [1]*Cornell University*, *Ithaca, NY*, [2]*Harper Adams University College*, *Newport, Shropshire, UK*.
10:15 AM	282	A comparison of trans-10, cis-12 CLA effectiveness at inducing milk fat depression (MFD) in early vs. established lactation. C. Moore, J. Kay, R. Rhoads, and L. Baumgard*, *University ofArizona*, *Tucson*.
10:30 AM	283	The effect of conjugated linoleic acid on cell growth and glucose transport in bovine mammary cells. A. F. Keating*[1,2], F. Q. Zhao[2], R. J. Weselake[1], and J. J. Kennelly[1], [1]*Dairy Research Group, Agricultural, Food and Nutritional sciences, University of Alberta*, *Edmonton, Canada.*, [2]*Lactation and Mammary Gland Biology Group, Department of animal science, University of Vermont*, *Burlington, VT*.
10:45 AM	284	Trans-9, cis-11 conjugated linoleic acid (CLA) reduces milk fat synthesis in lactating dairy cows. J. W. Perfield II*[1], A. L. Lock[1], A. Sæbø[2], J. M. Griinari[3], and D. E. Bauman[1], [1]*Cornell University*, *Ithaca, NY*, [2]*Natural ASA*, *Hovdebygda, Norway*, [3]*Clanet Ltd*, *Espoo, Finland*.
11:00 AM	285	Effects of dietary CLA on thermogenesis and body temperature indices in lactating dairy cows. M. Rhoads, R. Rhoads, L. Odens, R. Burgos, S. Baker, B. Pollard, C. Moore, J. Kay, M. VanBaale, R. Collier, and L. Baumgard*, *The University of Arizona*, *Tucson*.

Nonruminant Nutrition

Amino Acids

Chairs: Robert O. Myer, University of Florida, and Keith D. Haydon, Prince Agri Products

Room 202

Time	Abstract #	
9:30 AM	286	Evaluation of gender and lysine during the nursery period. G. M. Hill*, S. K. Baidoo, G. L. Cromwell, D. C. Mahan, J. L. Nelssen, and H. H. Stein, *NCCC-42 Committee on Swine Nutrition*.
9:45 AM	287	The methionine requirement varies between individual weaned pigs fed a corn-soybean diet. S. Moehn*[1], A. Shoveller[1], M. Rademacher[2], and R. Ball[1], [1]*University of Alberta*, *Edmonton, Alberta, Canada*, [2]*Degussa AG*, *Hanau, Germany*.
10:00 AM	288	Biological effectiveness of commercial methionine sources in piglet diets based on an equimolar trial design. M. Locatelli*[1] and R. Hall[2], [1]*Degussa Corporation*, *Kennesaw, GA*, [2]*Consultant*, *Franklin, IN*.
10:15 AM	289	Effect of replacing fish meal with synthetic amino acids in diets for 8 to 15 kg pigs. B. W. Ratliff*[1], A. M. Gaines[1], G. L. Allee[1], and J. L. Usry[2], [1]*University of Missouri-Columbia*, *Columbia*, [2]*Ajinomoto Heartland LLC*, *Chicago, IL*.
10:30 AM	290	Estimation of the true ileal digestible sulfur amino acid:lysine ratio for growing pigs weighing 28-49 kilograms. G. F. Yi*[1], A. M. Gaines[2], B. W. Ratliff[2], P. Srichana[2], G. L. Allee[2], C. D. Knight[1], and K. R. Perryman[1], [1]*Novus International, Inc.*, *St. Charles, MO*, [2]*University of Missouri*, *Columbia*.
10:45 AM	291	Effects of protein source on true ileal digestible (TID) isoleucine:lysine ratio in pigs from 58 to 76 kg. S. X. Fu*[1], R. W. Fent[1], P. Srichana[1], B. W. Ratliff[1], G. L. Gary[1], and J. L. Usry[2], [1]*University of Missouri-Columbia*, [2]*Ajinomoto Heartland, LLC*, *Chicago, IL*.
11:00 AM	292	Effect of L-Lysine·HCl supplementation in 52 to 104 kg pigs reared under commercial conditions. P. Srichana*[1], A. M. Gaines[1], B. W. Ratliff[1], G. L. Allee[1], and J. L. Usry[2], [1]*University of Missouri*, *Columbia*, [2]*Ajinimoto Heartland LLC*, *Chicago, IL*.
11:15 AM	293	Response of boar and gilt pigs in the weight range 60 to 100 kg to lysine concentration in the diet. M. K. O'Connell[1,2], P. B. Lynch*[1], J. V. O'Doherty[2], and P. G. Lawlor[1], [1]*Moorepark Research Centre*, *Fermoy, Co. Cork, Ireland*, [2]*University College*, *Belfield, Dublin, Ireland*.
11:30 AM	294	Influence of diet protein level and season on growth performance of finishing pigs. R. Myer*, J. Brendemuhl, and R. Bucklin, *University of Florida*, *Gainesville*.
11:45 AM	295	Nutrition induced variation in body composition, compensatory growth, cortisol and leptin in growing pigs. H. R. Martínez* and C. F. M. de Lange, *The University of Guelph*, *Guelph, Ontario, Canada*.
12:00 PM	296	Impact of time of feeding of lysine-deficient diets and dietary protein level on the intramuscular fat content of pork. E. Castaneda*[1,2], M. Ellis[1], and F. McKeith[1], [1]*University of Illinois*, *Urbana-Champaign*, [2]*Consejo Nacional de Ciencia y Tecnologia*, *Mexico, Distrito Federal. Mexico*.
12:15 PM	297	The effect of feeding frequency on energy and amino acid digestibility by growing pigs. A. Pahm*, F. Chastanet, C. Pedersen, and H. H. Stein, *South Dakota State University*, *Brookings*.

Physiology and Endocrinology III

Chair: Arnold Hippen, South Dakota State University, Brookings

Room 205

Time	Abstract #	
9:30 AM	298	Measuring aseasonality in a crossbred pedigree developed for mapping QTL. R. G. Mateescu*, M. L. Thonney, W. R. Butler, and M. C. Smith, *Cornell University*, *Ithaca, NY*.
9:45 AM	299	Advanced reduction of estradiol negative feedback on secretion of LH facilitates induction of precocious puberty in heifers that are weaned early and fed a high-concentrate diet. C. L. Gasser*, G. A. Bridges, M. L. Mussard, D. M. Dauch, D. E. Grum, J. E. Kinder, and M. L. Day, *The Ohio State University*, *Columbus*.
10:00 AM	300	Effect of maternal undernutrition on capillary vascularity of the bovine placentome. K. Vonnahme*[1], L. Reynolds[1], P. Borowicz[1], D. Miller[1], B. Caton[1], B. Hess[2], and S. Ford[2], [1]*North Dakota State University*, *Fargo*, [2]*University of Wyoming*, *Laramie*.

10:15 AM	301	Effects of estradiol (E2) and flaxseed meal (FSM) on organ weights in ovariectomized (OVX) ewes. M O'Neil*, G. P. Lardy, L. P. Reynolds, J. S. Caton, and K. A. Vonnahme, *North Dakota State University*, *Fargo*.
10:30 AM	302	17ß-estradiol concentrations in Holstein whole milk. D. A. Pape-Zambito*, A. L. Magliaro, and R. S. Kensinger, *Pennsylvania State University*, *University Park*.
10:45 AM	303	The use of melatonin and progestagen to advance the breeding season in Awassi sheep. R. Kridli* and H. Muhdi, *Jordan University of Science and Technology*, *Irbid, Jordan*.
11:00 AM		Break
11:15 AM	304	Plasma progesterone profiles in response to repeated blood sampling after estrus and mating in pregnant and open ewes. R. W. Godfrey*[1], R. E. Dodson[1], and S. T. Willard[2], [1]*University of the Virgin Islands*, *St. Croix, VI*, [2]*Mississippi State University*, *Mississippi State*.
11:30 AM	305	Plasma progesterone profiles in response to repeated blood sampling in the late gestation ewe as influenced by time of day. S. Willard*[1], R. Dodson[2], and R. Godfrey[2], [1]*Mississippi State University*, *Mississippi State*, [2]*University of the Virgin Islands*, *St. Croix, VI*.
11:45 AM	306	Effect of ovulatory follicle size and standing estrus on estradiol concentrations, LH surge, and ovulation. G. A. Perry*[1] and D. C. Busch[2], [1]*South Dakota State University*, *Brookings*, [2]*University of Missouri*, *Columbia*.
12:00 PM	307	Effect of ovulatory follicle size and expression of estrus on progesterone secretion in beef cows. D. C. Busch*[1], J. A. Atkins[1], J. F. Bader[1], D. J. Schafer[1], D. J. Patterson[1], T. W. Geary[2], and M. F. Smith[1], [1]*University of Missouri*, *Columbia*, [2]*USDA-ARS, Fort Keogh Livestock and Range Research Laboratory*, *Miles City, MT*.
12:15 PM	308	Corpus luteum size and function following single and double ovulations in non lactating dairy cows. G. E. Mann*, R. S. Robinson, L. M. Hicking, M. P. Green, and M. G. Hunter, *University of Nottingham,*, *Sutton Bonington Campus, Loughborough, UK*.

Production, Management and the Environment

Health and Reproduction

Chair: Sandy Johnson, Kansas State University

Room 242

Time	Abstract #	
9:30 AM	309	Clinical and subclinical diseases predisposing to Johne's disease. E. Raizman*[1], S. Wells[1], S. Godden[1], M. Oakes[2], and J. Fetrwo[1], [1]*University of Minnesota*, *St Paul*, [2]*Univeristy of Minesota*, *Minneapolis*.
9:45 AM	310	Evaluation of environmental sampling to determine distribution and herd infection status for Mycobacterium avium subspecies paratuberculosis. J. Lombard*[1], R. Smith[2], B. Wagner[1], and B. McCluskey[1], [1]*USDA:APHIS:VS; Centers for Epidemiology and Animal Health*, *Fort Collins, CO*, [2]*Cornell University*, *Ithaca, NY*.
10:00 AM	311	Evaluation of fecal culture pooling methods for detection of Mycobacterium avium subspecies paratuberculosis in a beef herd. S. Jensen*[1,2], J. Lombard[1,2], and F. Garry[1], [1]*Colorado State University*, *Fort Collins*, [2]*USDA:APHIS:VS; Centers for Epidemiology and Animal Health*, *Fort Collins, CO*.
10:15 AM	312	Effects of photoperiod on immune function in piglets at three different weaning ages. S. R. Niekamp*, M. A. Sutherland, G. E. Dahl, and J. L. Salak-Johnson, *University of Illinois*, *Urbana*.
10:30 AM		Break
10:45 AM	313	Productive performance of primiparous sows progeny in nursery period. C. Piñeiro*[1], J. Morales[1], M. Piñeiro[1], X. Manteca[2], and G. G. Mateos[3], [1]*PigCHAMP Pro Europa, S.A.*, *Segovia, Spain*, [2]*U.A. Barcelona*, *Spain*, [3]*U.P. Madrid*, *Spain*.
11:00 AM	314	Clinical trial testing the effect of vaccination or direct-fed microbial products on colonization of E. coli O157:H7 at the terminal rectum of cattle. R. Peterson*, D. Smith, R. Moxley, T. Klopfenstein, G. Erickson, and S. Hinkley, *University of Nebraska - Lincoln*, *Lincoln*.
11:15 AM	315	Factors influencing first service conception rate in Ragusa and Pennsylvania dairy herds. J. D. Ferguson*[1], G. Azzaro[2], M. Caccamo[2], and G. Licitra[2,3], [1]*University of Pennsylvania*, *Kennett Square*, [2]*CoRFiLaC, Regione Siciliana*, *Ragusa, Italy*, [3]*D.A.C.P.A., University of Catania*, *Catania, Italy*.
11:30 AM	316	Disposal reporting and disposition of culled cows by parity and herd size. A. H. Sanders* and H. D. Norman, *Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*.

Ruminant Nutrition

Dairy - Transition Cows

Chair: Gabriella A. Varga, Pennsylvania State University

Room 206

Time	Abstract #	
9:30 AM	317	Effect of transition diet on production performance and metabolism in periparturient dairy cows. J. Guo*, R. Peters, and R. Kohn, *University of Maryland*, *College Park*.
9:45 AM	318	Microarray analysis of the immunoregulatory actions of OmniGen-AF in periparturient dairy cattle. Y. Wang*[1], J. Burton[2], and N. Forsberg[1], [1]*Oregon State University*, *Corvallis*, [2]*Michigan State University*, *East Lansing*.
10:00 AM	319	Effect of CLA dose on milk production in early lactation dairy cows. M. J. de Veth*[1], W. M. van Straalen[2], W Koch[1], T. Keller[1], R. Hayler[1], and A. - M. Pfeiffer[1], [1]*BASF-AG*, *Offenbach, Germany*, [2]*Schothorst Feed Research B.V.*, *Lelystad, The Netherlands*.
10:15 AM	320	Dietary L-carnitine alters hepatic fatty acid metabolism and decreases liver lipid in periparturient Holstein cows. D. B. Carlson*[1], N. B. Litherland[1], J. W. McFadden[1], A. D'Angelo[1], J. C. Woodworth[2], and J. K. Drackley[1], [1]*University of Illinois*, *Urbana*, [2]*Lonza, Inc.*, *Fair Lawn, NJ*.
10:30 AM	321	Influence of dietary L-carnitine on production and metabolism during the periparturient period in Holstein cows. D. B. Carlson*[1], N. B. Litherland[1], J. W. McFadden[1], J. C. Woodworth[2], and J. K. Drackley[1], [1]*University of Illinois*, *Urbana, IL*, [2]*Lonza, Inc.*, *Fair Lawn, NJ*.
10:45 AM	322	Effect of dietary inclusion of cane molasses in dry cow diets on prepartum and postpartum performance. W. F. Miller*, J. E. Shirley, J. M. Rottinghaus, E. C. Titgemeyer, and D. E. Johnson, *Kansas State University*, *Manhattan*.
11:00 AM	323	Effects of varying transition diets fed to Holstein cows at two body condition scores on plasma concentrations of IGF-1 in late pregnancy and early lactation. T. Moyes*[1], C. Stockdale[2], S. Humphrys[3], and K. Macmillan[1], [1]*The University of Melbourne*, *Werribee, Victoria, Australia*, [2]*Department of Primary Industries*, *Kyabram, Victoria, Australia*, [3]*Primegro Ltd*, *Thebarton, South Australia, Australia*.
11:15 AM	324	The effect of precalving DMI on milk production is dependent on DMI in early lactation in grazing dairy systems. J. R. Roche*, *Dexcel*, *Hamilton, New Zealand*.

Ruminant Nutrition

Dairy and Beef - Minerals

Chair: Terry Engle, Colorado State University

Ballroom B

Time	Abstract #	
9:30 AM	325	Dietary cation-anion difference and dietary protein effects on performance and acid-base status of dairy cows in early lactation. W. Hu*[1], M. R. Murphy[1], P. D. Constable[1], and E. Block[2], [1]*University of Illinois*, *Urbana*, [2]*Church & Dwight Co., Inc.*, *Princeton, NJ*.
9:45 AM	326	Dietary cation-anion difference effect on performance and acid-base status of dairy cows in early lactation. W. Hu*[1], M. R. Murphy[1], P. D. Constable[1], and E. Block[2], [1]*University of Illinois*, *Urbana*, [2]*Church & Dwight Co., Inc.*, *Princeton, NJ*.
10:00 AM	327	Utilization of phosphorus in lactating cows fed varying amounts of phosphorus and sources of fiber. Z. Wu*, *Pennsylvania State University*, *University Park*.
10:15 AM	328	Estimate of phosphorus (P) maintenance requirement of lactating dairy cows over a range of feed intake rates. Z. H. Myers and D. K. Beede*, *Michigan State University*, *East Lansing*.
10:30 AM	329	Effect of supplementing lactating dairy cows on a commercial dairy with chromium-L-methionine. M. Etchebarne[1], M. Socha*[2], and D. Tomlinson[2], [1]*Michel A. Etchebarne PhD, Inc.*, *Modesto, CA*, [2]*Zinpro Corporation*, *Eden Prairie, MN*.

10:45 AM	330	Selenium yeast improved selenium status in blood and milk in first calf heifers. R. Wallace*[1], R. Aberle[1], M. Hutjens[1], T. Herdt[2], and I. Yoon[3], [1]*University of Illinois*, *Urbana*, [2]*Michigan State University*, *East Lansing*, [3]*Diamond V Mills*, *Cedar Rapids, IA*.
11:00 AM	331	Effect of trace mineral source and level on production and fertility of dairy cattle in two successive lactations. J. Nocek*[1], M. Socha[2], and D. Tomlinson[2], [1]*Spruce Haven Farm and Research Center*, *Auburn, NY*, [2]*Zinpro Corporation*, *Eden Prairie, MN*.
11:15 AM	332	Effects of dietary sulfur and sodium bicarbonate on performance of growing and finishing steers. J. W. Spears* and K. Lloyd, *North Carolina State University*, *Raleigh*.
11:30 AM	333	Dietary copper effects on brain copper concentration and brain prion protein characteristics in mature Angus cows. L. R. Legleiter*[1], J. W. Spears[1], J. K. Ahola[2], and T. E. Engle[3], [1]*North Carolina State University*, *Raleigh*, [2]*University of Idaho*, *Caldwell*, [3]*Colorado State University*, *Fort Collins*.
11:45 AM	334	The effect of dietary selenium levels on human health and milk and milk product selenium content when supplemented in dairy cattle diets. J. K. Margerison*[1], J. A. Harrison[1], and D. Wilde[2], [1]*University of Plymouth*, *Plymouth, Devon, UK*, [2]*Alltech (UK) Ltd*, *Stamford, Lincs, UK*.
12:00 PM	335	Long term effects of dietary manganese in beef heifers on performance and manganese status of their offspring. S. L. Hansen*, C. S. Whisnant, K. E. Lloyd, L. R. Legleiter, H. S. Stahlhut, and J. W. Spears, *North Carolina State University*, *Raleigh*.
12:15 PM	336	Effects of nutrient restriction and organically bound selenium on maternal and fetal organ mass in pregnant ewe lambs. M. A. Ward*[1], J. S. Caton[1], J. B. Taylor[2], J. J. Reed[1], P. P. Borowicz[1], K. A. Vonnahme[1], D. A. Redmer[1], and L. P. Reynolds[1], [1]*North Dakota State University*, *Fargo*, [2]*USDA-ARS Sheep Experiment Station*, *Dubois, ID*.

Ruminant Nutrition

Small Ruminants

Chair: Art Goetsch, Langston University

Room 241

Time	Abstract #	
9:30 AM	337	Nutritional evaluation of broccoli (Brassica oleracea) fodder for goats. K. R. Yadav*, B. S. Tewatia, and S. S. Khirwar, *CCS Haryana Agricultural University*, *Hisar, Haryana, India*.
9:45 AM	338	Effects of linseed and cottonseed supplementation on fatty acid composition of goats milk and muscle of suckling kids. A. Nudda*, G. Battacone, S. Fancellu, and G. Pulina, *University of Sassari*, *Sassari, Italy*.
10:00 AM	339	Effects of feeding oilseeds on total tract nutrient utilization and milk composition of lactating ewes. R. Zhang, A. Mustafa*, and X. Zhao, *McGill University*, *Ste-Anne-De-Bellevue, QC, Canada*.
10:15 AM	340	Lactational effects of including soybean oil in the concentrate of dairy goats to increase CLA in milk. M. A. Bouattour, R. Casals*, E. Albanell, X. Such, and G. Caja, *Universitat Autònoma de Barcelona*, *Bellaterra, Barcelona, Spain*.
10:30 AM	341	Effects of addition of different fats to flushing diet on reproduction in ewes. A. Nikkhah*, H. Sadeghi Panah, and A. Zare, *University of Tehran*, *Karaj, Tehran, Iran*.
10:45 AM	342	Effects of abomasal infusion of wheat starch or cottonseed oil on performance of lactating Sannen dairy goats. M. Bashtani, A. A. Naserian*, and R. Valizadeh, *Ferdowsi University of Mashhad*, *Mashhad, Khorasan, Iran*.
11:00 AM	343	Effects of abomasal infusion of glucose or cottonseed oil on performance of lactating Sannen dairy goats. M. Bashtani, A. A. Naserian*, and R. Valizadeh, *Ferdowsi University of Mashhad*, *Mashhad, Khorasan, Iran*.
11:15 AM	344	The effect of live yeast (Saccharomyces cervisiae-1026) on rumen fermentation parameters and blood metabolites of sheep. M. Nowrozi*[1], M. Danesh Messgaran[2], and M. Abazari[1], [1]*Agriculture and Natural Resources Research Center of Khorasan,IRAN*, *Mashhad, Khorasan, Iran*, [2]*Ferdosi university,IRAN*, *Mashhad, Khorasan, Iran*.
11:30 AM	345	Effect of two beta-adrenergic agonists and low energy diet on carcass composition, adipose cell size, blood hormones and metabolites in an Iranian fat-tailed breed of sheep. M. Nowrozi*[1], M. Abazari[1], M. Raisianzadeh[1], A. Zare Shahne[2], and M. Mohammadi[3], [1]*Agriculture and Natural Resources Research Center of Khorasan*, *Mashhad, Khorasan, Iran*, [2]*Tahran University*, *Karaj, Tahran, Iran*, [3]*Guilan University*, *Rasht, Guilan, Iran*.

SYMPOSIUM

Teaching/Undergraduate and Graduate Education

Scholarship of Teaching as Related to Promotion and Tenure

Chair: Michel A. Wattiaux, University of Wisconsin-Madison

Room 244

Time	Abstract #	
9:30 AM		Introduction
9:35 AM	346	The scholarship of teaching and learning: The synergy of scholar and teacher. W. M. Schlegel*, *Indiana University*, *Bloomington*.
10:00 AM		Panel Reaction. B. Moser, *The Ohio State University*; K. Plaut, *Michigan State University*; R. Rastani, *University of Wisconsin-Madison.*
10:15 AM	347	Promotion and tenure on the basis of excellence in teaching: An institutional perspective. L. Connor*[1] and J. Armstrong[2], [1]*University of Florida*, *Gainesville*, [2]*Michigan State University*, *East Lansing*.
10:40 AM		Panel Reaction. L. Martin, *Oklahoma State University*; M. Fernandez, *The Pennsylvania State University*; P. Schoknecht, *University of Richmond.*
10:55 AM	348	Promotion and tenure on the basis of excellence in teaching: A faculty perspective. M. Wattiaux*[1] and J. Moore[2], [1]*University of Wisconsin*, *Madison*, [2]*North Carolina State University*, *Raleigh*.
11:20 AM		Panel Reaction. K. Esbenshade, *North Carolina State University*; D. Coleman, *Auburn University*; B. Skaar, *Iowa State University*.
11:35 AM		Discussion: Creating a Culture Where Teaching is Valued.

Breeding and Genetics

International Evaluation of Dairy Bulls – In Honor of Dr. Rex Powell

Chair: Duane Norman, Animal Improvement Programs Laboratory

Room 203

Time	Abstract #	
11:00 AM		Introductory remarks. Duane Norman, *AIPL*.
11:15 AM	349	Dr. Powell's contribution to international comparison of dairy bulls. F. Miglior*[1,2], [1]*Agriculture and Agri-Food Canada - Dairy and Swine Research and Development Centre*, *Lennoxville, QC*, [2]*Canadian Dairy Network*, *Guelph, ON, Canada*.
12:00 PM	350	Country bias in international dairy bull evaluations. R. L. Powell*, A. H. Sanders, and H. D. Norman, *Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*.
12:15 PM	351	Multiple-trait multiple-country genetic evaluations of dairy bulls for udder health traits. T. Mark*[1] and P. G. Sullivan[2,3], [1]*Interbull Centre*, *SLU, Uppsala, Sweden*, [2]*Canadian Dairy Network*, *Guelph, Ontario, Canada*, [3]*Beef Improvement Ontario*, *Guelph, Ontario, Canada*.

OTHER EVENTS

ADSA Production Division Business Meeting

Room 236

11:30 AM

ADSA Dairy Foods Business Meeting

Room 240

11:30 AM

SYMPOSIA AND ORAL SESSIONS

SYMPOSIUM

ADSA Southern Section Symposium

Innovative Approaches to Address the Changing Needs of Our Dairy Industry

Chair: Brinton Hopkins, North Carolina State University

Sponsor: Pfizer Animal Health

Room 242

Time	Abstract #	
2:00 PM		Introduction. Brinton Hopkins, *North Carolina State University, Raleigh*.
2:05 PM	352	Innovative staffing models to enhance dairy educational programs. V. Ishler*, L. Holden, and R. Stup, *Pennsylvania State University*, *University Park*.
2:35 PM		Overview of our Undergraduate Student Internship Program. M. Douglas Kenealy, *Iowa State University*.
3:05 PM	353	A dairy consultant's perspective on the changing needs of our dairy industry. N. Ohanesian*, *Consulting Nutritionist*, *Clovis, CA*.
3:35 PM		Presentation of the Southern ADSA Honor Award.
3:45 PM		Break
4:00 PM		Dairy Producer Perspective on the Changing Needs of Our Dairy Industry. Don Bennink, *North Florida Holsteins*.
4:30 PM	354	Meeting the changing needs of the dairy industry: perspective from an AI company. M. A. Faust*, A. Knuth, C. Marti, N. Michael, and A. Storch, *ABS Global, Inc.*, *DeForest, WI*.
5:00 PM		Discussion and Questions for Presenters
5:30 PM		Southern Branch ADSA Business Meeting

Breeding and Genetics

Genetics of New and Emerging Traits

Chair: Bennet Cassell, Virginia Tech

Sponsor: Newsham Genetics

Room 203

Time	Abstract #	
2:00 PM	355	Emerging traits of interest to the livestock industries: scrapie resistance in sheep. R. M. Lewis*[1] and B. Villanueva[2], [1]*Virginia Polytechnic Institute and State University*, *Blackburg*, [2]*Scottish Agricultural College*, *Edinburgh, UK*.
2:45 PM	356	Effects of different strategies for breeding towards scrapie resistance in East Friesian milk sheep on inbreeding levels and production traits. F. de Vries*, H. Hamann, C. Drogemuller, and O. Distl, *University of Veterinary Medicine*, *Hannover, Germany*.
3:00 PM	357	Association analyses between the prion protein locus and reproductive and weight traits in Ripollesa sheep. J. Casellas*[1], J. Piedrafita[1], G. Caja[1], R. Bach[2], and O. Francino[1], [1]*Universitat Autònoma de Barcelona*, *Bellaterra, Spain*, [2]*Associació Nacional de Criadors d'Ovins de Raça Ripollesa*, *Monells, Spain*.
3:15 PM		Break
3:30 PM	358	QTL Scan for disposition in Bos taurus x Bos indicus cattle families. M. Wegenhoft*, J. Sanders, and C. Gill, *Texas A&M University*, *College Station*.
3:45 PM	359	Are time-budgets of dairy cows affected by genetic improvement of milk yield? P. Lovendahl* and L. Munksgaard, *Danish Institute of Agricultural Sciences*, *Tjele, Denmark*.
4:00 PM	360	Genetic variation of Johne's disease susceptibility in U.S. Holsteins. M. Gonda*, Y. Chang, G. Shook, M. Collins, and B. Kirkpatrick, *University of Wisconsin*, *Madison*.
4:15 PM	361	Fine mapping of a QTL in a swine population selected for ovulation rate. M. Mousel*, G. Rohrer, K. Leymaster, and R. Christenson, *USDA-ARS; U.S. Meat Animal Research Center*, *Clay Center, NE*.
4:30 PM	362	Genetics of immune response in Canadian dairy cows and potential use in selection. R. Rupp[1], A. Hernandez[1], F. Miglior*[2,3], and B. Mallard[1], [1]*Ontario Veterinary College*, *Guelph, ON, Canada*, [2]*Agriculture and Agri-Food Canada - Dairy and Swine Research and Development Centre*, *Lennoxville, QC, Canada*, [3]*Canadian Dairy Network*, *Guelph, ON, Canada*.
4:45 PM	363	Electrical conductivity of milk are genetically correlated to mastitis. E. Norberg*[1], G. W. Rogers[2], J. B. Cooper[2], and P. Madsen[1], [1]*Department of Genetics and Biotechnology, Danish Institute of Agricultural Sciences*, *Tjele, Denmark*, [2]*University of Tennessee*, *Knoxville*.

Dairy Foods

Cheese I-Cheddar, Mozzarella and Kashar Cheeses

Chair: D.L. Van Hekken, USDA, Wyndmoor, PA

Room 241

Time	Abstract #	
2:00 PM	364	Effects of incorporation of probiotic Lactobacillus acidophilus, Lb. casei, Lb. paracasei and Bifidobacterium spp. on proteolytic patterns and production of organic acid in Cheddar cheese. L. Ong[1], A. Henriksson[2], and N. P. Shah*[1], [1]*Victoria University*, *Werribee Campus, School of Molecualr Sciences, PO Box 14428 melbourne City MC, Vic 8001 Australia*, [2]*DSM Food Specialties*, *Moorebank, NSW , Australia*.
2:15 PM	365	Influence of calcium, phosphorus, residual lactose, and salt-to-moisture ratio (S/M) of Cheddar cheese on proteolysis during ripening. P. Upreti, P. S. Lehtola, and L. E. Metzger*, *University of Minnesota*, *St. Paul*.
2:30 PM	366	Moisture retention and salt uptake in Cheddar curds made from milk preacidificed with carbon dioxide: a possible solution to the salt whey problem. B. Nelson* and D. Barbano, *Cornell University*, *Ithaca, NY*.
2:45 PM	369	Use of cold microfiltration retentates for standardization of milks for pizza cheese: Impact on yield and functionality. S. Govindasamy-Lucey*, J. Jaeggi, M. Johnson, T. Wang, and J. Lucey, *University of Wisconsin*, *Madison*.

3:00 PM		Break
3:15 PM	367	Mathematical modeling of buffering properties of Cheddar cheese. P. Upreti*[1], P. Buhlmann[2], and L. E. Metzger[1], [1]*University of Minnesota*, *St. Paul,*, [2]*University of Minnesota*, *Minneapolis*.
3:30 PM	368	Effect of emulsifying salts on the state of calcium in pasteurized process Cheddar cheese. N. Shirashoji*[1,2], J. J. Jaeggi[2], and J. A. Lucey[2], [1]*Food Research & Development Laboratory, Morinaga Milk Industry Co.*, *Kanagawa, Japan*, [2]*University of Wisconsin*, *Madison*.
3:45 PM	370	The effect of cheese temperature on the texture and shredding of mozzarella. K. Lim*, A. Bostley, and C. Chen, *Wisconsin Center for Dairy Research*, *Madison, WI*.
4:00 PM	371	The use of fat replacers in low-fat fresh kashar cheese: composition, proteolysis and yield. N. Koca*[1,2] and M. Metin[1], [1]*Ege University*, *Izmir, Turkey*, [2]*The Ohio State University*, *Columbus*.

SYMPOSIUM

Extension Education

Cow Comfort on Commercial Dairy Operations

Chairs: Richard Norell, University of Idaho and Twig Marston, Kansas State University

Sponsor: Monsanto Company and Pfizer Animal Health

Room 244

Time	Abstract #	
2:00 PM	372	Maximizing cow comfort on dry lot dairies. D. Armstrong*[1], J. Smith[2], and M. VanBaale[1], [1]*University of Arizona*, *Tucson*, [2]*Kansas State University*, *Manhattan*.
2:30 PM	373	Practical methods for reducing heat stress on dairy operations. J. F. Smith*[1], D. V. Armstrong[2], M. J. Brouk[1], J. P. Harner[1], and M. J. VanBaale[2], [1]*Kansas State University*, *Manhattan*, [2]*University of Arizona*, *Tucson*.
3:00 PM	374	Maximizing cow comfort in free-stall facilities. D. Weary*, *University of British Columbia*, *Vancouver, BC, Canada*.
3:30 PM		Break
3:45 PM	375	Factors influencing time budgets of dairy cattle. R. Grant*, *W. H. Miner Agricultural Research Institute*, *Chazy, NY*.
4:15 PM	376	Animal welfare audits on dairy operations. J. Reynolds*, *University of California*, *Tulare, CA*.
4:45 PM		Panel Q/A session

Food Safety

Pathogen Control Interventions

Chair: John Sofos, Colorado State University

Room 212

Time	Abstract #	
2:00 PM		Introduction
2:05 PM	377	Essential oils in feed: Development of a quantification method. D. Bellenot[1], V. Hocde[6], J.-Y. Anizon[2], Y. Riou[3], C. Ionescu[9], C. Genouel[5], C. Langella[4], T. Banchereau[8], S. Oguey[13], V. Guitton[11], A. Guyonvarch[12], P. Metra[7], F. Recoquillay[10], S. Kerros[10], P. Schupfer*[14], [1]*ITEIPMAI*, *Chemillé, France*, [2]*ARCHIMEX*, *Vannes, France*, [3]*TECALIMAN*, *Nantes, France*, [4]*DGCCRF-Marseille*, *Marseille, France*, [5]*DGCCRF-Rennes*, *Rennes, France*, [6]*CCPA DELTAVIT*, *Janzé, France*, [7]*LAREAL*, *Saint-Nolff, France*, [8]*TECHNA*, *Coueron, France*, [9]*AXISS FRANCE S.A.S*, *Bellegarde-sur-Valserine, France*, [10]*PHYTOSYNTHESE*, *Saint Bonnet de Rochefort, France*, [11]*INZO*, *Paris, France*, [12]*EVIALIS*, *Vannes, France*, [13]*PANCOSMA*, *Genève, Switzerland*, [14]*INTERVET-CRINA*, *Gland, Switzerland*.

2:20 PM	378	Orange pulp reduces growth of E. coliO157:H7 and Salmonella Typhimurium in pure culture and in vitro mixed ruminal microorganism fermentation. T. Callaway*[1], J. Carroll[2], J. Arthington[3], R. Anderson[1], T. Edrington[1], K. Genovese[1], and D. Nisbet[1], [1]*ARS/USDA, Food and Feed Safety Research Unit*, *College Station, TX*, [2]*ARS/USDA, Livestock Issues Research Unit*, *Lubbock, TX*, [3]*Range Cattle Research and Education Center, Univ. Florida*, *Ona, FL*.
2:35 PM	379	Effects of an experimental vaccine on Escherichia coli O157:H7 prevalence in the feces and colonized at the terminal rectum in beef feedlot cattle. R. Peterson*, D. Smith, R. Moxley, T. Klopfenstein, G. Erickson, and S. Hinkley, *Univeristy of Nebraska*, *Lincoln*.
2:50 PM	380	A novel concept for simultaneous deactivation of various mycotoxins in piglets. G. Schatzmayr*[1], D. Schatzmayr[1], V. Starkl[1], S. Nitsch[1], M. Forat[2], and E. Binder[3], [1]*Biomin GmbH*, *Herzogenburg, Austria*, [2]*Instituto Internacional de Investigacion Animal*, *Queretaro, Mexico*, [3]*Erber AG*, *Herzogenburg, Austria*.
3:05 PM		Break
	381	See page 81.
3:35 PM	382	The effect of dried yeast culture on the carry over of aflatoxin in sheep milk. G. Battacone*[1], A. Nudda[1], M. Palomba[1], M. Pascale[2], A. Mazzette[1], P. Nicolussi[3], and G. Pulina[1], [1]*University of Sassari*, *Sassari, Italy*, [2]*CNR Istituto di Scienze delle Produzioni Alimentari*, *Bari, Italy*, [3]*Istituto Zooprofilattico Sperimentale della Sardegna*, *Sassari, Italy*.
3:50 PM	383	Detection of feed-ingested plant DNA fragments in salt-cured pork product. T. Reuter*[1,2], K. Aulrich[2], W. Schnäckel[3], and T. McAllister[1], [1]*Agriculture and Agri-Food Canada Research Centre*, *Lethbridge, AB, Canada*, [2]*Federal Agriculture Research Centre*, *Westerau, Germany*, [3]*Hochschule Anhalt*, *Bernburg, Germany*.

SYMPOSIUM

Forages and Pastures

Emerging Techniques for Predicting Forage Quality

Chair: Debbie Cherney, Cornell University

Ballroom A

Time	Abstract #	
2:00 PM		Welcome. Debbie Cherney, *Cornell University*
2:05 PM		Background to Symposium. Sam Coleman.
2:15 PM	384	Impact of cell wall lignification on forage digestibility. H. Jung*[1,2], [1]*USDA-ARS*, *St. Paul, MN*, [2]*University of Minnesota*, *St. Paul*.
2:40 PM	385	New applications of near-infrared reflectance spectroscopy for forage quality assessment. S. Coleman*, *USDA ARS Subtropical Agricultural Research Station*, *Brooksville, FL*.
3:05 PM		Break
3:15 PM	386	The need for new approaches in predicting forage quality: challenging the conventional wisdom. J. Moore*, *University of Florida*, *Gainesville*.
3:40 PM	387	Application of rates of fermentation to prediction of forage intake. M. Blummel*[1] and E. Grings[2], [1]*ILRI*, *Patancheru, Andhra Pradesh, India*, [2]*USDA-ARS*, *Miles City, MT*.
4:05 PM		Challenges for assessing forage intake of grazing animals. Eric Vanzant.
4:30 PM		Discussion

Meat Science and Muscle Biology

Muscle Growth and Fresh Meat Quality

Chair: Steven Lonergan, Iowa State University

Room 243

Time	Abstract #	
2:00 PM	388	Myostatin regulates MyHC isoform expression during myoblast differentiation in cattle. S. Hayashi*, K. Watanabe, Y. Miura, S. Hayashi, M. Miyake, H. Aso, S. Ohwada, and T. Yamaguchi, *Tohoku University*, *Sendai, Japan*.
2:15 PM	389	Influence of the IGF-II genotype on the calpastatin activity in three muscle in relation to age and development. K. Van den Maagdenberg*[1], A. Stinckens[2], E. Claeys[1], N. Buys[2], and S. De Smet[1], [1]*Laboratory of Animal Nutrition and Animal Product Quality, Department of Animal Production, Ghent University*, *Ghent, Belgium*, [2]*Centre for Animal Genetics and Selection, Department of Animal Production, K.U.Leuven*, *Leuven, Belgium*.
2:30 PM	390	Cardiac and skeletal muscle protein synthesis and activation of translation initiation factors are stimulated by leucine, but not isoleucine or valine, in neonatal pigs. J. Escobar*, J. Frank, A. Suryawan, H. Nguyen, and T. Davis, *USDA/ARS, Children's Nutrition Research Center, Baylor College of Medicine*, *Houston, TX*.
2:45 PM	391	Histochemical properties and meat quality traits of porcine muscles during growth: Effect of feed restriction in pigs slaughtered at the same age and varying weight. G. Bee*, M. Calderini, C. Biolley, G. Guex, and W. Herzog, *Agroscope Liebefeld-Posieux, Swiss Federal Research Station for Animal Production and Dairy Products (ALP)*, *Posieux, Fribourg, Switzerland*.
3:00 PM	392	Role of b-adrenoceptor signaling and AMP-activated protein kinase in the glycolysis of postmortem skeletal muscle. Q. W. Shen*, M. Du, and M. J. Zhu, *University of Wyoming*, *Laramie*.
3:15 PM		Break
3:45 PM	393	The fatty acid composition of Longissimus muscle from grazing cattle supplemented with sunflower oil and fishoil. E. Ermias[1,2], F. J. Monahan[2], and A. P. Moloney*[1], [1]*Teagasc, Grange Research Centre*, *Dunsany, Co. Meath, Ireland*, [2]*University College Dublin*, *Belfield, Dublin , Ireland*.
4:00 PM	394	Effects of corn oil supplementation on carcass quality, rib composition, and tenderness of implanted Angus, Brangus, and Hereford Heifers. J. Long*[1], S. Duckett[1], G. Hill[2], and H. Crowe[1], [1]*University of Georgia*, *Athens*, [2]*University of Georgia*, *Tifton*.
4:15 PM	395	Effect of castration of females on productive performance and carcass quality of Iberian pigs. M. P. Serrano[1], D. G. Valencia[1], R. Lázaro[1], M. Nieto[2], and G. G. Mateos*[1], [1]*Universidad Politécnica de Madrid*, *Spain*, [2]*Copese*, *Segovia, Spain*.
4:30 PM	396	Effects of pump rate and cooked temperature on pork loin instrumental, sensory descriptive and consumer-rated characteristics. R. T. Baublits*, J.-F. Meullenet, J. T. Sawyer, J. M. Mehaffey, and A. Saha, *University of Arkansas*, *Fayetteville*.

SYMPOSIUM

Milk Protein and Enzymes

Milk Protein Interactions

Chair: Rafael Jimenez-Flores, California Polytechnic State University, San Luis Obispo

Sponsor: California Research Foundation, EAAP, Glanbia Foods Inc., Land O'Lakes Inc., and U.S. Dairy Export Council

Room 211

Time	Abstract #	
2:00 PM		Introduction. Rafael Jimenez-Flores, *California Polytechnic State University, San Luis Obispo, CA*.
2:05 PM	397	Casein micelles and whey proteins: Physical interactions and functional properties. S. G. Anema*, *Fonterra Research Centre*, *Palmerston North, New Zealand*.
2:50 PM	398	Process-induced intermolecular bonds in milk protein gels and their impact on rheological properties. J. Hinrichs*, *University of Hohenheim*, *Germany*.

3:35 PM		Break
4:00 PM	399	The 500 Myr story of the evolution of phosphoproteins that made milk possible. C. Holt* and R. A. Clegg, *Hannah Research Institute*, *Ayr, UK*.
4:45 PM	400	HAMLET, an alpha-lactalbumin folding variant that induces tumor cell apoptosis. C. Svanborg*, *University of Lund*, *Sweden*.

SYMPOSIUM

Nonruminant Nutrition

Stable Isotope Tracer Techniques for Nonruminant Nutrition Research and Their Practical Applications

Chair: Ming Z. Fan, University of Guelph, and Hans H. Stein, South Dakota State University

Sponsor: Cambridge Isotope Laboratories and Elanco Animal Health

Room 202

Time	Abstract #	
2:00 PM		Introduction. Ming Z. Fan.
2:10 PM	401	Mass isotopomer distribution analysis (MIDA) for studying intermediary nutrient metabolism. B. J. Bequette*, *University of Maryland*, *College Park*.
2:50 PM	402	Measuring splanchnic amino acid metabolism by using stable isotope tracers. B. Stoll* and D. Burrin, *USDA-ARS Children's Nutrition Research Center, Baylor College of Medicine*, *Houston, TX*.
3:20 PM	403	Mineral bioavailability and metabolism determined using stable isotope tracers. J. R. Turnlund*, *USDA/ARS/Western Human Nutrition Research Center, University of California*, *Davis*.
3:50 PM	404	Measuring nitrogen-containing polymer synthesis rates by using stable isotope tracers. M. Z. Fan*[1], L. I. Chiba[2], P. D. Matzat[3], and Y. L. Yin[4], [1]*University of Guelph*, *Guelph, ON, Canada*, [2]*Auburn University*, *Auburn, AL*, [3]*Elanco Animal Health*, *Greenfield, IN*, [4]*The Institute of Subtropical Agricultural Research, the Chinese Academy of Sciences*, *Changsha, Hunan, China*.
4:20 PM	405	Factors affecting in vivo fatty acid and triglyceride synthesis rates measured by stable isotope tracers. E. Murphy*, *University of California*, *San Francisco*.
4:50 PM		Discussion

Physiology and Endocrinology IV

Chair: Thomas Adams, University of California, Davis

Room 200

Time	Abstract #	
2:00 PM	406	Effect of postpartum nutrition of primiparous beef cows on concentration of insulin in follicular fluid and abundance of mRNA for binding proteins (IGFBP) -4 and -5 and aromatase in granulosa cells of dominant follicles. I. Rubio*, R. P. Wettemann, F. J. White, P. Y. Aad, and L. J. Spicer, *Oklahoma Agricultural Experiment Station*, *Stillwater, OK*.
2:15 PM	407	Accessing the impact of faults in body condition score on reproductive performance in large commercial dairies. D. Caraviello*[1], K. Weigel[1], M. Florent[1], C. Rawson[2], N. Zwald[2], and M. Wiltbank[1], [1]*University of Wisconsin*, *Madison,*, [2]*Alta Genetics*, *Calgary, Alberta, Canada*.
2:30 PM	408	Prediction of reproductive performance on large commercial dairies. D. Caraviello*[1], K. Weigel[1], C. Rawson[2], N. Zwald[2], D. Gianola[1], and M. Wiltbank[1], [1]*University of Wisconsin*, *Madison*, [2]*Alta Genetics*, *Calgary, Alberta, Canada*.
2:45 PM	409	Individual variation in production efficiency of beef and dairy cows. A. Brosh* and Y. Aharoni, *Newe Yaar Research Center, Beef Cattle Section, Institute of Animal Science, A.R.O Israel*, *Newe Yaar Israel*.

3:00 PM	410	Fatty acid composition of the porcine conceptus in response to maternal omega-3 fatty acid supplementation. A. E. Brazle*[1], B. J. Johnson[1], E. C. Titgemeyer[1], S. K. Webel[2], and D. L. Davis[1], [1]*Kansas State University*, *Manhattan*, [2]*United Feeds, Inc.*, *Sheridan, IN*.
3:15 PM	411	Effects of stress on performance and the immune response in pigs infected with porcine reproductive and respiratory syndrome virus. M. Sutherland*[1], S. Niekamp[1], W. Van Alstine[2], and J. Salak-Johnson[1], [1]*University of Illinois*, *Urbana*, [2]*Purdue University*, *West Lafayette, IN*.
3:30 PM		Break
3:45 PM	412	Effects of albuterol on the physiology of finishing pigs. D. Lay*[1], J. Marchant Forde[1], B. Richert[2], R. Marchant Forde[1], and K. McMunn[1], [1]*USDA-ARS; Livestock Behavior Research Unit*, *W. Lafayette, IN*, [2]*Purdue University*, *W. Lafayette, IN*.
4:00 PM	413	Evidence for coordinated regulation of IGFBP-5, four and a half lim (FHL) 2, and a disintegrin and metalloprotease (ADAM) 9 expression in osteoblasts. K. E. Govoni*[1], A. Kramer[1], E. Winter[1], D. J. Baylink[1,2], and S. Mohan[1,2], [1]*MDC, JL Pettis VAMC*, *Loma Linda, CA*, [2]*Loma Linda University*, *Loma Linda, CA*.
4:15 PM	414	Immunization of pigs against chicken (c)GnRH-II and lamprey (l)GnRH-III: Effects on gonadotropin secretion and testicular function. A. Bowen*[1], S. Khan[2], L. Berghman[3], J. Kirby[4], and J. Vizcarra[1], [1]*Texas Tech University*, *Lubbock*, [2]*Clark Atlanta University*, *Atlanta, GA*, [3]*Texas A&M University*, *College Station*, [4]*University of Arkansas*, *Fayetteville*.
4:30 PM	415	Application of glycerol as an optical clearing agent to enhance photonic transference and detection of Salmonella typhimurium through pig skin. K. Moulton*[1], F. Lovell[1], E. Williams[1], P. Ryan[1], A. Karsi[1], M. Lawrence[1], D. Lay[2], E. Jansen[3], and S. Willard[1], [1]*Mississippi State University*, *Mississippi State*, [2]*USDA-ARS Livestock Behavior Research Unit*, *West Lafayette, IN*, [3]*Vanderbilt University*, *Nashville, TN*.
4:45 PM	416	Factors affecting days open and days to first breeding in Iranian Holsteins. A. Heravi Moussavi*[1], M. Danesh Mesgaran[1], and R. Noorbakhsh[2], [1]*Ferdowsi University*, *Mashhad, Khorasan, Iran*, [2]*Institute of Standards and Industrial Research*, *Mashhad, Khorasan, Iran*.

Production, Management and the Environment

Nutrition, Management, and Environment

Chair: Wayne Greene, Auburn University

Room 206

Time	Abstract #	
2:00 PM	417	Assessment of dairy farm management practices through internet connections. G. Licitra*[1,2], J. D. Ferguson[3], G. Azzaro[1], M. Caccamo[1], and A. Cappa[4], [1]*CoRFiLaC , Regione Siciliana*, *Ragusa, Italy*, [2]*D.A.C.P.A., University of Catania*, *Catania, Italy*, [3]*University of Pennyslvania,*, *Kennett Square*, [4]*APA*, *Vicenza, Italy*.
2:15 PM	418	Evaluation of models to predict phosphorus (P) excretion of dairy cattle fed a range of P concentrations during different stages of the dry period and lactation. Z. H. Myers and D. K. Beede*, *Michigan State University*, *East Lansing*.
2:30 PM	419	Effect of stall surface on the prevalence and severity of hock lesions in dairy cows housed in free stall barns. M. I. Endres, L. A. Espejo*, and J. A. Salfer, *University of Minnesota*, *St. Paul*.
2:45 PM	420	Effects of winter feeding systems on cow performance, feeding site soil nutrients and pasture growth. H. Lardner*[1], P. Jungnitsch[2], J. Schoenau[2], and T. Highmoor[1], [1]*Western Beef Development Centre*, *Saskatoon, Saskatchewan, Canada*, [2]*University of Saskatchewan*, *Saskatoon, Saskatchewan, Canada*.
3:00 PM	421	Effects of feeding varying concentrations of dry distillers grains with solubles to finishing steers on performance and odorant emissions. C. Benson*, K. Tjardes, and C. Wright, *South Dakota State University*, *Brookings*.
3:15 PM		Break
3:30 PM	422	Factors influencing ammonia emissions from beef cattle feedlots using forced-air wind tunnels. D. Sherwood*, G. Erickson, T. Klopfenstein, and D. Schulte, *University of Nebraska*.
3:45 PM	423	Assessment of strategies to reduce ammonia, methane, and nitrous oxide emissions from gestating and lactating sows. C. Piñeiro*[1], G. Montalvo[2], and M. Bigeriego[3], [1]*PigCHAMP Pro Europa, S.A.*, *Segovia, Spain*, [2]*Tragsega, S.A.*, *Madrid, Spain*, [3]*Spanish Ministry of Agriculture, Fisheries and Food*, *Spain*.
4:00 PM	424	Improving estimates of enteric methane emissions from cattle in Canada. K. Ominski*, D. Boadi, and K. Wittenberg, *University of Manitoba*, *Winnipeg, Manitoba, Canada*.

4:15 PM	425	Effects of ractopamine on growth performance and carcass characteristics of feedlot steers differing in biological type. S. L. Gruber*[1], J. D. Tatum[1], T. E. Engle[1], M. A. Mitchell[1], S. B. Laudert[2], A. L. Schroeder[2], and W. J. Platter[2], [1]*Colorado State University*, *Ft. Collins*, [2]*Elanco Animal Health*, *Greenfield, IN*.
4:30 PM	426	Effects of ractopamine hydrochloride (Optaflexx) on feedlot heifers. M. Quinn*, J. Drouillard, E. Loe, B. Depenbusch, A. Webb, and M. Corrigan, *Kansas State University*, *Manhattan*.

Ruminant Nutrition

Dairy – Fiber and Digestion

Chair: Ken Griswold, Pennsylvania State University

Room 207

Time	Abstract #	
2:00 PM	427	Validation of propionate challenge test methodology. B. J. Bradford*, A. D. O'Toole, A. S. Nash, and M. S. Allen, *Michigan State University*, *East Lansing*.
2:15 PM	428	Effects of dietary forage and non-fiber carbohydrate content on B-vitamin intake, duodenal flow, and apparent synthesis in dairy cows. E. Schwab*[1], R. Shaver[1], C. Girard[3], C. Schwab[2], D. Putnam[4], and N. Whitehouse[2], [1]*University of Wisconsin*, *Madison*, [2]*University New Hampshire*, *Durham*, [3]*Dairy and Swine R&D Center*, *AAC, QC, Canada*, [4]*Balchem Encapsulates*, *New Hampton, NY*.
2:30 PM	429	Impact of alfalfa hay neutral detergent fiber concentration and digestibility on Holstein dairy cow performance: I. Hay analyses and lactation performance – USDFRC. D. R. Mertens*[1], H. G. Jung[2,3], M. L. Raeth-Knight[3], and J. G. Linn[3], [1]*US Dairy Forage Research Center*, *Madison, WI*, [2]*USDA Agricultural Research Service*, *St. Paul, MN*, [3]*University of Minnesota*, *St. Paul*.
2:45 PM	430	Impact of alfalfa hay neutral detergent fiber concentration and digestibility on Holstein dairy cow performance: II. Lactation performance ~ St. Paul. M. L. Raeth-Knight*[1], J. G. Linn[1], H. G. Jung[1,2], D. R. Mertens[3], and P. R. Peterson[1], [1]*University of Minnesota*, *St. Paul*, [2]*USDA Agricultural Research Service*, [3]*US Dairy Research Center*, *Madison, WI*.
3:00 PM	431	Impact of alfalfa hay neutral detergent fiber concentration and digestibility on Holstein dairy cow performance: III. Diet digestibility ~ St. Paul. M. L. Raeth-Knight*[1], J. G. Linn[1], H. G. Jung[1,2], D. R. Mertens[3], and P. R. Peterson[1], [1]*University of Minnesota*, *St. Paul*, [2]*USDA Agricultural Research Service*, [3]*US Dairy Forage Research Center*, *Madison, WI*.
3:15 PM	432	Effects of the number of cycles at suboptimal pH on rumen bacterial fermentation in a dual flow continuous culture system. M. Cerrato*, S. Calsamiglia, and A. Ferret, *Universitat Autonoma de Barcelona*, *Bellaterra, Spain*.
3:30 PM	433	Acidosis in dairy cows. E. Bramley[1], I. J. Lean*[2], N. D. Costa[3], and W. J. Fulkerson[1], [1]*University of Sydney*, *Camden, NSW, Australia*, [2]*Bovine Research Australasia*, *Camden, NSW, Australia*, [3]*Murdoch University*, *Murdoch, WA, Australia*.
3:45 PM	434	Effects of graded levels of wheat-barley concentrate on subacute ruminal acidosis (SARA), lipopolysaccharide endotoxins (LPS) and acute phase proteins in steers. G. N. Gozho*, J. C. Plaizier, and D. O. Krause, *University of Manitoba*, *Winnipeg, MB, Canada*.
4:00 PM	435	Method to measure feed particles by image analysis. G. Licitra[1,2], M. Caccamo*[1], I. Schadt[1], J. D. Ferguson[3], G. Gennuso[1], and G. Azzaro[1], [1]*CoRFiLaC, Regione Siciliana*, *Ragusa, Italy*, [2]*D.A.C.P.A., Catania University*, *Catania, Italy*, [3]*University of Pennsylvania*, *Philadelphia*.
4:15 PM	436	Effect of replacing forage fiber with non-forage fiber in lactating dairy cow diets. J. Cyriac*, M. M. Abdelqader, K. F. Kalscheur, A. R. Hippen, and D. J. Schingoethe, *South Dakota State University*, *Brookings*.
4:30 PM	437	Pretrial intake affects relative intake, digestion, and production responses of lactating cows to alfalfa and grass silages. J. A. Voelker Linton* and M. S. Allen, *Michigan State University*, *East Lansing*.
4:45 PM	438	Effects of dietary NDF concentration on milk yield, bacterial protein syntheses and endocrine-metabolic status in dairy sheep in late lactation. A. Cannas*, G. Bomboi, F. Boe, and B. Floris, *University of Sassari*, *Sassari, Italy*.

Ruminant Nutrition

Dairy - Calves and Heifers

Chair: Michael J. VandeHaar, Michigan State University

Room 205

Time	Abstract #	
2:00 PM	439	An evaluation of the calf and heifer models within the 2001 Dairy NRC publication. M. Van Amburgh*, *Cornell University*, *Ithaca, NY*.
2:30 PM	440	Feeding neonatal calves starters with different protein concentrations in conventional and high protein milk replacer feeding regimes. M. Hill*, J. Aldrich, and R. Schlotterbeck, *Akey*, *Lewisburg, OH*.
2:45 PM	441	Effects of continuous versus periodic milk availability on the behavior and performance of dairy calves. F. Wolf[1], M. Hotzel[1], M. von Keyserlingk*[2], and D. Weary[2], [1]*Univ. de Santa Catarina, Brazil*, [2]*Animal Welfare Program, University of British Columbia*, *Vancouver, Canada*.
3:00 PM	442	Effects of weaning age and milk feeding frequency on calf growth, health and rumen parameters. S. I. Kehoe* and A. J. Heinrichs, *The Pennsylvania State University*, *University Park*.
3:15 PM	443	Effect of Apex botanicals on calves fed pasteurized milk or milk replacer (MR) during the nursery phase and subsequent grower phase until four months of age. M.k Hill*, J. Aldrich, and R. Schlotterbeck, *Akey*, *Lewisburg, OH*.
3:30 PM		Break
3:45 PM	444	Influence of starter protein content on growth of dairy calves in an enhanced early nutrition program. J. A. Stamey*, N. A. Janovick Guretzky, and J. K. Drackley, *University of Illinois*, *Urbana*.
4:00 PM	445	Influence of starter protein content on growth and body composition of dairy calves in an enhanced early nutrition program. J. A. Stamey*, F. K. McKeith, N. A. Janovick Guretzky, and J. K. Drackley, *University of Illinois*, *Urbana*.
4:15 PM	446	Using mixture enzyme as feed additive in growing diets of young Holstein calves. A. Naserian[1], B. Saremi*[2], and M. Sari[1], [1]*Ferdowsi University*, *Mashhad, Khorasan Razavi, Iran*, [2]*2-Animal Science Department, Education Centre of Khorasan Jihad-Agriculture*, *Mashhad, Khorasan Razavi, Iran*.
4:30 PM	447	Nutrient digestibility and excretion of dairy heifers fed diets with increasing concentrations of corn distillers grains. K. F. Kalscheur*, P. Exbrayat, and A. D. Garcia, *South Dakota State University*, *Brookings*.
4:45 PM	448	The effects of altering dry matter intake on rumen digestion and turnover in dairy heifers. G. I. Zanton* and A. J. Heinrichs, *Pennsylvania State University*, *University Park*.

Wednesday, July 27

POSTER PRESENTATIONS

Animal Behavior and Well-being

Dairy Cattle, Housing Management and Stress

Exhibit Hall A

Abstract #

W1 The effect of social hierarchy on lactating cows during relocation. K. J. Pence*, K. F. Knowlton, F. C. Gwazdauskas, R. E. Pearson, C. S. Wilson, L. Harris, C. O. Wilkes, S. R. Hill, and A. M. Hurt, *Virginia Polytechnic Institute and State University*, *Blacksburg*.

W2 Effect of freestall size and surface on frequency and type of use by lactating dairy cows. K. Cummins*, L. Carlson, J. Grubbs, and B. Rickman, *Auburn University*, *Auburn*.

W3 Regrouping dairy cattle and subsequent effects on dominance rank and milk production. B. Sandmann*, J. Swanson, J. Shirley, and J. Smith, *Kansas State University*, *Manhattan*.

W4 The effect of diet on lactating dairy cows during relocation. K. J. Pence*, K. F. Knowlton, F. C. Gwazdauskas, R. E. Pearson, C. O. Wilkes, A. M. Hurt, S. R. Hill, M. Hollmann, and C. S. Wilson, *Virginia Polytechnic Institute and State University*, *Blacksburg*.

W5 The effect of relocation on milking parlor behavior and stress in dairy cows. C. O. Wilkes*, F. C. Gwazdauskas, M. L. McGilliard, K. J. Pence, A. M. Hurt, and O. Becvar, *Virginia Polytechnic Institute and State University*, *Blacksburg*.

Animal Behavior and Well-being

Sow Housing, Management and Stress

Exhibit Hall A

Abstract #

W6 Analysis of the association between farrowing and lactation factors and sow removal. S. S. Anil*[1], L. Anil[1], J. Deen[1], S. K. Baidoo[2], and R. D. Walker[2], [1]*University of Minnesota*, *Saint Paul*, [2]*SROC, University of Minnesota*, *Waseca*.

W7 Evaluation of the effect of group size and structure of gestation housing on production performance and removal of sows in pens with electronic sow feeders (ESFs). L. Anil*[1], S. S. Anil[1], J. Deen[1], S. K. Baidoo[2], and R. D. Walker[2], [1]*University of Minnesota*, *Saint Paul*, [2]*SROC, University of Minnesota*, *Waseca*.

W8 Evaluation of the effect of group size and structure on welfare of gestating sows in pens with electronic sow feeders (ESFs). L. Anil*[1], S. S. Anil[1], J. Deen[1], S. K. Baidoo[2], and R. D. Walker[2], [1]*University of Minnesota*, *Saint Paul*, [2]*SROC, University of Minnesota*, *Waseca*.

W9 Effects of a modified farrowing pen on sow maternal behavior. N. Devillers*[1], M.-C. Meunier-Salaün[2], and C. Farmer[1], [1]*AAFC, Dairy and Swine R &D Centre*, *Lennoxville, QC, Canada*, [2]*INRA, UMR Système d'Elevage Nutrition Animale et Humaine*, *Saint Gilles, France*.

Animal Behavior and Well-being

Swine Handling, Transportation and Stress

Exhibit Hall A

Abstract #

W10 The fatigued pig syndrome. M. Ritter*[1], M. Ellis[1], M. Benjamin[2], E. Berg[3], P. DuBois[4], J. Marchant-Forde[5], A. Green[6], P. Matzat[7], P. Mormede[8], T. Moyer[9], K. Pfalzgraf[10], M. Siemens[11], J. Sterle[12], T. Whiting[13], B. Wolter[14], [1]*University of Illinois*, *Urbana*, [2]*ELANCO Animal Health*, *Canada*, [3]*University of Missouri*, *Columbia*, [4]*Cargill*, *KS*, [5]*USDA-ARS*, *IN*, [6]*USDA-APHIS*, *CO*, [7]*ELANCO Animal Health*, *MO*, [8]*Lab Neurogenetique et Stress*, *France*, [9]*Hatfield Quality Meats*, *PA*, [10]*Tyson Fresh Meats*, *AR*, [11]*Smithfield Foods, Inc.*, *VA*, [12]*Texas A&M University*, *College Station*, [13]*Agriculture & Food*, *Canada*, [14]*The Maschhoffs*, *Carlyle, IL*, [15]*National Pork Board*, *IA,*.

W11 Welfare of finisher pigs during transportation to slaughter. M. Ellis*[1], M. Ritter[1], L. Anil[2], D. Butler[3], S. Curtis[1], C. Dewey[4], B. Driessen[5], J. Hill[6], J. Salak-Johnson[1], J. McGlone[7], C. Stull[8], and A. Johnson[9], [1]*University of Illinois*, *Urbana*, [2]*University of Minnesota*, *St. Paul*, [3]*Murphy Brown Farms, LLC*, *NC*, [4]*University of Guelph*, *Ontario*, [5]*Zootechnical Centre*, *Belgium*, [6]*Premium Standard Farms*, *MO*, [7]*Texas Tech University*, *Lubbock*, [8]*University of California*, *Davis*, [9]*National Pork Board*, *IA*.

W12 Relationships between transport conditions and the incidence of dead and non-ambulatory finishing pigs at the slaughter plant. M. J. Ritter*[1], M. Ellis[1], J. Brinkmann[2], K. K. Keffaber[3], and B. F. Wolter[2], [1]*University of Illinois*, *Urbana*, [2]*The Maschhoffs*, *Carlyle, IL*, [3]*ELANCO Animal Health*, *Greenfield, IN*.

W13 The effect of sire line, floor space allowance in the barn, and gender on handling characteristics and stress responses in finishing pigs. M. J. Ritter*[1], M. Ellis[1], C. R. Bertelsen[1], J. Brinkmann[2], B. A. Peterson[1], J. M. Schlipf[1], and B. F. Wolter[2], [1]*University of Illinois*, *Urbana*, [2]*The Maschhoffs*, *Carlyle, IL*.

W14 Heart rate associated with routine handling in finishing pigs and sows. C. Lewis[1,2], L. Hulbert*[1,2], and J. McGlone[1,2], [1]*Pork Industry Institute*, *Lubbock, TX*, [2]*Texas Tech University*, *Lubbock*.

W15 Gender, age, and hormonal status affect recovery time from general anesthesia in pigs. D. Wray-Cahen*[1], W. Pritchard[1], A. Ashby[1], E. Russek-Cohen[1], J. Vossoughi[2], and J. Karanian[1], [1]*Food and Drug Administration*, *Laurel, MD*, [2]*Biomed Research Foundation*, *Olney, MD*.

Animal Health III

Exhibit Hall A

Abstract #

W16 Gnathostomosis ocurrence in wilds vertebrates in the south of Sinaloa State, Mexico. E. Torres*[1], S. Sánchez[1], C. De la Cruz[2], J. J. Portillo[3], and A. Lafón[4], [1]*EB-Universidad Autónoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*, [2]*FCQ-Universidad Autónoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*, [3]*FMVZ-Universidad Autónoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*, [4]*FZ-Universidad Autónoma de Chihuahua*, *Chihuahua, Chihuahua, Mexico*.

W17 Evaluation of garlic (allium sativum l.) anthelmintic properties to control internal parasite populations in adult female Boer goats. R. A. Franco and M. Worku*, *North Carolina A&T State University*, *Greensboro*.

W18 Evaluation of FAMACHA®, PCV, BW and FEC as diagnostic approaches to evaluate the efficacy of Cydectin®(moxidectin) in controlling natural infections of H. contortus in adult female South African Boer, Spanish and Boer/Spanish cross goats. O. Alexander, M. Worku*, G. C. Bernard, and R. A. Franco, *North Carolina A&T State University*, *Greensboro*.

W19 Temporal changes in rectal temperature and serum prolactin of weaned brahman-influenced heifers previously grazing endophyte-infected tall fescue pasture. G. Aiken*[1] and M. Looper[2], [1]*USDA-ARS, Forage-Animal Production Research Unit*, *Lexington, KY*, [2]*Dale Bumpers Small Farms Research Center*, *Booneville, AR*.

W20 Is male reproduction affected by fescue toxicosis? P. A. Eichen*, T. J. Evans, B. C. Wray, L. E. Wax, L. T. King, E. M. Walters, J. K. Critser, G. E. Rottinghaus, and D. E. Spiers, *University of Missouri*, *Columbia*.

W21 Does Reduced Caloric Intake Contribute to Symptoms Associate With Fescue Toxicosis? L. E. Wax*, P. A. Eichen, G. E. Rottinghaus, and D. E. Spiers, *University of Missouri*, *Columbia*.

W22 Growth performance of postweaning piglets fed diets containing flaxseed. S. Durand*[1,2], A. Guigère[2], M. Lessard[2], and J.-F. Bernier[1], [1]*Universite Laval*, *Québec, Quebec, Canada*, [2]*Agriculture and Agri-Food Canada, Dairy and Swine Research and Developpement Centre*, *Sherbrooke, Quebec, Canada*.

W23 Characterization of Bacterial Populations in the Gut of Piglets Treated with Probiotics by Using PCR Analysis. N. Gagnon*[1], E. Degagné[3], G. Talbot[1], M. Dupuis[1], P. Ward[2], D. Roy[2], T. A. Tompkins[3], and M. Lessard[1], [1]*Dairy and Swine Research and Development Centre, Agriculture and Agri-Food Canada*, *Lennoxville, Quebec, Canada*, [2]*Food Research and Development Centre, Agriculture and Agri-Food Canada*, *St. Hyacinthe, Quebec, Canada*, [3]*Institut Rosell-Lallemand Inc*, *Montreal, Quebec, Canada*.

W24 Probiotics and yeast modulate acute phase response in feedlot steers. A. Jafari*[2,1], V. Emmanuel[1], K. Beauchemin[3], J. Leedle[4], and B. Ametaj[1], [1]*University of Alberta*, *Edmonton, Alberta, Canada*, [2]*Isfahan University of Technology*, *Isfahan, Iran*, [3]*Agriculture and Agri-Food Canada*, *Lethbridge, Alberta, Canada*, [4]*Chr. Hansen, Inc.*, *Milwakee, WI*.

W25 Effects of bacterial direct-fed microbials on meditors of acute phase response in feedlot steers. D. Emmanuel*[1], A. Jafari[2,1], K. Beauchemin[3], J. Leedle[4], and B. Ametaj[1], [1]*University of Alberta*, *Edmonton, Alberta, Canada*, [2]*Isfahan University of Technology*, *Isfahan, Iran*, [3]*Agriculture and Agri-Food Canada*, *Lethbridge, Alberta, Canada*, [4]*Chr. Hansen, Inc.*, *Milwakee, WI*.

W26 Relationship of prepartum plasma nonesterified fatty acids (NEFA) to periparturient production, health and reproduction of Jersey cows. G. Higginbotham*[1], J. Merriam[2], E. Nogueira[3], and J. Santos[3], [1]*University of California Cooperative Extension*, *Fresno*, [2]*Ahlem Farms*, *Hilmar, CA*, [3]*University of California*, *Tulare*.

Beef Species

Exhibit Hall A

Abstract #

W27 Calves energy retention and efficiency to weaning in Nellore, British x Nellore and Continental x Nellore crossbred calves. L. Calegare[1], M. M. Alencar[2], G. M. Cruz[2], and D. P. D. Lanna*[1], [1]*Animal Growth and Nutrition Lab*, *ESALQ/USP, Piracicaba, SP, Brazil*, [2]*Embrapa*, *Sao Carlos, SP, Brazil*.

W28 The relationship between infrared thermography and residual feed intake in cows. A. L. Schaefer*[1], J. Basarab[2], S. Scott[3], J. Colyn[1], D. McCartney[1], J. McKinnon[4], E. Okine[5], and A. K. W. Tong[1], [1]*Agriculture and Agri-Food Canada*, *Lacombe, Alberta, Canada*, [2]*Alberta Agriculture Food and Rural Development*, *Lacombe, Alberta, Canada*, [3]*Agriculture and Agri-Food Canada*, *Brandon, Manitoba, Canada*, [4]*University of Saskatchewan*, *Saskatoon, Saskatchewan, Canada*, [5]*University of Alberta*, *Edmonton, Alberta, Canada*.

W29 Correlations between residual feed intake and carcass traits in finishing steers administered different anthelmintic treatments. P. A. Lancaster, B. R. Schilling*, G. E. Carstens, E. G. Brown, T. M. Craig, and D. K. Lunt, *Texas A&M University*, *College Station*.

W30 Evaluation of SafeGuard® (fenbendazole) oral drench in addition to Ivomec® (ivermectin) pour-on vs. Dectomax® (doramectin) injectable alone on parasite load, performance and carcass merit of finishing heifers. C. D. Reinhardt*, J. P. Hutcheson, and W. T. Nichols, *Intervet, Inc.*, *Millsboro, DE*.

W31 Effects of Revalor®-G in grazing heifer growth performance and subsequent breeding performance. W. T. Nichols*[1], K. Hill[2], J. P. Hutcheson[1], and C. D. Reinhardt[1], [1]*Intervet, Inc.*, *Millsboro, DE, USA*, [2]*Hill Veterinary Svcs.*, *Kaysville, UT, USA*.

W32 Evaluating rapid methods for determination of total conjugated linoleic acid in beef fat. M. E. R. Dugan*[1], D. C. Rolland[1], and J. K. G. Kramer[2], [1]*Agriculture and Agri-Food Canada*, *Lacombe, Alberta, Canada*, [2]*Agriculture and Agri-Food Canada*, *Guelph, Ontario, Canada*.

W33 Effect of method and timing of castration on growth performance and morbidity of newly arrived stocker cattle. M. D. Ratcliff*, E. B. Kegley, S. L. Krumpelman, and J. A. Hornsby, *University of Arkansas Division of Agriculture*, *Fayetteville*.

W34 Weight and carcass characteristics of nelore, guzerat-nelore and brahman-nelore steers. E. Ribeiro*[1], J. Hernandez[2], E. Zanella[3], M. Shimokomaki[1], S. Prudencio-Ferreira[1], E. Youssef[1], H. Ribeiro[1], and J. Reeves[2], [1]*Universidade Estadual de Londrina*, *Londrina, PR, Brazil*, [2]*Washington State University*, *Pullman*, [3]*Universidade de Passo Fundo*, *Passo Fundo, RS, Brazil*.

Companion Animals

Nutritional and Health Considerations for Companion Animals I

Exhibit Hall A

Abstract #

W35 Metabolic & histopathological effects of the somatotropin/insulin-like growth factor axis on bone healing in a canine unstable gap fracture healing model. F. Buonomo*[1] and D. Millis[2], [1]*Monsanto Company, Animal Science Division*, *St. Louis, MO*, [2]*University of Tennesee*, *Knoxville*.

W36 Antioxidants to protect petfood diets enriched in essential fatty acids from autoxidation. T. Tanner* and L. Deffenbaugh, *Kemin Industries, Inc.*, *Des Moines, IA*.

W37 Cloning and in vitro characterization of dog PepT1 and development of a polarized cell model to study PepT1 trafficking and regulation. B. Zanghi*[1], N. Etienne[1], A. Matthews[1], E. Miles[1], G. Davenport[2], and J. Matthews[1], [1]*University of Kentucky*, *Lexington*, [2]*The IAMS Company*, *Lewisburg, OH*.

W38 Feeding of chicken or soy protein-based diet differentially affects in vivo PepT1 uptake capacity in dogs. B. Zanghi*[1], G. Sipe[1], G. Davenport[2], and J. Matthews[1], [1]*University of Kentucky*, *Lexington*, [2]*The IAMS Company*, *Lewisburg, OH*.

Dairy Foods

Dairy Microbiology and Dairy Processing

Exhibit Hall A

Abstract #

W39 Quality characteristics and consumer acceptance of yogurt fortified with date fiber. I. Hashim*, A. Khaul, and H. Afifi, *UAE University*, *Al Ain, United Arab Emirates*.

W40 Effect of milk heat treatment on the growth and viability of Bifidobacterium animalis Bb12 during fermentation and storage of yogurt. L. Fachin and W. Viotto*, *State University of Campinas - UNICAMP, Faculty of Food Engineering, Department of Food Technology*, *Campinas, SP, Brazil*.

W41 Effect of Propionibacterium freudenreichii PS-1 on the growth and viability of Bifidobacterium animalis Bb12 during fermentation and storage of yogurt. L. Fachin and W. Viotto*, *State University of Campinas - UNICAMP, Faculty of Food Engineering, Department of Food Technology*, *Campinas, SP, Brazil*.

W42 Development of symbiotic goat's milk yogurt beverage. S. Li*, S. Gokavi, and M. Guo, *University of Vermont*, *Burlington*.

W43 Fat free plain yogurt manufactured with inulins of various chain lengths and Lactobacillus acidophilus or Lactobacillus casei. K. Aryana*, S. Begum, and P. McGrew, *Louisiana State University Agricultural Center*, *Baton Rouge*.

W44 Fat free lemon and strawberry flavored yogurts fortified with folic acid. C. Boeneke* and K. Aryana, *Louisiana State University Agricultural Center*, *Baton Rouge*.

W45 Physical and sensory attributes of stirred yogurts: impact of the physical properties of initial gel and breakdown process. W. J. Lee* and J. A. Lucey, *University of Wisconsin*, *Madison*.

W46 Sensory description of plain yogurt made from milk of different origins. M. Almena*, K. McEvoy, B. Yon, and A. Howard, *University of Vermont*, *Burlington*.

W47 Incorporation and survival of immobilized probiotic bacteria in arroz con leche, a Mexican dairy dessert. H. Hernandez-Sanchez*, E. Alvarez, and M. Labastida, *Instituto Politecnico Nacional*, *Mexico, DF, Mexico*.

W48 Assessment of potential probiotic properties of Latobacilli strains isolated from traditionally home-made Koumiss in Inner Mongolia of China. H. Zhang*[1], T. Sun[1], J. Xu[1], L. Wang[1], Y. Yun[1], B. Menghe[1], R. Wu[1], J. Wang[1], and M. R. Guo[2], [1]*Inner Mongolia Agricultural University*, *Huhhot, Inner Mongolia, China*, [2]*University of Vermont*, *Burlington*.

W49 High protein buttermilk powder; manufacture and properties. V. V. Mistry* and J. R. Dornellas, *South Dakota State University*, *Brookings*.

W50 Effects of packaging material, storage temperature, and fat content on the changes of the chemical composition of Ultrapasteurized milk bottled in amber polyethylene Terephthalate (PET) containers. J. Bailard*, W. Harper, M. Pascall, and V. Alvarez, *The Ohio State University*, *Columbus*.

W51 Effects of evening primrose oil addition on quality of cholesterol-removed butter and lowering blood cholesterol. T. H. Jung, J. J. Kim, S. H. Yu, and H. S. Kwak*, *Sejong University*, *Seoul, Korea*.

W52 Sensory evaluation of regular, whey and cultured butters. S. Jinjarak*, A. Olabi, R. Gonzalez, W. Lires, and R. Jimenez-Flores, *California Polytechnic State University*, *San Luis Obispo*.

W53 Characterization of slow acid-producing Streptococcus thermophilus strains. R. J. McCarthy*, O. Anggraeni, W. J. Harper, and P. D. Courtney, *The Ohio State University*, *Columbus*.

W54 Application of exopolysaccharide-producing cultures in making reduced fat Cheddar cheese. Composition and proteolysis. S. Awad*, A. Hassan, and F. Halaweish, *South Dakota State University*, *Brookings*.

W55 Propionibacterium freudenreichii growth is differentially affected by the serum of Swiss cheese slurries prepared with different Lactobacillus helveticus strains. P. Limpisathian*, W. J. Harper, and P. D. Courtney, *The Ohio State University*, *Columbus*.

W56 Processing factors that affect the quality of pilot plant scale Swiss type cheese. C. J. Kuo*, N. Koca, T. Ji, V. B. Alvarez, and W. J. Harper, *The Ohio State University*, *Columbus*.

Food Safety

Control of Hazards

Chair: John N. Sofos, Colorado State University

Exhibit Hall A

Abstract #

W57 Effects of in-feed anti-salmonella egg yolk antibodies on shedding and antibiotic resistance of bacteria in swine. S. Rattanatabtimtong*, A. Mathew, S. Chattin, E. Jarboe, and R. Clift, *University of Tennessee*, *Knoxville*.

W58 Effect of grain processing on performance and fecal shedding of E. coli O157 in finishing feedlot heifers. B. E. Depenbusch*, E. R. Loe, M. C. Corrigan, T. G. Nagaraja, and J. S. Drouillard, *Kansas State University*, *Manhattan*.

W59 Effect of monensin and tylosin on shedding of Escherichia coli O157:H7 by feedlot cattle. T. A. McAllister*[1], S. J. Bach[2], and T. R. Callaway[3], [1]*Agriculture and Agri-Food Canada Research Centre*, *Lethbridge, AB, Canada*, [2]*Agriculture and Agri-Food Canada Research Centre*, *Summerland, BC, Canada*, [3]*USDA-ARS*, *College Station, TX*.

W60 Clinical trial testing the effect of vaccination and direct-fed microbials on prevalence of E. coli O157:H7 in commercial beef feedlots. R. Peterson*, D. Smith, R. Moxley, T. Klopfenstein, G. Erickson, and S. Hinkley, *University of Nebraska*, *Lincoln, NE*.

W61 Inhibition effects of phage displayed peptides against E. coli O157:H7. C. J. Fu*, F. J. Schmidt, and M. S. Kerley, *University of Missouri*, *Columbia*.

W62 Effect of spraying acetic acid and refrigeration on microbial load in beef cattle carcass. F. G. Rios*, E. Ley, R. Verdugo, and G. Contreras, *FMVZ-Universidad Autónoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*.

W63 Relationship between kind, repose time and ruminal content consistence on bovine regurgitation at slaughter. F. G. Rios*, M. F. Moreno, J. J. Portillo, and G. Contreras, *FMVZ-Universidad Autónoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*.

W64 Lead levels in three commercial brands of pasteurized milk from northern Mexico. J. A. Sosa-Garcia[1], M. Garcia-Carrillo[1], M. C. Hernandez-Serrano[2], and R. Rodriguez-Martinez*[1], [1]*Universidad Autonoma Agraria Antonio Narro - Unidad Laguna*, *Torreon, Coahuila, Mexico*, [2]*Universidad Autonoma de Coahuila*, *Torreon, Coahuila, Mexico*.

W65 Application of automatic flow cytometry as a conventional method for determination of total bacterial count in Brazil. L. D. Cassoli[1], A. C. O. Rodrigues*[1], A. Coldebella[2], L. C. Roma, Jr.[1], and P. F. Machado[1], [1]*University of Sao Paulo (USP)*, *Piracicaba, SP, Brazil*, [2]*EMBRAPA Suinos e Aves*, *Concordia, SC, Brazil*.

W66 Milk quality and new regulations in Brazil. A. C. O. Rodrigues*, L. D. Cassoli, and P. F. Machado, *Clinica do Leite, ESALQ, USP*, *Piracicaba, SP, Brazil*.

W67 HACCP and GMP paper free management. B. M. de O. Ramos[1], R. Ramos[2], V. C. Oliveira[2], and L.H. da S. Miglioranza*[1], [1]*Universidade Estadual de Londrina*, *Londrina, Paraná, Brazil*, [2]*VRSys*, *Londrina, Paraná, Brazil*.

Wednesday Posters

Forages and Pastures

Feeding and Management

Exhibit Hall A

Abstract #

W68 A quick test for estimating added water or feeding adjustments for corn silage and haylage. R. Norell*[1], J. Packham[2], and S. Parkinson[3], [1]*University of Idaho*, *Idaho Falls*, [2]*University of Idaho*, *Paris*, [3]*University of Idaho*, *Preston*.

W69 Nutritive value and proper level of mixed feeding of Atriplex cancsens and Panicum antidotale in Balouchi sheep. V. Kashki* and H. Tavakoli, *Agriculture and Natural Resources Research Center of Khorasan*, *Mashhad, Khorasan, Iran*.

W70 Glyphosate spraying on forage accumulation and quality of a range of the Flooding Pampa (Argentina). M. J. Arzadun* and S. A. Mestelan, *Facultad Agronomia UNCPBA*, *Azul, Pcia. Buenos Aires, Argentina*.

W71 Afternoon harvest and greater ruminal degradability of supplemental protein interact to increase digestibility and voluntary intake of switchgrass (SG) hay fed to beef steers. G. Huntington*[1] and J. Burns[1,2], [1]*North Carolina State University*, *Raleigh*, [2]*USDA-ARS*, *Raleigh, NC*.

W72 Effects of eugenol, terpin-4-ol, a-terpineol, and methyl eugenol on consumption of alfalfa pellets by sheep. R. Estell*[1], E. Fredrickson[1], D. Anderson[1], and M. Remmenga[2], [1]*USDA ARS Jornada Experimental Range*, *Las Cruces, NM*, [2]*New Mexico State University*, *Las Cruces*.

W73 Conserved whole-crop wheat and forage maize feeding value relative to grass silage and adlibitum concentrates for beef cattle. K. Walsh*[1,2], P. O'Kiely[1], and F. O'Mara[2], [1]*Teagasc, Grange Research Centre*, *Dunsany, Co. Meath, Ireland*, [2]*University College Dublin*, *Belfield, Dublin, Ireland*.

W74 Cool-season grasses for dry cow forage. J. H. Cherney* and D. J. R. Cherney, *Cornell University*, *Ithaca, NY*.

W75 Effects of winter stocker growth rate and finishing diet on beef longissimus vitamin and mineral composition. R. N. Sonon, Jr.*[1], S. K. Duckett[1], J. Neel[2], S. Sellappan[1], J. Fontenot[3], and W. Clapham[2], [1]*University of Georgia*, *Athens*, [2]*USDA-ARS*, *Beaver, WV*, [3]*Virginia Polytechnic Institute and State University*, *Blacksburg*.

W76 Near infrared (NIRS) analysis of forages: challenges and opportunities in the application of the Dairy NRC 2001. P. Berzaghi*[1], N. P. Martin[2], and D. J. Undersander[3], [1]*University of Padova*, *Italy*, [2]*Dairy Forage Research Center USDA-ARS*, *Madison, WI*, [3]*University of Wisconsin*, *Madison*.

W77 Effect of level oil supplementation and carcass cooling temperature on beef tenderness of pasture-finished steers. E. Pavan*[1,2] and S. Duckett[1], [1]*University of Georgia*, *Athens*, [2]*Instituto Nacional de Tecnología Agropecuaria*, *Balcarce, Bs. As., Argentina*.

W78 Effect of feeding eastern gamagrass on growth of meat goats. A. Faucette*, J. Bartlett, and E. Rhoden, *Tuskegee University*, *Tuskegee, AL*.

W79 Enhancing conjugated linoleic acids (CLA) and omega-3 fatty acids in milk from cows fed green chopped forage. T. R. Dhiman*[1], S. A. Hagos[1], J. L. Walters[1], and S. Tamminga[2], [1]*Utah State University*, *Logan*, [2]*Wageningen University*, *Wageningen, The Netherlands*.

Goat Species

Nutrition, Grazing, and Forages

Exhibit Hall A

Abstract #

W80 Grazing behavior and energy expenditure by sheep and goats co-grazing grass/forb pastures at three stocking rates. G. Animut*[1,2], A. L. Goetsch[1], G. E. Aiken[3], R. Puchala[1], G. Detweiler[1], C. R. Krehbiel[2], R. C. Merkel[1], T. Sahlu[1], L. J. Dawson[4], and Z. B. Johnson[5], [1]*Langston University*, *Langston, OK*, [2]*Oklahoma State University*, *Stillwater*, [3]*USDA ARS Dale Bumpers Small Farms Research Center*, *Booneville, AR*, [4]*Oklahoma State University*, *Stillwater*, [5]*University of Arkansas*, *Fayetteville*.

W81 Goat preference of five tropical legumes. S. Pietrosemoli*, F. Arenas, D. Bermudez, O. Peley, and A. Casanova, *La Universidad del Zulia*, *Maracaibo, Zulia, Venezuela*.

W82 A comparison of herbicide, goats and mowing for control of woody vegetation species. S Hart*, J Joseph, A. Goetsch, and J Brokaw, *E Kika de la Garza American Institute for Goat Research*, *Langston, OK*.

W83 Postweaning performance by crossbred Boer kids consuming pelletized alfalfa subsequent to grazing at different stocking rates. A. Asmare[1,2], A. K. Patra*[1], R. Puchala[1], G. Detweiler[1], T. A. Gipson[1], T. Sahlu[1], and A. L. Goetsch[1], [1]*Langston University*, *Langston, OK*, [2]*Alemaya University, Dire Dawa*, *Dire Dawa, Ethiopia*.

W84 Growth and carcass traits of percentage and crossbred boer wether goat kids raised under different production systems. C. Shoemaker*[1], S. Solaiman[2], C. Kerth[1], W. Jones[1], and D. Bransby[1], [1]*Auburn University*, *Auburn, AL,*, [2]*Tuskegee University*, *Tuskegee, AL*.

W85 Effect of initial body condition of Boer x Spanish yearling wethers and level of nutrient intake on change in mass of internal organs and tissues. A.T. Ngwa*[1], L.J. Dawson[2], R. Puchala[1], G. Detweiler[1], R.C. Merkel[1], I. Tovar-Luna[1], T. Sahlu[1], and A.L. Goetsch[1], [1]*Langston University*, *Langston, OK*, [2]*Oklahoma State University*, *Stillwater*.

W86 Change in energy expenditure by meat goats with varying levels of feed intake. A. Asmare[1,2], R. Puchala[1], R.C. Merkel*[1], T. Sahlu[1], and A.L. Goetsch[1], [1]*Langston University*, *Langston, OK*, [2]*Alemaya University*, *Dire Dawa, Ethiopia*.

W87 Effect of shrub, tree and cacti foliage supplementation on rumen fermentation parameters in goats. A. Juarez-Reyes*, G. Nevarez-Carrasco, R. Montoya-Escalante, and A. Cerrillo-Soto, *Universidad Juarez del Estado de Durango*, *Durango, Dgo. Mexico.*

W88 Tea saponins affect rumen fermentation and growth performance in Growing Boer Goats. W.-L. Hu*[1], J.-X. Liu[1], Y.-Q. Guo[1], Y.-M. Wu[1], J.-A. Ye[1], X.-W. Ye[2], Y.-M. Wang[2], and H.-W. Ye[2], [1]*Zhejiang University*, *Hangzhou, P. R. China*, [2]*Hangzhou Zhengxing Animal Industries*, *Lin'an, Zhejiang, P.R. China*.

W89 Relationship between in vitro gas production and cell wall compounds in the diet selected by goats grazing a poor quality rangeland in North Mexico. A. Cerrillo-Soto*, G. Nevarez-Carrasco, R. Montoya-Escalante, and A. Juarez-Reyes, *Universidad Juarez del Estado de Durango*, *Durango, Dgo, Mexico*.

W90 In situ ruminal digestion kinetics and volatile fatty acid production rate in goats fed premium quality dehydrated alfalfa hay supplemented with three levels of a concentrate mix. N. E. Brown*, J. Bing, and R. N. Corley, III, *Tuskegee University*, *Tuskegee, AL*.

Growth and Development

Physiology of Growth and Development

Exhibit Hall A

Abstract #

W91 DNA regulatory activity and RNA expression of the sequence surrounding the callipyge mutation. A. Skipwith*[1], A. Perkins[1], T. Shay[2], S. Eng[2], D. Moody[1], N. Cockett[2], and C. Bidwell[1], [1]*Purdue University*, *West Lafayette, IN*, [2]*Utah State University*, *Logan*.

W92 Effect of dietary conjugated linoleic acid on adiposity and the adipose-transcriptome. K. M. Hargrave*, D. Pomp, and J. L. Miner, *University of Nebraska*, *Lincoln*.

W93 Decreased expression of DLK1 in the livers of 8 wk old callipyge lambs. J. N. Fleming*[1], J. M. Smith[1], T. S. Hadfield[2], S. L. Eng[2], D. E. Moody[1], N. E. Cockett[2], and C. A. Bidwell[1], [1]*Purdue University*, *West Lafayette, IN*, [2]*Utah State University*, *Logan*.

W94 Salmonella enterica serovars Typhimurium and Choleraesuis provoke divergent responses in serum IGF-I in young pigs. B. L. Davis*, J. N. Fraser, K. A. Skjolaas-Wilson, T. E. Burkey, S. S. Dritz, B. J. Johnson, and J. E. Minton, *Kansas State University*, *Manhattan*.

W95 Newborn calves fed colostrum of cows treated with rbST. Study II: IGF-I and IGF type I receptor gene expression in the liver and small intestine. A. Bagaldo, P. Pauletti, E. Delgado, D. Lanna*, L. Coutinho, L. Kindlein, and R. Machado Neto, *Escola Superior de Agricultura Luiz de Queiroz - USP*, *Piracicaba, SP, Brazil*.

W96 Newborn calves fed colostrum of cows treated with rbST. Study I: Rna, dna and protein concentrations in the liver and small intestine. A. Bagaldo, P. Pauletti, E. Delgado, D. Lanna*, L. Kindlein, and R. Machado Neto, *Escola Superior de Agricultura Luiz de Queiroz - USP*, *Piracicaba - SP Brazil*.

W97 The role of muscle membrane phospholipids in the developmental decline in insulin sensitivity in the piglet. K. Bergeron*[1], J. F. Bernier[1], P. Julien[2], A. Myre[1], T. A. Davis[3], and M. C. Thivierge[1], [1]*Nutraceutical and Functional Food Institute/Département des sciences animales, FSAA, Université Laval*, *Qc, Canada*, [2]*Québec Lipid Research Ctr, Laval University Medical Ctr (CHUL)*, *Qc, Canada*, [3]*USDA/ARS Children's Nutr. Res. Ctr., Dept. Pediatr. Baylor Coll. Med.*, *Houston, TX*.

W98 Insulin-like growth factor binding protein (IGFBP)-3 and IGFBP-5 mediate TGF beta- and myostatin-induced suppression of proliferation in porcine embryonic myogenic cell cultures. E. Kamanga-Sollo, M. White, M. Hathaway*, and W. Dayton, *University of Minnesota*, *St. Paul*.

W99 Exogenous ghrelin elevates plasma growth hormone concentrations in steers allowed ad libitum intake. A. E. Wertz-Lutz*[1], J. A. Daniel[1], J. A. Clapper[1], D. C. Beitz[2], and A. Trenkle[2], [1]*South Dakota State University*, *Brookings*, [2]*Iowa State University*, *Ames*.

W100 Effects of constitutive expression of porcine IGFBP-3 on proliferation and differentiation of L6 myogenic cells. G. Xi*, E. Kamanga-Sollo, M. Hathaway, M. White, and W. Dayton, *University of Minnesota*, *St. Paul*.

W101 Transgenic over-expression of IGF-I modulates the synthesis and secretion of pig milk IGFBP-2 and -5 in the early and post-lactation periods. M. H. Monaco*, M. B. Wheeler, and S. M. Donovan, *University of Illinois*, *Urbana*.

W102 Small intestinal IGF-I binding protein (IGFBP)-2 and -5 and IGF receptors in piglets suckling IGF-I transgenic sows. J. L. Hartke*, M. H. Monaco, R. H. McCusker, M. B. Wheeler, and S. D. Donovan, *University of Illinois*, *Urbana*.

W103 Growth rate, feed efficiency (FE), and IGFBP-2 and -3 in beef cattle treated with exogenous bovine (b) ST beginning at 200d, 250d and 300d of age. B. Velayudhan*, K. Govoni, T. Hoagland, and S. Zinn, *University of Connecticut*, *Storrs*.

W104 Expression of porcine acid-labile subunit (pALS) of the 150-kilodalton ternary insulin-like growth factor complex and initial characterization of recombinant pALS protein. C. Y. Lee*[1], D. H. Lee[2], C. Chun[2], and S. H. Kim[3], [1]*Jinju National University*, *Jinju, Korea*, [2]*University of Seoul*, *Seoul, Korea*, [3]*Kyunghee University*, *Seoul, Korea*.

W105 Effect of ovariectomy and estradiol administration on bovine skeletal muscle insulin-like growth factor-I (IGF-I) and b-adrenergic receptor (bAR) messenger RNA (mRNA) abundance. E. K. Sissom*[1], M. J. Meyer[2], Y. R. Boisclair[2], M. E. Van Amburgh[2], and B. J. Johnson[1], [1]*Kansas State Universiy*, *Manhattan*, [2]*Cornell Universiy*, *Ithaca, NY*.

W106 Effects of restricted feed intake on plasma levels of IGF-I and abundance of hepatic IGF-I and GH receptor mRNA in channel catfish. B. Peterson* and B. Small, *USDA/ARS Catfish Genetics Research Unit*, *Stoneville, MS*.

W107 Zinc finger binding protein 89 (ZBP-89) is a potential transcription factor for the bovine growth hormone receptor 1A promoter. H. Jiang*, Q. Xu, and L. Springer, *Virginia Tech*, *Blacksburg*.

W108 Effects of supply of excess amino acids on leucine utilization by growing steers. M. S. Awawdeh*, E. C. Titgemeyer, G. F. Schroeder, and D. P. Gnad, *Kansas State University*, *Manhattan*.

W109 The expression of genes related to adipocytes in Lee-Sung Pigs. S. T. Ding*, H. C. Wang, Y. H. Ko, and C. L. Chen, *National Taiwan University*, *Taipei, Taiwan*.

W110 Role of the translational insulin signaling machinery in the anabolic effect of n-3 polyunsaturated fatty acids in growing steers. M. C. Thivierge*[1], L. Dombrowski[2], A. A. Gingras[1], and A. Marette[2], [1]*Université Laval*, *Quebec, QC, Canada*, [2]*Laval University Hospital Research Ctr.*, *Quebec, QC, Canada*.

W111 Effect of myostatin on avian myogenic satellite cells and embryonic myoblasts. D. McFarland*[1], S. Velleman[2], J. Pesall[1], and C. Liu[2], [1]*South Dakota State University*, *Brookings*, [2]*Ohio State University*, *Wooster*.

W112 A novel regulatory mechanism of muscle protein anabolism in steers. A. A. Gingras*[1], P. Y. Chouinard[1], Y. Couture[2], P. Julien[3], P. Dubreuil[2], A. Myre[1], K. Bergeron[1], T. A. Davis[4], and M. C. Thivierge[1], [1]*Université Laval*, *Qc, Canada*, [2]*Université de Montréal*, *Qc, Canada*, [3]*Laval University Medical Ctr (CHUL)*, *Qc, Canada*, [4]*Baylor College of Medicine*, *Houston, Texas*.

International Animal Agriculture

Exhibit Hall A

Abstract #

W113 Environmental factors and genetic parameters for birth weight in the indigenous Chiapas ovine breed. G. Campos[1], H. Castro-Gámez[1], R. López[1], R. Perezgrovas[2], and H. Castillo-Juárez*[3], [1]*Universidad Nacional Autónoma de México*, *Ciudad Universitaria, México D.F.*, [2]*Universidad Autónoma de Chiapas*, *Teopisca Center, Los Altos de Chiapas, México*, [3]*Universidad Autónoma Metropolitana*, *Calzada del Hueso, México D.F.*

W114 Design of breeding objective including trypanotolerance for African cattle smallholders. U. Janben-Tapken*, Y. Li, and H. N. Kadarmideen, *Swiss Federal Institute of Technology, ETH Zentrum*, *Zurich, Switzerland*.

W115 Using the n-alkane technique to estimate the herbage intake of steers grazing Zoysia japonica grassland. Y. Zhang*[1], Y. Togamura[2], and K. Otsuki[2], [1]*China Agricultural University*, *Beijing, PR China*, [2]*National Institute of Livestock and Grassland Science*, *Tochigi, Japan*.

Lactation Biology

Exhibit Hall A

Abstract #

W116 Udder morphology and milking characteristics in dairy goats milked once- or twice-daily. A. A. K. Salama[1], G. Caja*[1], M. Rovai[1], R. Casals[1], and A. Martí[2], [1]*Universitat Autònoma de Barcelona*, *Bellaterra, Spain*, [2]*Universidad Miguel Hernández de Elche*, *Orihuela, Spain*.

W117 Effects of milking frequency prepartum on postpartum milk production, milk composition and dry matter intake in dairy cows. R. R. Rastani*[1], N. Silva del Rio[1], T. F. Gressley[1], G. E. Dahl[2], and R. R. Grummer[1], [1]*University of Wisconsin*, *Madison*, [2]*University of Illinois*, *Urbana*.

W118 Mid term lactational effects of once- versus twice-daily milking in Manchega and Lacaune dairy ewes. V. Castillo*, X. Such, G. Caja, E. Albanell, and R. Casals, *Universitat Autònoma de Barcelona*, *Bellaterrra, Spain*.

W119 Incidences of calving related disorders of Holstein cows supplemented with low dose of bST prepartum and during early lactation. M. S. Gulay*[1], M. Liboni[2], M. J. Hayen[2], and H. H. Head[2], [1]*Akdeniz University*, *Turkey*, [2]*University of Florida*, *Gainesville*.

W120 Association between dry period length (30 or 60 d) and calving related disorders. M. S. Gulay*[1], M. J. Hayen[2], and H. H. Head[2], [1]*Akdeniz University*, *Turkey*, [2]*University of Florida*, *Gainesville*.

W121 Assessing changes in mammary gland gene expression using a cDNA microarray in the dairy cow following administration of bovine somatotropin. J. Kelsey*[1], A. Nudda[1], A. Corato[1], E. Mosley[1], S. Mosley[1], B. Williams[1], J. Grimberg[1], D. Henderson[2], J. Hoying[2], K. Greer[2], and M. McGuire[1], [1]*University of Idaho*, *Moscow*, [2]*University of Arizona*, *Tucson*.

W122 Fatty acid composition of porcine milk throughout lactation and comparison to human and bovine milk. S. Donovan*[1], S. Taylor[2], and E. DePeters[2], [1]*University of Illinois*, *Urbana*, [2]*University of California*, *Davis*.

W123 The effect of conjugated linoleic acid (CLA) on transcriptional activation of the Stearoyl-CoA desaturase gene in bovine mammary cells. A. F. Keating*[1,2], F. Q. Zhao[2], and J. J. Kennelly[1], [1]*University of Alberta*, *Edmonton, Canada.*, [2]*University of Vermont*, *Burlington*.

W124 Effects of body weight and plane of nutrition on histological development of mammary tissue in Holstein heifers. K. M. Daniels*[1], M. L. McGilliard[1], P. L. Boyle[1], M. J. Meyer[2], M. E. Van Amburgh[2], A. V. Capuco[3], and R. M. Akers[1], [1]*Virginia Polytechnic Institute and State University*, *Blacksburg*, [2]*Cornell University*, *Ithaca, NY*, [3]*USDA-ARS*, *Beltsville, MD*.

W125 Use of an immortalized bovine mammary epithelial cell line (MAC-T) to measure the mitogenic activity of extracts from heifer mammary tissue: effects of nutrition and body weight. K. M. Daniels*[1], P. L. Boyle[1], M. L. McGilliard[1], M. J. Meyer[2], M. E. Van Amburgh[2], and R. M. Akers[1], [1]*Virginia Polytechnic Institute and State University*, *Blacksburg*, [2]*Cornell University*, *Ithaca, NY*.

W126 Use of ^{13}C-mass isotope distribution analysis (MIDA) to define precursors for lactose and amino acid synthesis by bovine mammary explants. B. J. Bequette*[1], S. L. Owens[1], S. W. El-Kadi[1], N. E. Sunny[1], and A. Shamay[2], [1]*University of Maryland*, *College Park*, [2]*The Volcani Center*, *Bet Dagan, Israel*.

W127 Withdrawn by Author.

W128 Composition and size of mammary glands of pregnant gilts according to gland anatomical location. F. Ji*[1], W. L. Hurley[2], and S. W. Kim[1], [1]*Texas Tech University*, *Lubbock, TX*, [2]*University of Illinois*, *Urbana*.

W129 Mineral and trace element content of porcine milk throughout lactation and comparison to human and bovine milks. S. Donovan*[1], S. Taylor[2], E. DePeters[2], and B. Lonnerdal[2], [1]*University of Illinois*, *Urbana*, [2]*University of California*, *Davis*.

W130 Effect of vaccenic acid/conjugated linoleic acid-enriched butter on plasma lipoproteins in the cholesterol-fed hamster. A. L. Lock[1], C. A. M. Horne[2], D. E. Bauman*[1], and A. M. Salter[2], [1]*Cornell University*, *Ithaca, NY*, [2]*University of Nottingham*, *Sutton Bonington, LEICS, UK*.

Nonruminant Nutrition

Enzyme Supplementation and Methodology

Exhibit Hall A

Abstract #

W131 Nutrient digestibility in microbial phytase supplemented corn-soybean based diets in two phases of growing pigs. H. Krebs*[1], C. T. Kadzere[1], Z. Liu[1], and E. van Heugten[2], [1]*North Carolina A&T State University*, *Greensboro*, [2]*North Carolina State University*, *Raleigh*.

W132 Effect of microbial phytase in corn-soybean based diets on total and soluble fecal phosphorus excretion in two phases of growing pigs. Z Liu[1], C. T. Kadzere*[1], H. Krebs[1], and E. van Heugten[2], [1]*North Carolina A&T State University*, *Greensboro*, [2]*North Carolina State University*, *Raleigh*.

W133 Effect of phytase activity of the diets on the faecal and urinary phosphorous excretion in adult roosters. J. Tossenberger[1], L. Babinszky*[1], and I. Kühn[2], [1]*University of Kaposvár, Department of Animal Nutrition*, *H-7400 Kaposvár, POB 16, Hungary*, [2]*AB-Enzymes GmbH*, *D-64212 Darmstadt, Germany*.

W134 Effect of combination of phytase and xylanase on the growth performance and nutrient digestibility of growing pigs. O. A. Olukosi*[1], J. S. Sands[2], and O. Adeola[1], [1]*Purdue University*, *West Lafayette, IN*, [2]*Danisco Animal Nutrition*, *Marlborough, UK*.

W135 Effect of a multi-enzyme preparation administered through drinking water in broiler chickens. S. Maisonnier-Grenier, F. Rouffineau, P. Dalibard, S. Jakob*, and P.-A. Geraert, *Adisseo France SAS*, *Commentry*.

W136 Effect of an enzymatic compound in turkeys under two feeding systems on their productive performance. I. A. García-Galicia[1,2], A. L. Rentería-Monterrubio*[2], G. B. Galicia-Juárez[1], M. L. Gorostiola-Herrera[1], F. Salvador-Torres[2], and J. C. García-López[3], [1]*Dirección General de Educación Tecnológica Agropecuaria*, *Distrito Federal, México*, [2]*Facultad de Zootecnia, UACH*, *Chihuahua, Chih.,México*, [3]*Alltech de México*, *Distrito Federal, México*.

W137 Development of an analytical method for the analysis of acid proteases in feed samples. P. Glenney* and K. Filer, *Alltech, Inc.*, *Nicholsville, KY*.

W138 New strategies guarantee success in mycotoxin control. U. Hofstetter*[1], V. Starkl[1], D. Schatzmayr[1], G. Schatzmayr[1], and E. M. Binder[2], [1]*Biomin GmbH*, *Herzogenburg, Austria*, [2]*Erber AG*, *Herzogenburg, Austria*.

W139 Influence of weaning on caecal microbiota of pigs: use of real-time PCR and t-RFLP. M. Castillo*[1], S. M. Martín-Orúe[1], E. G. Manzanilla[1], M. Roca[2], and J. Gasa[1], [1]*Departament de Ciència Animal i dels Aliments, Universitat Autònoma de Barcelona*, *Bellaterra, Barcelona, Spain*, [2]*Centre de Recerca en Sanitat Animal*, *Bellaterra, Barcelona, Spain*.

W140 Available energy from fermentation in the hindgut in growing pigs fed with different levels of dietary fiber. M. Anguita[1], N. Canibe[2], J. F. Pérez*[1], and B. B. Jensen[2], [1]*Universitat Autònoma de Barcelona*, *Bellaterra, Barcelona, Spain*, [2]*DIAS, Research centre Foulum*, *Tjele, Denmark*.

W141 An automated algorithm to estimate body protein and lipid deposition patterns in growing pigs from growth and feed intake curves. G. Vander Voort* and K. de Lange, *University of Guelph*, *Guelph, Ontario, Canada*.

W142 Dual-energy x-ray absorptiometry for determination of body composition in a porcine model of obesity development. C. A. Baldwin* and T. S. Stahly, *Iowa State University*, *Ames*.

W143 Hepatic gluconeogenesis and muscle intermediary metabolism in hybrid striped bass (HSB) determined by ^{13}C-mass isotopomer distribution analysis. B. J. Bequette*, S. L. Owens, N. E. Sunny, S. W. El-Kadi, and L. C. Woods, *University of Maryland*, *College Park*.

Nonruminant Nutrition

Minerals

Exhibit Hall A

Abstract #

W144 Genetic background and phosphorus nutrition affect bone strength and gene expression in young pigs. L. Hittmeier, R. Lensing, L. Grapes, M. Rothschild, and C. Stahl*, *Iowa State University*, *Ames*.

W145 Effect of dietary phosphorus on the gene expression related to energy metabolism in porcine muscle. A. Qu*, L. Grapes, M. Rothschild, and C. Stahl, *Iowa State University*, *Ames*.

W146 Phosphorus utilization is improved in the growing Enviropig™(Cassie line). A. Ajakaiye*, R. G. Meidinger, M. Z. Fan, D. A. Murray, J. Zhang, M. Mundia, J. P. Phillips, S. P. Golovan, J. M. Kelly, R. R. Hacker, and C. W. Forsberg, *University of Guelph*, *Guelph, Ontario, Canada.*

W147 Phosphorus and calcium utilization by the G1 generation Enviropig™ lines fed a diet without supplemental inorganic phosphorus. A. Ajakaiye*, R. G. Meidinger, M. Z. Fan, S. P. Golovan, J. P. Phillips, R. R. Hacker, and C. W. Forsberg, *University of Gulph*, *Guelph, Ontario, Canada.*

W148 Dietary selenium sources in swine: maternal transfer to embryos. M.-È. Fortier[1], H. Quesnel[2], J.-F. Bilodeau[1], A. GiguÈre[3], J.-P. Laforest[1], and J. J. Matte*[3], [1]*UniversitÈ Laval*, *QuÈbec, Canada*, [2]*Institut de la Recherche Agronomique*, *St-Gilles, France*, [3]*Agriculture et Agroalimentaire Canada*, *Lennoxville, Québec, Canada*.

W149 The comparative effects of organic and inorganic selenium on selenium transfer from sows to nursing pigs. I. Yoon*[1] and E. McMillan[2], [1]*Diamond V Mills, Inc.*, *Cedar Rapids, IA*, [2]*MapleLeaf Foods Agresearch*, *Burford, Ontario, Canada*.

W150 Supplementation of potassium-diformate (Formi®), as an alternative to antibiotics, on growth performance, morphological changes of small intestine and immune responses in weanling Pig. M. S. Yun, W. S. Joo*, H. F. Long, W. G. Park, and Y. Y. Kim, *Seoul National University*, *Seoul, South Korea*.

W151 Diet acidity fails to match zinc oxide in improving weaner pig performance. H. Miller*[1], P. Blanchard[2], and P. Toplis[3], [1]*University of Leeds*, *Leeds, West Yorkshire, UK*, [2]*Frank Wright Ltd*, *Ashbourne, Derbyshire, UK*, [3]*Primary Diets Ltd*, *Ripon, North Yorkshire, UK*.

W152 The effect of dietary natural mineral liquid complex on growth performance and blood characteristics in broilers. B. J. Min*, O. S. Kwon, K. S. Son, J. H. Cho, Y. J. Chen, H. J. Kim, J. S. Yoo, and I. H. Kim, *Dankook University*, *Cheonan, Korea*.

W153 Magnesium absorption from drinking water in rats. A. Ohata*, H. Ohmori, T. Matsui, and H. Yano, *Kyoto University*, *Kitashirakawa-oiwake, Sakyo-ku, Kyoto, 606-8502, Japan*.

W154 Developmental regulation of brush border hydrolase and iron transporter gene expression in pig small intestine. X. Xiao*, E. A. Wong, and K. E. Webb, Jr., *Virginia Tech*, *Blacksburg*.

Physiology & Endocrinology III

Exhibit Hall A

Abstract #

W155 Effects of early gestational undernutrition in the cow on fetal growth and placentomal composition. S. Ford*[1], C. Sanders[1], K. Vonnahme[2], and B. Hess[1], [1]*University of Wyoming*, *Laramie*, [2]*North Dakota State University*, *Fargo*.

W156 Production system under which ewes are selected alters nutrient availability to the fetus in response to early pregnancy undernutrition. G. Wu*[1], W. Shi[1], T. Spencer[1], B. Hess[2], P. Nathanielsz[3], and S. Ford[2], [1]*Texas A&M University*, *College Station*, [2]*University of Wyoming*, *Laramie*, [3]*University of Texas*, *San Antonio*.

W157 Effect of eicosapentaenoic acid on lipid composition and prostaglandin synthesis in bovine endometrial cells in vitro. J. W. Green*[1], J. K. Ahola[2], T. E. Engle[3], and P. D. Burns[1], [1]*University of Northern Colorado*, *Greeley*, [2]*University of Idaho*, *Caldwell*, [3]*Colorado State University*, *Fort Collins*.

W158 Leukocyte populations and cytokine mRNA expression in quarter milk fractions of dairy cows at different SCC levels. H. Sarikaya*, G. Schlamberger, and R. M. Bruckmaier, *Physiology Weihenstephan, Techn. Univ. Munich*, *Freising, Germany*.

W159 Effects of feeding pattern on plasma ghrelin concentrations in pigs. C. Brown*, R. Harrell, and C. Whisnant, *North Carolina State University*, *Raleigh*.

W160 Improved development and quality of embryos collected from superovulated Holstein cows in response to repeated subcutaneous injections of vitamin E and selenium. G. Martin-Castaneda*, C. Diaz-Mora, S. Padilla, R. Banuelos, R. M. Rincon, F. J. Escobar, J. M. Silva-Ramos, and C. F. Arechiga, *Universidad Autonoma de Zacatecas*, *Zacatecas, Zac. MEXICO*.

W161 Specific gGlutamate and nucleoside transport activities of Madin-Darby bovine kidney (MDBK) cells are inhibited by the ergopeptide bromocriptine. E. Miles*, J. Boling, and J. Matthews, *University of Kentucky*, *Lexington*.

W162 An observational analysis of twin births, calf sex ratio, and calf mortality in Holstein dairy cattle. N. Silva del Rio*[1], S. Stewart[2], P. Rapnicki[2], Y. M. Chang[1], and P. M. Fricke[1], [1]*University of Wisconsin*, *Madison*, [2]*University of Minnesota*, *St Paul*.

W163 Effects of diet energy concentration and fat addition on reproductive performance and hormone profiles of beef cows. J. E. Rossi*[1], N. M. Long[1], W. M. Graves[2], G. M. Hill[1], and B. G. Mullinix, Jr.[1], [1]*University of Georgia*, *Tifton*, [2]*University of Georgia*, *Athens*.

W164 NEFA and glucose levels in serum of periparturient dairy cows are indicative of pregnancy success at first service. M. Burkhart*, R. Youngquist, J. Spain, J. Sampson, J. Bader, R. Vogel, W. Lamberson, and A. Garverick, *University of Missouri-Columbia*, *Columbia*.

W165 Effects of limb origin and twenty-four hour storage on contractile response of bovine lateral saphenous vein to norepinephrine. J. L. Klotz*[1], A. C. Vevoda[2], L. P. Bush[2], and J. R. Strickland[1], [1]*FAPRU, USDA-ARS*, *Lexington, KY*, [2]*University of Kentucky*, *Lexington*.

W166 Effect of estradiol cypionate® (ECP) on milk production in lactating dairy cows. A. Gümen*, J. P. Powell, A. H. Souza, A. P. Cunha, J. N. Guenther, P. M. Crump, and M. C. Wiltbank, *University of Wisconsin*, *Madison*.

W167 Effects of increasing energy density and cooling treatment on ovarian function in postpartum dairy cows under heat stress conditions. J. Y. Wang* and J. C. Kung, *Tunghai University*, *Taichung, Taiwan*.

Production, Management and the Environment

Health and Reproduction

Exhibit Hall A

Abstract #

W168 Biosecurity practices related to cattle purchases. F. Hoe and P. Ruegg*, *University of Wisconsin*, *Madison*.

W169 Biosecurity practices used during dairy herd expansion. J. Dalton*[1], R. Norell[2], and M. Chahine[3], [1]*University of Idaho*, *Caldwell*, [2]*University of Idaho*, *Idaho Falls*, [3]*Twin Falls Research and Extension Center*, *Twin Falls*.

W170 Do dairy producers manage dairy bulls to limit biosecurity and infertility risk? J. Dalton*[1], R. Norell[2], and M. Chahine[3], [1]*University of Idaho*, *Caldwell*, [2]*Idaho Falls Research and Extension Center*, *Idaho Falls*, [3]*Twin Falls Research and Extension Center*, *Twin Falls*.

W171 Optimum month of pregnancy to maximize average daily milk production in Holstein cows. M. Terre*[1] and A. Bach[2,1], [1]*Unitat de Remugants-IRTA (Institut de Recerca i Tecnologia Agroalimentàries)*, *Barcelona, Spain*, [2]*ICREA (Institució Catalana de Recerca i Estudis Avançats)*, *Barcelona, Spain*.

W172 Assessment of voluntary waiting period and frequency of estrus synchronization among herds. R. H. Miller*[1], H. D. Norman[1], M. T. Kuhn[1], and J. S. Clay[2], [1]*Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*, [2]*Dairy Records Management Systems*, *Raleigh, NC*.

W173 Viability of Salmonella enterica Typhimurium and Escherichia coli O157:H7 in finishing swine manure slurries with and without a urease inhibitor and a plant essential oil. J. E. Wells* and V. H. Varel, *USDA-ARS, U.S. Meat Animal Research Center*, *Clay Center*.

W174 Pregnancy rates and progesterone concentrations following ovsynch and cidr ovulation synchronization and timed artificial insemination protocols in postpartum cows. M. Aali*[1], K. Cheng[1], G. Giritharan[1], N. Dinn[1], and R. Rajamahendran[1], [1]*Kuwait Institute for Scientific Research*, *Safat, Kuwait, Kuwait*, [2]*University of British Columbia*, *Vancouver, British Columbia, Canada*, [3]*University of British Columbia*, *Vancouver, British Columbia, Canada*, [4]*University of British Columbia*, *Vancouver, British Columbia, Canada*, [5]*University of British Columbia*, *Vancouver, British Columbia, Canada*.

W175 Effect of hCG on the pregnancy rate of beef cows synchronized with GnRH, progesterone, and prostaglandin F_{2a}. M. L. Borger and W. A. Greene*, *The Ohio State University*, *Wooster*.

W176 Relationship of calf respiratory and digestive disease and age at first calving in a large commercial Holstein herd. K. Rossini*[1], M. McGilliard[1], R . Pearson[1], R. James[1], W. Swecker[1], and G. Bethard[2], [1]*Virginia Polytechnic Institute and State University*, *Blacksburg*, [2]*G&R Dairy Consulting, Inc.*, *Wytheville, VA*.

W177 Environment effects on immunoglobulins (IgG, IgM) in dairy cattle and subsequent calf development in the sub-tropics. C. N. Lee* and M. Watson, *University of Hawaii-Manoa*, *Honolulu*.

W178 Vaginal and rumen temperature during the estrous cycle. A. Kennedy* and S. Mathew, *University of Manitoba*, *Winnipeg, MB, Canada*.

W179 Variability of double ovulation during estrous cycles in lactating Holstein cows. R. Silcox*, J. Brinkerhoff, J. Milner, J. de Almeida, and K. Genho, *Brigham Young University*, *Provo,UT*.

W180 Prevalence of mastitis pathogens in milk samples in Ragusa, Sicily from 2000 through 2004. J. D. Ferguson*[1], M. Gambina[2], G. Azzaro[2], and G. Licitra[2,3], [1]*University of Pennsylvania*, *Kennett Square*, [2]*CoRFiLaC , Regione Siciliana*, *Ragusa, Italy*, [3]*D.A.C.P.A. University of Catania*, *Catania, Italy*.

W181 The relevance of cows leaking milk in German dairy farms. M. Kollmann*, M. Rovai, and R. M. Bruckmaier, *Physiology Weihenstephan, Techn. Univ. Munich*, *Freising, Germany*.

W182 Relationship of cow cleanliness during the close-up period and milk quality following calving. M. Chahine*[1], J. K. Reneau[2], R. J. Norell[3], J. C. Dalton[4], and J. M. Lukas[2], [1]*University of Idaho*, *Twin Falls*, [2]*University of Minnesota*, *St. Paul*, [3]*University of Idaho*, *Idaho Falls*, [4]*University of Idaho*, *Caldwell*.

Ruminant Nutrition

Feed Additives and Feedstuffs

Exhibit Hall A

Abstract #

W183 Tea saponins affect in vitro fermentation and methanogenesis in faunated and defaunated rumen fluid. W.-L. Hu*, Y.-M. Wu, J.-X. Liu, and Y.-Q. Guo, *Zhejiang University*, *Hangzhou, P. R. China*.

W184 Feed intake, nutrient digestibility, milk production, and milk composition in cows fed cinnamaldehyde, yucca saponins extract, and condensed tannins. C. Benchaar*[1], T. A. McAllister[2], and P. Y. Chouinard[3], [1]*Agriculture and Agri-Food Canada, Dairy and Swine R&D Centre*, *Lennoxville, QC., Canada*, [2]*Agriculture and Agri-Food Canada*, *Lethbridge, AB., Canada*, [3]*Laval University*, *Quebec, QC., Canada.*

W185 Effects of cinnamaldehyde, yucca saponins extract and condensed tannins on fermentation characteristics, and ciliate protozoal populations in the rumen of lactating dairy cows. C. Benchaar*[1], T. A. McAllister[2], and P. Y. Chouinard[3], [1]*Agriculture and Agri-Food Canada, Dairy and Swine R&D Centre*, *Lennoxville, QC., Canada*, [2]*Agriculture and Agri-Food Canada*, *Lethbridge, AB., Canada*, [3]*Laval University*, *Quebec, QC., Canada*.

W186 Effects of cinnamaldehyde, yucca saponins extract and condensed tannins on ruminal in sacco degradation of soybean meal, grass silage, and corn in lactating dairy cows. C. Benchaar*[1], T. A. McAllister[2], and P. Y. Chouinard[3], [1]*Agriculture and Agri-Food Canada, Dairy and Swine R&D Centre*, *Lennoxville, QC., Canada*, [2]*Agriculture and Agri-Food Canada*, *Lethbridge, AB., Canada*, [3]*Laval University*, *Quebec, QC., Canada*.

W187 Ruminal degradation kinetics of corn silage with different additives. P. A. Katsuki[1], E. S. Pereira[2], B. M. O. Ramos[1], F. B. Moreira[1], E. L. A. Ribeiro[1], M. A. Rocha[1], A. P. Pinto[1], V. R. Loyola[1], R. Salmazo[1], T. R. Casimiro[1], T. C. Alves[1], and I. Y. Mizubuti*[1], [1]*Universidade Estadual de Londrina*, *Londrina, Paraná, Brazil*, [2]*Universidade Estadual do Oeste do Paraná*, *Marechal Cândido Rondon, Paraná, Brazil*.

W188 Effects of adding polyethylene glycol 4000 or urea to high tannin high moisture sorghum grain on ruminal degradation in beef cattle. M. D. Montiel*[1,2], J. C. Elizalde[1,2], L. Giorda[3], and F. Santini[1,2], [1]*CONICET*, *Argentina*, [2]*Fac. Cs. Agrarias UNMdP-INTA Balcarce*, *Argentina*, [3]*EEA INTA Manfredi*, *Argentina*.

W189 Fermentation and fatty acid biohydrogenation in continuous cultures fed soybean meal with and without added lecithin. C. M. Thompson*[1], S. J. Freeman[1], P. W. Jardon[2], and T. C. Jenkins[1], [1]*Clemson University*, *Clemson, SC*, [2]*West Central Soy*, *Ralston, IA*.

W190 Effects of eugenol and thymol on rumen microbial fermentation in continuous culture. L. Castillejos, S. Calsamiglia*, and A. Ferret, *Universitat Autonoma de Barcelona*, *Bellaterra, Spain*.

W191 Effects of different dose levels of essential oils compounds on in vitro methane production by mixed ruminal bacteria. J. Chiquette* and C. Benchaar, *Dairy and Swine Res. & Dev. Centre*, *Lennoxville, Quebec, Canada*.

W192 The effects of adverse environmental conditions on controlled-release property of Optigen® 1200. V. Akay*, *Alltech, Inc.*, *Nicholasville, KY*.

W193 The effect of a fibrolytic enzyme mixture on the performance of lactating dairy cows and digestibility of the total mixed ration. R. S. Teller*[1], R. J. Scmidt[1], C. N. Mulrooney[1], B. M. Moulder[1], J. St. Amand[1], L. Kung, Jr.[1], W. Steinberg[2], and I. Immig[2], [1]*University of Delaware*, *Newark*, [2]*DSM Nutritional Products Ltd.*, *Basel, Switzerland*.

W194 Identifying exogenous enzyme candidates that enhance degradation of alfalfa hay in vitro. J.-S. Eun*[1], K. A. Beauchemin[1], H.-E. Yang[2], and H. Schulze[3], [1]*Agriculture and Agri-Food Canada*, *Lethbridge, Alberta, Canada*, [2]*Korea University*, *Seoul, Korea*, [3]*Genencor International B. V.*, *Leiden, The Netherlands*.

W195 Application of carbohydrase inhibitors to moderate rumen fermentation: In vitro evaluation. S. M. Speight* and D. L. Harmon, *University of Kentucky*, *Lexington*.

W196 Fibrolytic enzyme and diets for cattle and sheep I. In virto disappearance of dry matter and fiber. R. Moreno-Jaramillo[1], S. González*[2], J. Pinos-Rodríguez[3], G. Mendoza-Martínez[2], R. Bárcena-Gama[2], J. Herrera-Haro[2], and L. Miranda-Romero[4], [1]*Universidad Autónoma Gabriel René Moreno de Santa Cruz de la Sierra*, *Santa Cruz de la Sierra, Santa Cruz, Bolivia*, [2]*Colegio de Postgraduados*, *Montecillo, Estado de México, México*, [3]*Universidad Autónoma de San Luis Potosí*, *San Luis Potosí, México*, [4]*Universidad Autónoma Chapingo*, *Texcoco, Estado de México, México*.

W197 Fibrolytic enzyme and diets for cattle and sheep II. In virto disappearance of dry matter and neutral detergent fiber. R. Moreno-Jaramillo[1], S. González*[2], J. Pinos-Rodríguez[3], G. Mendoza-Martínez[2], R. Bárcena-Gama[2], J. Herrera-Haro[2], and L. Miranda-Romero[4], [1]*Universidad Autónoma Gabriel René Moreno de Santa Cruz de la Sierra*, *Santa Cruz de la Sierra, Santa Cruz, Bolivia*, [2]*Colegio de Postgraduados*, *Montecillo, Estado de Máxico, Máxico*, [3]*Universidad Autónoma de San Luis Potosí*, *San Luis Potosí, Máxico*, [4]*Universidad Autónoma Chapingo*, *Texcoco, Estado de Máxico, Máxico*.

W198 Effects of fibrolytic enzymes and soybean oil on dairy sheep performance and nutrient digestibility. M. A. Bouattour, R. Casals*, E. Albanell, E. Gonzáez, X. Such, and G. Caja, *Universitat Autònoma de Barcelona*, *Bellaterra, Barcelona, Spain*.

W199 Effect of exogenous polysaccharide-degrading enzyme preparations on ruminal fermentation and total tract digestibility of nutrients in lactating dairy cows. A. N. Hristov*[1], C. E. Basel[1], A. Melgar[1], A. E. Foley[1], J. K. Ropp[1], C. W. Hunt[1], and J. M. Tricarico[2], [1]*University of Idaho*, *Moscow*, [2]*Alltech, Biotechnology Center*, *Nicholasville, Kentucky*.

W200 The effects of supplemental yeast culture fed during the periparturient period: Implications of milk production and feed intake of high producing dairy cows. R. Vogel*[1], J. N. Spain[1], and I. Yoon[2], [1]*University of Missouri*, *Columbia*, [2]*Diamond V Mills*, *Cedar Rapids, IA*.

W201 Effect of feeding a Saccharomyces Cerevisiae yeast culture on reproduction, body condition score (BCS) and lameness in dairy cows under heat stress. R. G. S. Bruno*, H. M. Rutigliano, R. L. A. Cerri, P. H. Robinson, and J. E. P. Santos, *University of California*, *Tulare*.

W202 Effects of feeding yeast culture and propionibacteria on milk yield and milk components in Holstein cows. K. V. Lehloenya*[1], D. R. Stein[1], M. M. Aleman[1], T. G. Rehberger[2], D. T. Allen[1], D. A. Jones[1], and L. J. Spicer[1], [1]*Oklahoma State University*, *Stillwater*, [2]*Agtech Products,Inc.*, *Waukesha, WI*.

W203 Production, intake, feed efficiency, and economic responses from feeding a concentrated yeast culture to lactating cows on commercial dairies. W. K. Sanchez*[1], I. Yoon[1], M. E. Engstrom[1], and N. R. St-Pierre[2], [1]*Diamond V Mills*, *Cedar Rapids, IA*, [2]*The Ohio State University*, *Columbus*.

W204 Effects of live yeast supplementation on ruminal pH of loose-housed dairy cattle. A. Bach*[1,2], C. Iglesias[2], M. Devant[2], and N. Rafols[2], [1]*Institució Catalana de Recerca i Estudis Avançats (ICREA)*, *Barcelona, Spain*, [2]*Unitat de Remugants, Institut de recerca i Tecnologia Agroalimentàries (IRTA)*, *Barcelona, Spain*.

W205 Effect of feeding a Saccharomyces Cerevisiae yeast culture on lactation performance of dairy cows under heat stress. R. G. S. Bruno*, H. M. Rutigliano, R. L. A. Cerri, P. H. Robinson, and J. E. P. Santos, *University of California*, *Tulare*.

W206 Effects of yeast culture and natural saponin sources on ruminal microbial populations and tropical forage digestion in vitro. H. R. Jiminez[1], O. Pacheco[1], H. Blanco[1], D. R. Chamorro[1], and J. M. Tricarico*[2], [1]*Corpoica*, *Cundinamarca, Colombia*, [2]*Alltech Inc.*, *Nicholasville, KY*.

W207 Lactation response of dairy goats fed sugar cane silage treated with Lactobacillus buchneri. C. Q. Mendes, I. Susin*, A. V. Pires, L. G. Nussio, I. U. Packer, and R. C. Araujo, *ESALQ/University of São Paulo*, *Piracicaba, SP, Brazil.*

W208 Withdrawn by author.

W209 Influence of dietary silymarin on hematic parameters and oxidative stress in periparturient dairy goats. D. Tedesco*[1], S. Galletti[2], S. Spaguolo[1], P. Abrescia[3], and L. Ferrara[2], [1]*University of Milan*, *Milan, Italy*, [2]*ISPAAM-CNR*, *Naples, Italy*, [3]*Università di Napoli Federico II*, *Naples, Italy*.

W210 Sorghum grain physical, chemical and genotype characteristics influence ruminal degradation in cattle. M. D. Montiel*[1,2], J. Elizalde[1,2], L. Giorda[3], and F. Santini[1,2], [1]*CONICET*, *Argentina*, [2]*Fac. Cs. Agrarias UNMdP-INTA Balcarce*, *Argentina*, [3]*EEA INTA Manfredi*, *Argentina*.

W211 Nitrogen fractions and fibers of commercial nonforage fiber sources for ruminants in central Iran. G. R. Ghorbani*[1] and A. Nikkhah[2], [1]*Isfahan University of Technology*, *Isfahan, Iran*, [2]*University of Manitoba*, *Winnipeg, Manitoba, Canada*.

W212 Intake and apparent digestibility in Holstein Steers fed diets containing Tifton 85 hay with different particle sizes. E. S.s Pereira*[1], A. M. V.a Arruda[1], and I. Y. Mizubuti[2], [1]*Universidade Estadual do Oeste do Paraná*, *Marechal Cândido Rondon, Paraná, Brasil*, [2]*Universidade Estadual de Londrina*, *Londrina, Paraná, Brasil*.

W213 The determination of fermentation characteristics of Iranian beet pulp, sunflower head and forages using gas production technique. M. Ziabakhsh, A. Taghizadeh*, H. Abdoli, G. A. Moghaddam, A. Tahmasbi, and P. Yasan, *Tabriz University*, *Tabriz, East Azarbayjan, Iran*.

W214 Relationship between in vitro dry matter disappearance and gas production of some feedstuffs. H. Abdoli, A. Taghizadeh*, and A. Tahmasbi, *Tabriz University*, *Tabriz, East Azarbayjan, Iran*.

W215 Nutritive value of pistachio hulls and effect on feed intake, milk production and composition in lactating dairy cows. P. Vahmani*, A. A. Naserian, J. Arshami, and M. Ghafurian, *Ferdowsi University of Mashhad*, *Khorasan, Iran*.

W216 The influence of urea treatment on in vitro gas production of pomegranate peel. R. Feizi*[1], A. Ghodratnama[1], M. Zahedifar[2], M. Danesh Mesgaran[3], and M. Raisianzadeh[1], [1]*Agricultural and Natural Resources Research Center of Khorasan*, *Mashhad, Khorasan, Iran*, [2]*Animal Science Research Institute Iran*, *Karaj, Tehran, Iran*, [3]*Ferdowsi University of Mashhad*, *Mashhad, Khorasan, Iran*.

W217 Carbohydrate and protein fractions and ruminal kinetics of Tifton 85 grass (Cynodon Spp.) silages. E. S. Pereira*[1], A. M. V. Arruda[1], and I. Y. Mizubuti[2], [1]*Universidade Estadual do Oeste do Paraná*, *Marechal Cândido Rondon, Paraná, Brasil*, [2]*Universidade Estadual de Londrina*, *Londrina, Paraná, Brasil*.

W218 Ensiling legume and grass pastures: Effects of wilting time and bacterial inoculation on silage fermentation, quality and degradability. L. O. Abdelhadi[1] and J. M. Tricarico*[2], [1]*Est. El Encuentro, Reserach and Extension in Ruminant Nutrition*, *Coronel Brandsen, Buenos Aires, Argentina*, [2]*Alltech Inc.*, *Nicholasville, KY*.

W219 Effects of bacterial inoculation on fermentation, chemical composition and degradability of sorghum by-product and whole-plant soybean silages. L. O. Abdelhadi[1] and J. M. Tricarico*[2], [1]*Est. El Encuentro, Research and Extension in Ruminant Nutrition*, *Coronel Brandsen, Buenos Aires, Argentina*, [2]*Alltech Inc.*, *Nicholasville, KY*.

W220 Ensiling corn and sorghum: Effects of bacterial inoculation on fermentation, quality and degradability of eight different silage hybrids. L. O. Abdelhadi[1] and J. M. Tricarico*[2], [1]*Est. El Encuentro, Research and Extension in Ruminant Nutrition*, *Coronel Brandsen, Buenos Aires, Argentina*, [2]*Alltech Inc.*, *Nicholasville, KY*.

W221 Fermentation characteristics and microbial succession of silage from organic residues of orange (Citrus sinensis) and pineapple (Ananas comosus) processing plants. S. Pagán*, A. Rodríguez, and E. Valencia, *University of Puerto Rico*, *Mayagüez, Puerto Rico*.

W222 Silages carbohydrate fractions and degradation rates estimated by gas production technique. E. S. Pereira*[1], A. M. V. Arruda[1], and I. Y. Mizubuti[2], [1]*Universidade Estadual do Oeste do Paraná*, *Marechal Cândido Rondon, Paraná, Brasil*, [2]*Universidade Estadual de Londrina*, *Londrina, Paraná, Brasil*.

Ruminant Nutrition

Protein and Amino Acids

Exhibit Hall A

Abstract #

W223 Use of Synchrotron FTIR microspectroscopy to determine the effect of heat treatment on protein secondary structures of brown and golden flaxseeds at a cellular level in relation to nutritive value of protein: A novel approach. P. Yu*[1], J. J. McKinnon[1], H. W. Soita[1], C. R. Christensen[2], and D. A. Christensen[1], [1]*University of Saskatchewan*, *Saskatoon, SK, Canada*, [2]*Canadian Light Source*, *Saskatoon, SK, Canada*.

W224 The role of protein matrix in the digestion of corn grain: Assessment by scanning electron microscopy. Y. Wang*[1], D. Sapienza[2], V. J. H. Sewalt[3], Z. Xu[1], and T.A. McAllister[1], [1]*Agriculture and Agri-Food Canada Research Centre*, *Lethbridge, AB, Canada*, [2]*Sapienza Analytica, LLC*, *Johnston, IA*, [3]*Kemin AgriFoods North America*, *Des Moines, IA*.

W225 Development of an in vitro technique to monitor the fate of true proteins of feedstuffs in the rumen. A. A. Sadeghi*[1] and P. Shawrang[2], [1]*Islamic Azad University*, *Tehran, Iran*, [2]*Tehran University*, *Karaj, Iran*.

W226 Degradability characteristics of crude protein of some feedstuffs in ruminants using in vitro technique. A. Taghizadeh*[1], H. Abdoli[1], A. Tahmasbi[1], and R. Noori[2], [1]*Tabriz University*, *Tabriz, East Azarbayjan, Iran*, [2]*Ekrami Highschool, Training and Education Ministry*, *Tabriz, East Azarbayjan, Iran*.

W227 Effects of adaptation time of a specific blend of essential oils on rumen nitrogen metabolism and fermentation profile in sheep. L. Castillejos[1], S. Calsamiglia*[1], A. Ferret[1], and R. Losa[2], [1]*Universitat Autonoma de Barcelona*, *Bellaterra, Spain*, [2]*AKZO NOBEL/CRINA SA*, *Gland, Switzerland*.

W228 Exogenous proteolytic enzymes improve in vitro degradation of alfalfa hay but not alfalfa silage. J.-S. Eun* and K. A. Beauchemin, *Agriculture and Agri-Food Canada*, *Lethbridge, Alberta, Canada*.

W229 Amino acid content of residues from in vitro and S. griseus incubations. D. A. Ross* and M. E. Van Amburgh, *Cornell University*, *Ithaca, NY*.

W230 Estimation of duodenal microbial N flow: Level of agreement between two methods of analysis. R. Martineau*[1], H. Lapierre[2], D. R. Ouellet[2], D. Pellerin[1], and R. Berthiaume[2], [1]*Université Laval*, *Québec, Canada*, [2]*Dairy and Swine R&D Centre, AAFC*, *Lennoxville, Québec, Canada*.

W231 Efficiency of microbial N supply (EMNS) and digestibility of N in dairy cows fed timothy conserved as restrictively- or extensively-fermented silage or as hay. R. Martineau*[1], H. Lapierre[2], D. R. Ouellet[2], D. Pellerin[1], and R. Berthiaume[2], [1]*Université Laval*, *Québec, Canada*, [2]*Dairy and Swine R&D Centre, AAFC*, *Lennoxville, Québec, Canada*.

W232 Endogenous nitrogen (EN) flows: Effects of methods of conservation of timothy in lactating dairy cows. D. R. Ouellet*[1], R. Berthiaume[1], G. Holtrop[2], G. E. Lobley[3], R. Martineau[4], and H. Lapierre[1], [1]*Agriculture and Agri-Food Canada*, *Lennoxville, Canada*, [2]*BIOSS*, *Aberdeen, UK*, [3]*Rowett Research Institute*, *Aberdeen, UK*, [4]*Department of Animal Science, U. Laval*, *Quebec, Canada*.

W233 Effects of glutamate on microbial efficiency and metabolism in continuous culture of ruminal contents and on performance of mid-lactation dairy cows. H. M. Dann*[1], C. S. Ballard[1], R. J. Grant[1], K. W. Cotanch[1], M. P. Carter[1], and M. Suekawa[2], [1]*W.H. Miner Agricultural Research Institute*, *Chazy, NY*, [2]*Zen-Noh National Federation of Agricultural Co-operative Associations*, *Tokyo, Japan*.

W234 Metabolic and production responses of dairy cows to glutamine (Gln) supplementation. L. Doepel*[1], J. F. Bernier[2], G. E. Lobley[3], P. Dubreuil[4], M. Lessard[5], and H. Lapierre[5], [1]*University of Alberta*, *Edmonton, AB, Canada*, [2]*Universite Laval*, *QC, Canada*, [3]*Rowett Research Institute*, *Aberdeen, UK*, [4]*Coll. Vet. Med., U. Montreal*, *St. Hyacinthe, QC, Canada*, [5]*Agriculture & Agri-Food Canada*, *Lennoxville, QC, Canada*.

W235 Effect of glutamine (Gln) supplementation on splanchnic flux in lactating dairy cows. L. Doepel*[1], J. F. Bernier[2], G. E. Lobley[3], P. Dubreuil[4], M. Lessard[5], and H. Lapierre[5], [1]*University of Alberta*, *Edmonton, AB, Canada*, [2]*Universite Laval*, *Quebec, Canada*, [3]*Rowett Research Institute*, *Aberdeen, UK*, [4]*Coll. Vet. Med., U. Montreal*, *St. Hyacinthe, QC, Canada*, [5]*Agriculture & Agri-Food Canada*, *Lennoxville, QC, Canada*.

W236 Determination of the first-limiting amino acid for milk production in dairy cows consuming a high concentrate diet containing corn and soybean meal. H. S. Kim[1], J. M. Yeo*[1], K. S. Ki[1], and C. -H. Kim[2], [1]*Dairy Science Division, National Livestock Research Institute, Rural Development Administration*, *South Korea*, [2]*Department of Animal Life and Resources, Hankyong National University*, *South Korea*.

W237 Effect of supplementing rumen-protected methionine at two levels of dietary crude protein in lactating dairy cows. G. A. Broderick*[1], M. J. Stevenson[2], R. A. Patton[3], N. E. Lobos[4], and J. J. Olmos Colmenero[4], [1]*U.S. Dairy Forage Research Center*, *Madison, WI.*, [2]*Degussa Corp.*, *Kennesaw, GA*, [3]*Nittany Dairy Nutrition, Inc.*, *Mifflinburg, PA*, [4]*University of Wisconsin*, *Madison*.

W238 Effects of supplemental DL-methionine and L-lysine-HCl on ruminal fermentation and ruminal and total tract digestibility in non-lactating Holstein cows. H. G. Bateman, II*, T. W. Braud, C. C. Williams, D. T. Gantt, C. F. Hutchison, J. D. Ward, P. G. Hoyt, and G. A. Sod, *Louisiana State University*, *Baton Rouge*.

W239 The effects of Alimet feed supplement and Sequent feed supplement on rumen digestibility, protein synthesis and ruminal disappearance. M. Vazquez-Anon*, *Novus International, Inc*, *St. Louis, MO*.

W240 Effects of corn source with or without supplementation of lysine and methionine on milk production in dairy cows. C.-H. Kim*[1], H. S. Kim[2], and J. M. Yeo[2], [1]*Hankyong National University*, *Ansung, Gyeonggi, Korea*, [2]*Dairy Science Division, National Livestock Research Institute, Rural Development Administration*, *Cheonan, Chungbuk, Korean*.

W241 Effect on milk protein of reducing crude protein intake while maintaining methionine and lysine: A field study. L. E. Armentano[1], R. A. Patton*[2], and M. J. Christians[3], [1]*University of Wisconsin*, *Madison*, [2]*Nittany Dairy Nutrition*, *Mifflinburg, PA*, [3]*Degussa Corporation*, *Kennesaw, GA*.

W242 Postruminal protein infusion increases leucine use by the gastrointestinal tract of sheep while glucose utilization remains unchanged. S. El-Kadi*[1], R. Baldwin, VI[2], N. Sunny[1], S. Owens[1], and B. Bequette[1], [1]*University of Maryland*, *College Park*, [2]*USDA-ARS*, *Beltsville, MD*.

W243 Appearance of free and peptide-bound AA in blood from the rumen, abomasum, and intestines and in lymph from the intestine of sheep. L. A. Sullivan and K. E. Webb, Jr.*, *Virginia Tech*, *Blacksburg*.

W244 Digestibility and N flux in steers fed diets with differing sources of supplemental protein. J. Eisemann*, G. Huntington, and M. Poore, *North Carolina State University*, *Raleigh*.

W245 Effect of RDP source on production and ruminal metabolism of lactating dairy cows. S. M. Reynal*[1] and G. A. Broderick[2], [1]*University of Wisconsin*, *Madison*, [2]*US Dairy Forage Research Center*, *Madison, WI*.

W246 Effects of protein source on ruminal and total tract nutrient digestibility in non-lactating Holstein cows. T. W. Braud*, H. G. Bateman, II, C. C. Williams, C. C. Stanley, D. T. Gantt, C. F. Hutchison, J. D. Ward, P. G. Hoyt, and G. A. Sod, *Louisiana State University*, *Baton Rouge*.

W247 Influence of slow-release urea on N balance and nutrient absorption of steers. C. C. Taylor*[1], N. A. Elam[1], S. E. Kitts[1], K. R. McLeod[1], D. E. Axe[2], and D. L. Harmon[1], [1]*University of Kentucky*, *Lexington*, [2]*Mosaic*, *Riverview, FL*.

W248 Encapsulated slow release urea in lactating dairy cow diets impacts microbial efficiency and metabolism in continuous culture. J. Garrett*[1], T. Miller-Webster[2], W. Hoover[2], C. Sniffen[3], and D. Putnam[1], [1]*Balchem Encapsulates*, *New Hampton, NY*, [2]*West Virginia University*, *Morgantown*, [3]*Fencrest, LLC*, *Holderness, NH*.

W249 Ruminal degradation of crude protein of cull chickpeas using nylon bag technique in bovines. R. Barajas*, L. R. Flores, and J. J. Lomeli, *FMVZ-Universidad Autonoma de Sinaloa*, *Culiacan, Sinaloa, Mexico*.

W250 Utilization of different protein sources as supplements to whey treated straw silage. F. T. Sleiman*, M. N. Afram, M. G. Uwayjan, M. T. Farran, S. K. Hamadeh, and M. R. Darwish, *American University of Beirut*, *Beirut, Lebanon*.

W251 Effects of dietary crude protein level on growth performance and blood parameters of Holstein heifers and steers. M. A. Bal*, H. Yarar, and M. Sahin, *Kahramanmaras Sutcu Imam University, Department of Animal Science*, *Kahramanmaras, Turkey*.

W252 Feed conversion and efficiency of NPK utilization in lactating dairy cows. A. R. Castillo*[1], J. E. P. Santos[2], and J. H. Kirk[2], [1]*University of California*, *Merced*, [2]*University of California*, *Tulare*.

W253 Manure production of heifers fed diets varying in forage, grain, and byproduct content. S. R. Hill*, K. F. Knowlton, R. E. James, R. E. Pearson, G. Bethard, K. P. Pence, and S. W. Wilson, *Virginia Polytechnic Institute and State Univeristy*, *Blacksburg*.

Women & Minority Issues in Animal Agriculture

Exhibit Hall A

W254 Heritability and permanent environmental effect for fleece quality assessed by an ancient Tzotzil indigenous evaluation system. H. Castro-Gámez[1], G. Campos[1], R. López[1], R. Perezgrovas[2], and H. Castillo-Juárez*[3], [1]*Universidad Nacional Autónoma de México*, *Ciudad Universitaria, México*, [2]*Universidad Autónoma de Chiapas*, *Chiapas, México*, [3]*Universidad Autónoma Metropolitana-Xochimilco*, *Calzada del Hueso, México D.F.*

OTHER EVENTS

Joint ADSA-ASAS Business Meeting

Room 236

9:30 AM

ADSA Business Meeting

Room 241

10:00 AM

ASAS Business Meeting

Room 234

10:00 AM

SYMPOSIA AND ORAL SESSIONS

ADSA Foundation Scholar Award Lecture - Dairy Production

Chair: Wendy J. Powers, Iowa State University, Ames

Sponsor: ADSA Foundation

Room 200

Time

10:30 AM Implementing waste solutions for dairy and livestock farms. K. F. Knowlton, *Virginia Polytechnic Institute & State University, Blacksburg*.

Animal Behavior and Well-being

Swine Transportation, Handling & Feed Restriction

Chair: Janeen Salak-Johnson, University of Illinois

Room 211

Time	Abstract #	
10:30 AM	449	Effects of albuterol on behavioral and heart rate responses of finishing pigs to handling. J. Marchant-Forde*[1], K. McMunn[1], B. Richert[2], D. Lay Jr.[1], and R. Marchant-Forde[1], [1]*USDA-ARS, Livestock Behavior Research Unit*, *W. Lafayette, IN*, [2]*Purdue University*, *W. Lafayette, IN*.
10:45 AM	450	Characterizing hunger in swine utilizing metabolic parameters during 36 h of imposed feed deprivation. M. Toscano*[1], D. Lay, Jr.[1], B. Craig[2], and E. Pajor[2], [1]*USDA-ARS-LBRU*, *West Lafayette, IN*, [2]*Purdue University*, *West Lafayette, IN*.
11:00 AM	451	A model for the study of dead and down pigs associated with transport: effects of maternal pheromone on pigs in transit. C. Lewis*[1,2], N. Krebs[1,2], L. Hulbert[1,2], and J. McGlone[1,2], [1]*Pork Industry Institute*, *Lubbock, TX*, [2]*Texas Tech University*, *Lubbock*.

Beef Species

Chair: Chris Reinhardt, Intervet, Inc.

Room 243

Time	Abstract #	
10:30 AM	452	Relationships between residual feed intake, ultrasound, and temperament traits in Brangus heifers. P. A. Lancaster*[1], G. E. Carstens[1], E. G. Brown[1], R. D. Randel[2], T. H. Welsh, Jr.[1], T. D. A. Forbes[3], D. T. Dean[1], and A. D. Herring[1], [1]*Texas Agricultural Experiment Station*, *College Station*, [2]*Texas Agricultural Experiment Station*, *Overton*, [3]*Texas Agricultural Experiment Station*, *Uvalde*.
10:45 AM	453	Relationships between feed efficiency and real-time ultrasound traits in growing and finishing steers. E. G. Brown*[1], G. E. Carstens[1], J. T. Fox[1], S. A. Woods[1], D. T. Dean[1], A. D. Herring[1], S. Moore[2], and P. C. Genho[2], [1]*Texas Agricultural Experiment Station*, *College Station*, [2]*King Ranch*, *Kingsville, TX*.
11:00 AM	454	Optimizing use of distiller's grains in finishing cattle diets. B. E. Depenbusch*, J. S. Drouillard, E. R. Loe, and M. E. Corrigan, *Kansas State University*, *Manhattan*.
11:15 AM	455	Effects of vegetable and animal lipid sources on meat sensory attributes and longissimus muscle fatty acid profile from yearling beef steers. E. R. Loe*[1], J. S. Drouillard[1], K. A. Hachmeister[1], and F. N. Owens[2], [1]*Kansas State University*, *Manhattan*, [2]*Pioneer Hi-Bred International*, *Des Moines, IA*.
11:30 AM	456	Effects of source of lipid on finishing cattle performance and carcass characteristics. E. R. Loe*[1], J. S. Drouillard[1], and F. N. Owens[2], [1]*Kansas State University*, *Manhattan*, [2]*Pioneer Hi-Bred International, Inc.*, *Des Moines, IA*.
11:45 AM	457	Effects of ractopamine-HCl (Optaflexx) and protein source on performance and carcass characteristics of feedlot heifers. B. E. Depenbusch*, D. K. Walker, E. C. Titgemeyer, E. R. Loe, M. E. Corrigan, M. J. Quinn, A. S. Webb, and J. S. Drouillard, *Kansas State University*, *Manhattan*.
12:00 PM	458	Effects of ractopamine and days on feed on performance and carcass traits of yearling steers. J. P. Hutcheson*[1], W. T. Nichols[1], C. D. Reinhardt[1], R. S. Swingle[2], and K. J. Karr[2], [1]*Intervet, Inc.*, *Millsboro, DE*, [2]*Cactus Research, Ltd.*, *Amarillo, TX*.

Breeding and Genetics

Beef Cattle Breeding and Genetics

Chair: Michael MacNeil, USDA Livestock and Range Research Laboratory

Sponsor: Newsham Genetics

Room 203

Time	Abstract #	
10:30 AM	459	Educating beef cattle breeders on the use of genomic technology for quantitative traits. W. Shafer*, *American Simmental Association*, *Bozeman, MT*.
11:15 AM		Discusssion
11:30 AM	460	Using appropriate genetic evaluations to make better selection decisions. D. Garrick*, *Colorado State University*, *Fort Collins*.
11:45 AM	461	Postweaning performance of purebred Angus and Romosinuano steers. W. A. Phillips*[1], S. W. Coleman[2], D. G. Riley[2], C. C. Chase, Jr.[2], and H. S. Mayeux[1], [1]*USDA,ARS, Grazinglands Research Lab.*, *El Reno, OK*, [2]*USDA,ARS,SubTropical Agricultural Res. Station*, *Brooksville, FL*.
12:00 PM	462	Strategies to optimize feed intake recording capacity for performance evaluated beef bulls. S. Miller*, *University of Guelph*, *Guelph, Ontario, Canada*.
12:15 PM	463	Associations between markers in the leptin gene and carcass traits in commercial feedlot steers and heifers. B. W. Woodward*[1], J. Li[2], Z. Zhang[3], R. L. Quaas[3], and E. J. Pollak[3], [1]*Merial Limited*, *Duluth, GA,*, [2]*Institute of Animal Science, CAAS*, *Beijing, PRC*, [3]*Cornell University*, *Ithaca, NY*.

Danisco International Dairy Science Award Lecture

Chair: W. James Harper, The Ohio State University, Columbus

Sponsor: Danisco USA Inc.

Room 236

Time	
10:30 AM	Milk protein processing and functionality. P. A. Munro, *Fonterra Cooperative Group, Palmerston North, New Zealand*.

Extension Education

Environment and National Animal Identification System

Chairs: Richard Norell, University of Idaho and Jodie Pennington, University of Arkansas

Room 244

Time	Abstract #	
10:30 AM	464	Agricultural-environmental programming in Pennsylvania: making connections, building capacity, increasing credibility. V. Ishler*[1], A. Dodd[1], R. Meinen[1], B. Mikesell[1], C. Abdalla[1], G. Martin[1], and J. Weld[2], [1]*Pennsylvania State University*, *University Park*, [2]*USDA Agricultural Research Service*, *University Park, PA*.
10:45 AM	465	Development of an on-farm feed management assessment tool for use with dairy comprehensive nutrient management plans. L. VanWieringen[1], J. Harrison*[1], R. Kincaid[1], A. Hristov[2], R. Sheffield[2], M. Gamroth[3], P. French[3], T. Downing[3], and A. Sutton[4], [1]*Washington State University*, *Puyallup*, [2]*University of Idaho*, *Moscow*, [3]*Oregon State University*, *Corvallis*, [4]*Purdue University*, *West Lafayette, IN*.
11:00 AM	466	Evaluation of whole-farm nutrient balances on a commercial dairy operation. T. Nennich*[1], J. Harrison[2], D. Davidson[2], J. Werkhoven[3], and A. Werkhoven[3], [1]*Texas A&M University*, *Stephenville*, [2]*Washington State University*, *Puyallup*, [3]*Werkhoven Dairy*, *Monroe, WA*.
11:15 AM	467	Sampling strategies to determine nutrient flows on a commercial dairy operation. T. Nennich*[1], J. Harrison[2], D. Davidson[2], J. Werkhoven[3], and A. Werkhoven[3], [1]*Texas A&M University*, *Stephenville*, [2]*Washington State University*, *Puyallup*, [3]*Werkhoven Dairy*, *Monroe, WA*.
11:30 AM	468	Implementing the NAIS. K. Olson*, J. Mattison, G. Marrs, D. Sheldon, and B. Dokkebakken, *NDHIA*, *Columbus, OH*.
11:45 AM	469	The effectiveness of collecting and delivering RFID data to meet requirements of NAIS. J. S. Clay*[1], P. A. Dukas[1], J. L. Mylin[2], J. A. High[2], P. E. Knepley[3], and R. Miller[3], [1]*Dairy Records Management Systems*, *Raleigh, NC*, [2]*Lancaster DHIA*, *Manheim, PA*, [3]*Pennsylvania Dept. Of Agriculture*, *Harrisburg, PA*.
12:00 PM	470	Utilizing RFID technology to enhance accuracy of identification and data entry in herd recording. M. Tomaszewski*[1], J. Clay[2], and P. Dukas[2], [1]*Texas A&M University*, *College Station*, [2]*North Carolina State University*, *Raleigh*.
12:15 PM	471	Use of radio frequency identification (RFID) eartags and barcoded labels for identification of laboratory submissions. S. Stewart*[1], C. Clobes[2], B. Dokkebakken[2], and S. Eicker[3], [1]*University of Minnesota*, *St. Paul*, [2]*Minnesota DHIA*, *Buffalo, MN*, [3]*Valley Ag Software*, *Tulare, CA*.

Extension Education

Training Programs, Program Evaluation, and Economics

Chairs: Twig Marston, Kansas State University and Justen Smith, Utah State University

Room 240

Time	Abstract #	
10:30 AM	472	Competency acquisition of workers participating in the Penn State Dairy Production Skills Certificate. S. S. Costello*, L. A. Holden, A. J. Heinrichs, E. P. Hovingh, M. O'Connor, V. A. Ishler, R. E. Stup, and B. J. Hilty, *Pennsylvania State University*, *University Park*.

10:45 AM	473	Calf sense: Learning to manage newborn dairy calves. R. E. Stup*, A. J. Heinrichs, R. Van Saun, and D. Wolfgang, *Pennsylvania State University*, *University Park*.
11:00 AM	474	Documenting the impact of continuing and extension education on changing adult behavior. D. Moore*[1] and H. Slotnick[2], [1]*University of California*, *Davis*, [2]*University of North Dakota*, *Grand Forks*.
11:15 AM	475	Benchmarking dairy information for efficient decision making using interactive visual tools. G. Boda*, R. Lacroix, and K. M. Wade, *McGill University*, *Montreal, QC, Canada*.
11:30 AM	476	Changing to an internet-based aquaculture service program. G. J. Burtle*, *University of Georgia*, *Tifton*.
11:45 AM	477	Youth livestock handling safety education. J. Yost* and S. Boyles, *The Ohio State University*, *Columbus*.
12:00 PM	478	Factors influencing the value of West Virginia feeder cattle. P. Osborne*, E. Rayburn, and J. Pritchard, *West Virginia University*, *Morgantown*.
12:15 PM	479	Beef artificial insemination economics. W. Ellis*, *Southeast Missouri State University*, *Cape Girardeau*.

SYMPOSIUM

FASS Symposium on Toxic Levels of Minerals

Chair: Kirk Klasing, University of California, Davis

Symposium meets AAVSB's RACE requirements for 2 hr CE.

Ballroom A

Time	Abstract #	
10:30 AM		Introduction. Kirk Klasing, *University of California-Davis*.
10:35 AM	480	Sources and bioavailabilities of toxic levels of minerals. J. W. Spears*[1] and J. P. Goff[2], [1]*North Carolina State University*, *Raleigh*, [2]*USDA, National Animal Disease Center*, *Ames, IA*.
10:55 AM	481	Toxic levels of minerals in the diets of animals. J. Goff*[1] and J. Spears[2], [1]*National Animal Disease Center, USDA-ARS*, *Ames, IA*, [2]*North Carolina State University*, *Raleigh*.
11:15 AM	482	Potential adverse effects on humans consuming excess minerals in animal products. J. Greger*[1], F. Nielsen[2], and K. Klasing[3], [1]*University of Connecticut*, *Storrs*, [2]*Grand Forks Human Nutrition Center*, *Grand Forks, ND*, [3]*University of Califronia*, *Davis*.
11:35 AM	483	New developments in selenium toxicity. X. G. Lei*, *Cornell University*, *Ithaca, NY*.
11:55 AM	484	The toxicity of minerals that may be advocated for animal health and production through reasons other than nutritional need. F. Nielsen*, *USDA/ARS/Grand Forks Human Nutrition Research Center*, *Grand Forks, ND*.
12:15 PM	485	New developments in heavy metal toxicity. K. Klasing*, *University of California*, *Davis*.

Nonruminant Nutrition

Feed Ingredients and Processing

Chair: C. Robert Dove, University of Georgia

Room 206

Time	Abstract #	
10:30 AM	486	Effects of menhaden fish meal or oil on the performance and immune response of nursery pigs. A. Gaines*[1], J. Carroll[2], R. Fent[1], and G. Allee[1], [1]*University of Missouri*, *Columbia*, [2]*Livestock Issues Research Unit, ARS-USDA*, *Lubbock, TX*.
10:45 AM	487	Evaluation of canola meal as an alternative plant protein source in nursery pig diets. J. Ele, S. Meers, M. Azain, and R. Dove*, *University of Georgia*, *Athens*.
11:00 AM	488	Near infra-red reflectance spectroscopy for prediction of amino acids in feed ingredients leads to important cost savings in diet formulation. J. Goodson*[1], D. Hoehler[1], J. Fontaine[2], B. Schirmer[2], and A. Jaeger[2], [1]*Degussa Corporation*, *Kennesaw, GA*, [2]*Degussa AG*, *Hanau, Germany*.

11:15 AM	489	Use of rice in substitution of corn in diets for young pigs. B. Vicente, D. G. Valencia, R. Lázaro, M. P. Serrano, and G. G. Mateos*, *Universidad Politácnica de Madrid*, *Spain*.
11:30 AM	490	Effect of dietary level of distillers dried grains with solubles (DDGS) on growth performance, mortality, and carcass characteristics of grow-finish barrows and gilts. D. Cook*[1], N. Paton[1], and M. Gibson[2], [1]*Akey*, *Lewisburg, OH*, [2]*Dakota Gold Research Association*, *Sioux Falls, SD*.
11:45 AM	491	Influence of feed soaking and feed fermentation on amino acid digestibility by growing pigs. C. Pedersen*, K. E. Strom, M. G. Boersma, and H. H. Stein, *South Dakota State University*, *Brookings*.
12:00 PM	492	Relative bioavailability of phosphorus and true amino acid digestibility by poultry as affected by soybean extraction time and use of low-phytate soybeans. L. Karr-Lilienthal*, P. Utterback, C. Martinez Amezcua, C. Parsons, N. Merchen, and G. Fahey, *University of Illinois*, *Urbana*.
12:15 PM	493	The effect of particle size and feed form on laying hen performance. M. Scott*[1] and M. McCann[1,2], [1]*The Queen's University of Belfast*, *Belfast, County Antrim, Northern Ireland*, [2]*Agriculture, Food and Environmental Division*, *Belfast, County Antrim, Northern Ireland*.

Production, Management and the Environment

Dairy and Livestock Management

Chair: Dan Waldner, Cargill Animal Nutrition

Room 202

Time	Abstract #	
10:30 AM	494	Influence of rearing environment and season on growth performance of growing-finishing pigs. R. Myer* and R. Bucklin, *University of Florida*, *Gainesville*.
10:45 AM	495	Repeatability of measures of Brahman bull temperament and their association with serum cortisol concentrations. K. Curley, Jr.*[1,2], J. Paschal[3], T. Welsh, Jr.[1], and R. Randel[2], [1]*Texas Agricultural Experiment Station, College Station*, [2]*Texas Agricultural Experiment Station, Overton*, [3]*3Texas Cooperative Extension, Corpus Christi*.
11:00 AM	496	Postpartum productivity of suckled beef cows supplemented with the fibrolytic enzyme Cattle-Ase™. L. Jonovich*[1,2], D. Neuendorff[2], A. Lewis[2], T. Welsh, Jr[1], and R. Randel[2], [1]*Texas Agricultural Experiment Station*, *College Station*, [2]*Texas Agricultural Experiment Station*, *Overton*.
11:15 AM	497	Production traits differ in different breedtypes of suckled beef cows. L. Jonovich*[1,2], D. Neuendorff[2], A. Lewis[2], T. Welsh, Jr[1], and R. Randel[2], [1]*Texas Agricultural Experiment Station*, *College Station*, [2]*Texas Agricultural Experiment Station*, *Overton*.
11:30 AM	498	Comparison of cattle identification costs using conventional or electronic systems in Spain. C. Saa, M. J. Milán, G. Caja*, and J. J. Ghirardi, *Universitat Autònoma de Barcelona*, *Bellaterra, Spain*.
11:45 AM	499	Economic study of milk production in Iran. A. Karbasi*[1] and A. Sarvari[2], [1]*Zabol Islamic Azad University*, [2]*Zabol University*.
12:00 PM	500	Development of an intraruminal device for data sampling and transmission. A. K. Sievers*[1], K.-H. Suedekum[1,2], H.-J. Laue[3], N. B. Kristensen[4], and S. Wolffram[1], [1]*University of Kiel*, *Kiel, Germany*, [2]*University of Bonn*, *Bonn, Germany*, [3]*University of Applied Sciences*, *Kiel, Germany*, [4]*Danish Institute of Agricultural Sciences*, *Tjele, Denmark*.
12:15 PM	501	Open-air windrows for winter disposal of large animal mortalities: effects of ambient temperature and windrow dimensions. K. Stanford*, V. Nelson, and B. Sexton, *Alberta Agriculture, Food and Rural Development*, *Lethbridge, AB, Canada*.

Production, Management and the Environment

Heat Stress

Chair: Andrew Skidmore, Blue Seal Feeds

Room 242

Time	Abstract #	
10:30 AM	502	Evaluation of environmental conditions in 4 and 6 row freestall barns that are tunnel ventilated with evaporative pads and located in Indiana. J. F. Smith*[1], M. J. VanBaale[2], M. J. Brouk[1], B. Prokop[3], and J. P. Harner[1], [1]*Kansas State University*, *Manhattan*, [2]*The University of Arizona*, *Tucson*, [3]*Herrema Dairy*, *Fairoaks, IN*.
10:45 AM	503	Impact of using feedline soakers in combination with tunnel ventilation and evaporative pads to minimize heat stress in lactating dairy cows located in Thailand. J. F. Smith*[1], D.V Armstrong[2], M. J. Brouk[1], V. Wuthironarith[3], and J. P. Harner[1], [1]*Kansas State University*, *Manhattan*, [2]*University of Arizona*, *Tucson*, [3]*Charoen Pokphanol Group Co., LTD*, *Bangkok, Thailand*.
11:00 AM	504	Combining air cooling and feedline soaking for heat abatement of lactating dairy cattle housed in north central Florida. M. Brouk*[1], J. Smith[1], D. Armstrong[2], M. VanBaale[2], D. Bray[3], and J. Harner[2], [1]*Kansas State University*, *Manhattan*, [2]*University of Arizona*, *Tucson*, [3]*University of Florida*, *Gainesville*.
11:15 AM		Break
11:30 AM	505	Utilizing data loggers and vaginal temperature data to evaluate heat stress of dairy cattle. M. Brouk*, B. Cvetkovic, J. Smith, and J. Harner, *Kansas State University*, *Manhattan*.
11:45 AM	506	Assessment of heat increment in dairy cattle by monitoring heart rate. A. Arieli*[1], U. Moallem[2], I. Halachmi[2], and Y. Aharoni[2], [1]*Hebrew University of Jerusalem*, *Rehovot, Israel*, [2]*Agricultural Research Organization, The Volcani Center*, *Bet Dagan, Israel*.
12:00 PM	507	Use of physiological measures as predictors of heat dissipation during heat stress in dairy cattle. B. C. Pollard*, P. C. Gentry, and R. J. Collier, *University of Arizona*, *Tucson*.
12:15 PM	508	Evaporative heat loss from pigs at different temperature and relative humidity. T.T. Huynh[1,2], J. A. Aarnink*[2], W. A. Verstegen[3], J. J. Gerrits[3], M. J. Heetkamp[4], and B. Kemp[4], [1]*Department of Animal Health*, *Ho Chi Minh city, Viet Nam*, [2]*Livestock and Environment, Wageningen University and Research Center*, *the Netherlands*, [3]*Animal Nutrition Group, Wageningen University and Research Center*, *the Netherlands*, [4]*Adaptation Physiology, Wageningen University and Research Center*, *the Netherlands*.

Ruminant Nutrition

Dairy – Feed Additives

Chair: Bill Sanchez, Diamond V Mills

Room 207

Time	Abstract #	
10:30 AM	509	'Rumen-up': New plants and plant extracts to decrease methane and nitrogenous emissions from ruminants and to alleviate nutritional stress. R. J. Wallace[1], R. Ningrat[1], K. Becker[2], E. Hoffman[2], S. Muetzel[2], N. Selje[2], S. Lopez[3], D. E. Beever[4], K. E. Kliem[4], R. Morgan[4], F. L. Mould[4], C. Duffy[5], M. Frehner[6], and R. Losa*[6], [1]*RRI*, *Aberdeen, UK*, [2]*Inst An Prod Un*, *Hohenhein, Germany*, [3]*Dept Prod An Un*, *Leon, Spain*, [4]*Dept Agric Un*, *Reading, UK*, [5]*Alltech Irland Ltd*, *Dunboyne, Irland*, [6]*CRINA SA*, *Gland, Switzerland*.
10:45 AM	510	Effect of a specific blend of essential oils on the colonization of starch-rich substrates by rumen microorganisms. S. Duval*[1], N. McEwan[2], R. Graham[2], R. Wallace[2], and C. Newbold[1], [1]*The Institute of Rural Science*, *Aberystwyth, Wales, UK*, [2]*Rowett Research Institute*, *Aberdeen, Scotland, UK*.
11:00 AM	511	Impact of rumensin premix on reproductive performance in dairy cows. T. Duffield*[1], S. LeBlanc[1], D. McClary[2], H. Green[2], and J. Wilkinson[2], [1]*University of Guelph*, *Guelph, ON, Canada*, [2]*Elanco*, *Greenfield, IN*.
11:15 AM	512	Effect of a low-moisture buffer block on subacute ruminal acidosis (SARA) in lactating dairy cows. K. M. Krause*[1], G. R. Oetzel[1], and D. V. Dhuyvetter[2], [1]*University of Wisconsin*, *Madison*, [2]*Ridley Block Operations, Ridley Inc.*, *Mankato, MN*.
11:30 AM	513	Effects of a Yucca Schidigera extract on microbial metabolism in continuous culture of rumen contents. J. Clark*[1], T. Miller-Webster[1], W. Hoover[1], and B. Clyburn[2], [1]*Rumen Fermentation Profiling Laboratory, West Virginia University*, *Morgantown, WV*, [2]*Distributors Processing, Inc.*, *Porterville, CA*.

11:45 AM	514	The effect of method of dietary addition of a fibrolytic enzyme on the performance of lactating dairy cows. D. Dean*, A. Adesogan, C. Staples, K. Arriola, S. Kim, N. Krueger, M. Huisden, S. Chikagwa, and B. Amaral, *University of Florida*, *Gainesville*.
12:00 PM	515	Effect of an enzyme mixture on dairy cow performance. S. Ghasemi* and A. A. Naserian, *Ferdowsi University*, *Mashhad, Khorasan, Iran*.

Sheep Species

Chair: Noelle Muggli-Cockett, Utah State University

Room 241

Time	Abstract #	
10:45 AM	516	Analysis of probability distribution of some serum and hematological variables of dairy sheep. C. Dimauro[1], P. Bonelli[2], N.P.P. Macciotta[1], P. Nicolussi[2], C. Patta[2], and G. Pulina*[1], [1]*Università di Sassari*, *Italia*, [2]*Istituto Zooprofilattico per la Sardegna*, *Italia*.
11:00 AM	517	Comparison of East Friesian and Lacaune sheep breeds for dairy production. D. L. Thomas*, Y. M. Berger, R. G. Gottfredson, and T. A. Taylor, *University of Wisconsin*, *Madison*.
11:15 AM	518	Reproductive performance and milk yield in Awassi and its crosses with either Charollais or Romanov breeds. R. Kridli*[1], A. Abdullah[1], N. AL-Smadi[1], and M. Momani-Shaker[2], [1]*Jordan University of Science and Technology*, *Irbid, Jordan*, [2]*Czech University of Agriculture*, *Prague, Czech Republic*.
11:30 AM	519	The use of Dorper crossbred ewes in an accelerated lambing and extensive management system in the tropics. R. E. Dodson* and R. W. Godfrey, *University of the Virgin Islands*, *St. Croix, US Virgin Islands*.
11:45 AM	520	Change in ultrasound loin and fat measurements in growing lambs of different breeds. C. Hiemke*, D. Thomas, T. Taylor, and R. Gottfredson, *University of Wisconsin*, *Madison*.
12:00 PM	521	Postweaning growth and internal parasite tolerance of lambs differing in percentage hair sheep breeding and raised on pasture. D. K. Aaron*, R. A. Zinner, D. G. Ely, W. P. Deweese, and E. Fink, *University of Kentucky*, *Lexington*.
12:15 PM	522	Interaction of copper oxide wire particles and molybdenum sulfate in lambs. J. Burke*[1], J. Miller[2], and D. Pote[1], [1]*USDA, Agricultural Research Service*, *Booneville, AR*, [2]*Louisiana State University*, *Baton Rouge*.

Swine Species

Swine Nutrition and Management

Chair: Teresa Parr, Zymetrics

Room 212

Time	Abstract #	
10:30 AM	523	Studies on causes of sow disposal at different parities of Large White sows. J. Arango*[1], I. Misztal[1], S. Tsuruta[1], M. Culbertson[2], and W. Herring[2], [1]*University of Georgia*, *Athens*, [2]*Smithfield Premium Genetics*, *Roanoke Rapids, NC*.
10:45 AM	524	Relations between lactation-, and slaughter/carcass traits in pigs. E. F. Knol*, D. T. Prins, and R. Bergsma, *Institute for Pig Genetics (IPG)*, *Beuningen, The Netherlands*.
11:00 AM	525	Estimation of variance components including competitive effects of Large White growing gilts. J. Arango*[1], I. Misztal[1], S. Tsuruta[1], W. Herring[2], and M. Culbertson[2], [1]*University of Georgia*, *Athens*, [2]*Smithfield Premuim Genetics*, *Roanoke Rapids, NC*.
11:15 AM	526	The effect of different grinding grades of soybean hulls on nutrient digestibility and performance in starting pigs (15-30kg). I. Moreira*[1], M. Kutschenko[1], D. Paiano[1], C. Scapinello[1], A. E. Murakami[1], and A. R. B. Qradros[1,2], [1]*Universidade Estadual de Maringá*, *Maringá, Paraná, Brazil*, [2]*Universidade Federal de Santa Maria*, *Santa Maria, Rio Grande do Sul, Brazil*.
11:30 AM	527	Reduced crude protein effects on aerial emissions from swine. W. Powers*[1], S. Bastyr[1], and B. Kerr[2], [1]*Iowa State University*, *Ames*, [2]*USDA-ARS*, *Ames, IA*.

11:45 AM	528	Effects of albuterol on the growth and carcass characteristics of finishing pigs. B. Richert*[1], R. Hinson[1], R. Marchant-Forde[2], D. Lay, Jr.[2], K. McMunn[2], and J. Marchant-Forde[2], [1]*Purdue University*, *West Lafayette, IN*, [2]*USDA-ARS, Livestock Behavior Research Unit*, *West Lafayette, IN*.
12:00 PM	529	Effect of diet supplementation with grass-meal and antioxidant supplementation on performance and carcass composition of Duroc and Landrace cross- bred pigs. P. G. Lawlor*[1], P. B. Lynch[1], J. Kerry[2], and S. Hogan[2], [1]*Moorepark Research Centre*, *Fermoy, Co. Cork, Ireland*, [2]*University College*, *Cork, Ireland*.
12:15 PM	530	Evaluation of low-phytate soybeans on swine performance and phosphorus excretion. W. Powers*, E. Fritz, W. Fehr, and S. Bastyr, *Iowa State University*, *Ames*.

Animal Behavior and Well-being

Sow and Boar Behavior and Housing

Chair: Jeremy Marchant-Forde, USDA-ARS, Livestock

Room 211

Time	Abstract #	
11:30 AM	531	Sexual behaviors in boars treated with an inhibitor of prostaglandin synthesis. M. Estienne*, A. Harper, and W. Beal, *Virginia Polytechnic Institute and State University*, *Blacksburg*.
11:45 AM	532	The effects of boar presence on the frequency of agonistic behaviour, occurrence of shoulder scratches and stress response of group-housed bred sows. M. J. Séguin*[1], R. M. Friendship[1], R. N. Kirkwood[2], A. J. Zanella[2], and T. M. Widowski[1], [1]*University of Guelph*, *Guelph, ON*, [2]*Michigan State University*, *East Lansing*.
12:00 PM	533	Effects of space on individual- and group-kept dry sows: behavior and immune status. J. L. Salak-Johnson*, M. A. Sutherland, M. J. Horsman, S. L. Rodriguez-Zas, and S. R. Niekamp, *University of Illinois*, *Urbana*.

Women & Minority Issues in Animal Agriculture Luncheon

Chair: Ray McKinnie, North Carolina A&T State University

Room 261

Time	
12:30 PM	Making It Happen: Career and Family. Carolyn Meyers, Provost, *North Carolina A&T State University, Greensboro*.

SYMPOSIUM

ADSA Production Division

Forage Analysis: Concept to Application

Chair: Rick Grant, W.H. Miner Agricultural Research Institute, Chazy, NY

Sponsor: ARPAS

Symposium meets AAVSB's RACE requirements for 6 hr CE.

Ballroom B

Time	Abstract #	
2:00 PM		Introduction. Rick Grant.
2:10 PM	534	Dairy nutritionist survey on forage carbohydrate analysis: Implications for methodology application. L. Chase*[1], M. Raeth-Knight[2], J. Linn[2], and W. Mahanna[3], [1]*Cornell University*, *Ithaca, NY*, [2]*University of Minnesota*, *St.Paul*, [3]*Pioneer Hi-Bred International*, *Des Moines, IA*.
2:30 PM	535	Starches and sugars: conceptual and analytical challenges. M. B. Hall*, *U. S. Dairy Forage Research Center, USDA-ARS*, *Madison, WI*.
3:15 PM	536	Applying starch and sugar analyses in dairy nutrition. S. Emanuele*, *Land O' Lakes Inc.*, *Caledonia, NY*.
3:45 PM		Break

4:00 PM	537	NDF digestibility: conceptual and analytical challenges. M. S. Allen*, *Michigan State University*, *East Lansing*.
4:45 PM	538	Collecting, interpreting and using corn silage NDF digestibility data as a consulting nutritionist for commercial dairies. W. Nelson*[1], C. Renken[1], C. Holtz[3], and B. Kloss[2], [1]*Nelson Dairy Consultants, Inc.*, *Lakeville, MN*, [2]*Nelson-Kloss Dairy Production Nutrition, LLC*, *Visalia, CA*, [3]*Holtz-Nelson Dairy Consultants, LLC*, *Dryden, NY*.
5:15 PM		Panel Discussion
6:00 PM		Break
6:30 PM		Testing Forages by NIRS Using New Tests To Balance Dairy Diets.

Animal Behavior and Well-being

Weaning and Animal Welfare

Chair: Drew A. Vermeire, Nouriche Nutrition Ltd.

Room 211

Time	Abstract #	
2:00 PM	539	Effect maze task on salivary cortisol of pigs at weaning and on subsequent fear response. J. Siegford*, G. Rucker, and A. Zanella, *Michigan State University*, *East Lansing*.
2:15 PM	540	Odor preference of pre-weaning piglets to biologically relevant and non-relevant odors. N. Krebs* and J. McGlone, *Texas Tech University*, *Lubbock*.
2:30 PM	541	Performance and behavior of calves reared in groups or individually following an accelerated-growth feeding program. M. Terre*[1], A. Bach[2,1], and M. Devant[1], [1]*Unitat de Remugants-IRTA (Institut de Recerca i Tecnologia Agroalimentàries)*, *Barcelona, Spain*, [2]*ICREA (Institució Catalana de Recerca i Estudis Avançats)*, *Barcelona, Spain*.
2:45 PM	542	Weaning cattle in two stages reduces the behavior changes typically associated with weaning stress. D. B. Haley*[1,2] and J. M. Stookey[1], [1]*Western College of Veterinary Medicine*, *Saskatoon, SK, Canada*, [2]*Alberta Agriculture, Food & Rural Development*, *Red Deer, AB, Canada*.

Animal Health II

Chair: Harlan J. Howard, Division of Production Drugs, CVM

Room 212

Time	Abstract #	
2:00 PM	543	Assessment of Antibiotic Usage in Dairy Herds in Pennsylvania. A. Sawant*, L. Sordillo, and B. Jayarao, *Pennsylvania State University*, *University Park*.
2:15 PM	544	The early detection of bovine respiratory disease (BRD) with infrared thermography and treatment with nitric oxide. A. L. Schaefer*[1], B.J. Perry[2], N.J. Cook[3], J. S. Church[3], C. Miller[2], and A. Stenzler[2], [1]*Agriculture and Agri-Food Canada*, *Lacombe, Alberta, Canada*, [2]*Pulmonox Medical Inc*, *Edmonton, Alberta, Canada*, [3]*Alberta Agriculture Food and Rural Development*, *Lacombe, Alberta, Canada*.
2:30 PM	545	Cytokine expression of T cell subsets in bovine peripheral blood. S. Tanaka*, K. Miyazawa, K. Watanabe, S. Ohwada, H. Aso, and T. Yamaguchi, *Tohoku University*, *Sendai, Japan*.
2:45 PM	546	Probiotics affect the establishment of T lymphocytes in the gut and prevent bacterial translocation in pigs. M. Lessard*[1], M. Dupuis[1], N. Gagnon[1], J. Matte[1], J. M. Fairbrother[2], E. Farnworth[3], and J. Goulet[4,5], [1]*Agriculture and Agri-Food Canada, Dairy and Swine Research and Development Centre*, *Lennoxville, Qc, Canada*, [2]*Montreal University*, *St-Hyacinthe, Qc, Canada*, [3]*Agriculture and Agri-Food Canada, Food Research and Development Centre*, *St-Hyacinthe, Qc, Canada*, [4]*Laval University, FSAA*, *Québec, Qc, Canada*, [5]*Institut Rosell Lallemand inc.*, *Montreal, Qc, Canada*.
3:00 PM	547	Long-term effects of weaning age on immune function of pigs. S. R. Niekamp*, M. A. Sutherland, and J. L. Salak-Johnson, *University of Illinois*, *Urbana*.

3:15 PM	548	A comparison of serum harvesting methods and different instruments for total solid refractometry in calves to determine failure of passive transfer. B. Jarvie, M. Wallace, N. Perkins, and K. Leslie*, *University of Guelph*, *Guelph, ON, Canada*.
3:30 PM	549	Effects of OmniGen-AF on growth and innate immune function in growing rats: identification of a mechanism of action. E. Georges*, Y. Wang, and N. Forsberg, *Oregon State University*, *Corvallis*.
3:45 PM	550	The process of porcine M cell differentiation within the follicle-associated epithelium. K. Miyazawa*, A. Hisashi, K. Takashi, K. Taketomo, K. Watanabe, S. Ohwada, and T. Yamaguchi, *Tohoku University*, *Sendai, Japan*.
4:00 PM	551	Comparison of direct-fed microbial and antibiotic supplementation on peripheral blood immune cell populations of weanling pigs. M. E. Davis*[1], D. C. Brown[1], C. V. Maxwell[1], Z. B. Johnson[1], and T. Rehberger[2], [1]*University of Arkansas*, *Fayetteville*, [2]*Agtech Products, Inc.*, *Waukesha, WI*.
4:15 PM	552	Effects of weaning age on pig immune response to mixing stress. S. R. Niekamp*, M. A. Sutherland, and J. L. Salak-Johnson, *University of Illinois*, *Urbana*.
4:30 PM	553	Effects of Melengestrol Acetate on bovine inflammatory response during Mannheimia haemolytica challenge. M. Corrigan*, J. Drouillard, D. Mosier, M. Spire, J. Minton, J. Higgins, E. Loe, B. Depenbusch, and J. Fox, *Kansas State University*, *Manhattan*.
4:45 PM	554	Peripheral and core body temperature sensing using radio-frequency implants in steers challenged with lipopolysaccharide. E. D. Reid* and G. E. Dahl, *University of Illinois*, *Urbana*.

Breeding and Genetics

Dairy Cattle Breeding for Non-Production Traits II

Chair: Marj Faust, ABS

Sponsor: Select Sires

Room 203

Time	Abstract #	
2:00 PM	555	Including important traits with low heritability in workable dairy progeny tests in the US. R. Pearson* and B. Cassell, *Virginia Polytechnic Institute and State University*, *Blacksburg*.
2:45 PM		Discussion
3:00 PM	556	Effect of herd by sire interaction variance on genetic evaluations. P. M. VanRaden and M. E. Tooker*, *Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*.
3:15 PM	557	Quantifying the level of heat stress in a southeastern dairy using weather recording on- and off-farm. M. Freitas*[2], I. Misztal[1], J. Bohmanova[1], and J. West[1], [1]*University of Georgia*, *Athens*, [2]*Universidade Federal de Vicosa*, *Vicosa, MG, Brazil*.
3:30 PM	558	Test-day model that accounts for heat stress of Holsteins in the United States. J. Bohmanova*[1], I. Misztal[1], S. Tsuruta[1], D. Norman[2], and T. Lawlor[3], [1]*University of Georgia*, *Athens*, [2]*Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*, [3]*Holstein Association*, *Brattleboro, VT*.
3:45 PM		Break
4:00 PM	559	Reproduction data in USDA database. G. Wiggans*, *Animal Improvement Programs Laboratory, Agricultural Research Service*, *Beltsville, MD*.
4:15 PM	560	Conception rates of Holsteins in New York and Georgia. C. Huang*[1], S. Tsuruta[1], I. Misztal[1], T. J. Lawlor[2], and J. S. Clay[3], [1]*University of Georgia*, *Athens*, [2]*Holstein Association USA Inc.*, *Rrattleboro, VT*, [3]*Dairy Records Management Systems*, *Raleigh, NC*.
4:30 PM	561	Genetic parameters for conception rate and days open in Holsteins. S. Tsuruta*[1], C. Huang[1], I. Misztal[1], T. J. Lawlor[2], and J. S. Clay[3], [1]*University of Georgia*, *Athens*, [2]*Holstein Association Inc.*, *Brattleboro, VT*, [3]*Dairy Records Management Systems*, *Raleigh, NC*.

Companion Animals

Nutritional and Health Considerations for Companion Animals II, Pet Food and Ingredient Technology, Inc.

Chair: Russell L. Kelley, The Iams Company

Sponsor: The Iams Company

Room 244

Time	Abstract #	
2:00 PM		Welcome and Introduction. Dr. Diane Hirakawa.
2:10 PM	562	Effects of food and water intake on variation in ileal digesta viscosity among dogs fed a maintenance diet. C. Dikeman* and G. Fahey, Jr., *University of Illinois*, *Urbana*.
2:25 PM	563	Canine diet matrices affect digesta viscosity in vitro and ileal viscosity in vivo. C. Dikeman* and G. Fahey, Jr., *University of Illinois*, *Urbana*.
2:40 PM	564	Effect of body size and diet on total dietary fiber digestibility in dogs. D. Hernot*[1], H. Dumon[1], V. Biourge[2], L. Martin[1], and P. Nguyen[1], [1]*National Veterinary School*, *Nantes, France*, [2]*Royal Canin Research Center*, *Aimargues, France*.
2:55 PM	565	Effect of body size and dietary fiber level on fecal bacterial mass and fecal quality in dogs. D. Hernot*[1], V. Biourge[2], H. Dumon[1], L. Martin[1], and P. Nguyen[1], [1]*National Veterinary School*, *Nantes, France*, [2]*Royal Canin Research Center*, *Aimargues, France*.
3:10 PM		Break
3:30 PM	566	Effects of selected concentrations of DL-methionine and 2-hydroxy-4-(methylthio)-butanoic acid on nitrogen balance and nutrient digestibility in growing dogs. I. Middelbos*[1], L. Karr-Lilienthal[1], J. Folador[1], M. Vazquez-Anon[2], G. Yi[2], and G. Fahey Jr.[1], [1]*University of Illinois*, *Urbana*, [2]*Novus International, Inc.*, *St. Louis, MO*.
3:45 PM	567	Encapsulation to deliver a steady-state level of dietary lutein to an animal via dry pet food. L. Deffenbaugh*, *Kemin Industries, Inc.*, *Des Moines, IA*.
4:00 PM	568	Effect of rosemary extract ingestion on canine serum antioxidant levels. W. Gamble*, *Kemin Nutrisurance*, *Des Moines, IA*.
4:15 PM	569	A multi-center clinical study of the effect of docosohexanoic acid (DHA) on joint inflammation and mobility in dogs with mild to moderate osteoarthritis. F. Buonomo*[1], D. Grohs[1], M. Conzemius[2], S. Johnston[3], and D. Millis[4], [1]*Monsanto Company, Animal Science Division*, *St. Louis, MO*, [2]*Iowa State University*, *Ames*, [3]*VA-MD Regional College of Veterinary Medicine*, *Blacksburg, VA*, [4]*University of Tennessee*, *Knoxville*.
4:30 PM		Insights on the Future of Companion Animal Sciences. Dr. Anita Oberbauer.
4:45 PM		Reception

Dairy Foods

Cheese II-Cream, Process, Italian and Other Cheeses

Chair: Joe Schlesser, U. S. Food and Drug Administration

Room 241

Time	Abstract #	
2:00 PM	570	Effect of the pH on the microstructure, firmness and meltability of cultured Cream cheese. R. R. Monteiro[1], D. Q. Tavares[1], P. S. Kindstedt[2], and M. L. Gigante*[1], [1]*State University of Campinas*, *Campinas, SP, Brazil*, [2]*University of Vermont*, *Burlington*.
2:15 PM	571	Effect of the addition of potassium sorbate on the stability of cream cheese. A. S. Salles[1], A. A. Vitali[2], P. S. Kindstedt[3], and M. L. Gigante*[1], [1]*State University of Campinas*, *Campinas,SP,Brazil*, [2]*Institute of Food Technology*, *Campinas,SP,Brazil*, [3]*University of Vermont*, *Burlington*.
2:30 PM	572	Textural properties of commercial cream cheese. T. Wang*, Y. Chan, M. Brighenti, S. Govindasamy-Lucey, and J. A. Lucey, *University of Wisconsin*, *Madison*.

2:45 PM	573	Effect of somatic cell count on Prato cheese ripening. G. Mazal[1], M. V. Santos[2], and M. L. Gigante*[1], [1]*State University of Campinas*, *Campinas, SP, Brazil*, [2]*University of Sao Paulo*, *Pirassununga, SP, Brasil*.
3:00 PM		Break
3:15 PM	574	Effect of mixing speed during manufacture and type and level of emulsifying salt used on the microstructure of process cheese. R. Kapoor*, S. K. Garimella Purna, and L. E. Metzger, *University of Minnesota*, *St. Paul*.
3:30 PM	575	Nutraceutical components of Pecorino Toscano cheese. M. Antongiovanni*[1], S. Rapaccini[1], A. Buccioni[1], M. Mele[2], A. Serra[2], and F. Petacchi[1], [1]*University of Florence*, *Firenze, Italy*, [2]*University of Pisa*, *Pisa, Italy*.
3:45 PM	576	Changes in sensory properties of Ragusano cheese from cows raw milk at different level of pastures. S. Carpino*[1], G. Marino[1], and G. Licitra[1,2], [1]*CoRFiLaC, Regione Siciliana*, *Ragusa, Italy*, [2]*D.A.C.P.A. Catania University*, *Catania, Italy*.

SYMPOSIUM

Food Safety

The Future of Food Safety: An Issue of National Importance

Chair: John N. Sofos, Colorado State University and Todd R. Callaway, USDA/ARS

Symposium meets AAVSB's RACE requirements for 4 hr CE.

Room 202

Time	Abstract #	
2:00 PM		Introduction.
2:05 PM	577	Foodborne illness and antibiotic resistance: Types, sources and extent of problem. M. P. Doyle*, *University of Georgia*, *Griffin*.
2:45 PM	578	Ethical issues surrounding food-borne illness: Who is responsible? B. Rollin*, *Colorado State University*, *Fort Collins*.
3:15 PM	579	Pathogen control in the field. What can we do to reduce pathogens entering the abattoir? T. Edrington*, T. Callaway, K. Genovese, R. Anderson, and D. Nisbet, *USDA-ARS-SPA, Food and Feed Safety Research Unit*, *College Station, TX*.
3:45 PM		Break
4:15 PM	580	Pathogen control during processing: What we can do to reduce pathogens in the processing plant . J. Sofos*, *Colorado State University*, *Fort Collins*.
4:45 PM	581	The economics of pathogen control in the meat industry: Who is going to foot the bill? R. Huffman*, *American Meat Institute Foundation*, *Washington, DC*.
5:15 PM		Food Safety as a Critical National Issue. E. Murano, *Texas A&M University, College Station*.

SYMPOSIUM

Goat Species

Educational Resources and Field Experiences to Enhance and Promote Goat Production and Management

Chair: Sandra Solaiman, Tuskegee University, AL

Room 243

Time	Abstract #	
2:00 PM	582	Fitness indicators among Boer, Kiko, and Spanish does managed on pasture in central Tennessee. R. Browning, Jr.*, T. Payton, B. Donnelly, P. Pandya, M. L. Leite-Browning, W. Hendrixson, S. Kebe, and M. Byars, *IAgER-Tennessee State University*, *Nashville*.
2:15 PM	583	Goat sales and price patterns in West Virginia. D Singh-Knights*[1], D Smith[1], and M Knights[2], [1]*West Virginia University*, *Morgantown*, [2]*The University of the West Indies*, *St. Augustine, Trinidad*.

2:30 PM	584	Formation of the Missouri Boer Goat Association. E. Walker*[1], S. Hamilton[2], and B. Watts[3], [1]*Southwest Missouri State University*, *Springfield*, [2]*University of Missouri*, *Columbia*, [3]*Missouri Boer Goat Assocation*, *Springfield*.
2:45 PM		Symposium Introduction & Comments Sandra Solaiman, *Tuskgee University, Alabama.*
3:00 PM	585	Using the internet to extend the reach of small ruminant extension programs in Maryland. S. Schoenian* and C. Fritz, *University of Maryland Cooperative Extension*, *Keedysville*.
3:15 PM	586	Extension and teaching goat production in Mexico. S. Arbiza[1], M. Perez[1], and M. Huerta*[2], [1]*Facultad de Estudios Superiores Cuautitlan, UNAM*, *Cuautitlan Izcalli, Mexico*, [2]*Universidad Autonoma Chapingo*, *Chapingo, Mexico*.
3:30 PM	587	University strategies to solve problems in goat production. A. S. Juarez-Reyes and M. A. Cerrillo-Soto*, *Universidad Juarez del Estado de Durango*, *Durango, Dgo, Mexico*.
3:45 PM	588	A college-level, team-taught course on small ruminant production: Reflections on the status and trend of the goat and sheep industry in Louisiana and the Gulf Coast region. J. M. Fernandez*, J. E. Miller, B. M. Olcott, T. L. Dumas, P. E. Humes, J. M. Gillespie, K. W. McMillin, and R. A. Godke, *Louisiana State University*, *Baton Rouge*.
4:00 PM		Roundtable Discussion: Goat Educational Resources and Efforts.

International Animal Agriculture

Chair: John Forrest, Purdue University

Room 240

Time	Abstract #	
2:00 PM	589	Animal genetic resources of Indian subcontinent, their unique features and conservation. S. P. S. Ahlawat* and S. C. Gupta, *National Bureau of Animal Genetic Resources*, *Karnal, Haryana, India*.
2:15 PM	590	Relationships between chemical composition and in vitro volatile fatty acid profile of the diet consumed by range sheep. A. Cerrillo-Soto*, K. Landa-Salas, G. Nevarez-Carrasco, R. Montoya-Escalante, and A. Juarez-Reyes, *Universidad Juarez del Estado de Durango*, *Durango, Dgo. Mexico*.
2:30 PM	591	Meat production using crop residues from eight maize cultivars as feed for sheep. S. Fernandez-Rivera*[1] and S. Twumasi-Afriyie[2], [1]*International Livestock Research Institute*, *Addis Ababa, Ethiopia*, [2]*International Maize and Wheat Improvement Center*, *Addis Ababa, Ethiopia*.
2:45 PM	592	Post tsunami disaster livestock development: Can the vulnerability be reduced? The case of Aceh, Indonesia. C. Wollny* and G. Tesfahun, *Georg-August University*, *Goettingen, Germany*.

Lactation Biology

Chair: Geoffrey Dahl, University of Illinois

Room 242

Time	Abstract #	
2:00 PM	593	Evidence of a role of prolactin in mediating photoperiodic effects during the dry period. H. M. Crawford*[1], J. L. Dauderman[1], D. E. Morin[1], T. B. McFadden[2], and G. E. Dahl[1], [1]*University of Illinois*, *Urbana*, [2]*University of Vermont*, *Burlington*.
2:15 PM	594	Lactational effects of the dry off period in dairy goats. A. A. K. Salama, G. Caja*, X. Such, E. Albanell, and R. Casals, *Universitat Autònoma de Barcelona*, *Bellaterra, Spain*.
2:30 PM	595	Effects of milking interval on hourly milk secretion rate in goats. G. Pulina*, S. Fancellu, G. Battacone, and A. Nudda, *University of Sassari*, *Sassari, Italy*.
2:45 PM	596	Induced lactation in 15-month-old heifers: production, health and survival. R. S. Kensinger*, A. L. Magliaro, R. Graboski, P. R. Tozer, M. L. O, and L. D. Muller, *Pennsylvania State University*, *University Park*.
3:00 PM	597	Leptin alters albumin synthesis in the bovine mammary gland. Y Feuermann[1,2], S. J. Mabjeesh[2], and A Shamay*[1], [1]*Agriculture Research Organisation The Volcani center*, *Bet Dagan Israel*, [2]*The Hebrew University of Jerusalem*, *Rehovot, Israel*.

3:15 PM	598	Effects of continuous milking (CM) and prostaglandin E_2 (PGE_2,) on mammary gene expression in dairy cows. E. L. Annen*[1], P. C. Gentry[1], R. Sprissler[1], D. L. Hadsell[2], A. V. Capuco[3], and R. J. Collier[1], [1]*University of Arizona*, *Tucson*, [2]*Baylor College of Medicine*, *Huston, TX*, [3]*USDA-ARS*, *Beltsville, MD*.
3:30 PM	599	Effects of continuous milking (CM) and bovine somatotropin (bST) on mammary gene expression in primiparous cows. E. L. Annen*[1], P. C. Gentry[1], R. Sprissler[1], D. L. Hadsell[2], A. V. Capuco[3], and R. J. Collier[1], [1]*University of Arizona*, *Tucson*, [2]*Baylor College of Medicine*, *Huston, TX*, [3]*USDA-ARS*, *Beltsville, MD*.
3:45 PM		Break
3:55 PM	600	Effects of heat stress on morphology and gene expression of bovine mammary epithelial cells (BMEC) in collagen gel culture. C. Stiening[1], J. Hoying[1], M. Ben Abdallah[1], P. Coussens[2], and R. Collier*[1], [1]*University of Arizona*, *Tucson*, [2]*Michigan State University*, *East Lansing*.
4:10 PM	601	A proteomic approach to evaluate the effects of body weight and plane of nutrition on protein expression profiles of mammary gland extracts from Holstein heifers. K. M. Daniels*[1], K. E. Webb, Jr.[1], M. L. McGilliard[1], M. J. Meyer[2], M. E. Van Amburgh[2], and R. M. Akers[1], [1]*Virginia Polytechnic Institute and State University*, *Blacksburg*, [2]*Cornell University*, *Ithaca, NY*.
4:25 PM	602	Inhibitory activity of bovine milk fat globule membrane against sialic acid-dependent and -independent strains of rotavirus. K. Ochonicky*[1], S. Donovan[1], T. Kuhlenschmidt[1], R. Jimenez-Flores[2], and M. Kuhlenschmidt[1], [1]*University of Illinois*, *Urbana*, [2]*Dairy Products Technology Center*, *San Luis Obispo, CA*.
4:40 PM	603	Inhibitory effects of human and porcine milk oligosaccharides on sialic acid dependent and sialic acid independent strains of rotavirus. K. Ochonicky*, S. Donovan, T. Kuhlenschmidt, and M. Kuhlenschmidt, *University of Illinois*, *Urbana*.
4:55 PM	604	Glucose and histidine affect the phosphorylation state of translation initiation factor 2 in the bovine mammary gland in vivo. C. A. Toerien*, D. R. Trout, and J. P. Cant, *University of Guelph*, *Guelph, ON, Canada*.
5:10 PM	708	Mammary use of glucose when milk yield is reduced by once daily milking and/or feed restriction in dairy cows. J. Guinard-Flament*, E. Delamaire, S. Lemosquet, and Y. David, *UMR INRA-Agrocampus Rennes Production du Lait*, *Rennes, France*.

SYMPOSIUM

Physiology and Endocrinology

Effects of Maternal Nutrient Supply on Embryonic and Fetal Development and Postnatal Performance

Chair: Brian Crooker, University of Minnesota, St. Paul

Sponsor: EAAP

Ballroom A

Time	Abstract #	
2:00 PM	605	Effects of maternal metabolic state and intra-uterine crowding on embryonic survival and fetal development in swine. G. Foxcroft*, J. Barry, W. Dixon, S. Novak, M. Vinsky, E. Putman, S. Town, G. Murdoch, A. Wellen, S. Terletski, and J. Patterson, *University of Alberta*, *Edmonton, AB, Canada*.
2:40 PM	606	Pre-gestational ewe management systems alter the impacts of early maternal undernutrition on fetal growth and offspring quality. S. Ford*[1], M. Du[1], B. Hess[1], and P. Nathanielsz[2], [1]*University of Wyoming*, *Laramie*, [2]*University of Texas*, *San Antonio*.
3:20 PM		Break
3:35 PM	607	Timing of nutrient restriction and programming of fetal adipose tissue development. M. Symonds*, H. Budge, M. Gnanalingham, T. Stephenson, and D. Gardner, *Centre for Reproduction and Early Life, Institute of Clinical Research, University Hospital*, *Nottingham, UK*.
4:15 PM	608	Nutrient partitioning in the growing adolescent sheep: consequences for conceptus development. J. M. Wallace*, *Rowett Research Institute*, *Aberdeen, UK*.

Ruminant Nutrition

Beef - Feedlot

Chair: David Bohnert, Oregon State University

Room 206

Time	Abstract #	
2:00 PM	609	Effect of cooked molasses block supplementation and flax on newly received calf performance. D. Larson*[1], M. Bauer[1], G. Lardy[1], and J. Stewart[2], [1]*North Dakota State University*, *Fargo*, [2]*Tublicks, LLC*, *Wyndmere, ND*.
2:15 PM	610	Effects of winter growing program on visceral organ mass and oxygen consumption in beef steers. M. McCurdy*[1], C. Krehbiel[1], G. Horn[1], and J. Wagner[2], [1]*Oklahoma State University*, *Stillwater*, [2]*Continental Beef Research*, *Lamar, CO*.
2:30 PM	611	Influence of phase-feeding on performance of beef steers. J. Gleghorn[1], P. Defoor[1], M. L. Galyean[2], G. C. Duff[3], and N. A. Cole*[4], [1]*New Mexico State University*, *Clayton*, [2]*Texas Tech University*, *Lubbock*, [3]*University of Arizona*, *Tucson*, [4]*USDA- Agricultural Research Service*, *Bushland, TX*.
2:45 PM	612	Relationship of residual feed intake with metabolic rate, methane production and energy partitioning in beef cattle. J. D. Nkrumah*[1], E. K. Okine[1], G. W. Mathison[1], K. Schmid[1], C. Li[1], J. A. Basarab[2], M. A. Price[1], Z. Wang[1], and S. S. Moore[1], [1]*University of Alberta*, *Edmonton, Alberta, Canada*, [2]*Alberta Agriculture, Food and Rural Development*, *Lacombe, Alberta, Canada,*.
3:00 PM	613	The relationship between mitochondrial DNA content, single nucleotide polymorphisms and feed efficiency in crossbred Angus steers. W. H. Kolath*, M. S. Kerley, and J. W. Golden, *University of Missouri*, *Columbia*.
3:15 PM	614	Evaluation of the effects of diatary antioxidant (Agrado®) on feedlot performance and carcass characteristics. M. Vazquez-Anon*[1], F. Scott[1], B. Miller[1], and T. Peters[2], [1]*Novus International*, *St Louis, MO*, [2]*Dekalb Feeds*, *Rock Falls, IL*.
3:30 PM	615	Effects of dietary sunflower seeds (SS) and Tylosin phosphate on production parameters, carcass characteristics and liver abscess incidence in European crossbred steers. C. Ross, P. Mir*, and M. Shah, *Agriculture And Agri- Food Canada*, *Lethbridge, AB, Canada*.
3:45 PM	616	Effect of Bos Koolus on dry matter intake, rectal temperature and respiration rate of grain fed steers exposed to hot conditions. J. Gaughan*[1], R. van Barneveld[2], and D. Cadogan[3], [1]*The University of Queensland*, *Gatton, Qld, Australia*, [2]*Becan Consultancy Group*, *South McLean, Qld, Australia*, [3]*Feedworks*, *Eagle Farm, Qld, Australia*.
4:00 PM	617	Feedlot performance response by steers to oral doses of polyclonal antibody preparations against Streptococcus bovis or Fusobacterium necrophorum. N. DiLorenzo*, C. R. Dahlen, A. DiCostanzo, and G. C. Lamb, *University of Minnesota*, *St Paul*.
4:15 PM	618	Effect of dietary vitamin A intake on marbling. M. A. Gorocica-Buenfil*, F. L. Fluharty, and S. C. Loerch, *The Ohio State University*, *Wooster*.
4:30 PM	619	Effects of roughage level and Fibrozyme™ supplementation on performance and carcass characteristics of finishing beef steers. J. J. Cranston* and C. R. Krehbiel, *Oklahoma State University*, *Stillwater*.
4:45 PM	620	Fatty acid composition of diets, metabolism and deposition in edible tissue of pasture-and feedlot-finished cattle. J. Guay*[1], J. Fontenot[1], W. Swecker[1], J. Neel[2], J. Herbein[1], W. Clapham[2], G. Scaglia[1], and A. Abaye[1], [1]*Virginia Polytechnic Institute and State University*, *Blacksburg*, [2]*USDA/ARS*, *Beaver, WV*.

Ruminant Nutrition

Dairy - Fats

Chair: Maurice Eastridge, The Ohio State University

Room 207

Time	Abstract #	
2:00 PM	621	Fatty acid composition in rumen bacteria isolated from ruminal and duodenal digesta. B. Vlaeminck[1], R. J. Dewhurst[2], and V. Fievez*[1], [1]*Laboratory for Animal Nutrition and Animal Product Quality, Ghent University*, *Ghent, Belgium*, [2]*Institute of Grassland and Environmental Research*, *Aberystwyth, UK*.
2:15 PM	622	Proportions of solid- (SAB) and liquid-associated (LAB) rumen bacteria in duodenal content as estimated by bacterial odd and branched-chain fatty acids. B. Vlaeminck[1], R. J. Dewhurst[2], and V. Fievez*[1], [1]*Laboratory for Animal Nutrition and Animal Product Quality, Ghent University*, *Ghent, Belgium*, [2]*Institute of Grassland and Environmental Research*, *Aberystwyth, UK*.
2:30 PM	623	Development of an in vitro method to estimate fat digestibility in the small intestine of ruminants. T. Glindemann[1], K.-H. Suedekum*[1,2], and E. Wisker[1], [1]*University of Kiel*, *Kiel, Germany*, [2]*University of Bonn*, *Bonn, Germany*.
2:45 PM	624	Conversion of oleic acid to 10-hydroxy and 10-keto stearic acids in vitro and their accumulation in milk of cows fed added fat. T. C. Jenkins*, A. A. AbuGhazaleh, E. J. Thies, and M. B. Riley, *Clemson University*, *Clemson, SC*.
3:00 PM	625	Effect of feeding supplemental palmitic acid (C 16:0) on performance of lactating dairy cows under summer heat. J. L. Warntjes*[1], P. H. Robinson[1], E. Galo[2], E. J. DePeters[1], and D. Howes[3], [1]*University of California*, *Davis*, [2]*Dairy Consulting Services of California, Inc.*, *Madera, CA*, [3]*Howes Consulting Inc.*, *Nampa, ID*.
3:15 PM	626	Effect of different levels of nonfiber carbohydrates with and without supplemental fat on production and composition of Holstein dairy cows. M. Bashtani, A. A. Naserian*, and R. Valizadeh, *Ferdowsi University of Mashhad*, *Mashhad, Khorasan, Iran*.
3:30 PM	627	Milk fat trans-10 C18:1, trans-10 cis-12 CLA and trans-9 cis-11 CLA: association with fish oil-induced milk fat depression. M. A. S. Gama[1], J. M. Griinari[2], P. C. Garnsworthy[3], P. H. M. Rodrigues[4], P. R. Leme[4], L. W. O. Souza[4], and D. P. D. Lanna*[1], [1]*ESALQ-USP*, *Piracicaba, SP, Brazil*, [2]*University of Hensinki*, *Finland*, [3]*University of Nottingham*, *UK*, [4]*FZEA-USP*, *Pirassununga, Brazil*.
3:45 PM	628	Source and amount of pelleted cottonseed influences fat digestibility and milk fat composition through ruminal metabolism of fatty acids in lactating cows. C. Reveneau*, M. L. Eastridge, and J. L. Firkins, *The Ohio State University*, *Columbus*.
4:00 PM	629	Effect of feeding whole fuzzy cottonseed with elevated concentrations of free fatty acids on production of lactating dairy cows. K. M. Cooke* and J. K. Bernard, *The University of Georgia*, *Tifton*.

Animal Behavior and Well-being

Dairy Cattle Housing, Management and Stress

Chair: Marcia I. Endres, University of Minnesota

Room 211

Time	Abstract #	
3:00 PM	630	The use of animal-based measures to evaluate tie stall design on dairy farms in Ontario. K. Zurbrigg*[1], D. Kelton[2], N. Anderson[1], and S. Millman[2], [1]*Ontario Ministry of Agriculture and Food*, *Fergus, Ontario, Canada*, [2]*University of Guelph*, *Guelph, Ontario, Canada*.
3:15 PM	631	The comparison between cow behavior to free stall and straw bedding system. S. Ghasemi* and A. A. Naserian, *Ferdowsi University*, *Mashhad, Khorasan, Iran*.
3:30 PM	632	Immune function and oxidative stress vary by management and lactation stage for dairy cows in pasture-based production systems. K. Saker*[1], J. Fike[1], S. Washburn[2], and A. Meir[3], [1]*Virginia Polytechnic Institute and State University*, *Blacksburg*, [2]*North Carolina State University*, *Raleigh,*, [3]*Center for Environmental Farming Systems*, *Goldsboro, NC*.

3:45 PM	633	Infrared thermography as a non-invasive measure of stress in dairy cows. M. Stewart*[1], J. Webster[1], G. Verkerk[2], J. Colyn[3], and A. Schaefer[3], [1]*AgResearch*, *Hamilton, New Zealand*, [2]*Dexcel*, *Hamilton, New Zealand*, [3]*Agriculture and Agri-Food Canada*, *Lacombe, Alberta, Canada*.

Animal Behavior and Well-being

Cattle, Pain Stress and Welfare

Chair: Ed L. Fredrickson, USDA, Agricultural Research Service

Room 211

Time	Abstract #	
4:00 PM	634	Does ketoprofen alleviate acute pain during dehorning? S. Millman*, T. Duffield, K. Lissemore, S. James, and L. Misch, *University of Guelph*, *Guelph, ON, Canada*.
4:15 PM	635	Effect of neck injections and use of a blind on behavior and flight speed in cattle. R. Müller*[1], M. A. G. von Keyserlingk[1], and K. S. Schwartzkopf-Genswein[2], [1]*Animal Welfare Program, University of British Columbia*, *Vancouver, BC, Canada*, [2]*Agriculture and Agri-Food Canada*, *Lethbridge, AB, Canada*.
4:30 PM	636	A comparison of cattle temperament scores by breed type using different types of temperament scoring. J. Baszczak*, T. Grandin, S. Gruber, and J Tatum, *Colorado State University*, *Fort Collins*.

OTHER EVENTS

International Reception

Invited Speaker - Hank Fitzhugh, "Animals are where the people are. How ASAS-ADSA-CSAS can be there too."

4:30 PM - 6 PM

Ballroom C

Thursday, July 28

SYMPOSIA AND ORAL SESSIONS

SYMPOSIUM

Animal Behavior and Well-being

Attitudes Toward Animal Welfare and Human Animal-Interactions

Chair: Adroaldo J. Zanella, Animal Behavior and Welfare Group, Michigan State University

Sponsor: Pfizer Animal Health

Symposium meets AAVSB's RACE requirements for 3 hr CE.

Room 206

Time	Abstract #	
8:30 AM		Introductions and symposium format A.J. Zanella, *Michigan State University*
8:40 AM	637	Human and animal interaction and welfare issues at the farm level. P. Hemsworth*, *University of Melbourne*, *Werribee, Vic, Australia*.
9:30 AM	638	Assessment of student attitudes about companion and food animal welfare. J. Osborne*[1], C. Gasser[1], S. Boyles[1], J. Kinder[1], and P. Hemsworth[2], [1]*The Ohio State University*, *Columbus*, [2]*Animal Welfare Centre*, *Victoria, Australia*.

9:45 AM	639	Attitudes to farm animal welfare: Survey results of US animal science and veterinary college faculty. C. Heleski*[1], A. Mertig[2], and A. Zanella[1], [1]*Michigan State University*, *East Lansing*, [2]*Middle Tennessee State University*, *Murfreesboro*.
10:00 AM	640	Development of a web-based course in animal welfare. C. Wickens*, J. Siegford, and A. Zanella, *Michigan State University*, *East Lansing*.
10:15 AM		General discussion
10:45 AM		Concluding remarks - Speakers

SYMPOSIUM

A FASS Symposium on Antibiotic Resistance

Chair: Gary Cromwell, University of Kentucky, Lexington and Rodney Preston, Pagosa Springs, CO

Sponsors: Animal Health Institute, Elanco Animal Health, Intervet, National Pork Board and Phibro

Room 244

Time	Abstract #	
8:30 AM		Introduction. G. Cromwell[1] and R. Preston[2], [1]*University of Kentucky, Lexington*, [2]*Pagosa Springs, CO*.
9:00 AM		The growth promoter ban five years later - the Danish experience. J. Waddell, *Sutton Veterinary Clinic, Sutton, NE*.
9:45 AM		The animal arm of the national antimicrobial resistance monitoring system - an eight year journey. P. Fedorka-Cray, *USDA-ARS, Athens, GA*.
10:30 AM		Quantifying potential human health risks and benefits of animal antibiotics. T. Cox, *Cox Associates, Denver, CO*.
11:15 AM		Comments and Questions
11:30 AM		Adjourn

SYMPOSIUM

Animal Health

Alpharma Symposium: Animal Health: Acidosis in Dairy Cattle

Chair: Robert L. Larson, University of Missouri

Sponsors: Alpharma and Pfizer Animal Health

Symposium meets AAVSB's RACE requirements for 3 hr CE.

Ballroom A

Time	Abstract #	
8:30 AM	641	Ruminal acidosis: beyond the rumen. M. B. Hall*, *U. S. Dairy Forage Research Center, USDA-ARS*, *Madison, WI*.
9:20 AM	642	Regulation of ruminal pH: interaction of dietary and animal factors. M. S. Allen*, *Michigan State University*, *East Lansing*.
10:10 AM	643	Applied aspects of ruminal acidosis induction and prevention. G. R. Oetzel*, *University of Wisconsin*, *Madison*.
11:00 AM		Discussion - all speakers.

Breeding and Genetics

Dairy Cattle Breeding for Production and Non-Production Traits

Chair: Chad Dechow, The Pennsylvania State University

Room 203

Time	Abstract #	
8:30 AM	644	Productive life including all lactations, longer lactations, and calf value. P. M. VanRaden* and M. E. Tooker, *Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*.
8:45 AM	645	Effect of inbreeding on functional longevity in Canadian dairy breeds. A. Sewalem*[1,2], G. Kistemaker[2], F. Miglior[1,2], and B. Van Doormaal[2], [1]*Agriculture and Agri-Food Canada*, *Guelph, ON, Canada,*, [2]*Canadian Dairy Network*, *Guelph, ON, Canada*.
9:00 AM	646	Relationship between somatic cell count and functional longevity in Canadian dairy breeds. A. Sewalem*[1,2], G. Kistemaker[2], and B. Van Doormaal[2], [1]*Agriculture and Agri-Food Canada*, *Guelph, ON, Canada.*, [2]*Canadian Dairy Network*, *Guelph, ON, Canada*.
9:15 AM	647	Detection and confirmation of quantitative trait loci affecting traits of lifetime profit index on 23 chromosomes in Canadian Holstein cattle. Y. Pan*[1,2], J. P. Chesnais[1,2], N. Bissonnette[3], N. Caron[1], G. B. Jansen[4], Y. Plante[5], and E. B. Burnside[1,2], [1]*The Semex Alliance*, *Saint-Hyacinthe, Quebec, Canada*, [2]*L'Alliance Boviteq*, *Saint-Hyacinthe, Quebec, Canada*, [3]*Dairy and Swine Research and Development Centre, AAFC*, *Lennoxville, Quebec, Canada*, [4]*CGIL, Animal and Poultry Science, University of Guelph*, *Guelph, Ontario, Canada*, [5]*Saskatchewan Research Council*, *Saskatoon, Saskatchewan, Canada*.
9:30 AM	648	Identification of a missense mutation in the gene responsible for the QTL on BTA6 affecting milk yield and composition in dairy cattle. M. Cohen-Zinder[1], E. Seroussi[1], D. Larkin[2], J. Loor[2], A. Everts-van der Wind[2], J. Lee[2], J. Drackley[2], M. Band[2], M. Shani[1], H. Lewin[2], J. Weller*[1], and M. Ron[1], [1]*Agricultural Research Organization, The Volcani Center*, *Bet Dagan, Israel*, [2]*University of Illinois*, *Urbana*.
9:45 AM	649	Genetic gains in milk, fat and protein yields of the Holstein breed in Brazil. C. N. Costa*[1], N. M. Teixeira[1], A. F. Freitas[1], J. A. Cobuci[1], and K. Haguihara[2], [1]*Embrapa Gado de Leite*, *Juiz de Fora-MG, Brazil*, [2]*Brazilian Holstein Association-ABCBRH*, *São Paulo-SP, Brazil*.
10:00 AM		Break
10:15 AM	650	A phenotypic study of test-day yields recorded on Holstein-Friesian cows under Tunisian conditions. A. Ben Gara*, B. Rekik, M. Mrad, and B. Khouildi, *Ecole Supérieure d'Agriculture de Mateur*, *Mateur, Bizerte, Tunisia*.
10:30 AM	651	Genetic evaluation and best prediction of lactation persistency. J. Cole* and P. VanRaden, *Animal Improvement Programs Laboratory, Agricultural Research Service, USDA*, *Beltsville, MD*.
10:45 AM	652	Genetic evaluation of calving traits across Dairy and Beef breeds of cattle in Ireland. V. Olori*[1], A. Cromie[1], P. Donnellan[1], P. Amer[2], and R. Veerkamp[3], [1]*Irish Cattle Breeding Federation*, *Bandon, Co. Cork, Ireland*, [2]*Abacus Biotech Ltd.*, *Dunedin, New Zealand*, [3]*Animal Sciences Group*, *Lelystad, The Netherlands*.
11:00 AM	653	Effect of the bovine solute carrier/sulfate transporter (SLC26a2) gene on foot and leg traits in newborn calves. A. M. Scholz*[1], S. Nueske[1], I. Medugorac[2], D. Seichter[3], J. Hampe[1], and M. Foerster[2,1], [1]*Experimental Farm of the Veterinary Faculty, University Munich*, *Oberschleissheim, Germany*, [2]*Institute of Animal Breeding of the Veterinary Faculty, University Munich*, *Munich, Germany*, [3]*Animal Breeding Research Munich e.V.*, *Poing, Germany*.
11:15 AM	654	Inheritance of hair whorl characteristics in Holstein cattle. A. VanCise*, T. Grandin, D. Garrick, and R. Enns, *Colorado State University*, *Fort Collins*.

SYMPOSIUM

Companion Animals

New Advances in Pet Health, Nutrition and Reproductive Management

Chair: Diane Hirakawa, The Iams Company

Sponsor: The Iams Company

Symposium meets AAVSB's RACE requirements for 3.5 hr CE.

Room 212

Time	Abstract #	
8:30 AM		Introduction. Dr. Diane Hirakawa, *The Iams Company.*
8:40 AM	655	Maximizing conception rates using fresh cooled or frozen canine semen. R. Hutchison*, *Animal Clinic Northview, Inc.*, *North Ridgeville, OH*.
9:25 AM	656	Improving puppy trainability through nutrition. R. Kelley*, *The Iams Company - Research & Development*, *Lewisburg, OH*.
10:00 AM		Break
10:15 AM	657	Research advances in carotenoid nutrition and immunology of dogs and cats. B. Chew* and J. S. Park, *Washington State University*, *Pullman, WA*.
11:00 AM	658	Critical issues in aging and cancer: Implications for effective cancer prevention. D. Waters*[1,2], [1]*Purdue University Center on Aging and the Life Course*, *West Lafayette, IN*, [2]*Gerald P. Murphy Cancer Foundation*, *West Lafayette, IN*.
11:45 AM		Panel Discussion. Dr. Diane Hirakawa, *The Iams Company.*

SYMPOSIUM

Extension Education

Current Topics in Dairy Management: Transition Cows

Chairs: Jodie Pennington, University of Arkansas and Justen Smith, Utah State University

Sponsor: Monsanto Company

Symposium meets AAVSB's RACE requirements for 2.5 hr CE.

Ballroom B

Time	Abstract #	
8:30 AM	659	Manipulating the transition udder: Where dairy management meets mammary gland biology. T. B. McFadden*, *University of Vermont*, *Burlington*.
9:00 AM	660	Effects of modified dry periods on milk yield, milk composition and mammary development in dairy cows. E. L. Annen* and R. J. Collier, *University of Arizona*, *Tuscon*.
9:30 AM	661	Photoperiodic effects on the transition dairy cow. G. E. Dahl*, H. M. Crawford, and E. D. Reid, *University of Illinois*, *Urbana*.
10:00 AM	662	Impact of increased milking frequency during early lactation. M. VanBaale*, D. Ledwith, J. Thompson, R. Collier, and L. Baumgard, *University of Arizona*, *Tucson*.
10:30 AM		Panel Q/A session.

Forages and Pastures

Composition and Quality

Chair: Sam Coleman, USDA ARS SubTropical Agricultural Research Station

Room 211

Time	Abstract #	
8:30 AM	663	Ruminal and post ruminal crude protein digestion of halophyte forages (Kochia scoparia, Atriplex domorphostegia) determined by various procedures. A. Riasi*[1], M. Stern[2], M. Danesh Mesgaran[1], and M. Ruiz Moreno[2], [1]*University of Mashhad*, *Mashhad, Khorasan, Iran*, [2]*University of Minnesota*, *St. Paul*.
8:45 AM	664	Factors affecting the quality of corn silage grown in hot, humid areas 1: Effect of delayed sealing, simulated rainfall and ensiling temperature. A. Adesogan*[1] and S. Kim[1,2], [1]*University of Florida*, *Gainesville*, [2]*Gyeongsang National University*, *South Korea*.
9:00 AM	665	Factors affecting the quality of corn silage grown in hot, humid areas 2: Effect of applying two dual-purpose inoculants or molasses. A. Adesogan*[1], M. Huisden[1], K. Arriola[1], S. Kim[1,2], and J. Foster[1], [1]*University of Florida*, *Gainesville*, [2]*Gyeongsang National University*, *Jinju, South Korea*.
9:15 AM	666	Comparison of hays harvested at three stages of grass maturity in their effects on chewing activity and ruminal pH fluctuation of cows. F. Dohme* and A. Muenger, *Agroscope Liebefeld-Posieux, Swiss Federal Research Station for Animal Production and Dairy Products (ALP)*, *Posieux, Fribourg, Switzerland*.
9:30 AM	667	Comparative effect of brown midrib sorghum-sudan and corn silages on lactational performance, nutrient digestibility, and phosphorus retention in Holstein dairy cows. H. M. Dann[1], C. S. Ballard[1], E. D. Thomas[1], K. W. Cotanch[1], C. T. Hill[1], R. J. Grant*[1], R. Rice[2], and W. Townsend[2], [1]*W. H. Miner Agricultural Research Institute*, *Chazy, NY*, [2]*Garrison & Townsend*, *Hereford, TX*.
9:45 AM	668	Exogenous fibrolytic enzymes accelerate in vitro degradation of ammonia-treated rice straw. J.-S. Eun*[1], K. A. Beauchemin[1], S.-H. Hong[2], and M. W. Bauer[3], [1]*Agriculture and Agri-Food Canada*, *Lethbridge, Alberta, Canada*, [2]*Sahmyook College*, *Seoul, Korea*, [3]*Syngenta Biotechnology Inc.*, *Research Triangle Park, NC*.
10:00 AM		Break
10:10 AM	669	Assessment of two indigestible markers for improving the accuracy of measurement of feed intake by cattle fed ryegrass. A. V. Chaves*, R. Delagarde, and A. Boudon, *UMRPL - INRA*, *St-Gilles, France.*
10:25 AM	670	Soybean hulls as an energy source for rotationally grazed Holstein heifers. J. A. Jackson*, L. J. Driedger, S. T. Franklin, M. T. Sands, K. I. Meek, J. V. Ware, and C. H Hamilton, *University of Kentucky*, *Lexington*.
10:40 AM	671	Effect of variety on chemical composition and ruminal nutrient degradability of forage soybean silage. A. Mustafa* and P. Seguin, *McGill University*, *Ste-Anne-De-Bellevue, QC, Canada*.
10:55 AM	672	Non-protein nitrogen formation in legume silages as influenced by condensed tannins, polyphenols, and harvesting methods. J. Grabber*, C. Davidson, and L. Massingill, *USDA-ARS, US Dairy Forage Research Center*, *Madison, Wisconsin*.

Growth and Development

Growth Factors and Growth

Chair: Jim Sartin, Auburn University

Room 200

Time	Abstract #	
8:30 AM	673	Small intestinal composition and hydrolytic activity in neonatal calves fed nucleotides. C. Oliver*[1], C. De Jesus Arias[2], W. Keller[1], M. Bauer[1], and C. Park[1], [1]*North Dakota State University*, *Fargo*, [2]*Instituto Superior de Agricultura*, *Santiago de los Caballeros, Dominican Republic*.
8:45 AM	674	Fibroblast growth factor receptor 1 regulates protein metabolism in atrophic muscle. J. K. Eash*, A. L. Grant, K. M. Hannon, and D. E. Gerrard, *Purdue University*, *West Lafayette, IN*.
9:00 AM	675	Effects of an intensified compared to a moderate feeding program during the pre-weaning period on body growth and pubertal age in Holstein heifers. L. Davis*, M. VandeHaar, J. Liesman, L. Chapin, and M. Weber Nielsen, *Michigan State University*, *East Lansing*.

9:15 AM	676	Developmental changes in expression of toll-like receptors in fetal porcine intestine. T. E. Burkey*, K. A. Skjolaas-Wilson, K. R. Lawrence, B. J. Johnson, and J. E. Minton, *Kansas State University*, *Manhattan*.
9:30 AM	677	Quantification of muscle regulatory factors and myostatin in callipyge sheep. J. N. Fleming*[1,2], C. A. Bidwell[2], S. P. Jackson[1], R. D. Allen[1], and J. R. Blanton, Jr.[1], [1]*Texas Tech University*, *Lubbock*, [2]*Purdue University*, *West Lafayette, IN*.
9:45 AM	678	Regulation of muscle protein anabolism in growing steers by fatty acids in muscle membrane phospholipids is dose-dependent. M. C. Thivierge*[1], P. Y. Chouinard[1], Y. Couture[2], P. Julien[3], P. Dubreuil[2], T. A. Davis[4], and A. Myre[1], [1]*Université Laval*, *Quebec, QC, Canada*, [2]*Université de Montréal*, *St-Hyacinthe, QC, Canada*, [3]*Laval University Medical Ctr (CHUL)*, *Quebec, QC, Canada*, [4]*USDA/ARS Children's Nutr. Res. Ctr., Dept. Pediatr. Baylor Coll. Med*, *Houston, TX, USA*.
10:00 AM	679	Effects of serum from angus cattle divergently selected for serum IGF-I concentration on myoblast differentiation. M. Updike*, M. Davis, and M. Wick, *The Ohio State University*, *Columbus*.
10:15 AM	680	Effect of melengestrol acetate (MGA) on bovine satellite cell b-adrenergic receptor (bAR) messenger RNA (mRNA) abundance. E. K. Sissom* and B. J. Johnson, *Kansas State University*, *Manhattan*.
10:30 AM	681	Myostatin prodomain transgene significantly improves dietary fat utilization for animal muscle growth. J. Yang*[1], B. Zhao[1], and R. Wall[2], [1]*University of Hawaii*, *Honolulu*, [2]*Animal and Natural Resources Institute, USDA-ARS*, *Beltsville, MD*.
10:45 AM	682	The effect of rumen fluid supplementation on neonatal dairy calf performance and the incidence of diarrhea. C. Todd*[1], D. McKnight[2], T. Godfrey[2], A. Keokkoek[2], P. Sharpe[2], L. Gooijer[1], R. Rana[2], J. Pitty Del Cid[2], and K. Leslie[1], [1]*University of Guelph*, *Guelph, ON, Canada*, [2]*University of Guelph*, *Kemptville, ON, Canada*.
11:00 AM	683	Effects of colostrum (C) and dexamethasone (DEXA) treatment on insulin (I)-dependent glucose (G) metabolism in neonatal calves. B. Scheuer[1], L. Tappy[2], J. W. Blum[1], and H. M. Hammon*[3,1], [1]*University of Berne*, *Berne, Switzerland*, [2]*University of Lausanne*, *Lausanne, Switzerland*, [3]*Research Institute for Biology of Farm Animals (FBN)*, *Dummerstorf, Germany*.
11:15 AM	684	Nutrient restriction in cows alters the number and volume of fetal myofibers. M. Du*, M. J. Zhu, G. A. Olson, B. W. Hess, W. J. Means, and S. P. Ford, *University of Wyoming*, *Laramie*.

Nonruminant Nutrition

Enzyme Supplementation

Chairs: Gretchen M. Hill, Michigan State University and Ronny L. Moser, United Feeds

Room 202

Time	Abstract #	
8:30 AM	685	Fate of supplemental Escherichia coli phytase in the digestive tract of young pigs. A. R. Pagano*, K. R. Roneker, and X. G. Lei, *Cornell University*, *Ithaca, NY*.
8:45 AM	686	Site of digestibility of protein and phosphorus by growing pigs fed diets without or with microbial phytase. L. L. Geraets*, M. G. Boersma, and H. H. Stein, *South Dakota State University*, *Brookings*.
9:00 AM	687	Influence of feeding level on apparent ileal and fecal digestibilities of phosphorus and calcium in piglets fed microbial or plant phytase. T. Steiner* and R. Mosenthin, *University of Hohenheim*, *Stuttgart, Germany*.
9:15 AM	688	The evaluation of phosphorus feeding strategies in pigs from 12 kg to market. R. W. Fent*[1], G. L. Allee[1], D. M. Webel[2], J. D. Spencer[2], and T. S. Torrance[2], [1]*University of Missouri*, *Columbia*, [2]*United Feeds, Inc.*, *Sheridan, IN*.
9:30 AM	689	Efficacy and equivalency of an E. coli-derived phytase for replacing inorganic phosphorus in broilers and pigs. J. A. Jendza*[1], R. N. Dilger[1], J. S. Sands[2], and O. Adeola[1], [1]*Purdue University*, *West Lafayette, IN*, [2]*Danisco Animal Nutrition*, *Marlborough, Wiltshire,UK*.
9:45 AM	690	Effect of xylanase and(or) phytase supplementation on amino acid digestibility of grower pigs fed wheat-based diets containing wheat millrun. T. Nortey*[1,2], N. Trottier[3], J. Patience[1], P. Simmins[4], and R. Zijlstra[5], [1]*Prairie Swine Centre*, *Saskatoon, SK, Canada*, [2]*University of Saskatchewan*, *Saskatoon, SK, Canada*, [3]*Michigan State University*, *East Lansing*, [4]*Danisco Animal Nutrition*, *Marlborough, UK*, [5]*University of Alberta*, *Edmonton, AB, Canada*.

10:00 AM	691	The effect of wheat variety and enzyme supplementation on pig performance. M. E. E. McCann*[1,2], K. J. McCracken[2], and P. H. Simmins[3], [1]*Agricultural Research Institute of Northern Ireland*, *Hillsborough, Co. Down, Northern Ireland*, [2]*The Queen's University of Belfast*, *Belfast, Northern Ireland*, [3]*Danisco Animal Nutrition*, *Marlborough, Wiltshire, England*.
10:15 AM	692	The effect of enzyme supplementation on energy and crude protein digestibility of wheat distiller's dried grains with solubles in grower-finisher pigs. G. P. Widyaratne*[1,2] and R. T. Zijlstra[3], [1]*Prairie Swine Centre Inc.*, *Saskatoon, SK, Canada*, [2]*University of Saskatchewan*, *Saskatoon, SK, Canada*, [3]*University of Alberta*, *Edmonton, AB, Canada*.
10:30 AM	693	The effect of cereal type and enzyme supplementation on nutrient digestibility, intestinal microflora, volatile fatty acid concentration and manure ammonia emissions from pigs. J. M. O' Connell, T. Sweeney, C. Byrne, J. J. Callan, and J. V. O' Doherty*, *University College Dublin*, *Ireland*.
10:45 AM	694	Effect of a multi-enzyme preparation on the gut morphology of weaning piglets. S. Jakob*[1], J. Wolinski[2], R. Zabielski[2], and D. Laubitz[2], [1]*Adisseo France SAS*, *Commentry, France*, [2]*The Kielanowski Institute of Anim. Physiol. and Nutr. PAS*, *Jablonna, Poland*.
11:00 AM	695	Effect of a multi-enzyme preparation on rheological parameters of liquid feed for pigs. S. Jakob*[1], M. Türk[2], and T. Zenke[2], [1]*Adisseo France SAS*, *Commentry, France*, [2]*ATB Bornim*, *Potsdam, Germany*.
11:15 AM	696	Evaluation of cellulolytic enzyme supplementation on production indices of poultry fed soyabean hull meal based diets. B. O. Esonu*[1], R. O. Izukanne[1], and O. A. Inyang[2], [1]*Federal University of Techology*, *Owerri, Imo State, Nigeria.*, [2]*Michael Okpara College of Agriculture*, *Umuagwo, Imo State, Nigeria*.

Ruminant Nutrition

Dairy - Behavior, Modeling, and Production

Chair: John Bernard, University of Georgia

Room 205

Time	Abstract #	
8:30 AM	697	Effect of stocking density and fence line barrier on the behavior of dairy cattle. J. M. Huzzey*, P. Valois, T. J. DeVries, M. A. G. von Keyserlingk, and D. M. Weary, *University of British Columbia*, *Vancouver, British Columbia, Canada*.
8:45 AM	698	Effect of feeding frequency on the behavior of lactating dairy cows. T. J . DeVries* and M. A. G. von Keyserlingk, *The University of British Columbia*, *Canada*.
9:00 AM	699	The Cornell Net Carbohydrate and Protein System: An evolving model. T. Tylutki* and D. Fox, *Cornell University*, *Ithaca, NY*.
9:15 AM	700	Impact of the level of aggregation of feed carbohydrate (CHO) fractions on predictions of the Cornell Net Carbohydrate and Protein System (CNCPS). C Lanzas*, L. O. Tedeschi, and D. G. Fox, *Cornell University*, *Ithaca, NY*.
9:30 AM	701	The energy system of the 2001 Dairy NRC: Challenges for a ration formulation program. M. VandeHaar*, *Michigan State University*, *East Lansing*.
9:45 AM	702	Corn grain endosperm type and brown midrib 3 corn silage: ruminal fermentation and microbial N efficiency in lactating dairy cows. C. C. Taylor* and M. S. Allen, *Michigan State University*, *East Lansing*.
10:00 AM	703	Effects of corn grain endosperm type and conservation method on site of digestion, ruminal digestion kinetics and microbial nitrogen production of lactating dairy cows. Y. Ying* and M. S. Allen, *Michigan State University*, *East Lansing*.
10:15 AM	704	Evaluation of near infrared calibrations for corn kernel hardness parameters and relationship to degradabilities. D. Ngonyamo-Majee*[1], R. Shaver[1], J. Coors[1], D. Sapienza[2], J. Lauer[1], and P. Flannery[1], [1]*University of Wisconsin*, *Madison*, [2]*Sapienza Analytica*, *Johnston, IA*.
10:30 AM	705	Long term feeding of wet corn distillers grains and lactation performance of dairy cows. G. S. Mpapho*, A. R. Hippen, K. F. Kalscheur, and D. J. Schingoethe, *South Dakota State University*, *Brookings*.
	706	Withdrawn by Author
10:45 AM	707	Effects of feeding whole cottonseed coated with starch, urea, or yeast on performance of lactating dairy cows. K. M. Cooke* and J. K. Bernard, *The University of Georgia*, *Tifton*.
	708	See page 144

Ruminant Nutrition

Beef and Small Ruminant - Nitrogen Metabolism

Chair: Jim Wohlt, Rutgers University

Room 207

Time	Abstract #	
8:30 AM	709	Metabolizable protein effects on ammonia emissions and nitrogen excretion of steers. D. Panetta*, W. Powers, and J. Russell, *Iowa State University of Science and Technology*, *Ames*.
8:45 AM	710	Effects of energy source on methionine utilization by growing steers. G. F. Schroeder*, E. C. Titgemeyer, M. S. Awawdeh, J. S. Smith, and D. P. Gnad, *Kansas State University*, *Manhattan*.
9:00 AM	711	Ruminal fermentation of ^{15}N-labeled alfalfa hay N fractions in vitro. A. Melgar* and A. N. Hristov, *University of Idaho*, *Moscow*.
9:15 AM	712	Total splanchnic flux of nutrients in wethers fed oscillating crude protein diets. S. L. Archibeque*, H. C. Freetly, and C. L. Ferrell, *USDA, ARS; U.S. Meat Animal Research Center*, *Clay Center, NE*.
9:30 AM	713	Splanchnic metabolism of nutrients in response to methionine supplementation in ewes. T. Thelen*[1], J. Taylor[2], C. Loest[1], S. Wang[2], and G. Lewis[2], [1]*New Mexico State University*, *Las Cruces*, [2]*USDA-ARS, US Sheep Experiment Station*, *Dubois, ID*.
9:45 AM	714	Effects of supplemental RDP versus increasing amounts of supplemental RUP on N retention and digestion of a low-quality forage diet by growing lambs. R. L. Atkinson*, C. D. Toone, and P. A. Ludden, *University of Wyoming*, *Laramie*.
10:00 AM	715	Nitrogen balance in goats fed a novel byproduct protein source. S. Freeman*[1], M. Poore[1], P. Ferket[1], G. Huntington[1], and T. Middleton[2], [1]*North Carolina State University*, *Raleigh*, [2]*AgProvisions, LLC*, *Kenansville, NC*.
10:15 AM	716	Monitoring the fate of microwave treated whole cottonseed proteins in the rumen. A. A. Sadeghi*[1] and P. Shawrang[2], [1]*Islamic Azad University*, *Tehran, Iran*, [2]*Tehran University*, *Karaj, Iran*.
10:30 AM	717	Monitoring the fate of steam flaked corn proteins in the rumen. A. A. Sadeghi*[1] and P. Shawrang[2], [1]*Islamic Azad University*, *Tehran, Iran*, [2]*Tehran University*, *Karaj, Iran*.
10:45 AM	718	Urea treatment of corn straw and its use in fattening of Holstein bull calves. S. A. Shiri*, *Agricultural and Natural Resources Research Center of Khorasan*, *Mashhad, Iran*.
11:00 AM	719	Degradability of dry matter and crude protein of sugar beet tops and crown silage treated with urea and molasses in Iranian Balouchi sheep. M. Raisianzadeh*[1], G. Moghaddam[2], M. Daneshmesgaran[3], H. Fazaeli[4], and M. Nowrozi[1], [1]*Agricalture and Natural Resources Research Center of Khorasan*, *Mashhad, Khorasan, Iran*, [2]*University of Tabriz*, *Tabriz, Azarbayegan, Iran*, [3]*Ferdowsi University of Mashhad*, *Mashahd, Khorasan, Iran*, [4]*Animal Science Research Institute of Iran*, *Karaj, Tehran, Iran*.

Author Index

Numbers following names refer to abstract numbers: a number alone indicates an oral presentation, an M prior to a number indicates a Monday poster, a T indicates a Tuesday poster, and a W indicates a Wednesday poster.

The author index is created directly and automatically from the abstracts. If an author's name is typed differently on multiple abstracts, the entries in the author index will reflect these discrepancies. Efforts have been made to make this index consistent: however, error from author entry contributes to inaccuracies.

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

Program at a Glance
Sunday, July 24

Room	8:00 am - 12 pm	1 pm - 5:30 pm	7 pm - 10 pm
206	CSAS Symposium: Udder Health Management: A Canadian Perspective	CSAS Symposium: Vitamin Nutrition of Livestock Animals	
207		Genomics Symposium: Using Functional Genomics for Animal Improvement	
211		(3pm - 5pm) 2005/2006 Program Chairs & Vice Chairs Meeting	
233	Hospitality Room	Hospitality Room	
234		(3pm - 4pm) ADSA Production Division Resolutions Committee (5pm - 6pm) ADSA Dairy Foods Division Council Meeting	
236		(2pm - 3pm) ADSA Production Division Council Meeting (3pm - 4pm) ADSA Production Division Nominating Committee	
240	W-173	W-173	
241	W-173	W-173	
260		SAD Quiz Bowl Seating/Preliminary Rounds	
261		SAD Quiz Bowl Seating/Preliminary Rounds	(6:30pm - 7pm) SAD Quiz Bowl Final Round
262	(12 pm - 1pm) SAD Mid-day Mixer and Pizza Party		
263	(12 pm - 1pm) SAD Mid-day Mixer and Pizza Party		
264	(11am - 12pm) SAD Officers & Advisors Meeting		
Ballroom A	Set up Opening Session	Set up Opening Session	Opening Session
Ballroom B	Set up Opening Session	Set up Opening Session	Opening Session
Ballroom C	Set up Opening Session	Set up Opening Session	Opening Session
Ballroom Foyer	Set up Opening Reception	Set up Opening Reception	(8pm) Opening Reception
Exhibit Hall A	Exhibits & Posters Setup	Exhibits & Posters Setup	
Show Management Rooms			
209	Presentation Pre-Loading Room	Presentation Pre-Loading Room	
210		(4:30pm - 6:30pm) NAGP Policy Coordinating Committee	
Coat Check Room (2nd Floor, North Rooms)	Speaker Ready Room	Speaker Ready Room	
Office F	ASAS 2008 Centennial Committee	ASAS 2008 Centennial Committee	

Program at a Glance
Monday, July 25

Room	7:30 am - 9:30 am	9:30 am - 12:30 pm	2 pm - 5:00 pm
200	**Posters Only In Exhibit Hall A**	Swine Species: Effects of Maternal Nutrition on Offspring Performance	Growth and Development: Growth Promoters and Growth Measures
202		Nonruminant Nutrition: Dietary Supplements and Additives	Nonruminant Nutrition: Weanling Pig Nutrition and Methodology
203		Breeding and Genetics: Statistical Methods I	Breeding and Genetics: Statistical Methods II
205		Lactation Biology: Lactation Persistency	Physiology and Endocrinology II
206		Ruminant Nutrition: Dairy - Protein and Amino Acids	Ruminant Nutrition: Exploring the Boundaries of Efficiency in Lactation: Metabolic Relationships in Supply of Nutrients in Lactating Cows
207		(9:30am - 11am) Graduate Student Competition: ADSA Dairy Production Graduate (11:15am - 12:30pm) Graduate Student Competition: ADSA-ASAS Southern Division	Ruminant Nutrition: Beef – Feedstuffs and Predicting Feed Intake
211		GS Competition: ADSA-ASAS Northeast section (start 11 am)Nematodes in Sheep	Sheep: Management of Gastrointestinal
212		Horse Species: Emerging Equestrian Varsity Competition	Breeding and Genetics: Sheep, Swine, and Dog Breeding
233		Hospitality Room	Hospitality Room
241		Dairy Foods: Dairy Chemistry	(2pm - 4:30pm) Dairy Foods: Dairy Products and Processing (5pm - 6pm) NE ASAS-ADSA Business Meeting & Awards
242		Dairy Foods: Extending Shelf Life of Fluid Milk	Dairy Foods: Forum on Cheese Ripening
243		Ruminant Nutrition: Diary Grazing (start 10am)	(2pm - 3:30pm) Graduate Student Competition: National ADSA Dairy Foods (5pm - 6pm) ADSA Town Hall meeting
244		Breeding and Genetics: Dairy Crossbreeding	
261		(8:30am - 9:15am) SAD Business Meeting (9:30am - 10:30am) SAD Activities Symposium (11am - 12:30pm) Undergraduate Presentations	Undergraduate Presentations
262		(9:30am - 10:30am) SAD Judging of Yearbooks, Scrapbooks and Annual Reports	
263		SAD Interviews for Outstanding Student and Advisor Awards	
301		(12:30pm - 2pm) Jersey Research Focus Group	
Ballroom A		ALPHARMA Beef Cattle Nutrition: Challenging the Limits of Caloric Intake in Feedlot Cattle	Meat Science: Novel Technologies in Muscle Biology/ Fresh Meat Research
Ballroom B		Physiology and Endocrinology I	Production, Management and the Environment: Impact of Culling Rate on Dairy Profitability
Exhibit Hall A	**Poster Presentations**	Exhibits & Posters	Exhibits & Posters
Show Management **Rooms**			
209	Presentation Pre-Loading Room	Presentation Pre-Loading Room	Presentation Pre-Loading Room
210		(7:30am - 8:30am) ADSA 2006 Centennial Planning Committee (8:30am - 9:30am) ADSA 2006 Centennial Publications Committee (10:30am - 12:30pm) ARPAS Exam (12:30pm-2pm) ARPAS ACAN Meeting	(2pm - 4pm) ARPAS Exams
Coat Check Room (2nd Floor, North Rooms)	Speaker Ready Room	Speaker Ready RoomSpeaker Ready Room	
Office F		ASAS 2008 Centennial Committee	5

Program at a Glance
Tuesday, July 26

Room	7:30 am - 9:30 am	9:30 am - 12:30 pm	2 pm - 5:00 pm
200	**Posters Only In Exhibit Hall A**	Growth and Development: Postnatal Development as a Harbinger of Future Performance	Physiology and Endocrinology IV
20		Nonruminant Nutrition: Amino Acids	Nonruminant Nutrition: Stable Isotope Tracer Techniques for Nonruminant Nutrition Research and Their Practical Applications
203		(9:30am - 11am) Breeding and Genetics: Dairy Cattle Breeding for Non-Production Traits I (11am - 12:30pm) Breeding and Genetics: International Evaluation of Dairy Bulls – In Honor of Dr. Rex Powell	Breeding and Genetics: Genetics of New and Emerging Traits
205		Physiology and Endocrinology III	Ruminant Nutrition: Dairy - Calves and Heifers
206		Ruminant Nutrition: Dairy - Transition Cows	Production, Management and the Environment: Nutrition, Management, and Environment
207		Forages and Pastures: Beef Cattle and Pastures	Ruminant Nutrition: Dairy – Fiber and Digestion
211		(9:30am - 11:15am) Lactation Biology: Conjugated Linoleic Acid (12:30pm - 2pm) ARPAS Business Meeting	Milk Protein and Enzymes: Milk Protein Interactions
212		Animal Health I	Food Safety: Pathogen Control Interventions
233		Hospitality Room	Hospitality Room
236		(11:30am - 1:30pm) ADSA Production Division Business Meeting	(5pm - 6pm) USDA Agricultural Research Service Update Session
240		(9:30am - 10:30am) ADSA Foundation Scholar Award Lecture - Dairy Foods (11:30am - 1:30pm) ADSA Dairy Foods Division Business Meeting	(3:30pm - 5:30pm) ASAS JAS Forum (Division/Associate Editors and Authors)
241		Ruminant Nutrition: Small Ruminants	Dairy Foods: Cheese I-Cheddar, Mozzarella and Kashar Cheeses
242		Production, Management and the Environment: Health and Reproduction	(2pm - 5:30pm) ADSA Southern Branch Symposium: Innovative Approaches to Address the Changing Needs of Our Dairy Industry (5:30pm) ADSA Southern Branch Business Meeting
243		Graduate Student Competition: CSAS Only	Meat Science and Muscle Biology: Muscle Growth and Fresh Meat Quality
244		Teaching/Undergraduate and Graduate Education: Scholarship of Teaching as Related to Promotion and Tenure, Symposium	Extension Education: Cow Comfort on Commercial Dairy Operations
260		(9:30am - 10:30am) SAD Student Careers Symposium: Leaders in Training	
261		(8:30am - 9:30am) SAD Business Meeting - Election of Officers	(3pm - 4:30pm) SAD Committee Meeting - Old and new Officers & Advisors
262		Setup for awards luncheon	(12:30pm - 2:30pm) SAD Awards Luncheon (2:30pm - 3:30pm) SAD Awards Photos
263		Setup for awards luncheon	(12:30pm - 2:30pm) SAD Awards Luncheon (2:30pm - 3:30pm) SAD Awards Photos
301		(12:30pm - 2pm) CSAS Annual Meeting & Luncheon	
302		(12:30pm - 2pm) CSAS Annual Meeting & Luncheon	
Ballroom A		Beef Species: Vertical Coordination in the Beef Industry: Implications for Animal, Information, and Enterprise Management	Forages & Pastures: Emerging Techniques for Predicting Forage Quality
Ballroom B		Ruminant Nutrition: Dairy and Beef - Minerals	
Exhibit Hall A	Poster Presentations	Exhibits & Posters	Exhibits & Posters
Show Management Rooms			
209	Presentation Pre-Loading Room	Presentation Pre-Loading Room	Presentation Pre-Loading Room
210			(2pm - 4pm) ARPAS Exams
Coat Check Room (2nd Floor, North Rooms)	Speaker Ready Room	Speaker Ready RoomSpeaker Ready Room	
Office F		ASAS 2008 Centennial Committee	ASAS 2008 Centennial Committee

Program at a Glance
Wednesday, July 27

Room	7:30 am - 9:30 am	9:30 - 10:30 am	10:30 am - 12:30 pm	2 pm - 5:00 pm	5:00 - 7:00 PM
200	**Posters Only In Exhibit Hall A**		ADSA Foundation Scholar Award Lecture - Dairy Production		
202			Production, Management and the Environment: Dairy and Livestock Management	Food Safety: The Future of Food Safety: An Issue of National Importance	
203			Breeding and Genetics: Beef Cattle Breeding and Genetics	Breeding and Genetics: Dairy Cattle Breeding for Non-Production Traits II	
205			CAST Meeting		
206			Nonruminant Nutrition: Feed Ingredients and Processing	Ruminant Nutrition: Beef - Feedlot	
207			Ruminant Nutrition: Dairy – Feed Additives	Ruminant Nutrition: Dairy - Fats	
211			(10:30am - 11:15am) Animal Behavior and Well-being: Swine Transportation, Handling & Feed Restriction (11:30am) Animal Behavior and Well-being: Sow and Boar Behavior and Housing	(2pm - 3pm) Animal Behavior and Well-being: Weaning and Animal Welfare (3pm - 4pm) Animal Behavior and Well-being: Dairy Cattle Housing, Management and Stress (4pm - 5pm) Animal Behavior and Well-being: Cattle, Pain Stress and Welfare	
212			Swine Species: Swine Nutrition and Management	Animal Health II	
233		Hospitality Room	Hospitality RoomHospitality Room		
234		(10am - 10:30am) ASAS Business Meeting	(12:30pm - 2pm) RFAC Business Meeting		
236		(9:30am - 10am) Joint ADSA & ASAS Business Meeting	Danisco International Dairy Science Award Lecture		
240			Extension Education: Training Programs, Program Evaluation, and Economics	International Animal Agriculture	
241		(10am - 10:30am) ADSA Business Meeting	(10:45am - 12:30pm) Sheep Species	Dairy Foods: Cheese II-Cream, Process, Italian and Other Cheeses	
242			Production, Management and the Environment: Heat Stress	Lactation Biology	
243			Beef Species	Goat Species: Educational Resources and Field Experiences to Enhance and Promote Goat Production and Management	
244			Extension Education: Environment and National Animal Identification System	(2pm - 4:45pm) Companion Animals: Nutritional and Health Considerations for Companion Animals II (4:45pm) Reception	
262				(2:30pm - 3:30pm) Retirees Social	
263			(12:30pm - 2pm) Women & Minority Issues in Animal Agriculture Luncheon		
Ballroom A			FASS Symposium: Toxic Levels of Minerals in Animal Feeds and Water	Physiology and Endocrinology: Effects of Maternal Nutrient Supply on Embryonic and Fetal Development and Postnatal Performance	
Ballroom B				ADSA Production Division Symposium: Forage Analysis: Concept to Application	Production Division Evening Session/ Reception
Ballroom C					International Reception with Invited Speaker Hank Fitzhugh
Exhibit Hall A	Poster Presentations	Exhibits & Posters	Exhibits & Posters	Exhibits & Posters	Exhibit Teardown
Show Management Rooms					
209	Presentation Pre-Loading Room	Presentation Pre-Loading Room	Presentation Pre-Loading Room	Presentation Pre-Loading Room	
210				(2pm - 4pm) ARPAS Exams	
Coat Check Room (2nd Floor, North Rooms)	Speaker Ready Room	Speaker Ready Room	Speaker Ready Room	Speaker Ready Room	
Office F		ASAS 2008 Centennial Committee	ASAS 2008 Centennial Committee	ASAS 2008 Centennial Committee	

Program at a Glance
Thursday, July 28

Room	8:30 am - 11:30 am
200	Growth and Development: Growth Factors and Growth
202	Nonruminant Nutrition: Enzyme Supplementation
203	Breeding and Genetics: Dairy Cattle Breeding for Production and Non-Production Traits
205	Ruminant Nutrition: Dairy - Behavior, Modeling, and Production
206	Animal Behavior and Well-being: Attitudes Toward Animal Welfare and Human Animal-Interactions
207	Ruminant Nutrition: Beef and Small Ruminant - Nitrogen Metabolism
211	Forages and Pastures: Composition and Quality
212	Companion Animals: New Advances in Pet Health, Nutrition and Reproductive Management
233	Hospitality Room
244	FASS Antibiotic Resistance
Ballroom A	Animal Health: Acidosis in Dairy Cattle
Ballroom B	Extension Education: Current Topics in Dairy Management: Transition Cows
Show Management Rooms	
209	Presentation Pre-Loading Room
210	Committee Meetings/ARPAS Exams
Coat Check Room (2nd Floor, North Rooms)	Speaker Ready Room
Office F	ASAS 2008 Centennial Committee

Notes

Eazi-Breed CIDR Is Now Approved For Lactating Dairy Cows.

No matter what breeding program you're using, it may not achieve its full potential without the help of Eazi-Breed™ CIDR® Cattle Inserts. The fact is, reproductive problems may cause dairies an annual loss in excess of $120 per cow. Just think of the impact of those numbers on your own operation. But with Eazi-Breed CIDR, you can ensure more pregnancies. More milk sold. And a bottom line that will be more to your liking. So put more life in your breeding program, with Eazi-Breed CIDR. You'll see just how much you've been missing.

For more information, contact your veterinarian or visit www.cidr.com.

EAZI-BREED™ CIDR®
Cattle Insert

Pfizer Animal Health

Make Breeding Less Of A Guess.™

TAKE TIME OBSERVE LABEL DIRECTIONS

Helping shape the landscape since 1954

ELANCO™

For more than half a century, Elanco has helped shape the animal health industry around the world — from the pastures of Nebraska to the pampas of Argentina, and in dozens of nations spanning the global horizon.

Wherever they raise animals, food producers count on Elanco for groundbreaking products that keep animals comfortable and healthy so they can perform to their full potential. We are known for a service philosophy founded on integrity, and for sharing reliable advice based on decades of experience and exploration.

Looking ahead, we remain devoted to transforming animal agriculture through superior products and services—supported by people who care.