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AMERICAN SOCIETY OF ANIMAL SCIENCE

AMERICAN DAIRY SCIENCE ASSOCIATION

CANADIAN SOCIETY OF ANIMAL SCIENCE

July 20—25, 2002

Quebec, Canada

SATURDAY, JULY 20, 2002[1,2]

6th Joint EAAP/ASAS Workshop on Biology of Lactation in Farm Animals

Alternative Strategies in Dairy Cow Management

Chair(s): K. Stelwagen, AgResearch

(Preregistration fee required.)

Sponsors: De Laval; European Association of Animal Production; Le Conseil de l'industrie laitere du Québec; Lely Industries, NL; Lemmer-Fullwood GmbH; Monsanto; Purina Mills, LLC; System Happel GmbH; USDA; and Westfalia Landtechnik GmbH

Room: 200C

Time	Abstract Number	
8:00 AM		Opening. P. Lacasse, AAFC-Dairy and Swine R&D Centre
8:05 AM		Brief Overview. K. Stelwagen, AgResearch
8:15 AM	1	Sensors and management support in high-tech milking. **H. Hogeveen***[1] and W. Ouweltjes[2], [1]Farm Management Group, Wageningen University, the Netherlands, [2]Research Institute for Animal Husbandry, Lelystad, the Netherlands.

[1]Names in bold indicate invited speakers.

9:00 AM	2	Effects of once-a-day vs twice-a-day milking throughout lactation in dairy goats. A.A.K. Salama, X. Such, G. Caja*, M. Rovai, R. Casals, E. Albanell, and A. Marti, Universitat Autonoma de Barcelona, Bellaterra, Spain.
9:15 AM	3	Management of photoperiod in the dairy herd for improved production and health. **Geoffrey Dahl*[1]** and Denis Petitclerc[2], [1]University of Illinois, [2]AAFC-Dairy and Swine R&D Centre.
10:00 AM		Break & Poster Session (Odd-Numbered Poster Boards present; see pages 7–8)
11:00 AM	4	Effects of chronic oxytocin administration on oxytocin release and milk ejection efficiency. J. Macuhova[1], V. Tancin[1,2], and R. M. Bruckmaier[1], [1]Institute of Physiology, Techn. Univ. Munich-Weihenstephan, Freising, Germany, [2]Research Institute of Animal Production, Nitra, Slovakia.
11:15 AM	5	Lactation persistency: insights from mammary cell proliferation studies. **A.V. Capuco*[1]**, S.E. Ellis[2], S.A. Hale[3], E. Long[1], R.A. Erdman[3], X. Zhao[4], and M.J. Paape[1], [1]USDA-ARS, Beltsville, MD, [2]Clemson University, Clemson, SC, [3]University of Maryland, College Park, [4]McGill University, Quebec, Canada.

6th Joint EAAP/ASAS Workshop on Biology of Lactation in Farm Animals

Lactation Biology in the Post-Genomic Era

Chair(s): W. Hurley, University of Illinois

Sponsors: De Laval; European Association of Animal Production; Le Conseil de l'industrie laitier du Québec; Lely Industries, NL; Lemmer-Fullwood GmbH; Monsanto; Purina Mills, LLC; System Happel GmbH; USDA; and Westfalia Landtechnik GmbH

Room: 200C

Time	Abstract Number	
1:30 PM		Brief Overview. W. Hurley, University of Illinois
1:40 PM	6	Transgenic livestock: promise fulfilled. **M.B. Wheeler***, University of Illinois at Urbana-Champaign.
2:15 PM	7	Transgenic models for animal science research and application. **D.E. Kerr*[1]**, O. Wellnitz[1], A. Mitra[2], and R.J. Wall[2], [1]University of Vermont,Burlington, [2]USDA-ARS, Beltsville, MD.
2:50 PM	8	Regulation of apoptosis in mammary gland of cows at early lactation. M. Colitti* and B. Stefanon, Dipartimento di Scienze della Produzione Animale - Universita' di Udine, Italy.
3:05 PM		Break & Poster Session (Even-Numbered Poster Boards present; see pages 7–8)
3:30 PM	9	Proliferation-associated gene expression in bovine mammary gland. **T. B. McFadden***, University of Vermont.
4:05 PM	10	Molecular methods for probing signal transduction pathways in mammary tissue. **L.G. Sheffield***, University of Wisconsin, Madison.
4:40 PM		Overall Discussion
5:00 PM		Cheese Reception

6th Joint EAAP/ASAS Workshop on Biology of Lactation in Farm Animals

Poster Session

Chair(s): P. Lacasse, AAFC-Dairy and Swine R&D Centre

Sponsors: De Laval; European Association of Animal Production; Le Conseil de l'industrie laitier du Québec; Lely Industries, NL; Lemmer-Fullwood GmbH; Monsanto; Purina Mills, LLC; System Happel GmbH; USDA; and Westfalia Landtechnik GmbH

Room: 200C

(Presentation Times: Odd-Numbered Poster Boards: 10:00 AM; Even-Numbered Poster Boards: 3:05 PM)

Abstract Number	
11	Modeling the interaction of milking frequency and nutrition in lactation. I Vetharaniam and S R Davis, AgResearch Limited, Hamilton, New Zealand.
12	Changes in cisternal and alveolar milk throughout lactation in dairy sheep. M. Rovai*, X. Such, G. Caja, and J. Piedrafita, Universitat Autonoma de Barcelona, Bellaterra, Spain.
13	Insulin response to amino acid infusions in Holstein cows. C. A. Toerien* and J. P. Cant, University of Guelph, Guelph, Canada.
14	Involvement of Oct-1 in transcriptional regulation of beta-casein gene expression in mouse mammary gland. Feng-Qi Zhao*[1] and Takami Oka[2], [1]University of Vermont, Burlington, Vermont, [2]National Institute of Health, Bethesda, Maryland.
15	Synthesis of insulin-like growth factor binding proteins by a bovine mammary cell line. F Cheli*[1], A Baldi[1], L Rossi[1], M Vestergaard[2], and S Purup[2], [1]Dept. VSA, University of Milan/I, [2]Danish Institute of Agricultural Sciences/DK.
16	Influence of dietary starch and of phase of lactation on haematological markers of oxidative stress in early lactation. G. Stradaioli[1], G. Gabai[2], and B. Stefanon*[1], [1]Dipartimento di Scienze della Produzione Animale - Universita' di Udine (Italy), [2]Dipartimento di Scienze Sperimentali Veterinarie - Universita' di Padova (Italy).
17	Effect of milking and a suckling/milking combination on oxytocin and prolactin release and on milk yield in crossbred Gir x Holstein cows. J. A. Negrao*[1] and P. G. Marnet[2], [1]USP/FZEA, FAPESP, Pirassununga/SP, Brazil, [2]UMR INRA/ENSAR, Production de lait, Rennes, French.
18	Milk emission during machine milking in dairy sheep. M. Rovai*, X. Such, G. Caja, and J. Piedrafita, Universitat Autonoma de Barcelona, Bellaterra, Spain.
19	Induction of milk yield decrease and mammary gland involution in lactating Holstein cows and female rats. L. Delbecchi*, N. Miller, D. Petitclerc, and P. Lacasse, AAFC-Dairy and Swine R&D Centre, Lennoxville, Quebec, Canada.
20	Cloning lactoferrin gene in a novel expression vector and its expression/secretion in bovine mammary cells. N Bissonnette*, P Lacasse, and D Petitclerc, Agriculture and Agri-Food Canada, Dairy and Swine Development and Research Center.
21	Effect of Milking Interval on Milk Yield and Quality and the Rate of Recovery during subsequent frequent Milking. K. Stelwagen*, V.C. Farr, and S.R. Davis, AgResearch Ltd., Hamilton, New Zealand.
22	Leptin variations in dry and lactating periods of dairy cows with different genetic merit. R. Lombardelli[1], P. Bani[1], C. Delavaud[2], Y. Chilliard[2], and G. Bertoni*[1], [1]UCSC, Facolta di Agraria, Piacenza, Italy, [2]INRA-UHRH, Theix, France.
23	Comparison of milk yield and of oxytocin and cortisol release during machine milking in Gir, Gir/Holstein and Holstein cows. J. A. Negrao*[1] and P. G. Marnet[2], [1]USP/FZEA, FAPESP, Pirassununga/SP, Brazil, [2]UMR INRA/ENSAR, Production de lait, Rennes, French.
24	Mixed linear model analysis of factors affecting the evolution of milk electrical conductivity along lactation in dairy cattle. N.P.P. Macciotta[1], M. Mele*[2], A. Cappio-Borlino[1], and P. Secchiari[2], [1]Dipartimento di Scienze Zootecniche - Université degli Studi di Sassari, Italy, [2]D.A.G.A. Settore Scienze Zootecniche - Université di Pisa, Italy.
25	Effect of stimulation intensity on oxytocin release before and after milking. D. Weiss*, A. Dzidic, and R.M. Bruckmaier, Institute of Physiology, Techn. Univ. Munich-Weihenstephan.

26 Factors affecting level and post-feeding behaviour of insulin in dairy cows. G. Bertoni*, E. Trevisi, R. Lombardelli, and F. Piccioli Cappelli, UCSC, Facolta di Agraria, Piacenza, Italy.

27 Evidence for the presence of the cationic amino acid transporter CAT-1 in porcine mammary gland during lactation. J. Perez Laspiur*, J.L. Burton, P.S.D. Weber, and N.L. Trottier, Michigan State University.

28 Oxytocin release and milk ejection induced by teat cleaning in a single stall automatic milking system. A. Dzidic, D. Weiss, and R.M. Bruckmaier*, Institute of Physiology, Techn. Univ. Munich - Weihenstephan, Freising, Germany.

29 mRNA expression of immunologically important factors and milk proteins in mammary tissue of dairy cows during LPS-induced mastitis. S Schmitz, MW Pfaffl, HHD Meyer, and RM Bruckmaier*, Institute of Physiology, Techn. Univ. Munich-Weihenstephan, Freising, Germany.

30 Body lipid change in lactation: consequences for the prediction of energy requirements. N. C. Friggens*, K. L. Ingvartsen, and G. C. Emmans, Danish Institute of Agricultural Sciences, Foulum, Denmark.

31 Serum insulin-like growth factor 1 and placental lactogen profiles in Holstein nulliparous and multiparous cows in early gestation. W. J. Weber*[1], C. R. Wallace[2], H. Chester-Jones[1], and B. A. Crooker[1], [1]University of Minnesota, St. Paul, [2]University of Maine, Orono.

32 Detecting beta-casein and beta-lactoglobulin variants using real-time PCR taking advantage of single nucleotide polymorphisms in milk cell DNA. Ralf Einspanier*[1], Andreas Klotz[1], Johann Buchberger[2], and Ingolf Krause[2], [1]Institute of Physiology TU Munich Germany, [2]Institute of Chemistry TU Munich Germany.

33 Effect of contact time between calves and cows on IgG transfer, cortisol release, milk yield and residual milk. F. A. Paiva, A. R. Bueno, A. Saran-Neto, M. S. Freiria, and J. A. Negrao*, USP/FZEA, FAPESP, Pirassununga/SP, Brazil.

34 Prolactin receptor expression responds to photoperiod similarly in multiple tissues in dairy cattle. T. L. Auchtung*[1], B.C. Pollard[1], P.E. Kendall[1], T.B. McFadden[2], and G.E. Dahl[1], [1]University of Illinois, Urbana, IL, [2]University of Vermont, Burlington, VT.

35 Possible role of enterolactone on mammary development and lactation in cattle. S Purup, M Vestergaard, MR Weisbjerg, T Hvelplund, and K Sejrsen*, Danish Institute of Agricultural Sciences, Foulum.

36 Effects of omitting one milking per week on milk yield, milk composition and udder health of dairy cows. M. Ayadi[1], G. Caja*[1], X. Such[1], E. Albanell[1], M. Ben M'Rad[2], and R. Casals[1], [1]Universitat Autonoma de Barcelona, Spain, [2]Institut National Agronomique de Tunisie, Tunisia.

37 Effects of conjugated linoleic acid (CLA) on milk fatty acid profiles and activities of lipogenic enzymes in the mammary gland, liver and adipose tissue of lactating rats. A. A. Hayashi*[1], S. R. Medeiros[2], and D.P.D. Lanna[1], [1]ESALQ/ USP/ SP, Brazil, [2]Embrapa /Gado de Corte/ MS, Brazil.

SUNDAY, JULY 21, 2002[1]

CSAS SYMPOSIUM

Amino Aicds: Milk, Meat, and More!

Chair(s): Robert Berthiaume, Dairy & Swine Research Centre

Sponsors: AGROPUR, CIPQ - Saint-Lambert, Dairy Farmers of Canada, Degussa Canada, Ministère de la Science et Technologie du Québec, Ordre des agronomes, Pioneer Hi-Bred Limited, Shur-Gain, Université Laval - FSAA, Université Laval - Vice rectorat Recherche

Room: 206A

Time	Abstract Number	
8:30 AM		Welcome. H. Lapierre, Agriculture and Agri-Food Canada.
8:40 AM		Protein turnover—what does it mean for animal production? **G. E. Lobley**, Rowett Research Institute.
9:15 AM		Intestinal metabolism of amino acids by the young pig. **R. Ball**, University of Alberta.
9:50 AM		Amino acid metabolism across the mammary gland. **J. Cant**, University of Guelph.
10:25 AM		Break
10:45 AM		Interaction of amino acids and hormones in the regulation of protein metabolism in growing animals. **T. Davis**, **A. Suryawan**, **J. Bush**, **P. O'Connor**, and **C. Thivierge**, Children's Nutrition Research Center.
11:20 AM		Amino acid requirements in inflammatory states. **C. Obled** and **I. Papet**, INRA.
11:55 AM		Question-and-answer period.

CSAS SYMPOSIUM

Improving Animal Production with Reproductive Technology

Chair(s): Robert Berthiaume, Dairy & Swine Research Centre

Sponsors: AGROPUR, CIPQ - Saint-Lambert, Dairy Farmers of Canada, Degussa Canada, Ministére de la Science et Technologie du Québec, Ordre des agronomes, Pioneer Hi-Bred Limited, Shur-Gain, Université Laval - FSAA, Université Laval - Vice rectorat Recherche

Room: 206A

Time	Abstract Number	
1:00 PM		Welcome. L. MacLaren[1] and J.-P. Laforest[2], [1]Nova Scotia Agricultural College, [2]Laval University.
1:05 PM		Past, present, and future perspectives on sperm sexing, **D. Garner**, Colorado State University.
1:45 PM		Dairy genetic improvement through artificial insemination. **B. VanDoormaal**, Canadian Dairy Network
2:30 PM		Semen cryopreservation: success and persistent problems in farm species. **J. Bailey**, Laval University.
3:15 PM		Break
3:30 PM		Impact of IVM, IVF, and ET on the dairy industry. **D. Bousquet**, L'Alliance Boviteq.
4:15 PM		Update on cloning and its impact. **S. Novak**, Laval University.
5:00 PM		Conclusion by chairs.

MONDAY, JULY 22, 2002[1]

SYMPOSIUM

Food Safety and FASS Advisory Committee on Food Safety, Animal Drugs, and Animal Health

Transmissible Spongiform Encephalopathies: Impact on Animal Agriculture and Food Safety

Chair(s): Gary Cromwell, University of Kentucky

Room: 200A

Time	
8:00 AM	Scientific update: TSEs, disease transmission, prion mode of action, and diagnostics. **W. Hueston**, University of Minnesota.
8:45 AM	The 'Harvard Risk Analysis': Quantifying food safety risks to consumers: Real or perceived? **G. Gray**, Harvard University.
9:15 AM	Global/US governmental monitoring, surveillance. **L. Ferguson**, USDA, APHIS.
9:45 AM	Break
10:00 AM	Regulatory update. **D. McChesney**, FDA, CVM.
10:20 AM	Producer and feed industry perspectives for the future of animal agriculture. **R. Sellers**, American Feed Industry Association
10:40 AM	Animal byproducts and rendering—Biosecure preservation of sustainable animal agriculture. **R. Hamilton**, National Renderers Association.
11:00 AM	Discussion
11:15 AM	Domestic and global implications for TSEs—Effects on animal agriculture and the by-product industry. **C. Yeutter**, Former Secretary of Agriculture and Ambassador.

SYMPOSIUM

Forages and Pastures

The J. W. Thomas Forage Symposium: A Discussion on Silage Fermentation Issues

Chair(s): D. Benz, U.S. Food and Drug Administration, Center for Veterinary Medicine

Sponsor: Biotal Incorporated

Room: 200C

Time	Abstract Number	
8:00 AM		Tribute: Scientific and education contributions of Dr. J. W. Thomas. D. Beitz, Iowa State University
8:15 AM	38	Microbiology of silage. **Thomas Rehberger*[1]**, [1]Agtech Products, Inc, Waukesha, WI.
9:00 AM	39	The history and future of silage inoculants. **Limin Kung, Jr.*[1]**, [1]The University of Delaware.
9:45 AM		Break
10:00 AM	40	The end products of silage fermentation and their relationships to animal performance. **Richard Muck*[1]** and Limin Kung, Jr.[2], [1]USDA, ARS, US Dairy Forage Research Center, [2]University of Delaware.

10:45 AM	41	Improving protein utilization in silages to increase animal performance and reduce environmental burden. **Ed Charmley***, AAFC Crops and Livestock Research Centre, Nappan, NS, Canada.
11:30 AM	42	Reflections and concluding remarks. **J.W. Thomas***, Michigan State University.

SYMPOSIUM

Physiology

Improving Reproductive Efficiency with Hormone Treatments

Chair(s): M. Lucy, University of Missouri, and M. Wiltbank, University of Wisconsin

Sponsors: Monsanto, Pharmacia Animal Health, and Select Sires, Inc.

Room: 2000A

Time	Abstract Number	
8:00 AM	43	Optimization of timed insemination programs and integration with bST to increase pregnancy rates in lactating dairy cows. **W. W. Thatcher***[1], L. Badinga[1], S. M. Pancarci[1], F. Moreira[1], R. Pershing[1], A. Guzeloglu[1], T. R. Bilby[1], S. Kamimura[1], J. Santos[2], and J. Santos[2], [1]University of Florida, Gainesville, FL, USA, [2]University of California, Davis, CA, USA.
8:50 AM	44	Use of CIDR-B for regulating reproduction. **Reuben J. Mapletoft***[1] and John P. Kastelic[2], [1]University of Saskatchewan, Saskatoon, SK Canada, [2]AAFC, Research Centre, Lethbridge, AB Canada.
9:40 AM	45	A review of methods to synchronize estrus in postpartum beef cows and replacement beef heifers. **D.J. Patterson***, F.N. Kojima, and M.F. Smith, University of Missouri.

SYMPOSIUM

Swine Species

Value-Added Pork Products for 21st Century Consumers

Chair(s): G. Hill, Michigan State University

Sponsors: Danbred, United Feeds, and PIC

Room: 2000B

Time	Abstract Number	
8:00 AM	46	Economic analysis of production factors important in developing value-added pork products. **R. L. Plain***[1], [1]University of Missouri - Columbia.
8:30 AM	47	Breeding and Genetics in the Evolving Swine Industry. **J.A.B. Emsley***, PIC, Franklin KY, USA.
9:00 AM	48	Evaluating the functional quality of pork. **Eric Berg***, University of Missouri-Columbia.
9:30 AM		Nutrition and management for value-added pork. **B. Rickert**, Purdue University.

Graduate Paper Competition

CSAS Graduate Student Competition

Chair(s): F. Castonguay, Agriculture and Agri-Food Canada

Room: 207

Time	Abstract Number	
8:00 AM	49	Variation in phytate content in Ontario soybean samples. S.D. Leech* and C.F.M. de Lange, University of Guelph, Guelph, Ontario.

8:15 AM	50	Effect of supplementing corn-soybean-based diet with microbial phytase and organic acid in young pigs. F. O. Omogbenigun*, B. A. Slominski, and C. M. Nyachoti, University of Manitoba, Winnipeg, MB.
8:30 AM	51	Utilization of apparent ileal digestible threonine intake for body protein deposition in the pig appears related to endogenous gut protein losses and microbial fermentation in the gut. C.L. Zhu*, Y. Yin, and C.F.M. de Lange, University of Guelph, Guelph, ON, Canada.
8:45 AM	52	The optimal dietary level of vitamin B12 in gestating gilts. F. Simard*[1], F. Guay[1], J.P. Laforest[1], A. Giguere[2], C.L. Girard[2], and J. J. Matte[2], [1]Universite Laval, Quebec, Qc, Canada, [2]Agriculture and Agri-Food Canada, Lennoxville, Qc, Canada.
9:00 AM	53	Low Protein Diets Can be Fed to Lactating Sows With Few Adverse Effects. D. J. McMillan*, S. Möhn, and R. O. Ball, University of Alberta, Edmonton, Canada.
9:15 AM	54	Effects of Sulphur Amino Acid (SAA) Ratios and Concentrations on the Performance of Weaned Piglets. R.D. Harte*, A.K. Shoveller, R.F.P Bertolo, and R.O Ball, [1]University of Alberta.
9:30 AM		Break
10:00 AM	55	Fecal excretion of major odor-causing and acidifying compounds in response to dietary supplementation of chicory inulin extract in pigs. T. C. Rideout and M. Z. Fan, University of Guelph, Ontario, Canada.
10:15 AM	56	Thirteen polymorphic microsatellite markers for American mink. I.R. Vincent, A. Farid, and C.J. Otieno, Nova Scotia Agricultural College.
10:30 AM	57	Persistence of transgenic DNA from Roundup Ready® canola during processing for feed and in vitro ruminal incubation. T.W. Alexander*[1,2], R. Sharma[1], T.A. McAllister[1], R.J. Forster[1], Y. Wang[1], and W.T. Dixon[2], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]University of Alberta, Edmonton.
10:45 AM	58	Elimination of *Escherichia coli* O157:H7 through the use of electrolyzed oxidizing (EO) water. S.M.L. Stevenson*, S.R. Cook, S.J. Bach, and T.A. McAllister, Agriculture and Agri-Food Canada, Lethbridge, AB.
11:00 AM	59	Relationship between feeding behavior and performance of feedlot steers. D.D. Hickman*[1,3], K.S. SchwartzkopfGenswein[2], R. Silasi[2], D.H. Crews Jr.[1], C.R. Krehbiel[3], and T.A. McAllister[1], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]Alberta Agriculture, Food and Rural Development, Lethbridge, AB, [3]Oklahoma State University, Stillwater.
11:15 AM	60	Observational study of factors associated with seasonal variation in milk urea nitrogen observed on intensively and extensively managed pastures, during the summer 2000 grazing season, in Prince Edward Island, Canada. E Leger, I Dohoo, G Keefe, J Wichtel, P Arunvipas, and J VanLeeuwen, Atlantic Veterinary College.

Graduate Paper Competition

Dairy Foods

Chair(s): R. Dave, South Dakota State University

Room: 301B

Time	Abstract Number	
8:45 AM	64	Use of restriction fragment length polymorphism to isolate *Lactococcus lactis* strains producing novel EPS. Helene Deveau* and Sylvain Moineau, Universite Laval.
8:00 AM	61	Purification and characterization of two types of bile salt hydrolase from *Bifidobacterium* spp. GB Kim* and BH Lee, Dept. of Food Sci. & Agri. Chemistry, McGill University.
8:15 AM	62	Exopolysaccharide production by *Lb. rhamnosus* RW-9595M. D. Bergmaier*[1], C. Lacroix[1], and C.P. Champagne[2], [1]Dairy Research Centre STELA, [2]Food Research and Development Centre, Agriculture and AgriFood Canada.

8:30 AM	63	The effect of lactic acid bacteria and bifidobacteria on interleukin-6 and interleukin-8 production by Caco-2 cells. C. Wong*[1], J.J. Pestka[1], and Z. Ustunol[1], [1]Department of Food Science and Human Nutrition, Michigan State University.
9:00 AM	65	The detection of *Bacillus* endospores during low heat skim milk powder processing using nucleic acid technology. Amy Rife*, Dr. Rafael Jimenez-Flores, Dr. Chris Kitts, and Dr. Mark Kubinski, California Polytechnic State University.
9:15 AM	66	Comparison of three media used to estimate psychrotrophic bacteria in milk. A.A. Glueck-Chaloupka* and C.H. White, Mississippi State University, Mississippi State, Ms./USA.
9:30 AM		Break
10:00 AM	67	Sensory and Instrumental Measurements of the Sensory Properties of Powdered Buttermilk. M. Spill*[1], J.-X. Guinard[1], and R. Jimenez-Flores[2], [1]Department of Food Science and Technology, University of California, Davis, [2]Dairy Products Technology Center, California Polytechnic University, San Luis Obispo.
10:15 AM	68	Presence of an active phosphoenolpyruvate: glucose/mannose phosphotransferase system in *Streptococcus thermophilus* ATCC 19258. Armelle Cochu*, Christian Vadeboncoeur, Sylvain Moineau, and Michel Frenette, Groupe de Recherche en Ecologie Buccale, Universite Laval, Quebec, Canada.
10:30 AM	69	Properties and substrate selectivities of esterases from *Lactobacillus casei* LILA, *Lactobacillus helveticus* CNRZ32, and *Lactococcus lactis* MG1363. K.M. Fenster*, K.L. Parkin, and J.L. Steele, University of Wisconsin-Madison, Madison, WI.
10:45 AM	70	Construction and evaluation of food-grade vectors for *Lactococcus lactis* using aspartate aminotransferase and a-galactosidase as selectable markers. V. R. Sridhar*, V. V. Smeianov, and J. L. Steele, University of Wisconsin-Madison, Madison, WI.
11:00 AM	71	Electrostatic effects on the yield stress of whey protein isolate foams. J. P. Davis* and E. A. Foegeding, North Carolina State University, Raleigh, NC/U.S.A.
11:15 AM	72	Characterization of interactions involved in the gelation of hydrolyzed whey proteins. D. Doucet*[1], S.F. Gauthier[2], and E.A. Foegeding[1], [1]North Carolina State University, [2]Universite Laval.
11:30 AM	73	Process Analysis of Skim Milk Microfiltration for selective concentration of Casein. M Singh*, G Solakni, and S.S.H. Rizvi, Institute of Food Science, Cornell University, Ithaca NY 14853.

Graduate Paper Competition

ADSA Production Division and ADSA Southern Branch

Chair(s): D. Johnson, Burkmann Mills, and A. Shepard, Purina Mills

Room: 203

Time	Abstract Number	
8:00 AM	74	Effects high wheat bran rations and different sources of protein on the milk constituents and production. Moslem Bashtani*, Abbasali Naserian, and Reza Valizadeh, Ferdowsi University Of Mashhad, Mashhad, khorasan, Iran.
8:15 AM	75	Effect of lauric acid on ruminal fermentation, nutrient digestibility and milk yield of dairy cows. K. L. Grandeen*, A. N. Hristov, and J. K. Ropp, Department of Animal and Veterinary Science, University of Idaho, Moscow, ID 83844-2330.
8:30 AM	76	Production and metabolic responses to dietary conjugated linoleic acid (CLA) and trans-octadecenoic acid isomers in periparturient Holstein cows. KT Selberg*, CR Staples, and L Badinga, University of Florida, Gainesville, FL.
8:45 AM	77	Intramammary infusion of IGF-I increases BrdU-labeling in mammary epithelial cells of prepubertal heifers. L.F.P. Silva*, M.J. VandeHaar, and M.S. Weber Nielsen, Michigan State University, East Lansing MI.

9:00 AM	78	Use of insulin-like growth factor-1 in culture and administration of GnRH to recipients to improve pregnancy rates following timed embryo transfer of in vitro-produced embryos to lactating dairy cows. J. Block*[1], M. Drost[1], R.L. Monson[2], J.J. Rutledge[2], R.M. Rivera[1], F.F. Paula-Lopes[1], O.M. Ocon[1], and P.J. Hansen[1], [1]University of Florida, Gainesville, FL, [2]University of Wisconsin, Madison, WI.
9:15 AM	79	Expression of fibronectin, laminin and type IV collagen in mammary tissue from ovariectomized and intact prepubertal heifers. S. D. Berry*[1], R. D. Howard[2], and R. M. Akers[1], [1]Virginia Tech, [2]Virginia Maryland Regional College of Veterinary Medicine, Blacksburg, VA 24061.
9:30 AM		Break
10:00 AM	80	Comparison of high-molecular weight glycoproteins, MUC1 and MUCX, in porcine and bovine milks. C. Liu*, A.K. Erickson, D.R. Henning, and D.H. Francis, South Dakota State University, Brookings, SD.
10:15 AM	81	Short day photoperiod enhances lymphocyte proliferation in dairy cattle. T.L. Auchtung*, J.L. Salak-Johnson, and G.E. Dahl, University of Illinois, Urbana, IL.
10:30 AM	82	Prevention of fatty liver in transition dairy cows by glucagon. R. A. Nafikov*[1], B. N. Ametaj[2], G. Bobe[1], J. W. Young[1], and D. C. Beitz[1], [1]Iowa State University, Ames, IA, [2]Purdue University, West Lafayette, IN.
10:45 AM	83	Oxytetracycline resistant gram-negative bacteria in dairy cattle: risk factors and implications on food safety. A. A. Sawant, N. V. Hegde, B. C. Love, and B. M. Jayarao, The Pennsylvania State University, University Park, PA, USA.
11:00 AM	84	Antimicrobial resistance patterns of bacteria cultured from milk samples in Wisconsin from 1994 - 2001. J. A. Makovec* and P. L. Ruegg, University of Wisconsin, Madison.
11:15 AM	85	Effects of storage time and thawing methods on the recovery of Mycoplasma in milk samples from cows with intramammary infections. M. Biddle*, L. Fox, M. Evans, and C. Gaskins, Washington State University.
11:30 AM	86	Performance of lactating dairy cows fed gamagrass as hay or silage. J-S. Eun*[1], V. Fellner[1], J. C. Burns[2], and M. L. Gumpertz[1], [1]North Carolina State University, Raleigh, NC, USA, [2]USDA-ARS, Raleigh, NC, USA.
11:45 AM	87	Dietary cation-anion difference and K:Na ratio effect on performance of lactating dairy cows during hot weather. C.D. Wildman*, J.W. West, and J.K. Bernard, The University of Georgia, Tifton, GA.

Graduate Paper Competition

Northeast ASAS/ADSA Section

Chair(s): T. Hartsock, University of Maryland

Room: 205B

Time	Abstract Number	
8:00 AM	88	Potential Mechanisms for Increased Milk Yield due to Increased Milking Frequency during Early Lactation. S. A. Hale*[1], A. V. Capuco[2], and R. A. Erdman[1], [1]University of Maryland, College Park, [2]USDA-ARS, Beltsville, MD.
8:15 AM	89	Performance of dairy cows as affected by prepartum dietary carbohydrate source and supplementation with chromium throughout the periparturient period. K. L. Smith*[1], M. R. Waldron[1], T. R. Overton[1], J. K. Drackley[2], and M. T. Socha[3], [1]Cornell University, Ithaca NY, [2]University of Illinois, Urbana, [3]Zinpro Corporation, Eden Prairie, MN.
8:30 AM	90	Evaluation of ruminally unprotected lysine as a source of metabolizable lysine for high producing cows. A. M. McLaughlin*[1], N. L. Whitehouse[1], E. D. Robblee[1], R. S. Ordway[1], C. G. Schwab[1], P. S. Erickson[1], and D. E. Putnam[2], [1]University of New Hampshire, Durham, NH, [2]Balchem Corporation, Slate Hill, NY.
8:45 AM	91	Timing of embryonic mortality and its relationship to serum progesterone in dairy cattle. M. J. Starbuck*, R. A. Dailey, and E. K. Inskeep, West Virginia University, Morgantown, WV.

9:00 AM	92	The effect of gastrointestinal parasitism on reproductive parameters in lactating dairy cows. Javier Sanchez*[1], Ian R. Dohoo[1], Ane Nodtvedt[2], and Luc DesCôteaux[3], [1]Atlantic Veterinary College, University of Prince Edward Island, [2]The Norwegian Zoonosis Centre, National Veterinary Institute, [3]Faculté de médécine veterinaire, Université de Montreal.
9:15 AM		Break
9:45 AM	93	Management definition of alternative herd environments to investigate genotype by environment interaction. E Raffrenato*[1,2], R W Blake[2], P A Oltenacu[2], and J Carvalheira[3], [1]Consorzio Ricerca Filiera Lattiero-Casearia, Ragusa, Italy, [2]Cornell University, Ithaca, NY, [3]Universidade do Porto, Vairao, Portugal.
10:00 AM	94	A comparison of chemical and microbial anti-fungal additives and their effects on the fermentation and aerobic stability of corn silage. D. H. Kleinschmit*, J. M. Neylon, T. L. Ebling, J. M. Ladd, J. E. Lynch, and L. Kung, Jr., University of Delaware, Newark.
10:15 AM	95	Age-related response of somatotropic axis in Hereford calves from birth to one year of age treated with bovine (b) somatotropin (ST). K.E. Govoni*, T.A. Hoagland, E.F. Jones, D. Schrieber, and S.A. Zinn, University of Connecticut, Storrs, CT, USA.
10:30 AM	96	Differential effect of mammary inflammation on albumin and b-casein concentration in porcine milk. A. C. W. Kauf*, D. C. Pighetti, D. A. Pape, A. L. Magliaro, and R. S. Kensinger, Penn State University, University Park.
10:45 AM	97	Novel birth-weaning feeder reduces time spent learning to drink from an open vessel. R.W. Quinn*[1], T.G. Hartsock[1], N.C. Whitley[2], and L.W. Douglass[1], [1]University of Maryland College Park, [2]University of Maryland Eastern Shore.
11:00 AM	98	Development of a new in vitro model for infant colonic fermentation with immobilized cells. C. Cinquin*[1], G. Le Blay[1], I. Fliss[1,2], and C. Lacroix[1,2], [1]Dairy research institut STELA, Quebec, Qc, Canada, [2]Institut sur les Nutraceutiques et les Aliments Fonctionnels (INAF), Quebec, Qc, Canada.

Animal Behavior and Well-Being

Influence of Environment on Animal Well-Being

Chair(s): D. Lay, Jr., Purdue University

Room: 205C

Time	Abstract Number	
8:00 AM	99	Environmental enrichment for neonatal pigs and its influence on post weaning aggression. E.S. Jolly, J.B. Gaughan*, and A.K. King, The University of Queensland, Gatton, Australia.
8:15 AM	100	Heat Stress in the Outdoor Lactating Sow: Influence of Shaded Wallows on Behavior, Performance and Physiology. A. K. Johnson*[1], F. M. Mitlöhner[1], J. L. Morrow[2], and J. J. McGlone, [1]Pork Industry Institute, [2]USDA-ARS.
8:30 AM	101	Effect of gestational stress on sow behavior and subsequent pig response to weaning. M.J. Toscano*[1], K.A. Scott[1], H.K. Smith[1], H.G. Kattesh[2], M.P. Roberts[2], and D.C. Lay[1], [1]USDA-Agricultural Research Service -Livestock Behavior Research Unit, [2]Department of Animal Science, The University of Tennessee.
8:45 AM	102	The isolation of simulated udder elements to decrease danger to piglets due to crushing. H.K. Smith*[1], K.A. Scott[1], M.J. Toscano[1], K.J. Daniels[2], and D.C. Lay Jr.[1], [1]Agricultural Research Service - USDA, [2]Purdue University.
9:00 AM		Break
9:15 AM	103	Effects on production, health and behavior of two types of housing for gestating gilts. M.J. Harris*[1], A.D. Sorrells[1,2], S.D. Eicher[2], B.T. Richert[1], and E.A. Pajor[1], [1]Purdue University, West Lafayette, Indiana, [2]USDA-ARS Livestock Behavior Research Unit, West Lafayette, Indiana.
9:30 AM	104	Evaluation of housing stress on gestating gilts using immunological measures. A.D. Sorrells*[1,2], S.D. Eicher[1], M.J. Harris[2], E.A. Pajor[2], and B.T. Richert[2], [1]USDA-ARS, West Lafayette, Indiana, [2]Purdue University, West Lafayette, Indiana.

9:45 AM	105	Cooling during the dry period reduces stress and increases milk production in the next lactation. L. Avendaño-Reyes*[1], D. Alvarez-Valenzuela[1], S. Saucedo-Quintero[1], A. Correa-Calderon[1], F. Rivera-Acuña[1], and P.H. Robinson[2], [1]Universidad Autonoma de Baja California, Mexicali, Mexico, [2]UCCE, Dept. of Anim. Sci., UC Davis, Davis, CA.
10:00 AM	106	Effects of pre-haul management and transport distance on beef calf performance and welfare. M.E. Booth*[1], K.S. SchwartzkopfGenswein[2], T.A. McAllister[1], G.J. Mears[1], A.L. Schaefer[3], N. Cook[3], J.S. Church[4], and D.H. Crews Jr.[1], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]Alberta Agriculture, Food and Rural Development, Lethbridge, AB, [3]Agriculture and Agri-Food Canada, Lacombe, AB, [4]Alberta Agriculture, Food and Rural Development, Red Deer, AB.
10:15 AM		Break
10:30 AM	107	Cow distribution within two different types of free-stall barns at varying temperatures. K. A. Koudele*, L. D. Birney, and L. H. Adams, Andrews University, Berrien Springs, MI.
10:45 AM	108	Factors affecting cow preference for stalls with different freestall bases in pens with different stocking rates. A.M. Wagner-Storch and R.W. Palmer*, University of Wisconsin-Madison.
11:00 AM	109	Rubber flooring affects behaviour of dairy cows, especially animals with hoof injuries. J Fregonesi, F Flower, T Vittie, C Tucker, and DM Weary*, Animal Welfare Program, Faculty of Agricultural Sciences, University of British Columbia.
11:15 AM	110	Effects of stall surface on occupancy and postural changes in dairy cows. D. C. Lay Jr. *[1], L. L. Timms[2], and D. R. Thoreson[2], [1]ARS-USDA-Livestock Behavior Research Unit, West Lafayette, IN, [2]Iowa State University, Ames, IA.

Animal Health

Immunology and Management

Chair(s): R. Roeder, Southern Illinois University

Room: 206A

Time	Abstract Number	
8:00 AM	111	Immunological and growth performance responses of finishing steers supplemented with menhaden fish oil. T. J. Wistuba*, E. B. Kegley, and M. E. Davis, University of Arkansas, Fayetteville AR / USA.
8:15 AM	112	*In vitro* cytotoxicity of aflatoxins B1, M1, ochratoxin A and protective effects of antioxidants. A. Baldi*, E. Fusi, R. Rebucci, L. Pinotti, F. Cheli, and V. Dell'Orto, Department VSA, University of Milan, Italy.
8:30 AM	113	*In vitro* evaluation of the oxidative damage induced by mycotoxins. E. Pavoni[1], B. Bertasi*[1], M.N. Losio[1], and A. Baldi[2], [1]IZS, Brescia - Italy, [2]Department VSA, University of Milan - Italy.
8:45 AM	114	Effect of intravenous infusion of increasing amounts of lipopolysaccharide on plasma macromineral, vitamin D, and protein concentrations in lactating dairy cows. M. R. Waldron*[1], B. J. Nonnecke[2], T. Nishida[1], R. L. Horst[2], M. R. Foote[3], and T. R. Overton[1], [1]Cornell University, Ithaca, NY, [2]National Animal Disease Center (NADC), USDA ARS, Ames, IA, [3]Iowa State University, Ames, IA.
9:00 AM	115	Endotoxin (LPS) administration uncouples growth hormone (GH) regulation of insulin-like growth factor-1 (IGF-1): decreased signal transduction STAT-5b phosphorylation. T. H. Elsasser* and S. Kahl, USDA-ARS, Growth Biology Laboratory, Beltsville, MD.
9:15 AM	116	Growth, feed intake, and acute phase protein response of two genotypes and genders to an acute challenge with lipopolysaccharide (LPS). J. W. Frank*[1], R. W. Ratliff[1], G. L. Allee[1], R. D. Boyd[2], and M. A. Mellencamp[2], [1]University of Missouri - Columbia, [2]PIC USA, Inc.
9:30 AM	117	Effect of dexamethasone (DEX) and insulin-like growth factor-1 (IGF-1) on pokeweed mitogen (PWM)-induced lymphoproliferation and immunoglobulin production. A.L. Delgado*[1], T.H. Welsh, Jr.[2], and J.C. Laurenz[1], [1]Texas A&M University-Kingsville, [2]Texas A&M University-College Station.
9:45 AM		Break

10:15 AM	118	Toxicity of ergovaline on Caco2 cells as assessed by MTT, alamarBlue, and DNA analysis. N.W. Shappell*, ARS-USDA.
10:30 AM	119	Effects of segregated early weaning on systemic and enteric T lymphocyte subpopulations in pigs. D. C. Brown*, C. V. Maxwell, M. E. Davis, G. F. Erf, and S. Singh, University of Arkansas, Fayetteville.
10:45 AM	120	Bacterial colonization of the neonatal pig gut is altered by enteral versus parenteral feeding. R. B. Harvey*[1], K. Andrews[1], R. E. Droleskey[1], K. V. Kansagra[2], B. Stoll[2], D. G. Burrin[2], K. J. Genovese[1], T. S. Edrington[1], R. C. Anderson[1], and D. J. Nisbet[1], [1]Food and Feed Safety Research Unit, USDA-ARS, College Station, TX USA, [2]USDA-ARS-Children's Nutrition Research Center, Baylor College of Medicine, Houston, TX USA.
11:00 AM	121	Development of a novel paradigm for the real-time monitoring of bacterial pathogenicity in swine. S. Willard*[1], P. Ryan[1], R. Bailey[2], M. Lawrence[2], C. Estill[2], S. Gandy[1], and D. Lay[3], [1]Dept. of Animal and Dairy Science, Mississippi State University, Mississippi State, MS, [2]College of Veterinary Medicine, Mississippi State University, Mississippi State, MS, [3]USDA-ARS, West Layfayette, IN.
11:15 AM	122	Effect of ketoprofen, local anesthesia, and caudal epidural anesthesia during castration of beef cattle. S. T. L. Ting*[1,2], B. Earley[1], J. M. L. Hughes[2], and M. A. Crowe[2], [1]Teagasc, Grange Research Centre, Dunsany, Co. Meath, [2]Faculty of Veterinary Medicine, University College Dublin, Ballsbridge, Dublin 4, Ireland.
11:30 AM	123	Effect of forage condensed tannins on gastro-intestinal parasite infection in grazing wether goats. B.R. Min*[1], W. Pomroy[2], S.P. Hart[1], and T. Sahlu, [1]E (Kika) dela Garza Institute for Goat Research, Langston University, OK 73050, USA, [2]Veterinary and Biomedical Science, Massey University, Palm/N, NZ.
11:45 AM	124	Minimally invasive diagnostic procedures and measures of test performance in BVD infected cattle. N Cook*[1], A Schaefer[1], S Tessaro[2], D Deregt[2], G Desroche[3], and P Dubeski[4], [1]Agriculture and AgriFood Canada, [2]Animal Disease Research Institute, [3]Public Works, Edmonton, [4]Alberta Agriculture Food and Rural Development.

Breeding and Genetics

Genetic Prediction and Selection in Cattle

Chair(s): D. Norman, AIPL, ARS, USDA

Room: 205A

Time	Abstract Number	
8:00 AM	125	Detection and adjustment of abnormal test day yields. G. R. Wiggans*, P. M. VanRaden, and J. C. Philpot, Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD.
8:15 AM	126	Examination of methods to correct for preferential treatment among AI bull dams. N.R. Zwald* and K.A. Weigel, University of Wisconsin - Madison, Madison, WI.
8:30 AM	127	Data sub-setting and assessment of bias in estimation of genetic correlations among countries. H. Jorjani*, Interbull Centre, Dept. of Anim. Breed. and Genet., Swedish University of Agricultural Sciences.
8:45 AM	128	Selection differentials from national Holstein bull progeny test programs estimated from international data. R. L. Powell*[1], H. D. Norman[1], and A. H. Sanders[1], [1]Animal Improvement Programs Laboratory, Agricultural Research Service, USDA.
9:00 AM	129	Improvements in Dystocia National Genetic Evaluation System and Data Processing. C. P. Van Tassell*[1], G. R. Wiggans[1], J. C. Philpot[1], and I. Misztal[2], [1]Animal Improvement Programs Laboratory, ARS, USDA, Beltsville, MD, [2]University of Georgia, Athens, GA.
9:15 AM	130	A mixed effects heteroskedastic threshold model analysis of calving ease in Italian Piedmontese cattle. K. Kizilkaya[1], P. Carnier[2], A. Albera[3], G. Bittante[2], and R.J. Tempelman*[1], [1]Michigan State University, East Lansing MI,USA, [2]University of Padova, Agripolis, Italy, [3]Associazione Nazionale Allevatori Bovini di Razza Piemontese, Italy.

9:30 AM	131	Investigating the value of birth weight as a predictor of perinatal mortality and dystocia. J.M. Johanson*[1] and P.J. Berger[1], [1]Iowa State University.
9:45 AM	132	Repeatability of birth weight of calves in Holstein dams of Southern Nigeria. O.T.F. Abanikannda*[1], A.O. Leigh[1], O. Olutogun[2], and M. Orunmuyi[3], [1]Department of Zoology, Lagos State University, Nigeria, [2]Department of Animal Science, University of Ibadan, Nigeria, [3]Department of Animal Science, Ahmadu Bello University, Zaria, Nigeria.
10:00 AM		Break
10:30 AM	133	Additional evaluation of the parameters of the glucose tolerance test (GTT) in connection with pedigree performance (PBV) in growing young bulls. L. Panicke*[1], R. Staufenbiel[2], and E. Fischer[3], [1]Research Institute for the Biology of Farm Animals, Dummerstorf, Germany, [2]Free University Berlin, Clinic of cattle and pigs, Germany, [3]University Rostock, Faculty of Agricultural and Environmental Sciences, Germany.
10:45 AM	134	Global trends in international selection strategies of Holstein bulls. F. Miglior*[1,2] and B.J. Van Doormaal[2], [1]Agriculture and Agri-Food Canada, [2]Canadian Dairy Network.
11:00 AM	135	The Effect of Producer Goals on Sire Selection. P. R. Tozer*[1] and J. R. Stokes[1], [1]The Pennsylvania State University.
11:15 AM	136	Effect of fitting dominance effects on the prediction of genetic values for beef cattle. K. A. Donoghue*, J. K. Bertrand, and I. Misztal, The University of Georgia, Athens, GA, USA.

Dairy Foods

Micro

Chair(s): L. Metzger, University of Minnesota, and S. Moineau, Laval University

Room: 301A

Time	Abstract Number	
8:15 AM	137	Production of Exopolysaccharides from *Streptococcus thermophilus* strains in Batch, Continuous and Fed-batch culture. F. Vaningelgem*[1], T. Adriany[1], M. Zamfir[2], and L. De Vuyst, [1]Vrije Universiteit Brussel (VUB), Brussels, Belgium, [2]Institute of Biology Bucharest (IBB), Bucharest, Romania.
	138	Withdrawn
8:30 AM	139	SURVIVAL and antimicrobial effect of bifidobacteria and yoghurt bacteria during refrigerated storage of yoghurt made from lactose hydrolysed milk. Ehab Kheadr[1], Abd El-Rah Abd El-Rahman*[2], and Tarek El-Nemr[1], [1]Alexandria University, Alexandria, Egypt, [2]El-Minia University, El-Minia, Egypt, [1]Alexandria University, Alexandria, Egypt.
8:45 AM	140	Analysis of the early promoter P1 of *Streptococcus thermophilus* bacteriophage DT1. Genevišve Lamothe*, Céline Lévesque, Denise Tremblay, Frédéric Bissonnette, Armelle Cochu, Michel Frenette, and Sylvain Moineau, Université Laval.
9:00 AM	141	Identification of the melibiose carrier in *Lactococcus lactis* subsp. *cremoris* MG1363. I. Boucher*, C. Vadeboncoeur, and S. Moineau, Universite Laval, Quebec, Canada.
9:15 AM	142	Phage ul36 gene expression in sensitive and resistant *Lactococcus lactis* hosts. J. D. Bouchard* and S. Moineau, Universite Laval.
9:30 AM	143	Monitoring endospores and endospore-forming bacteria populations in commercial skim milk powder production plants. C. Murillo* and Rafael Jimenez-Flores, California Polytechnic State University, San Luis Obispo, CA.
9:45 AM	144	Influence of lactococcal cell envelope proteinases on accelerated Cheddar cheese ripening. S. I. Myaka*, L. E. Metzger, and L. L. McKay, MN-SD Dairy Food Research Center, University of Minnesota, St. Paul, MN.
10:00 AM	145	Exopolysaccharides from lactic acid bacteria: microbial physiology and fermentation kinetics. L De Vuyst*[1] and F Vaningelgem[1], [1]Vrije Universiteit Brussel.

Marschall Rhodia International Dairy Science Award Lecture

2002 Award Chair: J. Parsons, Oakland, AR

Introduction by Harry Farrell, USDA

Room: 204B

Time	
11:00 AM	Structure and stability of casein micelles: a critical appraisal of micellar models. **David Horne**, Hannah Research Institute, Scotland, UK.

Nonruminant Nutrition

Nutritional Values of Phytase and Other Enzymes

Chair(s): S. Radcliffe, Purdue University

Room: 2000C

Time	Abstract Number	
8:00 AM	146	Impacts of site-directed mutations and expression systems on efficacy of *Escherichia coli* phytases in diets for weanling pigs. C. H. Stahl*, J. M. Gentile, T. W. Kim, K. R. Roneker, and X. G. Lei, Cornell University.
8:15 AM	147	Relative effectiveness of an experimental consensus phytase to inorganic phosphorus and an *Escherichia coli* phytase in diets for weanling pigs. J. M. Gentile*, K. R. Roneker, S. E. Crowe, W. G. Pond, and X. G. Lei, Cornell University.
8:30 AM	148	True phosphorus digestibility is improved with little change in the endogenous phosphorus outputs associated with soybean meal in the transgenic phytase weanling enviropig™. A. Ajakaiye*, M. Z. Fan, C. W. Forsberg, J. P. Phillips, R. G. Meidinger, M. Z. Weiderkehr, T. Archbold, S. P. Golovan, R. R. Hacker, and D. Barney, University of Guelph, Guelph, Ontario, Canada.
8:45 AM	149	Effect of microbial phytase on energy availability as assessed by protein and fat deposition in pigs. J. L. Shelton*[1], L. L. Southern[1], T. D. Bidner[1], M. Persica[1], J. Braun[2], B. Cousins[3], and F. McKnight[3], [1]LSU Agricultural Center, [2]BASF AG, Ludwigshafen, Germany, [3]BASF Corporation, Mount Olive, NJ.
9:00 AM	150	The effect of citric acid alone or in combination with microbial phytase on gastric pH, and P and DM ileal and fecal digestibilities. J.P. Rice*[1], J.S. Radcliffe[1], and R.S. Pleasant[2], [1]Purdue University, West Lafayette, IN, [2]Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, VA.
9:15 AM	151	Phytase supplementation in soybean meal-based practical diets improves apparent digestibility coefficients of nutrients for rainbow trout (*Oncorhynchus mykiss*). Zongjia Cheng*[1], R.W. Hardy[1], V. Verlhac[2], and J. Gabaudan[2], [1]University of Idaho,Hagerman Fish Culture Experiment Station, [2]Research Center for Animal Nutrition and Health, STE Chimique Roche, Ltd, France.
9:30 AM	152	Effect of a-1,6-galactosidase, b-1,4-mannosiase, and b-1,4-mannanase on intestinal morphology and the removal of dietary antinutritional factors in young pigs. S. W. Kim*, Texas Tech University.
9:45 AM	153	Effects of increasing xylanase supplementation of medium quality wheat based diets on the growth performance of entire males between 24 and 56 kg live weight. D. J. Cadogan*[1], H. Simmins[2], G. Partridge[2], and C. Argent[1], [1]Bunge Meat Industries, [2]Finnfeeds International Ltd.

Nonruminant Nutrition

Antimicrobial Agents and Plant Extracts on Immunity, Health, and Performance

Chair(s): M. Lindemann, University of Kentucky

Room: 2000C

Time	Abstract Number	
10:15 AM	154	Introduction of antibiotics in animal production. **Virgil W. Hays**, University of Kentucky.
10:30 AM	155	Protection of piglets against Salmonella infection with dried bacterial cells. Z. Mroz*[1] and Y. Toride[2], [1]Institute for Animal Science and Health, Lelystad, The Netherlands, [2]Ajinomoto Co., Inc., Tokyo, Japan.
10:45 AM	156	Studies on the blood cholesterol lowering effect of specific lactic acid bacteria in growing pigs. Y. H. Park*[1], K. M. Lee[1], J. G. Kim[1], Y. W. Shin[1], H. S. Kim[2], S. H. Kim[1], and K. Y. Whang, [1]Korea University, Seoul, Korea, [2]Culture Systems, Inc., Mishawaka, IN.
11:00 AM	157	Growth performance and immune parameters of weanling pigs fed mannan oligosaccharides. M. E. Davis*, C. V. Maxwell, D. C. Brown, and T. J. Wistuba, University of Arkansas, Fayetteville.
11:15 AM	158	Dietary galactooligosaccharides (GOS) affect nutrient digestion, bacterial populations, and ileal short-chain fatty acid (SCFA) production in the pig. M. R. Smiricky*, C. M. Grieshop, E. A. Flickinger, and G. C. Fahey, Jr., University of Illinois, Urbana-Champaign.
11:30 AM	159	Botanicals for nursery pigs. P.J. Holden* and J.D. McKean, Iowa State University, Ames, IA.
11:45 AM	160	Plant extracts enhance sow lactation performance. S. E. Ilsley[1], H. M. Miller[1], H. M. R. Greathead[1], and C. Kamel*[2], [1]University of Leeds, Leeds, UK, [2]AXISS France SAS, Archamps, France.
12:00 PM	161	Plant extracts enhance broiler performance. D. Jamroz[1] and C. Kamel*[2], [1]The Agricultural University of Wroclaw, Poland, [2]AXISS France SAS, Archamps, France.

Production, Management, and the Environment

Dairy Management

Chair(s): B. Perkins, Monsanto Dairy Business

Room: 206B

Time	Abstract Number	
8:00 AM	162	Nutritionally induced growth pattern changes of pregnant heifers and subsequent changes in body weights and dry matter intake. H. C. Freetly*, C. L. Ferrell, and T. G. Jenkins, USDA, ARS, U.S. Meat Animal Research Center.
8:15 AM	163	Effects of raising regime on milk yield of primiparous holstein cows. L. A. Torbert*[1], J. G. Linn[1], D. G. Johnson[2], G. J. Cuomo[2], H. Chester-Jones[3], and M. L. Raeth-Knight[1], [1]University of Minnesota, St. Paul, MN, [2]West Central Research and Outreach Center, Morris, MN, [3]Southern Research and Outreach Center, Waseca, MN.
8:30 AM	164	Economic analysis of high yielding dairy cows under different feeding systems combining pasture, total mixed ration and concentrates. P. R. Tozer*[1], F. Bargo[1], and L. D. Muller[1], [1]Pennsylvania State University.
8:45 AM	165	Application of mixed model methodology to the determination of the economic optimal prepubertal rate of gain of dairy heifers. N. R. St-Pierre*, The Ohio State University, Columbus.
9:00 AM	166	Feeding neonatal calves milk replacers (MR) with different protein, fat, and lactose levels. T. M. Hill*, J. M. Aldrich, A. J. Proeschel, and R. L. Schlotterbeck, Akey.
9:15 AM	167	Effect of sprinkling frequency and airflow on respiration rate, skin temperature and body temperature of heat stressed dairy cattle. M.J. Brouk*, J.F. Smith, and J.P. Harner, III, Kansas State University.

9:30 AM	168	Effect of utilizing evaporative cooling in tie-stall dairy barns equipped with tunnel ventilation on respiration rates and body temperature of lactating dairy cattle. M. J. Brouk*, J. F. Smith, and J. P. Harner, III, Kansas State University.
9:45 AM		Break
10:00 AM	169	Non-dietary sources of variation of milk urea nitrogen (MUN) in Ohio dairy herds. P.J. Rajala-Schultz*[1], [1]The Ohio State University.
10:15 AM	170	The effects of prepartum milking on postpartum reproductive performance in dairy heifers. S. Bowers*[1], S. Gandy[1], K. Graves[1], S. Eicher[2], K. Scott[2], M. Schutz[3], and S. Willard[1], [1]Mississippi State University, Mississippi State, MS, [2]USDA-ARS, West Lafayette, IN, [3]Purdue University, West Lafayette, IN.
10:30 AM	171	Dry matter intake prediction equation for nonlactating Jersey cows in late gestation and breed dry matter intake differences in late gestation. P. D. French*[1], H. H. Meyer[1], R. E. James[2], and J. K. Drackley[3], [1]Oregon State University, [2]Virginia Tech, [3]University of Illinois.
10:45 AM	172	The effects of prepartum milking on postpartum production performance in dairy heifers. S. Bowers*[1], S. Gandy[1], K. Graves[1], S. Eicher[2], K. Scott[2], M. Schutz[3], and S. Willard[1], [1]Mississippi State University, Mississippi State, MS, [2]USDA-ARS, West Lafayette, IN, [3]Purdue University, West Lafayette, IN.
11:00 AM	173	Effects of feeding low phytic acid corn and phytase on phosphorus balance in lactating dairy cows. B.E. Hill*, S.L. Hankins, J.F. Kearney, J.D. Arseneau, D.T. Kelly, S.S. Donkin, B.T. Richert, and A.L. Sutton, Purdue University, W. Lafayette, Indiana.
11:15 AM	174	Effects of voluntary wait and censoring assumptions on life table analysis of reproductive data. DT Galligan[1], JF Ferguson*[1], G Azzaro[2], S Ventura[2], J Brooks[2], and G Licitra[3], [1]University of Pennsylvania, [2]Consorzio Ricerca Filiera Lattiero Casearia, [3]Université di Catania.
11:30 AM	175	Effect of elapsed time between initial thawing of multiple 0.5-mL semen straws and AI on conception rates in dairy cattle. J. C. Dalton*[1], A. Ahmadzadeh[2], B. Shafii[2], W. J. Price[2], and J. M. DeJarnette[3], [1]University of Idaho, Southwest Research and Extension Center, Caldwell, ID, [2]University of Idaho, Moscow, ID, [3]Select Sires, Inc., Plain City, OH.
11:45 AM	176	Factors affecting prepartum dry matter intake of pregnant nonlactating Holstein and Jersey cows in late gestation. P. D. French*, Oregon State University.

Ruminant Nutrition

Feedlot

Chair(s): M. Galyean, Texas Tech University

Room: 2000D

Time	Abstract Number	
8:00 AM	177	Effect of source of energy and rate of gain on performance, carcass characteristics, ruminal fermentation, and glucose and insulin profiles of early-weaned steers. J. P. Schoonmaker*[1], M. J. Cecava[2], D. B. Faulkner[3], F. L. Fluharty[1], H. N. Zerby[1], and S. C. Loerch[1], [1]The Ohio State University, [2]Archer Daniels Midland, [3]University of Illinois.
8:15 AM	178	Beef cattle can successfully be fed 80% potato waste in the finishing diet. J.L. Duynisveld* and E. Charmley, Crops and Livestock Research Center, AAFC, Nappan NS.
8:30 AM	179	Effect of Roundup Ready® Corn (event NK603) on Performance in Beef Feedlot Diets. J. J. Simon[1], K. J. Vander Pol*[1], G.E. Erickson[1], T. J. Klopfenstein[1], C. N. Macken[1], E. P. Stanisiewski[2], and G. F. Hartnell[2], [1]University of Nebraska-Lincoln, Lincoln, NE, [2]Monsanto Company, St. Louis, MO.
8:45 AM	180	Effect of Corn Root Worm Protected Corn (event MON863) on performance in beef feedlot diets. K. J. Vander Pol*[1], G. E. Erickson[1], C. N. Macken[1], M. P. Blackford[1], T. J. Klopfenstein[1], E. P. Stanisiewski[2], and G. F. Hartnell[2], [1]University of Nebraska-Lincoln, Lincoln, NE, [2]Monsanto Company, St. Louis, MO.

9:00 AM	181	Impact of grain processing and forage on microbial protein synthesis in beef cattle fed barley-based diets. K. M. Koenig*[1], K. A. Beauchemin[1], and L. M. Rode[2], [1]Agriculture and Agri-Food Canada, Research Centre, Lethbridge, AB, Canada, [2]Rosebud Technology, Ltd., Lethbridge, AB, Canada.
9:15 AM	182	Effect of growth promotants on physiological characteristics of feedlot cattle exposed to hot and cold conditions. W.M. Kreikemeier*[1], T.L. Mader[1], and J.B. Gaughan[2], [1]Univesity of Nebraska-Lincoln, Northest Research and Extension Center, [1]University of Nebraska-Lincoln, Northest Research and Extension Center, [2]The University of Queensland-Gatton Campus.
9:30 AM	183	Effects of dietary cobalt source and concentration on performance, vitamin B_{12} status, and ruminal and plasma metabolites in growing and finishing steers. M.E Tiffany*[1], J.W. Spears[1], and F.R. Valdez[2], [1]North Carolina State University, [2]Kemin Industries, Des Moines,IA.
9:45 AM	184	Corn-based diets for cattle: effects of dry- vs steam-rolling, and two combinations of antibiotics. D.J. Gibb*[1], T.A. McAllister[1], and M.N. Streeter[2], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]Alpharma Inc., Fort Lee, NJ.
10:00 AM		Break
10:15 AM	185	The Effects of Supplementing Fish Oil into the Drinking Water of Dairy Cows on Lactation Performance and Milk Fatty Acids. V. R. Osborne*[1], B. W. McBride[1], R. R. Hacker[1], S. Radhakrishnan[1], A. R. Hill[1], and J. K. Kramer[2], [1]University of Guelph, Ontario, Canada, [2]Agriculture and Agri-food Canada, Guelph, Ontario, Canada.
10:30 AM	186	A longitudinal study to describe the presence of *Escherichia coli* O157:H7 and *Salmonella* spp. in feedlot cattle pens. D. R. Smith*[1], R. A. Moxley[1], S. Hinkley[1], L. L. Hungerford[1], J. D. Folmer[1], G. E. Erickson[1], and T. J. Klopfenstein[1], University of Nebraka, Lincoln, NE.
10:45 AM	187	Effect of implanting during summer grazing and (or) finishing on feedlot performance and carcass characteristics of steers. L.J. McBeth*[1], D.R. Gill[1], and C.R. Krehbiel, [1]Oklahoma State University.
11:00 AM	188	Effects of vitamin E supplementation on feed intake and febrile responses of beef cattle challenged with infectious bovine respiratory virus. J. D. Rivera*[1], G. C. Duff[2], M. L. Galyean[3], L. A. Stalker[1], M. M. Reed[1], and B. R. Mitchell[1], [1]New Mexico State University, Las Cruces, NM, [2]University of Arizona, Tuscon, AZ, [3]Texas Tech University, Lubbock, TX.
11:15 AM	189	Performance and carcass characteristics of steers fed different feeding levels and implant strategies during the growing period. G. Scaglia*[1], L. W. Greene[1], F. T. McCollum III[1], and T. H. Montgomery[2], [1]Texas A&M University Agricultural Research and Extension Center, Amarillo, Texas, [2]West Texas A&M University, Canyon, Texas.
11:30 AM	190	Insulin responsiveness improved as glucogenic potential increased in protein supplements fed to young post-partum range beef cows. R.C. Waterman*[1], J.E. Sawyer[1], F. Valdez[2], J. Horton[2], and M.K. Petersen[1], [1]New Mexico State University, Las Cruces NM USA, [2]Kemin Industries, Inc. Des Moines, IA USA.
11:45 AM	191	Effects of delayed implant protocols on performance, carcass characteristics and meat tenderness in Holstein steers. J.L. Beckett*[1] and J. Algeo[2], [1]Cal Poly State University, [2]Algeo Nutrition Consulting.

CSAS Business Meeting and Luncheon

Chair(s): Tim McAllister, Agriculture and Agri-Food Canada Research Centre

Room: 304AB

11:30 AM – 1:00 PM

SYMPOSIUM

Breeding and Genetics

Applications of Random Regression Models in Animal Breeding

Chair(s): I. Misztal, University of Georgia

Sponsors: ABS Global, AniGenics, Cotswold USA, Monsanto, and Semex Alliance

Room: 205A

Time	Abstract Number	
1:00 PM	192	Random regression models in animal breeding. **L. R. Schaeffer*[1]**, [1]CGIL, Dept. Animal & Poultry Sci, Guelph, Ontario, Canada N1G 2W1.
1:40 PM	193	Implementation issues for Markov Chain Monte Carlo methods in random regression test-day models. **J. Jamrozik***, University of Guelph, Guelph, ON, Canada.
2:20 PM		Break
2:50 PM	194	Accuracy of genetic evaluation of beef cattle for growth fitting a random regression model. **K. Meyer*[1]**, [1]Animal Genetics and Breeding Unit, University of New England.
3:30 PM	195	Differences in genetic parameters for production traits and somatic cell scores estimated using a multiple trait random regression test day model in the Italian Holstein population. A.B. Samore*[1,2], F. Canavesi[1], S. Biffani[1], P. Boettcher[3], and J. Jamrozik[4], [1]ANAFI, Italy, [2]Wageningen University, The Netherlands, [3]IDGVA-CNR, Italy, [4]CGIL, University of Guelph, Canada.
3:45 PM	196	Nonparametric Bayesian Analysis Of Test Day Milk Yield Data. R. Rekaya*[1], [1]Dept. of Animal and Dairy Science, University of Georgia.
4:00 PM	197	Changes of genetic correlation between milk production and body size over time in Holsteins using random regression models. S. Tsuruta*[1], I. Misztal[1], T. J. Lawlor[2], and L. Klei[2], [1]University of Georgia, Athens, GA, [2]Holstein Association USA Inc., Brattleboro, VT.

Congressional Insights

Facilitator: E. Bergfeld, ASAS

Sponsor: ASAS Board of Directors

Room: 303B

Time: 2:00 PM – 5:00 PM

Description:

The Congressional Insights program is a novel, state-of-the-art, interactive computer model designed to simulate a two-year term of office in Congress. This computer simulation and educational tool introduces participants to the legislative and political process on Capitol Hill. It illustrates why politicians must (or should) make some of the decisions they do.

The program will introduce you to the pressures faced by members of Congress, show you the demands placed on their time, help you to understand that legislators are public officials whose actions are open to public scrutiny, and provide you with a better understanding of the role of elected officials and their staffs.

Participants are actively involved in this program. It focuses on policy and political issues and effectively demonstrates some of the tough decisions faced by elected officials.

SYMPOSIUM

Dairy Foods

Whey Proteins: Structure, Production, Function, and Future

Chair(s): Y. Pouliot, Universite Laval

Sponsors: CDRF, DMI, Land O'Lakes, Ministère de la Recherche, de la Science et de la Technologie du Québec, and Nutraceuticals and Functional Foods Institute – INAF (Université Laval)

Room: 301A

Time	Abstract Number	
1:00 PM	198	b-Lactoglobulin: Properties, Structure and Function. **L. Sawyer***, The University of Edinburgh.
1:45 PM	199	Heat-induced reactions involving b-lactoglobulin and other milk proteins in milk, whey, and model systems. **L. K. Creamer*[1]**, G. A. Manderson[1], Y-H. Hong[2], P. Havea[1], Y-H. Cho[3], H. Singh[4], A. Bienvenue[5], and R. Jimenez-Flores[5], [1]NZDRI, Palmerston North, New Zealand, [2]Chonnam University, Kwanju, Korea, [3]Mass. General Hospital, Boston, MA, USA, [4]IFNHH, Massey University, Palmerston North, NZ, [5]DPDC, Calpoly, San Luis Obispo, CA, USA.
2:30 PM	200	Functional properties of whey proteins. **M. Britten***, FRDC, Agriculture and Agri-Food Canada, St-Hyacinthe, Qc., Canada.
3:15 PM		Break
3:30 PM	201	Technological, functional and biological properties of peptides obtained by enzymatic hydrolysis of whey proteins. **S.F. Gauthier*** and Y. Pouliot, Centre de recherche STELA, Universite Laval, Quebec, Canada.
4:15 PM	202	The quantitative analysis of whey proteins - where we are and where we are going. **D.E. Otter*** and E.A. Foegeding, North Carolina State University, Raleigh, NC.

SYMPOSIUM

Extension Education and International Animal Agriculture

The Impact of Governmental Policies on North American Animal Agriculture

Chair(s): M. Schutz, Purdue University

Sponsors: Elanco Animal Health and Monsanto

Room: 205C

Time	Abstract Number	
1:00 PM	203	Mexico: Agricultural Policies, Trade Agreements and Challenges for the Animal Scientist. **M Garcìa-Winder*[1]**, [1]T.C. Jacoby & Co.
1:40 PM		Impact of U. S. policy on animal agriculture. **R. Young**, University of Missouri
2:20 PM		Impact of Canadian policy on animal agriculture. To Be Announced.

SYMPOSIUM

Milk Synthesis

Regulation of Mammary Gland Function by Growth Factors and Downstream Signaling Cascades

Chair(s): W. Cohick, Rutgers University

Sponsors: Land O'Lakes and Monsanto

Room: 200B

Time	Abstract Number	
1:00 PM	204	Effect of transforming growth factor-beta-1 on mammary development. **K. Plaut***, A. Dean, and T. Patnode, University of Vermont, Burlington, VT/USA.
1:45 PM	205	Mammary development, growth and plasma levels of IGF-I and IGF-binding proteins in gilts provided different energy levels from weaning to puberty. MT Sorensen*, M Vestergaard, S Purup, and K Sejrsen, Danish Institute of Agricultural Sciences, Foulum, Denmark.
2:00 PM	206	Both phosphatidylinositol 3-kinase (PI3K) and mitogen activated protein kinase (MAPK) pathways are required for IGF-I regulation of IGF binding protein-5 synthesis in bovine mammary cells. J. Fleming* and W. Cohick, Rutgers University.
2:15 PM		Analysis of Akt function in transgenic mice suggests multiple roles in lactation and involution. M. Richert, University of Colorado.
3:00 PM		Break
3:15 PM	207	Polycation-mediated transfection of the porcine mammary gland. M. Amstutz*[1], S. Reuss[1], R. Neiswander[2], T. Meek[1], S. Courtney[1], and F. Schanbacher[2], [1]The Ohio State University Agricultural Technical Institute, [2]Ohio Agricultural Research and Development Center, Wooster USA.
3:30 PM	208	Frequent milking in early lactation that increases milk yield also increases prolactin receptor mRNA expression. Geoffrey Dahl*, Tera Auchtung, John Underwood, and James Drackley, University of Illinois.
3:45 PM	209	Effect of growth factors and hormones on mammogenesis and lactogenesis in cattle. **Robert Collier***[1], J.C. Byatt[2], M.F. McGrath[2], P.J. Eppard[2], J.L. Vicini[2], and C. Stiening[1], [1]University of Arizona, Department of Animal Sciences, [2]Monsanto Company.
4:30 PM	210	Parathyroid Hormone-related Peptide (PTHrP) enhances Mammary Tight Junction (TJ) Formation under low-calcium (Ca) Conditions through maintaining intracellular Ca Stores. K. Stelwagen* and M. R. Callaghan, AgResearch Ltd., Hamilton, New Zealand.
4:45 PM	79	Expression of fibronectin, laminin and type IV collagen in mammary tissue from ovariectomized and intact prepubertal heifers. S. D. Berry*[1], R. D. Howard[2], and R. M. Akers[1], [1]Virginia Tech, [2]Virginia Maryland Regional College of Veterinary Medicine, Blacksburg, VA 24061.

SYMPOSIUM

Nonruminant Nutrition

Phytase, What is New and What Needs to be Done?

Chair(s): X. Lei, Cornell University, and J. Pettigrew, University of Illinois

Sponsors: BASF, Danbred, Monsanto, PIC, and Roche Vitamins Inc.

Room: 2000B

Time	Abstract Number	
1:00 PM		Introduction. X. Lei, Cornell University.
1:05 PM	211	Overview of nutritional and environmental benefits of phytases. **Gary L. Cromwell***, University of Kentucky, Lexington.
1:25 PM	212	Comparative properties of various phytase genes and proteins. **E. Mullaney***, SRRC-ARS-USDA.

1:55 PM	213	Expression, engineering, and testing of phytases. **X. G. Lei***, Cornell University.
2:25 PM	214	The Enviropig™ physiology, performance and potential contribution to nutrient management. **C.W. Forsberg*[1]**, J.P. Phillips[1], S.P. Golovan[1], R.G. Meidinger[1], M. Cottrill[1], A. Ajakaiye[1], M.Z. Fan[1], D. Hilborn[2], and R.R. Hacker[1], [1]University of Guelph, Guelph, ON, [2]Ontario Ministry of Agriculture, Food and Rural Affairs, Woodstock, ON.
2:55 PM		Break
3:10 PM	215	Considerations on the field application of phytase. **D. R. Cook***, Akey, Lewisburg, OH.
3:30 PM	216	Phytase does improve energy, protein, and amino acid utilization. **Z. Mroz***, Institute for Animal Science and Health, IDTNO Animal Nutrition, Lelystad, The Netherlands.
3:50 PM	217	Does supplemental dietary microbial phytase improve amino acid utilization?. **O. Adeola***, Department of Animal Sciences, Purdue University.
4:10 PM		Open discussion.

SYMPOSIUM

Production, Management, and the Environment

Environmental Stress on Livestock and Economic Implications

Chair(s): B. Perkins, Monsanto Dairy Business

Sponsors: Elanco and Land O'Lakes

Room: 200A

Time	Abstract Number	
1:00 PM	218	The physiological response to stress. **Robert Collier*[1]**, Wolfgram Alison[1], and Coppola Crista[2], [1]University of Arizona, Department of Animal Sciences, [2]Colorado State University.
1:30 PM	219	Environmental stress in beef cattle. **T Mader*[1]**, [1]University of Nebraska.
2:00 PM	220	The effects of environmental stress on the performance of dairy cattle. **J.N. Spain***, M. Lucy, and D. Spiers, Brody Environmental Center, University of Missouri - Columbia.
2:30 PM		Break
2:45 PM	221	Survival, performance, and productivity in swine as influenced by adverse environmental temperatures. **J.A. Carroll***, Animal Physiology Research Unit, Agricultural Research Service-USDA, Columbia, Missouri.
3:15 PM	222	Economic losses from thermal stress by U.S. livestock industries. **N. R. St-Pierre*[1]** and G. Schnitkey[2], [1]The Ohio State University, Columbus, [2]University of Illinois, Urbana.
3:45 PM		Panel discusson.

Graduate Paper Competition

ADSA Production Division, ADSA Southern Branch, and Northeast ASAS/ADSA Section

Chair(s): D. Johnson, Burkmann Mills, and A. Shepard, Purina Mills

Room: 203

Time	Abstract Number	
1:00 PM	223	Beta-Lactoglobulin as a facilitator of transcellular transport of IgG in Caco-2 cells. L.F. Sutton*[1], M. Worku[2], and B. Alston-Mills[1], [1]North Carolina State University, [2]North Carolina A&T Universtiy.
1:15 PM	224	The effect of *Kluyveromyces marxianus* and *Saccharomyces cerevisiae* on fatty acid composition of equine milk. P. M. Yocum*, V. Fellner, and B. Alston-Mills, North Carolina State University.
1:30 PM	225	Rapid Detection of Sub-Clinical Mastitis in Dairy Goats. Carol Gill*, Scott Horner, Velva Mc Whinney, and Dalton Mc Whinney, Prairie View A&M University.

1:45 PM	226	Supplemental lactoferrin improves performance of dairy calves during the preweaning phase. E. D. Robblee*[1], P. S. Erickson[1], N. L. Whitehouse[1], A. M. McLaughlin[1], C. G. Schwab[1], J. J. Rejman[2], and R. E. Rompala[3], [1]University of New Hampshire, Durham, NH, [2]ImmuCell Corporation, Portland, ME, [3]Blue Seal Feeds, Inc., Londonderry, NH.
2:00 PM	227	Lactating dairy cows endogenously synthesize *trans*-7, *cis*-9 CLA. B.A. Corl*[1], L.H. Baumgard[1], J.M. Griinari[2], P. Delmonte[3], K.M. Morehouse[3], M.P. Yurawecz[3], and D.E. Bauman[1], [1]Cornell Univ., USA, [2]Univ. of Helsinki, Finland, [3]Food and Drug Admin., USA.
2:15 PM		Break
2:45 PM	228	Observational study assessing the significance of nutritional and management factors associated with milk urea nitrogen levels during the non grazing season. E Leger*, I Dohoo, G Keefe, J Wichtel, P Arunvipas, and J VanLeeuwen, Atlantic Veterinary College.
3:00 PM	229	Experimental analysis of activity in healthy dairy cows. J.L. Edwards* and P.R. Tozer, Pennsylvania State University, University Park, PA.
3:15 PM	230	Effect of various zeolites on nutrient utilization by ruminal microorganisms during continuous culture fermentation. M. Pickett*[1], T. W. Cassidy[1], and G. A. Varga[1], The Pennsylvania State University, PA.
3:30 PM	231	Inflluence of nutrition management on rumen fermentation, blood metabolites, type and growth of holstein neonatal calves. Behnam Saremi* and Abbasali Naserian, Ferdowsi University Of Mashhad, Mashhad, Khorasan, Iran.
3:45 PM	232	Alcohol stability of milk and its relation to milk and blood composition in Holstein dairy cows. Sasan Sobhani*, Reza Valizadeh, and Abbasali Naserian, Ferdowsi University, Agriculture college, Animal Sci. Dep.,Mashhad, Khorasan, Iran.

ADSA Foundation Scholar Award Lecture—Dairy Production Division

Chair(s): Deanne M. Meyer, University of California

Room: 203

Time		
4:00 PM		ADSA Foundation Scholar Award Lecture—Production. Keeping science in enviromental regulations: The role of the animal scientist. **W. Powers**, Iowa State University.

Dairy Foods

Processing

Chair(s): S. Rizvi, Cornell University, and D. Barbano, Cornell University

Room: 301B

Time	Abstract Number	
1:00 PM	233	Impact of a novel fat removal process on the fat removed from aged full-fat Cheddar cheese and the fat portion of reduced-fat Cheddar cheese. B. K. Nelson* and D. M. Barbano, Northeast Dairy Foods Research Center, Cornell University, Ithaca, NY.
1:15 PM	234	Milk pH as a Function of Carbon Dioxide Concentration, Temperature, and Backpressure in a Heat Exchanger. Y Ma* and D Barbano, Cornell University, Ithaca, NY.
1:30 PM	235	Determination of Optimum Sampling Protocol before milk pick up from Ontario farms. V Servello, I McMillan, R Lencki, and A Hill*, University of Guelph.
1:45 PM	236	Buttermilk fractionation by microfiltration. Harit K. Vyas*, Johanna C. Astaire, and Rafael Jimenez-Flores, Dairy Products Technology Center, California Polytechnic State University, San Luis Obispo, CA.
2:00 PM	237	Skim milk fractionation by constant flux microfiltration. Harit K. Vyas* and Phillip S. Tong, Dairy Products Technology Center, California Polytechnic State University, San Luis Obispo, CA.

2:15 PM	238	Effect of trans membrane pressure, cross flow velocity and pH on the permeate flux during selective concentration of skim milk components. M. Singh* and S.S.H. Rizvi, Institute of Food Science, Cornell University, Ithaca NY 14853.
2:30 PM	239	Effects of Dairy Process on Insulin-Like Growth Factor-1 (IGF-1) Content and Its Concentration in Several Commercial Dairy Products. S. H. Kang*[1], J. W. Kim[2], J. Y. Imm[3], S. J. Oh[4], and S. H. Kim[2], [1]Seoul Dairy Cooperatives, [2]Korea University, Division of Food Science, [3]Kookmin University, Dept. of Food & Nutrition, [4]Korea Yakult Co. Ltd.
2:45 PM	240	Effect of meat process conditions on mechanical properties of heat cured whey protein-based edible films: a comparison to commercial collagen films. S.N. Simelane*, A.M. Booren, and Z. Ustunol, Michigan State University.
3:00 PM	241	Utilization of a milk fat globule membrane fraction in the manufacture of low-fat yogurt. Rodrigo Roesch*[1], Douglas Dalgleish[2], and Milena Corredig[1], [1]The University of Georgia, Athens, GA, USA, [2]University of Guelph, Ontario, Canada.
3:15 PM		Break

ADSA Foundation Scholar Award Lecture—Dairy Foods

Chair(s): Deanne M. Meyer, University of California

Room: 301B

Time		
4:00 PM		ADSA Foundation Scholar Award Lecture—Dairy Foods. An integrated science-based approach to dairy food safety: *Listeria monocytogenes* as a model. **M. Wiedmann**, Cornell University.

Forages and Pastures

Grazing Systems and Fiber

Chair(s): P. Hoffman, University of Wisconsin

Room: 206A

Time	Abstract Number	
1:00 PM	242	Soybean hulls as a supplement for stocker steers grazing annual ryegrass. J. A. Rush and S. P. Schmidt*, Auburn University.
1:15 PM	243	The effect of an extruded-expeller soybean meal on milk production in grazing dairy cows. J.M. Hernandez Vieyra*, [1]SOYTECH SA, Buenos Aires, Argentina.
1:30 PM	244	Performance of lactating dairy cows fed hyper-nitrogenous red clover based diets supplemented with dextrose. L. M. Bauman[1] and P. C. Hoffman*[1], [1]University of Wisconsin, Madison.
1:45 PM	245	Stock-piled Forage or Limit-fed Corn as an alternative to Hay for Gestating and Lactating Beef Cows. J. P. Schoonmaker*, S. C. Loerch, J. E. Rossi, and M. L. Borger, The Ohio State University.
2:00 PM	246	Digestion of pasture only and pasture plus concentrate diets during continuous culture fermentation. F. Bargo*[1], G. A. Varga[1], L. D. Muller[1], and E. S. Kolver[2], [1]The Pennsylvania State University, University Park, PA., [2]Dexcel Ltd., Hamilton, New Zealand.
2:15 PM	247	Effect of water addition on selective consumption (sorting) of dry diets by dairy cattle. C. Leonardi*[1], F. Giannico[2], and L.E. Armentano[1], [1]University of Wisconsin-Madison, USA, [2]University of Bari, Italy.
2:30 PM	248	Supplementation of modified yeast cell wall preparations to reduce the effects of toxins in steers fed endophyte-infected fescue. V. Akay*[1], J. A. Jackson[1], and K. A. Dawson[2], [1]University of Kentucky, Lexington, KY, [2]Alltech Biotechnology Inc., Nicholasville, KY.
2:45 PM		Break
3:15 PM	249	Reproductive responses to endophyte-infected tall fescue in the ewe. J. M. Burke*[1], [1]Dale Bumpers Small Farms Research Center, USDA, ARS.
3:30 PM	250	Transport of Tall Fescue Alkaloids Across Gastric Tissues. Andrea Ayers[1], N.S. Hill*[1], G.E. Rottinghaus[2], J.A. Studemann[3], D.L. Dawe[1], and F.N. Thompson[1], [1]University of Georgia Athens, GA, USA, [2]University of Missouri Columbia, MO, USA, [3]USDA-ARS Watkinsville, GA, USA.

3:45 PM	251	The effects of traditional endophyte, endophyte-free, and novel endophyte (MaxQ) Jessup tall fescue hay consumption on digestion and nitrogen retention in steers. A. D. Killebrew*, M. H. Poore, G. B. Huntington, and J. T. Green, North Carolina State University, Raleigh.
4:00 PM	252	An evaluation of three grazing systems for beef cows in the Mid-Atlantic region. J. W. Comerford*, V. H. Baumer, H. W. Harpster, E. H. Cash, R. C. Stout, and R. L. Swope, Penn State University.
4:15 PM	253	Evaluation of Illinois bundleflower as a grazing source for ruminants using dual flow continuous culture fermenters. K.A. Caperoon*, M.D. Stern, C.C. Sheaffer, G.I. Crawford, and R.L.K. Hulbert, University of Minnesota, Saint Paul, MN.
4:30 PM	254	The Effect of Yeast *(Saccharomyces cerevisiae)* Culture Included In a Free-Choice Mineral Mix on Milk Production in Beef Cattle In A Fescue-Based Pasture Grazing System. D.J. Kobs* and S.L. Boyles, The Ohio State University. Columbus, Ohio.
4:45 PM	255	Ruminal undegradable proteins and protein fractions in alfalfa (*Medicago sativa* L.). G. F. Tremblay*, R. Michaud, G. Belanger, and J. Michaud, Agriculture and Agri-Food Canada, Sainte-Foy, QC, Canada.

Physiology

Endocrinology and Metabolism

Chair(s): G. Williams, Texas A&M University, and M. Vestergaard, Danish Institute for Agricultural Sciences

Room: 206B

Time	Abstract Number	
1:00 PM	256	Effect of 14-day Subcutaneous Injections of Several Dosages of Glucagon on Milk Yield and Composition in Lactating Dairy Cows. G. Bobe*[1], B. N. Ametaj[2], D. C. Beitz[1], and J. W. Young[1], [1]Iowa State University, Ames, IA, [2]Purdue University, West Lafayette, IN.
1:15 PM	257	Effect of 14-day Subcutaneous Injections of Several Dosages of Glucagon on Plasma Parameters in Lactating Dairy Cows. G. Bobe*[1], B. N. Ametaj[2], R. Nafikov[1], D. C. Beitz[1], and J. W. Young[1], [1]Iowa State University, Ames, IA, [2]Purdue University, West Lafayette, IN.
1:30 PM	258	Effects of lasalocid on serum concentrations of IGF-I: Correlations among serum concentrations of IGF-I, leptin, and reproductive performance of postpartum Brahman cows. T. A. Strauch*[1], D. A. Neuendorff[1], C. G. Brown[1], M. L. Wade[1], A. W. Lewis[1], D. H. Keisler[2], and R. D. Randel[1], [1]Texas Agricultural Experiment Station, Overton, TX, [2]University of Missouri, Columbia, MO.
1:45 PM	259	Breedtype influences adrenal responsiveness to ACTH in beef steers. R.J. Hollenbeck*[1], T.M. Bryan[1], T.A. Strauch[2], D.A. Neuendorff[2], A.W. Lewis[2], C.G. Brown[2], R.D. Randel[2], and T.H. Welsh, Jr.[1], [1]Texas Agricultural Experiment Station, College Station, [2]Texas Agricultural Experiment Station, Overton.
2:00 PM	260	Estrogen regulation of somatotrophic genes in livers of prepubertal ewes. T.M. Bryan*[1], C.A. Gray[1], S.K. Durham[2], T.E. Spencer[1], and T.H. Welsh, Jr.[1], [1]Texas Agricultural Experiment Station, Texas A&M University, College Station, [2]Diagnostic Systems Lab, Webster, TX.
2:15 PM	261	Metabolic responses to a glucose challenge in heifers with different body condition at calving and postpartum anoestrus interval. L.M. Chagas*[1], F.M. Rhodes[1], M.A. Blackberry[2], P.J.S. Gore[1], and G.A. Verkerk[1], [1]Dexcel limited, Hamilton, New Zealand, [2]The University of Western Australia, Nedlands, Australia.
2:30 PM		Break
3:00 PM	262	Characterization of reations to intravenous immunoglobulin in neonatal calves. C. J. Hammer*[1], J. D. Quigley[2], J. A. Roth[1], and H. D. Tyler[1], [1]Iowa State University, [2]APC Company, Inc.
3:15 PM	263	The somatotrophic axis and lipid metabolism in transition dairy cows in relation to timing of first postpartum ovulation. A.L. Marr*[1], M.S. Piepenbrink[1], T.R. Overton[1], M.C. Lucy[2], and W.R. Butler[1], [1]Cornell University, Ithaca,NY, [2]University of Missouri - Columbia.
3:30 PM	264	Alterations of blood serum leptin concentrations in dairy cows treated with bovine somatotropin (bST). U. Heintges and H. Sauerwein*, Bonn University, Germany.

3:45 PM	265	Plasma leptin concentrations during early pregnancy in the dairy cow. GE Mann*[1], MD Fray[2], and D Blache[3], [1]University of Nottingham, School of Biosciences, Sutton Bonington, Loughborough, LE12 5RD, UK, [2]Institute for Animal Health, Compton, Newbury, RG20 7NN, UK, [3]Animal Science, Faculty of Agriculture, University of Western Australia, Nedlands 6907, Australia.
4:00 PM	266	STUDY OF HISTOLOGY AND HISTOCHEMISTRY OF SECRETORY STRUCTURES OF DISTAL PARTS OF DIGESTIVE TRACT OF PERSIAN STURGEON Acipenser persicus. T. Sheibani*, Dept. of Basic Sciences, Faculty of Vet. Med. University of Tehran.

Ruminant Nutrition

Growing Cattle and Byproducts

Chair(s): S. Laudert, Elanco Animal Health

Room: 2000D

Time	Abstract Number	
1:00 PM	267	The effect of feeding three milk replacer regimens on calf intake, body weight gain, and animal performance. C. S. Ballard*[1], H. M. Wolford[1], C. J. Sniffen[1], M. P. Carter[1], P. Mandebvu[1], T. Sato[1,2], Y. Yabuuchi[2], and M. Van Amburgh[3], [1]W. H. Miner Agricultural Research Institute, Chazy, NY, [2]Zen-Noh National Federation of Agricultural Co-operative Associations, Tokyo, Japan, [3]Cornell University, Ithaca, NY.
1:15 PM	268	Plasma glucagon, IGF-1 and metabolite concentrations in Hereford and Senepol steers on orchardgrass or endophyte-infected tall fescue. R. Browning, Jr., Y. G. Myles, and T. L. Payton, Tennessee State University, Nashville, TN, USA.
1:30 PM	269	Pearl millet grain supplements for growing beef cattle. G. M. Hill*[1], W. W. Hanna[2], A. C. Coy[1], B. C. Hand[1], W. B. Forlow[1], and B. G. Mullinix[1], [1]University of Georgia, Tifton, GA/USA, [2]USDA-ARS, Tifton, GA/USA.
1:45 PM	270	Using allantoin in spot urine samples to predict bacterial protein production in finishing heifers. R.A. McDonald*, T.J. Klopfenstein, G.E. Erickson, C.N. Macken, and K.M. Whittet, University of Nebraska-Lincoln, Lincoln, NE.
2:00 PM	271	Effect of previous liveweight gain on acid/base balance, blood flow, and oxygen consumption by splanchnic tissues during adaptation to a high-grain diet in steers. M. J. Hersom*, C. R. Krehbiel, G. W. Horn, and J. G. Kirkpatrick, Oklahoma State University, Stillwater, OK.
2:15 PM	272	Increasing intake of milk replacer by preruminant Holstein calves increases body tissue gain without affecting composition of gain. K. S. Bartlett*, F. K. McKeith, and J. K. Drackley, University of Illinois, Urbana, IL.
2:30 PM	273	Soybean hulls for replacing corn silage in total mixed rations of lactating cows. J. Miron*, E. Yosef, E. Maltz, and D. Ben-Ghedalia, ARO, Bet Dagan, Israel.
2:45 PM		Break
3:00 PM	274	Feeding high free fatty acids cottonseed to lactating dairy cows. H. M. Sullivan*[1], J. K. Bernard[2], H. E. Amos[1], and T. C. Jenkins[3], [1]University of Georgia, Athens, GA/USA, [2]University of Georgia, Tifton, GA/USA, [3]Clemson University, Clemson, SC/USA.
3:15 PM	275	Effect of feeding wet corn gluten feed and a raw soybean hull-corn steep liquor pellet on the performance of lactating dairy cows. E.E. Ferdinand*, J.E. Shirley, E.C. Titgemeyer, J.M. DeFrain, and A.F. Park, Kansas State University, Manhattan, KS.
3:30 PM	276	Effects of dietary sunflower seeds (SS) and protein on digesta physico-chemical parameters in small intestine and on plasma cholecystokinin (CCK) in lambs. P.S. Mir*, M. Ivan, G.J. Mears, C.M. Ross, and Z Mir, [1]Agriculture and Agri-Food Canda, Lethbridge, AB.
3:45 PM	277	The effect of feeding wet corn gluten feed and a raw soybean hull-corn steep liquor pellet on digestibility and rumen parameters. E.E. Ferdinand*, J.E. Shirley, E.C. Titgemeyer, J.M. DeFrain, and A.F. Park, Kansas State University.
4:00 PM	278	Effects of level of substitution of pelleted beet pulp for high-moisture corn on production and digestion in lactating dairy cows. J. A. Voelker* and M. S. Allen, Michigan State University.

4:15 PM	279	Effects of increasing level of dietary soybean hulls on ruminal characteristics and serum urea nitrogen of Boer-cross goats. J. A. Moore, A. T. Maye, M. H. Poore*, and J-M Luginbuhl, North Carolina State University, Raleigh.
4:30 PM	280	Effects of feeding raw and roasted sunflower seed on rumen fermentation and total tract nutrient utilization by lactating dairy cows. P. Sarrazin*[1], A. F. Mustafa[1], P. Y. Chouinard[2], and V. Raghavan[1], [1]McGill University, Ste-Anne-De-Bellevue, QC, Canada, [2]Universite Laval, Pavillon Paul-Comtois, QC, Canada.
4:45 PM	281	Effects of feeding glyphosate-tolerant canola meal on lamb growth, meat quality and apparent feed digestibility. K. Stanford*[1], T.A. McAllister[2], J. Aalhus[3], M. Dugan[3], and R. Sharma[2], [1]Alberta Agriculture, Food and Rural Development, Lethbridge, AB, [2]Agriculture and Agri-Food Canada, Lethbridge, AB, [3]Agriculture and Agri-Food Canada, Lacombe, AB.

Ruminant Nutrition

Protein

Chair(s): S. Woodford and J. Sommerfeldt, Nutrition Professionals, Inc.

Room: 2000B

Time	Abstract Number	
1:00 PM	282	Quantifying the metabolisable methionine contribution of a liquid or powder presentation of 2-hydroxy-4 (methyl thio) butanoic acid isopropyl ester (HMBi). J.C. Robert, T. d'Alfonso, G. Etave, E. Depres, and B. Bouza, Aventis Animal Nutrition, Antony, France.
1:15 PM	283	Effects of metabolizable undegradable protein and methionine and lysine on production parameters and nitrogen efficiency of Holstein cows in early and mid-lactation. Sarah Ivan* and Normand St-Pierre, The Ohio State University, Columbus, OH.
1:30 PM	284	Lactational responses of early lactation cows to two crude protein levels in corn silage and alfalfa silage based diets. K.L. Karg* and M.A. Wattiaux, University of Wisconsin-Madison.
1:45 PM	285	Urea-nitrogen recycling and nitrogen balance in lambs fed a high-concentrate diet and infused with differing proportions of casein in the rumen and abomasum. K. C. Swanson*, H. C. Freetly, and C. L. Ferrell, USDA, ARS, U.S. Meat Animal Research Center.
2:00 PM	286	Use of 2-hydroxy-4-[methylthio]-butanoic acid (HMB) by lactating dairy cows. H. Lapierre*[1], J.J. Dibner[2], M. Vazquez-Anon[2], D. Parker[2], P. Dubreuil[3], M. Babkine[3], G. Zuur[4], and G.E. Lobley[5], [1]Dairy and Swine R&D Centre, Lennoxville, QC, Canada, [2]Novus International Inc, St Louis, MO, USA, [3]Coll. Vet. Med., U. Montreal, St-Hyacinthe, QC, Canada, [4]Biomathematics and Statistics Scotland, Aberdeen, UK, [5]Rowett Research Institute, Aberdeen, UK.
2:15 PM	287	Effect of a jugular infusion of essential amino acids on splanchnic metabolsim in dairy cows fed a protein deficient diet. R. Berthiaume*[1], M.C. Thivierge[2], G.E. Lobley[3], P. Dubreuil[4], M. Babkine[4], and H. Lapierre[1], [1]Dairy and Swine R&D Centre, Lennoxville Quebec, Canada, [2]Université Laval, Quebec, Canada, [3]Rowett Research Institute, Aberdeen, UK, [4]Coll. Vet. Med., U. Montreal, St-Hyacinthe Quebec, Canada.
2:30 PM	288	Minimum dietary protein required for lactating dairy cows fed different amounts of alfalfa and corn silage.. E. B. Groff* and Z. Wu, Pennsylvania State University, University Park, PA.
2:45 PM		Break
3:15 PM	289	Amino acid profiles of tropical forages and of their residues after incubation in the rumen, phosphate-borate buffer and intestinal digestion. L. F. Miranda*[1], N. M. Rodriguez[1], R. D. Sainz[2], E. S. Pereira[3], C. M. Veloso[4], and M. M. Gontijo Neto[5], [1]Universidade Federal de Minas Gerais, Brazil, [2]University of California, Davis, USA, [3]Universidade Estadual Oeste Paraná, Brazil, [4]Universidade Itapetinga, Brazil, [5]EMBRAPA Gado de Corte, Brazil.
3:30 PM	290	Effects of a slow-release urea product on nitrogen metabolism in lactating Holstein dairy cattle. E. Galo*[1], S.M. Emanuele[2], C.J. Sniffen[3], J.H. White[1], and J.R. Knapp[1], [1]U. of Vermont, [2]Land O' Lakes, Inc., [3]W.H. Miner Institute.

3:45 PM	291	Effects of protein supplementation during lactation on milk yield of primiparous Holstein cows. L. A. Torbert*[1], J. G. Linn[1], M. L. Raeth-Knight[1], and K. S. Davis[2], [1]University of Minnesota, St. Paul, MN, [2]Chippewa Valley Ethanol Company, Benson, MN.
4:00 PM	292	Effects of replacing soybean meal with secondary protein nutrients in silage-based diets for growing beef steers. S.R. Freeman*[1], M.H. Poore[1], G.B. Huntington[1], and T.F. Middleton[2], [1]North Carolina State University, Raleigh, NC, [2]AgPro Visions, LLC, Kenansville, NC.
4:15 PM	293	Comparative evaluation of the protein values of soybean and rapeseed meals by *in vivo*, *in situ*, and laboratory methods. K.-H. Suedekum*[1], D. Nibbe[1], P. Lebzien[2], H. Steingass[3], and H. Spiekers[4], [1]University of Kiel, Germany, [2]Federal Agric. Res. Center, Braunschweig, Germany, [3]Hohenheim University, Stuttgart, Germany, [4]Chamber of Agric. for Rhineland, Bonn, Germany.
4:30 PM	294	Estimating the protein value of protected protein feeds by *in situ* and laboratory methods. K.-H. Suedekum*, University of Kiel, Germany.
4:45 PM	295	Effects of degradable intake protein on plasma hormone and metabolite concentrations in periparturient beef cows fed native prairie hay. W.W. Dvorak*, M.L. Bauer, G.P. Lardy, and J.S. Caton, North Dakota State University, Fargo.

Sheep Species

Chair(s): M. Brown, Grazinglands Research Laboratory

Room: 205B

Time	Abstract Number	
1:00 PM	296	Pregnancy rates in sheep after traversing the cervix with a new transcervical artificial insemination instrument. M. C. Wulster-Radcliffe[1] and G. S. Lewis*[2], [1]Fort Dodge Animal Health, [2]USDA, ARS, U.S. Sheep Experiment Station.
1:15 PM	297	Reproductive performance of anestrous ewes treated with used-CIDR devices and estrogen. M Knights*, Q S Baptiste, and P E Lewis, West Virginia University, Morgantown, West Virginia.
1:30 PM	298	Effect of dosage of Follicle Stimulating Hormone (FSH), vehicle and time of injection on ovulation rate and prolificacy in anestrous ewes. M Knights*, Q S Baptiste, A B Dixon, E K Inskeep, and P E Lewis, West Virginia University, Morgantown, WV.
1:45 PM	299	Libido and biological parameters of mature Awassi, Awassi x Charollais and Awassi x Romanov rams. R. T. Kridli*[1], M. Momani Shaker[2], A. Y. Abdullah[1], and I. Sada[2], [1]Jordan University of Science and Technology, Irbid/Jordan, [2]Czech University of Agriculture, Prague/Czech Republic.
2:00 PM	300	Breeding scheme for "merino branco" sheep ram lambs selection index. José Avó* and José Castro, Universidade de Évora.
2:15 PM		Break
2:45 PM	301	An analysis of lamb price differences for West Virginia producers. D Singh*, M Knights, and D Smith, West Virginia University, Morgantown, WV.
3:00 PM	302	Growth and immune status of orphaned lambs fed milk replacer and supplemented with fish oil or safflower oil. G. S. Lewis*[1] and M. C. Wulster-Radcliffe [2], [1]USDA, ARS, U.S. Sheep Experiment Station, [2]Fort Dodge Animal Health.

3:15 PM	303	Effect of age and some physiological state on seasonal wool growth and fiber diameter of Arabi breed sheep in south west of Iran. Najafgholi Dabiri*, Shahid Chamran University, Ahwaz/Iran.
3:30 PM	304	Growth and carcass characteristics of Awassi, Awassi x Romanov and Awassi x Charollais ram lambs fed different planes of nutrition. A. Y. Abdullah*[1], M. Momani Shaker[2], R. T. Kridli[1], and I. Sada[2], [1]Jordan University of Science and Technology, Irbid/Jordan, [2]Czech University of Agriculture, Prague/Czech Republic.

TUESDAY, JULY 23, 2002[1]

SYMPOSIUM

Contemporary and Emerging Issues

Homeland Security and Animal Agriculture

Chair(s): G. Hartnell, Monsanto Company

Sponsors: Elanco Animal Health and USDA

Room: 200A

Time	Abstract Number	
9:00 AM	305	Current Thought on Bioterrorism: The Threat, Preparedness and Response. **D.R. Franz***, Southern Research Institute.
9:35 AM	306	The Agroterror Threat: An overview of issues and potential impacts.. **Jerry Jaax***, Kansas State University, Manhattan KS.
10:10 AM		Break
10:25 AM	307	Security of the Food Supply. G. Clarke*[1], [1]Agriculture & Agri-Food Canada/Canadian Food Inspection Agency [Presented by **Chris Hansen**, Canadian Food Inspection Agency].
11:00 AM		Homeland security research to protect animal agriculture. **R. Breeze**, ARS, USDA.
11:35 AM		Panel question and answer.

SYMPOSIUM

Dairy Foods

Milk Protein Gelation and Their Mixtures with Polysaccharides

Chair(s): S. Turgeon and M. Subirade, STELA

Sponsors: CDRF, DMI, Land O'Lakes, Ministère de la Recherche, de la Science et de la Technologie du Québec, and Nutraceuticals and Functional Foods Institute – INAF (Université Laval)

Room: 301A

Time	Abstract Number	
8:00 AM	308	Protein-polysaccharide interactions in emulsions and gelled emulsions. **Eric Dickinson***, University of Leeds, Leeds, United Kingdom.

8:45 AM	309	Milk protein-polysaccharide interactions. **Cornelis G De Kruif*[1,2]**, [1]NIZO food research, P.O. Box 20, 6710 BA Ede, The Netherlands, [2]Van't Hoff Laboratory for Physical and Colloid Chemistry, Debye Institute, University of Utrecht.
9:30 AM	310	Gelation of Globular Proteins: Current and Future Perspectives. **A. H. Clark*[1]**, W. S. Gosal[2], and S. B. Ross-Murphy[2], [1]Unilever Research & Development Colworth, Bedford, U.K., [2]King's College, London, U.K.
10:15 AM		Break
10:30 AM	311	Mixed gels from whey proteins and polysaccharides. **Sylvie L. Turgeon***, Maude Girard, Martin Beaulieu, and Nakhle Haddad, Dairy Research Centre, Laval University.
11:15 AM	312	Different molecular ways to form filamentous and random aggregate gels. **Muriel Subirade*[1]**, Gabriel Remondetto[1], and Thierry Lefevre[1], [1]Centre STELA/INAF/Universite Laval.

SYMPOSIUM

Growth and Development and Ruminant Nutrition

Heifer Growth and Mammary Gland Development

Chair(s): G. Dahl, University of Illinois

Sponsors: Elanco Animal Health, Monsanto, Pharmacia, and USDA

Room: 200B

Time	Abstract Number	
8:00 AM	313	Growth and subsequent productivity of dairy replacements. **M. E. Van Amburgh***, Cornell University, Ithaca, NY.
8:30 AM	314	Effect of plasma protein and form of diet in meal fed calves. J.A. Booth*[1], J.D. Quigley[2], and T.M. Wolfe[2], [1]Iowa State University, [2]American Protein Company.
8:45 AM	315	Performance of Jersey bull calves fed whole milk or milk replacers with varying fat/protein ratios. S. S. Bascom*, R. E. James, M. L. McGilliard, and E. P. Hovingh, Virginia Polytechnic Institue and State University.
9:00 AM	316	Contemporary issues in applied dairy replacement heifer research. **P.C. Hoffman*[1]**, [1]University of Wisconsin, Madison.
9:30 AM		Break
9:45 AM	317	Evaluation of the Hipometer® and Heart Girth tape for estimating body weight in Holstein heifers. K.E. Leslie*[1], M. Wallace[1], R.T. Dingwell[1], C. Leslie[1], C.J. McLaren[1], and B. Dow[2], [1]University of Guelph, Department of Population Medicine, [2]University of Guelph, Kemptville College.
10:00 AM	318	Increasing energy and protein intake of Holstein heifer calves increases mammary development. E.G. Brown*, M.J. VandeHaar, K.M. Daniels, J.S. Liesman, L.T. Chapin, and M.S. Weber Nielsen, Michigan State University, East Lansing, Michigan.
10:15 AM	319	Potential role for leptin in mammary development of heifers. **M.J. VandeHaar***, L.F.P. Silva, B.E. Etchebarne, and M.S. Weber Nielsen, Michigan State University, East Lansing, MI.
10:45 AM	320	Mitogenic effects of parenchymal tissue extracts from different regions within the heifer mammary gland. L. E. Davis*, J. L. Liesman, M. J. VandeHaar, and M. S. Weber Nielsen, Michigan State University, East Lansing.

SYMPOSIUM

Nonruminant Nutrition

Are We Ready for Nutritional Genomics?

Chair(s): X. G. Lei, Cornell University, and M. Lindemann, University of Kentucky

Sponsors: Danbred, Monsanto, and United Feeds Inc.

Room: 200C

Time	Abstract Number	
10:00 AM		Introduction. X. G. Lei, Cornell University
10:05 AM		Nutrition in the post-genome-sequencing era. **R. A. Sunde**, University of Missouri.
10:45 AM	321	Microarray and proteomic technology for nutrition research. **K. E. Webb, Jr.***, E. A. Wong, and H. Jiang, Virginia Tech, Blacksburg, VA.
11:25 AM	322	How do these tools help study nutrient function? **X. G. Lei***, Cornell University.

Animal Behavior and Well-Being

Influence of Production Practices on Behavior and Well-Being

Chair(s): D. Lay, Jr., Purdue University

Room: 205C

Time	Abstract Number	
8:00 AM	323	Reaction of Holstein dairy cattle to a looming person as a temperament assessment tool. J. L. Lanier[1] and T. Grandin*[1], [1]Colorado State University.
8:15 AM	324	Orientation of beef cattle grazing foothill winter range in Montana. B. Olson*[1], Montana State University.
8:30 AM	325	Relationships between daily feed intake and feeding behaviours in feedlot steers. J.A. Basarab*[1], E.K. Okine[2], and K.L. Lyle[1], [1]Western Forage Beef Group, Lacombe Research Centre, Lacombe, Alberta, Canada, [2]University of Alberta, Edmonton, Alberta, Canada.
8:45 AM	326	Effect of timing and uniformity of feed delivery on feeding behavior, ruminal pH and growth performance of feedlot cattle. K.S. Schwartzkopf-Genswein*[1], T.A. McAllister[2], D.J. Gibb[2], K.A. Beauchemin[2], and M. Streeter[3], [1]Alberta Agriculture, Food and Rural Development, Lethbridge, AB, [2]Agriculture and Agri-Food Canada, Lethbridge, AB, [3]Alpharma Inc., Fort Lee, NJ.
9:00 AM		Break
9:15 AM	327	The effects of ractopamine on behavior and physiology of finishing pigs. J.N. Marchant-Forde*[2], D.C. Lay Jr.[2], B.T. Richert[1], and E.A. Pajor[1], [1]Dept of Animal Sciences, Purdue University, 1151 Lilly Hall, West Lafayette, IN 47907, [2]USDA-ARS, Livestock Behavior Research Unit, Purdue University, West Lafayette, IN 47907.
9:30 AM	328	Modulation of health and production by oral beta-glucan and ascorbic acid after transport. S. D. Eicher*[1] and T. R. Johnson[2], [1]USDA-ARS, [2]Purdue.
9:45 AM	329	The effect of holding pen time on milk production and blood components in Holstein dairy cows. A. G. Fahey*[1], M. M. Schutz[1], E. A. Pajor[1], S. D. Eicher[2], S. J. Larkin[1], and K. A. Scott[2], [1]Purdue University, West Lafayette, IN, [2]USDA-ARS, West Lafayette, IN.
10:00 AM	330	Weaning age impairs spatial learning in pigs at increased but not basal levels of stress. K Laughlin* and AJ Zanella, Animal Behavior and Welfare Group, Department of Animal Science, Michigan State University.
10:15 AM		Break

10:30 AM	331	Sexual behaviour of male New Zealand White Rabbits in an intensive production unit. V. Fuentes*, C. Villagran, and J. Navarro, [1]Centro Universitario de los Altos Universidad de Guadalajara, México.
10:45 AM	332	Effect of dehydration on some behavioral aspects of camels. H Abdel Rahman*[1], M.A. El Sherif[2], M.A. El Sayed[1], S.S. Omar[1], and N.M. Ibrahim[2], [1]Minufiya University, [2]Desert Research Center.
11:00 AM	333	Sexual performance of Awassi and Awassi x Romanov yearling rams. R. T. Kridli*[1], M. Momani Shaker[2], A. Y. Abdullah[1], and I. Sada[2], [1]Jordan University of Science and Technology, Irbid/Jordan, [2]Czech University of Agriculture, Prague/Czech Republic.

Animal Health

Mastitis and Management

Chair(s): B. Stone, Cornell University

Room: 206A

Time	Abstract Number	
8:00 AM	334	Infrared thermography to evaluate milking induced alterations in teat tissue fluid circulation. C. O. Paulrud*[1], S. Clausen[2], P. E. Andersen[2], M. Bjerring[3], and M.D Rasmussen[3], [1]Danish Dairy Board, [2]Risoe National Laboratory, [3]Danish Institute of Agricultural Sciences.
8:15 AM	335	Bedding amendments for environmental mastitis control in dairy cattle. E. K. Kupprion, J. D. Toth*, Z. Dou, H. W. Aceto, and J. D. Ferguson, University of Pennsylvania, Kennett Square, PA/USA.
8:30 AM	336	Impact of two coliform mastitis vaccination schedules on milk yield, dry matter feed intake and intramammary infections of dairy cattle. C.S. Petersson*[1], K.E. Leslie[1], D.F. Kelton[1], and B.A. Mallard[2], [1]Department of Population Medicine, [2]Department of Pathobiology, University of Guelph, Ontario, Canada.
8:45 AM	337	Multiple boosters of J5 vaccine elicit strong lactational antibody responses in dairy cows. R.A. Darch*[1], L. Nielsen[1], P. Saama[1], R.J. Erskine[2], A.P. Belschner[3], and J.L. Burton[1], [1]Animal Science, Michigan State University, [2]Large Animal Clinical Sciences, Michigan State University, [3]Pharmacia Animal Health.
9:00 AM	338	An evaluation of the ColiMast test for detection of coliform mastitis in dairy cattle. S.K. Gawrylash*[1], K.E. Leslie[1], M. Archambault[2], and A. Bashiri[1], [1]University of Guelph, Department of Population Medicine, [2]University of Guelph, Animal Health Laboratory.
9:15 AM	339	Characteristics of milk samples submitted for culture in Wisconsin from 1994 - 2001. J. A. Makovec* and P. L. Ruegg, University of Wisconsin, Madison.
9:30 AM	340	Evaluation of *Mycoplasma species* shedding patterns in milk of lactating dairy cows with intramammary infections. M. Biddle* and L. Fox, Washington State University, Pullman.
9:45 AM		Break
10:00 AM	341	Impact of intramammary treatment of CMT positive early postpartum dairy cows. J.A. Wallace*[1], K. Stipetic[2], K.E. Leslie[1], R.T. Dingwell[1], Y.H. Schukken[2], and P. Baillargeon[3], [1]University of Guelph, Department of Population Medicine, [2]Cornell University, [3]Clinique de St-Louis/Embryobec.
10:15 AM	342	Reported antimicrobial usage on organic and conventional dairy farms in the Midwest and Northeast. A.M. Geiger*[1], P.L. Ruegg[1], L.D. Warnick[2], J.B. Kaneene[3], S.J. Wells[4], C. Fossler[4], and L. Halbert[3], [1]University of Wisconsin, Madison, WI, [2]Cornell University, Ithaca, NY, [3]Michigan State University, East Lansing, MI, [4]University of Minnesota, St. Paul, MN.
10:30 AM	343	Influence of transportation stress and prophylactic antibiotic on oxidative stress biomarker status and incidence of bovine respiratory disease of feeder steers. N. K. Chirase*[1,3], C. W. Purdy[2], R. W. Loan[3], R. Briggs[2], G. Duff[4], J. Avampato[1], and D. Murray[5], [1]Texas Agricultural Experiment Station, Amarillo and West Texas A&M University, Canyon, [2]USDA/ARS, Bushland, TX and Ames, IA, [3]Texas A&M University, College Station, [4]Arizona State University, Tucson, Arizona, [5]OXIS International, Portland, OR.

10:45 AM	344	Effect of environmental stressors and prophylactic antibiotic on serum antioxidant concentrations and incidence of bovine respiratory disease of feeder steers. N. K. Chirase*[1,3], C. W. Purdy[2], R. W. Loan[3], R. Briggs[4], G. Duff[5], and J. M. Avampato[1], [1]Texas Agricultural Experiment Station, Amarillo and West Texas A&M University, Canyon, [2]USDA/ARS, Bushland, TX, [3]Texas A&M University, College Station, TX, [4]USDA/ARS, Ames, IA, [5]Arizona State University, Tucson, Az.
11:00 AM	345	Development and validation of a pruritic index to assess the impact of chorioptic mange infestation in dairy cows. K. Day*[1], K. Leslie[1], T. Duffield[1], D. Kelton[1], J. Jansen[2], and W. Sears[1], [1]University of Guelph, Guelph, ON, [2]Ontario Ministry of Agriculture, Food, and Rural Affairs, Fergus, ON.
11:15 AM	346	Cow characteristics and management factors on locomotion in Holsteins. T. E. van Dorp*[1], L. R. Schaeffer[1], P. Boettcher[2], D. Kelton[1], and M.M. Shoukri[3], [1]University of Guelph, Guelph, ON, Canada, [2]IDVGA-LITA, Segrate (MI), Italy, [3]University of Western Ontario, ON, Canada.
11:30 AM	347	Effect of environmental stressors and prophylactic antibiotic on performance, fever status and incidence of bovine respiratory disease of feeder steers. N. K. Chirase*[1,3], C. W. Purdy[2], R. W. Loan[3], R. Briggs[4], G. Duff[5], and J. M. Avampato[1], [1]Texas Agricultural Experiment Station, Amarillo and West Texas A&M University, Canyon, [2]USDA/ARS, Bushland, TX, [3]Texas A&M University, College Station, TX, [4]USDA/ARS, Ames, IA, [5]Arizona State University, Tucson, Az.
11:45 AM	348	A Comparison of the Effect of *Neospora caninum* on Milk Production in Two Populations of Ontario Dairy Herds. Jamie Hobson*[1], Todd Duffield[1], Dave Kelton[1], Bev McEwen[2], Sharon Hietala[3], Kerry Lissemore[1], Ken Leslie[1], Gerard Cramer[1], and Andrew Peregrine[1], [1]Ontario Veterinary College, University of Guelph, Guelph, Ontario, Canada, [2]Animal Health Laboratory, University of Guelph, Guelph, Ontario, Canada, [3]California Animal Health and Food Safety Laboratory System, Davis, University of California, U.S.A.

Breeding and Genetics

Factors Affecting Fertility and Longevity

Chair(s): R. Shanks, University of Illinois

Room: 202

Time	Abstract Number	
9:00 AM	349	Assessment of trends in involuntary culling in expanding herds using survival analysis methodology. K. A. Weigel*, R. W. Palmer, and D. Z. Caraviello, University of Wisconsin - Madison.
9:15 AM	350	Analysis of the relationship between linear type traits, inbreeding, and survival in US Jersey cows using a Weibull model. D. Z. Caraviello*, K. A. Weigel, and D. Gianola, University of Wisconsin Madison WI USA.
9:30 AM	351	Correlations among measures of dairy cattle fertility and longevity. P. M. VanRaden*, H. D. Norman, and R. H. Miller, USDA Animal Improvement Programs Lab, Beltsville, MD USA.
9:45 AM	352	Modeling length of productive life in beef cows. N. Vukasinovic*[1], M. Berweger Baschnagel[2], and N. Kuenzi[3], [1]Utah State University, [2]SVAMH, Switzerland, [3]Swiss Federal Institute of Technology.
10:00 AM		Break
10:30 AM	353	Genetic relationships among fertility traits of Holsteins and Jerseys. H. D. Norman*[1], R. H. Miller[1], P. M. VanRaden[1], J. R. Wright[1], and J. S. Clay[2], [1]Animal Improvement Programs Laboratory, Agricultural Research Service, Beltsville, MD, [2]North Carolina State University, Raleigh.
10:45 AM	354	Results of 25 years of selection for functional traits. A. Karlsen*, T. Steine, E. Sehested, M. Svendsen, and I.M.A. Ranberg, GENO Breeding and A.I. Association.
11:00 AM	355	Correlations between Estimated Breeding Values (EBVs) of juvenile growth traits and cows' stayability in an Angus herd. D.P. Rasali*[1], G.H. Crow[1], J.N.B. Shrestha[2], and A. Brule-Babel[3], [1]Dept. of Animal Science, University of Manitoba, Winnipeg, MB R3T 2N2, [2]Agriculture and Agri-Food Canada, Lennoxville, QC J1M 1Z3, [3]Dept. of Plant Science, University of Manitoba, Winnipeg, MB R3T 2N2.
11:15 AM	356	A genetic study of longevity in swine. F. Fortin* and R. I. Cue, Department of Animal Science, McGill University (Macdonald Campus), Montreal, Quebec, Canada.

Dairy Foods

Cheese

Chair(s): P. Kindstet, University of Vermont, and N. Farkye, Cal Poly State University

Room: 301B

Time	Abstract Number	
8:00 AM	357	Comparison of effect of vacuum condensed and ultrafiltered milk on pasteurized Process cheese. M. R. Acharya* and V. V. Mistry, MN-SD Dairy Foods Research Center, South Dakota State University.
8:15 AM	358	Comparison of three methods to quantify water soluble calcium in Mozzarella cheese. 2. Effect of short-term aging. M.A.S. Cortez[1], M.M. Furtado[1], and P.S. Kindstedt*[2], [1]Federal University of Vicosa/ CAPES, MG/Brazil, [2]University of Vermont, Burlington, VT/USA.
8:30 AM	359	Reduction of losses of salt (NaCl) during the manufacture of Cheddar Cheese. S. S. Nair* and V. V. Mistry, MN-SD Dairy Foods Research Center, South Dakota State University.
8:45 AM	360	The role of physicochemical properties in governing cheese texture. J.A. Brown*, E.A. Foegeding, M. Drake, and C. Daubert, [1]North Carolina State University.
9:00 AM	361	Effect of adding yeast extract on proteolysis and flavor development of reduced fat Cheddar cheese. Shakeel Rehman*[1], Nana Farkye[1], Eba Vedamuthu[2], and MaryAnne Drake[3], [1]Dairy Products Technology Center, California Polytechnic State University, San Luis Obispo, CA 93407, [2] 994 NW Hayes, Corvallis, OR, 97330, [3]South East Dairy Research Center, North Carolina State University, Raleigh, NC 27695.
9:15 AM	362	Effect of pH on chemical and functional properties of cheese. A.J. Pastorino[1], C.L. Hansen[1], and D.J. McMahon*[1], [1]Western Dairy Center. Utah State University.
9:30 AM	363	Impact of high solids cheesemilks that are standardized with cold ultrafiltration retentates on the functionality of non-pasta filata mozzarella cheese. S. Govindasamy-Lucey*[1], M. G. Zimbric[1], J. J. Jaeggi[1], M. E. Johnson[1], and J. A. Lucey[2], [1]Center for Dairy Research, University of Wisconsin, Madison, Wisconsin, USA, [2]Department of Food Science, University of Wisconsin, Madison, Wisconsin, USA.
9:45 AM		Break
10:15 AM	364	Does presalting and brine concentration influence salt uptake by Ragusano cheese?. C. Melilli*[1], D. M. Barbano[2], G. Licitra[3], G. Tumino[1], G. Farina[1], and S. Carpino[1], [1]Consorzio Ricerca Filiera Lattiero Casearia, Ragusa, Italy, [2]Northeast Dairy Food Research Center, Cornell University, Ithaca, NY, [3]D.A.C.P.A, Catania University, 95100 Catania, Italy.
10:30 AM	365	Temperature induced moisture migration in reduced fat Cheddar cheese. A.A. Olabi*[1] and D.M. Barbano[1], [1]Cornell University, Northeast Dairy Foods Research Center, Ithaca, NY.
10:45 AM	366	Studies on using milk protein concentrate in pizza cheese manufactured by culture or direct acidification. Shakeel Rehman*[1] and Nana Farkye[1], [1]Dairy Products Technology Center, California Polytechnic State University, San Luis obispo, CA 93407.
11:00 AM	367	Effect of modifying lactose concentration in cheese curd on proteolysis and quality of Cheddar cheese. Shakeel Rehman[1] and Patric Fox[2], [1]Dairy Products Technology Center, Calpoly State University, San Luis Obispo, CA 93407, [2]Department of Food Science, Food Technology and Nutrition, University College, Cork, Ireland.
11:15 AM	368	Regional differences in the chemical and microbial quality of Cheddar cheese manufactured in the United States. N.A. Khilla*[1], T. Considine[1], and N.Y. Farkye[1], [1]Dairy Products Technology Center, California Polytechnic State University, San Luis Obispo,CA.
11:30 AM	369	Determination of organic acids in the water soluble fraction of Cheddar cheese. Therese Considine*[1] and Nana Farkye[1], [1]Dairy Products Technology Center, Calpoly State University, San Luis Obispo, CA 93407.

Forages and Pastures

Silages and Forage Composition

Chair(s): M. Endres, University of Minnesota

Room: 206B

Time	Abstract Number	
8:00 AM	370	Effect of alfalfa hay and silage on the peformance of dairy cows in early lactation. A. A. Naserian*[1], [1]Ferdowsi university of Mashhad.
8:15 AM	371	Edible covering reduces spoilage in bunker silos. L.L. Berger*, N.A. Pyatt, and J.R. Sewell, University of Illinois-Urbana.
8:30 AM	372	Effects of substituting sunflower silage for corn silage in diets for lactating cows. L. A. Leite[1], B. O. Silva[1], R. B. Reis*[1], L. M. Fonseca[1], and D. K. Combs[2], [1]Escola de Veterinária UFMG, Brasil, [2]University of Wisconsin, Madison.
8:45 AM	373	Effect of variety on chemical composition and ruminal nutrient degradability of pea silage. A. F. Mustafa*[1], P. Seguin[1], I. Adeleye[1], and D. Ouellet[2], [1]McGill University, Ste-Anne-De-Bellevue, QC, Canada, [2]Agriculture and Agri-Food Canada, Lennoxville, QC, Canada.
9:00 AM	374	Effect of Corn Silage Maturity and Crop Processing on Performance of Dairy Cows. G. Ferreira*[1], D.R. Mertens[2], P. Berzaghi[2,3], and R.D. Shaver[1], [1]University of Wisconsin, Madison, WI, [2]ARS-US Dairy Forage Research Center, Madison, WI, [3]University of Padova, Italy.
9:15 AM	375	Variability in relationships among forage intake, digestibility, NDF and ADF. S. W. Coleman*[1] and J. E. Moore[2], [1]USDA, ARS Subtropical Agricultural Research Station, Brooksville, FL, [2]University of Florida, Gainesville, FL.
9:30 AM		Break
10:00 AM	376	Divergent phenotypic selection for concentrations and ratios of fiber components in timothy. A. Claessens*[1], D. Mather[2], G. Belanger[1], G. F. Tremblay[1], and R. Michaud[1], [1]Agriculture and Agri-Food Canada, Ste-Foy, QC, Canada, [2]McGill University, Macdonald Campus, Sainte-Anne-de-Bellevue, QC, Canada.
10:15 AM	377	Seasonal fluctuations in kikuyu grass (Pennisetum clandestinum) yield and nutrient composition, and impact on growth rate of nursing calves. J.R. Carpenter*[1], B.W. Mathews[2], R.Y. Niino-DuPonte[1], and M. Kaheki, [1]CTAHR, Univ. of Hawaii at Manoa, [2]CAFNRM, Univ. of Hawaii at Hilo.
10:30 AM	378	Fatty acid and nutrient composition of annual rye and ryegrass forage. S. J. Freeman*, J. A. Bertrand, T. C. Jenkins, and B. W. Pinkerton, Clemson University, Clemson, SC / USA.
10:45 AM	379	How relevant are meals in the short-term regulation of diet choice?. M.P. Yeates*, B.J. Tolkamp, and I. Kyriazakis, Scottish Agricultural College, Edinburgh, UK.
11:00 AM	380	Effect of barley or soybean supplementation on growth, and carcass and meat characteristics of steers finished on pasture. J.L. Duynisveld*[1], E. Charmley[1], P. Mir[2], and Z. Mir[2], [1]AAFC Crops and Livestock Research Centre, Canada, [2]AAFC Lethbridge Research Centre, Canada.
11:15 AM	381	An evaluation of the use of alkanes for estimating intake and digestibility of forages from fecal grab samples. E. Charmley*[1], H.V. Petit[2], D.R. Ouellet[2], D.M. Veira[3], and R. Michaud[4], [1]AAFC, Crops and Livestock Research centre, [2]AAFC, Dairy and Swine Research and Development Centre, [3]AAFC, Kamloops Range Research Unit, [4]AAFC, Soils and Crops Research and Development Centre.

Nonruminant Nutrition

Ractopamine and Somatotropin on Nutrient Metabolism and Pork Quality

Chair(s): T. Stahly, Iowa State University

Room: 2000B

Time	Abstract Number	
10:00 AM	382	Effect of ractopamine on optimum dietary phosphorus regimen for growth in pigs. T.R. Lutz* and T.S. Stahly, Iowa State University, Ames, IA.
10:15 AM	383	Effects of vitamin and mineral concentrations and ractopamine hydrochloride in diets for growing-finishing pigs. C. Starkey*, J. Hancock, D. Kropf, C. Jones, K. Hachmeister, T. Lawrence, D. King, and J. Dunn, Kansas State University, Manhattan.
10:30 AM	384	Effects of vitamin and mineral concentrations and ractopamine hydrochloride on pork quality. C. Starkey*, J. Hancock, D. Kropf, C. Jones, K. Hachmeister, T. Lawrence, D. King, and J. Dunn, Kansas State University, Manhattan.
10:45 AM	385	Effect of space allocation and ractopamine (Paylean®) on barrow growth performance and carcass characteristics. M C Brumm*[1], R C Thaler[2], and P S Miller[1], [1]University of Nebraska, [2]South Dakota State University.
11:00 AM	386	Excessive amino acids limit the response to exogenous porcine Somatotropin (pST). D. Brana-Varela and J. A. Cuaron*, CNI-Fisiologia y Mejoramiento Animal, INIFAP, Mexico.

Physiology

Estrus Synchronization I

Chair(s): R. Nebel, Virginia Polytechnic Institute & State University, and P. Fricke, University of Wisconsin

Room: 2000A

Time	Abstract Number	
8:00 AM	387	Paired use of milk progesterone testing and a PreSynch OvSynch timed insemination protocol in lactating dairy cows. J.D. Ferguson[1], D.T. Galligan[1], J.W. Brooks*[2], G. Azzaro[2], S. Ventura[2], and G. Licitra[3], [1]University of Pennsylvania, [2]Consorzio Ricerca Filiera Lattiero-Casearia, Ragusa, Italy, [3]University of Catania, Italy.
8:15 AM	388	The length of pregnancy modifies the association between the length of the dry period and subsequent milk yield. C Enevoldsen[1], [1]Royal Veterinary and Agricultural University, Copenhagen, Denmark.
8:30 AM	389	ECP induced changes in ovarian function of lactating dairy cattle. S. M. Pancarci*, J. A. Bartolome, T Dickerson, W. W. Thatcher, and W.W. Thatcher, University of Florida, Gainesville, FL, USA.
8:45 AM	390	Estrus, ovarian, and hormonal responses after resynchronization with progesterone (P4) and estrogen in lactating dairy cows of unknown pregnancy status. S.Z. El-Zarkouny*, B.A. Hensley, and J.S. Stevenson, Kansas State University.
9:00 AM	391	Effect of milking frequency (MF), estradiol cypionate, and bST on milk yield and reproductive outcomes in dairy cows. C.A. Blevins*, J.J. Aberle, J.E. Shirley, B.A. Hensley, S.M. Tiffany, and J.S. Stevenson, Kansas State University.
9:15 AM	392	Synchronization of estrus in dairy cows using prostaglandin F_{2a} (PGF_{2a}), gonadotropin-releasing hormone (GnRH), and estradiol cypionate (ECP). J. M. Borman*[1], R. P. Radcliff[2], B. L. McCormack[2], F. N. Kojima[2], D. J. Patterson[2], K. L. Macmillan[1], and M. C. Lucy[2], [1]University of Melbourne, Werribee, Australia, [2]University of Missouri, Columbia, MO.
9:30 AM		Break

10:00 AM	393	The use of ovsynch and heatsynch for re-synchronization of cows open at pregnancy diagnosis by ultrasonography. JA Bartolome*, FT Silvestre, ACM Arteche, S Kamimura, LF Archbald, and WW Thatcher, University of Florida, Gainesville, Florida, USA.
10:15 AM	394	Incidence and timing of estrus, LH surge, and ovulation in cows treated with the Ovsynch protocol with estradiol cypionate (ECP) substituting for GnRH. J.S. Stevenson *[1], S.M. Tiffany[1], and M.C. Lucy[2], [1]Kansas State University, [2]University of Missouri.
10:30 AM	395	Effects of Differences in Dietary Protein on the Production and Quality of Bovine Embryos Collected from Superovulated Donors.. F.D. Jousan*, M.D. Utt, and W.E. Beal, Virginia Polytechnic Institute and State University.
10:45 AM	396	Prostaglandin synchronization before synchronized ovulation for first insemination in lactating dairy cows. S.J. LeBlanc* and K.E. Leslie, University of Guelph, Ontario, Canada.
11:00 AM	397	Administration of human chorionic gonadotrophin (hCG) or gonadotrophin releasing hormone (GnRH) analogue at day 5 after oestrus and plasma progesterone in the cow. LM Hicking*, APF Flint, and GE Mann, University Of Nottingham, UK.
11:15 AM	398	The Effect Of Bromocryptine On The Ovulation Rate Of Ewes Of Different Fecundity And Ovulation Rate. V. Fuentes[1], R. Sanchez, and P. Fuentes, [1]Centro Universitario de los Altos Universidad de Guadalajara, México.

Production, Management, and the Environment

Beef and Swine Management

Chair(s): V. Varel, USDA-ARS

Room: 203

Time	Abstract Number	
8:00 AM	399	Cooling and feeding strategies to reduce heat load in feedlot cattle. J.B. Gaughan*[1], S.M. Holt[2], and T.L. Mader[3], [1]The University of Queensland, [2]South Dakota State University, [3]University of Nebraska.
8:15 AM	400	Effects of shade and implant strategy on performance by finishing heifers. J. E. Stockstill[1], F. M. Mitloehner*[2], M. L. Galyean[1], and J. J. McGlone[1], [1]Texas Tech University, Lubbock, [2]University of California, Davis.
8:30 AM	401	Implant strategies for production of high quality beef for Japanese export market. K. S. Eng*[1], R. Becthel[2], and D. P. Hutcheson[3], [1]Eng, Inc., San Antoino, TX, USA, [2]Advance Agricultural Testing, Petersburg, Ont, Canada, [3]Animal-Agricultural Consulting, Inc., Amarillo, TX. USA.
8:45 AM	402	Effect of early calf weaning on cow and calf performance in Florida. J. D. Arthington*[1] and R. S. Kalmbacher[1], [1]University of Florida, Range Cattle Research and Education Center, Ona.
9:00 AM	403	Effects of periparturient disorders and other factors on calf related traits. M. L. Wiederhold*[1], M. A. Faust[1], and S. L. Berry[2], [1]Iowa State University, Ames, [2]University of California, Davis.
9:15 AM	404	Development of antibiotic resistance among *Escherichia coli* in feedlot cattle. H.W. Busz*[1], T.A. McAllister[1], L.J. Yanke[1], M.E. Olson[2], D.W. Morck[2], and R.R. Read[3], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]University of Calgary, AB, [3]Calgary Regional Health Authority, Calgary, AB.
9:30 AM	405	Effects of the fibrolytic enzyme preparation Cattle-Ase™ on growth of prepuberal crossbred heifers. T. A. Strauch*[1], D. A. Neuendorff[1], C. G. Brown[1], C. Cobb[2], J. L. Kerby[1], R. D. Randel[1], and F. M. Rouquette[1], [1]Texas Agricultural Experiment Station, Overton, TX, [2]Loveland Industries, Hereford, TX.
9:45 AM		Break
10:00 AM	406	Predicting the Nutritional Status of Mature Beef Cows. D. S. Horsley*, J. B. Hall, D. E. Eversole, J. P. Fontenot, and M. L. Wahlberg, Virginia Polytechnic Institute and State University, Blacksburg, VA.

10:15 AM	407	Using adjusted 205-day weight ratios to predict beef cow-calf performance. T. R. Troxel*[1], Z. B. Johnson[2], and W. T. Wallace[1], [1]University of Arkansas Cooperative Extension Service, Little Rock, AR, [2]University of Arkansas, Fayetteville, AR.
10:30 AM	408	Factors affecting the market value of cows sold through Arkansas auction barns, Part 1: Management. M. S. Gadberry, T. R. Troxel*, D. Urell, J. Foley, R. Wiedower, S. Cline, and G. Ford, University of Arkansas Cooperative Extension Service, Little Rock, AR.
10:45 AM	409	Evaluation of ultrasound exam at feedlot entry as a predictor of carcass grade at slaughter. G Keefe*, I Dohoo, J Valcourt, and R Milton, Atlantic Veterinary College.
11:00 AM	410	Use of a modified yeast cell wall preparation to alleviate endophyte toxicosis in cattle. I. Production characteristics. D. G. Ely*[1], D. K. Aaron[1], B. T. Burden[1], C. L. Schultz[1], J. Wyles[1], V. Akay[2], and K. A. Dawson[2], [1]University of Kentucky, Lexington, KY, [2]Alltech Biotechnology, Inc., Nicholasville, KY.
11:15 AM	411	Use of a modified yeast cell wall preparation to alleviate endophyte toxicosis in cattle. II. Tympanic temperature response. D. K. Aaron*[1], D. G. Ely[1], B. T. Burden[1], C. L. Schultz[1], J. Wyles[1], V. Akay[2], and K. A. Dawson[2], [1]University of Kentucky, Lexington, KY, [2]Alltech Biotechnology, Inc., Nicholasville, KY.
11:30 AM	412	Comparison of an early weaning management system with a conventional weaning system on cow and calf performance while grazing tall fescue pastures. C. L. Schultz*, D. G. Ely, B. T. Burden, D. K. Aaron, and J. Wyles, University of Kentucky, Lexington, KY.
11:45 AM	413	Evaluation of four ractopamine use programs on pig growth and carcass characteristics. S.A. Trapp*, J.P. Rice, D.T. Kelly, A. Bundy, A.P. Schinckel, and B.T. Richert, Purdue University, West Lafayette, IN.

Ruminant Nutrition

Feed Additives and Fiber

Chair(s): J. Woodford, Nutrition Professionals, Inc., and S. Laudert, Elanco Animal Health

Room: 2000D

Time	Abstract Number	
8:00 AM	414	Use of feed enzymes to improve feed utilization by ruminants. **K. A. Beauchemin*[1]**, D. Colombatto[1], W. Z. Yang[1], and D. P. Morgavi[2], [1]Agriculture and Agri-Food Canada, Research Centre, Lethbridge, Alberta, Canada, [2]INRA Centre Clermont-Theix, Saint-Genes-Champanelle, France.
8:45 AM	415	Bacterial Direct-Fed Microbials in Ruminant Diets: Performance Response and Mode of Action. **C.R. Krehbiel*** and S.E. Gilliland, Oklahoma State University.
9:30 AM	416	Effects of Tasco (a brown seaweed) and heat stress on immune function and antioxidant activity of wether lambs. K.E. Saker*[1], J.H. Fike[1], H.P. Veit[1], and D.L. Ward[1], Virginia Tech, Blacksburg, Virginia, USA.
9:45 AM	417	Effects of a fibrolytic enzyme supplement on digestion and nutrient utilization by dairy cows fed alfalfa hay and grass silage-based rations. S.E. Adams*[1], C.J. Sniffen[2], J.H. White[1], and J.R. Knapp[1], [1]U. of Vermont, [2]W.H. Miner Institute.
10:00 AM		Break
10:30 AM	418	Volatile fatty acid production rates of Holstein dairy cows provided monensin during the transition period.. X. Markantonatos[1], G. A. Varga*[1], T.W. Cassidy[1], R. K. McGuffey[2], R. Tucker[2], and L. F. Richardson[2], [1]The Pennsylvania State University, PA, [2]Elanco Animal Health, IN.
10:45 AM	419	The influence of low concentrations of supplemental enzymes on ruminal fermentation and milk production in dairy cows. J. Tricarico*[1], J. D. Johnston[2], and K. A. Dawson[1], [1]Alltech Biotechnology Inc., Nicholasville, KY, [2]Ritchie Feed&Seed, Ottawa, Ontario, Canada.
11:00 AM	420	Predicting chewing and ruminal pH by measuring physically effective NDF of dairy cow diets. W. Z. Yang* and K. A. Beauchemin, Agriculture and Agri-Food Canada, Lethbridge, Canada.

11:15 AM	421	Is fibrosity better evaluated by dietary mean particle size or percentage of dry matter retained by a 2-mm sieve ?. D. Sauvant*[1] and D. Mertens[2], [1]Institut National Agronomique Paris-Grignon - INRA, [2]US Dairy Forage Research Center.
11:30 AM	422	Interaction of corn silage processing and replacement of concentrate with nonforage sources of fiber on performance and digestion characteristics of lactating dairy cows. J. A. Mills* and R. J. Grant, University of Nebraska.
11:45 AM	423	Meta-analysis of relationships between particle outflow rate and mastication in cattle. D. Sauvant*[1] and D. Mertens[2], [1]Institut National Agronomique Paris-Grignon - INRA, [2]US Dairy Forage Research Center.

Ruminant Nutrition

Minerals

Chair(s): K. Knowlton, Virginia Tech, and H. Freetly, USDA, ARS, MARC

Room: 2000C

Time	Abstract Number	
8:00 AM	424	Effect of trace mineral source on performance of dairy cattle: lactation and reproduction responses. H. T. Ballantine*[1], M. T. Socha[2], D. J. Tomlinson[2], A. B. Johnson[2], A. S. Fielding[3], J. K. Shearer[4], S van Amstel[5], and C. J. Rapp[2], [1]Ballantine Consulting, [2]Zinpro Corporation, [3]Purina Mills, LLC, [4]University of Florida, [5]University of Tennessee.
8:15 AM	425	Effect of trace mineral source on performance of dairy cattle: claw integrity. H. T. Ballantine[1], C. J. Rapp*[2], M. T. Socha[2], D. J. Tomlinson[2], A. B. Johnson[2], A. S. Fielding[3], J. K. Shearer[4], and S. van Amstel[5], [1]Ballantine Consulting, [2]Zinpro Corporation, [3]Purina Mills LLC, [4]University of Florida, [5]University of Tennessee.
8:30 AM	426	Summary of twelve trials evaluating the effect of feeding complexed zinc methionine on lactation performance of dairy cattle. D. J. Tomlinson*, M. T. Socha, C. J. Rapp, and A. B. Johnson, Zinpro Corporation, Eden Prairie, MN.
8:45 AM	427	Effect of chelated trace mineral supplementation for inorganic sources on production and health of Holstein cows. J.E. Nocek[1] and R.S. Patton[2], [1]Auburn, NY, [2]Galisteo, NM.
9:00 AM	428	Predicting Cattle Phosphorus Excretion. T.P. Tylutki*, D.G. Fox, and L.E. Chase, Cornell University.
9:15 AM	429	Utilization of phosphorus in lactating cows fed two levels of forage.. Z. Wu*, V. A. Ishler, and D. D. Archibald, Pennsylvania State University, University Park, PA.
9:30 AM	430	The effect of *Solanum glaucophyllum* on calcium and phosphorus utilization in lactating cows. Y. Cheng[1], J. P. Goff[2], and R. L. Horst*[2], [1]Iowa State University, Ames, IA, [2]National Animal Disease Center, USDA/ARS, Ames, IA.
9:45 AM	431	Altering electrolyte balance of diets for lactating dairy cows to reduce phosphorus excretion to the environment. S.I. Borucki Castro*[1], L.E. Phillip[1], V. Girard[2], and A. Tremblay[3], [1]McGill University - Montreal, Qc / Canada, [2]Institut de recherche et de developpement en agroenvironnement - Deschambault, Qc / Canada, [3]Universite de Montreal - St. Hyacinthe, Qc / Canada.
10:00 AM		Break
10:15 AM	432	Effects of dietary supplementation with biotin and a B-vitamin blend on lactation performance by dairy cows. D. Majee*[1], E. C. Schwab[1], W. M. Seymour[2], and R. D. Shaver[1], [1]University of Wisconsin - Madison, [2]Roche Vitamins Inc.
10:30 AM	433	Effect of copper deficiency on the acute phase protein response to inflammatory challenge in beef heifers. J. D. Arthington*[1], F. Blecha[2], and C. K. Swensen[3], [1]University of Florida, Range Cattle Research and Education Center, Ona, [2]Kansas State University, College of Veterinary Medicine, Manhattan, [3]Zinpro Corporation, Eden Prairie, MN.
10:45 AM	434	Effect of dietary strong ions on milk yield, milk composition, and chewing activity in lactating dairy cows. C. S. Mooney* and M. S. Allen, Michigan State University, East Lansing.

11:00 AM	435	Effects of chloride fertilization on alfalfa dietary cation-anion content. S. J. Henning[1], R. K. Doorenbos[1], E. C. Brummer[1], J. P. Goff[2], and R. L. Horst*[2], [1]Iowa State University, Ames IA, [2]National Animal Disease Center, USDA/ARS, Ames, IA.
11:15 AM	436	Productive and rumen reponses of lactating cows to buffer supplementation. F. Meschy[1], D. Bravo[2], and D. Sauvant*[1], [1]INRA-INAPG Physiologie de la Nutrition et Alimentation Paris France, [2]Ets UCAAB Chateau-Thierry France.
11:30 AM	437	Effect of dietary cobalt supplementation on cobalt metabolism in dairy cows. R. L. Kincaid*[1], J. D. Cronrath[1], and Socha M. T.[2], [1]Washington State University, Pullman, WA, [2]Zinpro Corporation, Edina Prairie, MN.
11:45 AM	438	The effect of barley varieties on phosphorus utilization and fecal excretion in lactating dairy cows. T. D. Nennich*[2], J. H. Harrison[2], R. L. Kincaid[1], L. Johnson[2], and D. Davidson[2], [1]Washington State University, Pullman, WA, [2]Washington State University, Puyallup, WA.

Swine Species

Chair(s): M. Ezekwe, Alcorn State University

Room: 2000B

Time	Abstract Number	
8:00 AM	439	Sow Hulls for Gestating Sow Diets. PJ McKinnon* and SX Shi, American Soybean Association.
8:15 AM	440	Reducing odor in swine production: effect of a natural carbon-mineral supplement on odor reduction. S. W. Kim*, F. Ji, and J. J. McGlone, Texas Tech University.
8:30 AM	441	Response of growing pigs to dietary threonine:lysine ratio and protein level. P.B. Lynch*[1], P.G. Lawlor[1], and S. van Cauwenberghe[2], [1]Teagasc, Moorepark Research Centre, Fermoy, Co. Cork, Ireland, [2]Ajinomoto-Eurolysine, Paris, France.
8:45 AM	442	Effects of Feeding Echinacea purpurea to Nursery Pigs on Performance and Viremia. J.R. Hermann*[1], M.S. Honeyman[1], J.J. Zimmerman[1], and C.C. Chang[1,2], [1]Iowa State University, [2]Pig Research Institute.
9:00 AM	443	Growth rate and age at first estrus in relation to efficient gilt pool management. Jennifer Patterson*[1], Murray Pettitt[1], George Foxcroft[2], and Eduardo Beltranena[1], [1]Prairie Swine Centre Inc., Saskatoon, Saskatchewan, Canada, [2]University of Alberta, Edmonton, Alberta, Canada.
9:15 AM	444	The effects of including a blend of incapsulated organic and inorganic acids in diets for weanling pigs. H. H. Stein*[1], D. Peters[1], B. T. Christopherson[1], and E. Cerchiari[2], [1]South Dakota State University, [2]SODA Feed Ingredients, Monaco.

ADSA Dairy Foods Division Business Meeting

Chair(s): Rafael Jimenez-Flores, Cal Poly

Room: 205A

Time: 11:00 AM – 12:00 PM

ADSA Production Division Business Meeting

Chair(s): Roger Cady, Monsanto

Room: 204B

Time: 11:00 AM – 12:00 PM

SYMPOSIUM

Alpharma Beef Cattle Nutrition

Factors Affecting Feed Intake in Beef Cattle

Chair(s): D. Buskirk, Michigan State University

Sponsors: Alpharma, ASAS Foundation, and European Association of Animal Production

Room: 200A

Time	Abstract Number	
1:00 PM		Welcome and symposium overview. D. Buskirk, Michigan State University.
1:05 PM	445	The multifactorial nature of food intake control. **J.M. Forbes***, Centre for Animal Sciences, University of Leeds, England.
1:50 PM	446	Effects of roughage source and level on intake by feedlot cattle. **M. L. Galyean*[1]** and P. J. Defoor[2], [1]Texas Tech Univeristy, [2]Nutrition Service Associates, Pratt, KS.
2:35 PM		Break
2:50 PM	447	Metabolic consequences of feeding behavior and intake in feedlot cattle. **T.A. McAllister*[1]**, K.S. SchwartzkopfGenswein[2], K.A. Beauchemin[1], D.J. Gibb[1], M.N. Streeter[3], D.D. Hickman[1], and D.H. Crews, Jr.[1], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]Alberta Agriculture, Food and Rural Development, Lethbridge, AB, [3]Alpharma Inc., Fort Lee, NJ.
3:35 PM	448	Controlling variation in feed intake through bunk management. **R. H. Pritchard*[1]**, [1]South Dakota State University.
4:20 PM		Roundtable discussion.

SYMPOSIUM

Breeding and Genetics

Applications of Functional Genomics in Animal Breeding and Genetics

Chair(s): J. Reecy, Iowa State University, and D. Crews, Lethbridge Research Center

Sponsors: ABS Global, AniGenics, Cotswold, Monsanto, and Semex

Room: 200C

Time	Abstract Number	
1:00 PM	449	Novel Approaches for Complex Trait Analysis. **B Bowen***, Lynx Therapeutics, Inc.
1:45 PM	450	Integrating Molecular Marker Information into National Beef Cattle Evaluation. **R. L. Quaas***, Cornell University, Ithaca, New York.
2:15 PM	451	Using gene expression profiling to study disease resistance in the chicken: honing in on candidate genes. **Joan Burnside*[1]**, Robin Morgan[1], and Hans Cheng[2], [1]Delaware Biotechnology Institute, University of Delaware, [2]USDA/ARS, Avian Disease and Oncology Laboratory.
2:45 PM		Break
3:00 PM	452	Power Calculation In Microarray Experiments Using Bayesian Mixture Models. R. Rekaya*[1], [1]Dept. of Animal and Dairy Science, University of Georgia.
3:15 PM	453	Detection of quantitative trait loci for mastitis resistance in Canadian Holsteins. J. Moro-Mendez*, J.F. Hayes, and D. Zadworny, McGill University, Department of Animal Science (Macdonald Campus), Montreal, Quebec, Canada.

3:30 PM 454 Application of daughter and granddaughter designs in a study of microsatellite markers in a large A.I. breeding company. E.B. Burnside*[1,2], Y. Pan[1,2], G.B. Jansen[3], Y. Plante[4], N. Caron[1], and D. Petitclerc[5], [1]The Semex Alliance, Saint-Hyacinthe, Quebec, Canada, [2]L'Alliance Boviteq, Saint-Hyacinthe, Quebec, Canada, [3]University of Guelph, Ontario, Canada, [4]The Saskatchewan Research Council, Saskatoon, Saskatchewan, Canada, [5]Agriculture and Agri-Food Canada, Lennoxville, Quebec, Canada.

3:45 PM 455 Development of a cattle population for mapping economic trait loci (ETL) affecting parasite resistance. Tad S Sonstegard*[1], Louis C Gasbarre[2], Curtis P Van Tassell[1], and Terazinha Padilha[2], [1]Gene Evaluation & Mapping Laboratory, [2]Immunology & Disease Resistance Laboratory.

4:00 PM 456 Genetic variation among sheep breeds at the insulin-like growth factor-1 receptor locus. C.J. Otieno and A. Farid, Nova Scotia Agricultural College.

4:15 PM 457 Genetic diversity of Chinese indigenous pig breed resources by microsatellites and near-complete mitochondrial genome. K Li*, Huazhong Agricultural University, Wuhan 430070, China.

4:30 PM 458 A novel and highly effective method to generate transgenic cows and goats: linker-based sperm-mediated gene transfer (LB-SMGT). J. Qian*[1], K. Chang[2,3], C. Lai[2], C. Chen[2], T. Keng[2], C. Huang[2], F. Wu[3], H. Huang[1], and K. Wang, [1]BioAgri Corp., City of Industry, CA, USA, [2]BioAgri Corp.-Taiwan Branch, Taipei, Taiwan, [3]Dept. of Chemistry, Soochow University, Taipei, Taiwan.

4:45 PM 459 Generation of transgenic pigs at a high efficiency by linker based sperm-mediated gene transfer. K. Chang[2,3], J. Qian[1], C. Chen[2], C. Lai[2], I. Ho[2], M. Wu[4], and K. Wang*, [1]BioAgri Corp. City of Industry, CA, USA, [2]BioAgri Corp-Taiwan Branch, Taipei, Taiwan, [3]Dept. of Chemistry, Soochow University, Taipei, Taiwan, [4]Dept. of Physiology, Taiwan Livestock Research Center, Tainan, Taiwan.

Congressional Insights

Facilitator: E. Bergfeld, ASAS

Room: 303B

Sponsor: ASAS Board of Directors

Time: 2:00 PM – 5:00 PM

Description: The Congressional Insights program is a novel, state-of-the-art, interactive computer model designed to simulate a two-year term of office in Congress. This computer simulation and educational tool introduces participants to the legislative and political process on Capitol Hill. It illustrates why politicians must (or should) make some of the decisions they do.

The program will introduce you to the pressures faced by members of Congress, show you the demands placed on their time, help you to understand that legislators are public officials whose actions are open to public scrutiny, and provide you with a better understanding of the role of elected officials and their staffs.

Participants are actively involved in this program. It focuses on policy and political issues and effectively demonstrates some of the tough decisions faced by elected officials.

SYMPOSIUM

Dairy Foods

Lactic Acid Bacteria and Exopolysaccharides

Chair(s): S. Moineau, Universite Laval

Sponsors: CDRF, DMI, Land O'Lakes, Ministère de la Recherche de la Science et de la Technologie du Québec, and Nutraceuticals and Functional Foods Institute – INAF (Université Laval)

Room: 301A

Time	Abstract Number	
1:00 PM		Introduction. S. Moineau, Universite Laval.
1:05 PM	460	The genetic basis for diversity in exopolysaccharide structure and production. **G LaPointe*[1]**, [1]STELA Dairy Research Centre.
1:45 PM	461	Structure determination of exopolysaccharides from lactic acid bacteria. **Marie-Rose Van Calsteren***, Food Research and Development Centre, Agriculture and Agri-Food Canada.
2:25 PM		Exoploysaccharide production by lactic acid bacteria: Physiology and fermentation kinetics. **L. De Vuyst**, Universiteit Brussel.
3:05 PM		Break
3:20 PM	462	Applications of EPS production by LAB. **C. J. Oberg*[1]**, J. R. Broadbent[2], and D. J. McMahon[2], [1]Weber State University, Ogden, Utah, [2]Utah State University, Logan, Utah.
4:00 PM	463	Visualization of bacterial exopolysaccharide in dairy products using confocal laser scanning microscopy. **J F Frank*[1]** and A N Hassan[1], [1]Department of Food Science and Technology, University of Georgia.
4:20 PM	464	Does EPS protect LAB against phages? **Sylvain Moineau***, Denise Tremblay, and Helene Deveau, Universite Laval.

SYMPOSIUM

Physiology

Basic Mechanisms Regulating Anovulatory States

Chair(s): G. Williams, Texas A&M University, and R. Nebel, Virginia Polytechnic Institute & State University

Sponsors: European Association of Animal Production, Monsanto, Pharmacia, Select Sires, and USDA

Room: 200B

Time	Abstract Number	
1:00 PM	465	Neuroendocrine mechanisms underlying seasonal breeding in the ewe. **RL Goodman*[1]**, GM Anderson[1], VL Adams[1], SL Hardy[1], JM Connors[1], and MN Lehman[2], [1]West Virginia University, [2]University of Cincinnati.
1:50 PM	466	Nutrition and suckling mediated anovulation in beef cattle. **R.P. Wettemann***, C.A. Lents, N.H. Ciccioli, F.J. White, and I. Rubio, Oklahoma Agricultural Experiment Station, Stillwater.
2:40 PM	467	Nitric oxide and the ovary. **Carlo Tamanini***, Giuseppina Basini, and Francesca Grasselli, Dip. Prod. Anim., Biotec. Vet., Qual. Sic. Alim., University of Parma-Italy.

SYMPOSIUM

ADSA Southern Branch Symposium

Potential for Dairying in the Southeast—Challenges and Opportunities

Chair(s): J. Bertrand, Clemson University

Room: 206A

Time	Abstract Number	
1:00 PM		Introduction. J. Bertrand, Clemson University.
1:10 PM	468	Regional production differences. **L. O. Ely***, J. W. Smith, and G. H. Oleggini, University of Georgia, Athens, GA.
1:30 PM		Environmental effects on production. **J. W. West**, University of Georgia.
1:55 PM	469	Heat stress effects on reproduction. **E. R. Jordan***, The Texas A&M University System.
2:20 PM	470	Multi-cropped forages for nutrient management. **G.L. Newton***[1], G.J. Gaschol[1], J.K. Bernard[1], J.R. Allison[1], R.K. Hubbard[2], R.N. Gates[2], and G. Vellidis[1], [1]University of Georgia, [2]USDA-ARS.
2:40 PM	471	Rearing dairy herd replacements in the Southeast. **R. E. James***, Virginia Polytechnic Institute and State University.
3:00 PM	472	Economic evaluation of dairy production in the southeastern United States. **A. de Vries***[1], R. G. Giesy[1], and L. O. Ely[2], [1]University of Florida, [1]University of Florida, [2]University of Georgia.
3:20 PM		Summary
3:30 PM		Break
3:45 PM	473	The effects of supplementing yeast culture during the transition period on performance of Holstein cows during hot humid weather. J. D. Ward*, LSU AgCenter Southeast Research Station.
4:00 PM	474	Comparison of nutrient content and digestibility of traditional versus genetically modified whole cottonseed. J. A. Bertrand*[1], T. C. Jenkins[1], and M. Calhoun[2], [1]Clemson University, [2]Texas A&M University.
4:15 PM	475	Use of DairyMetrics to compare Jersey and Holstein dairy herds of different herd sizes in the southern U.S. J.A. Pennington*[1], J.S. Clay[2], and C.N. Vierhout[2], [1]University of Arkansas Cooperative Extension Service, Little Rock,AR, [2]Dairy Records Management Systems, Raleigh, NC.
4:30 PM		Southern Branch Business Meeting

Dairy Foods

Chemistry

Chair(s): M. Pouliot, Agropure Canada, and Z. Ustunol, Michigan State University

Room: 301B

Time	Abstract Number	
1:00 PM	476	Measurement of moisture in high lactose whey products. Michel Pouliot*, Josee Beauchemin, and Jacques Rolland, Agropur Dairy Cooperative, Granby, Qc, Canada.
1:15 PM	477	Effect of kappa-carrageenan on microstructure of milk protein: polysaccharide mixed systems. H. D. Goff*, S. Thaiudom, and R. A. Andrew, University of Guelph, ON, Canada.
1:30 PM	478	Effects of enzymatic crosslinking on the consistency and structure of probiotic goat milk yogurt. J. Farnsworth*[1], G. Hendricks[2], V. Gotcheva[1], R Akuzawa[3], and M. Guo[1], [1]University of Vermont, Burlington VT 05405, [2]University of Massachusetts, Worcester, MA 01655, [3]Nippon Veterinary and Animal Science University, Tokyo, Japan.

1:45 PM	479	Comparison of Bulk Physical Properties of Angel Food Cakes Containing Egg White Protein or Whey Protein Isolate. P. Luck*, C. Pernell, E.A. Foegeding, and C. Daubert, [1]North Carolina State University.
2:00 PM	480	Effect of potassium sorbate addition on the viscosity of aqueous solutions of locust bean gum during storage at 4 and 20 C. M.S. Gigante*[1], M. Almena-Aliste[2], and P.S. Kindstedt[2], [1]State University of Campinas, Campinas, SP/Brazil, [2]University of Vermont, Burlington, VT/USA.
2:15 PM	481	Water solubility and mechanical properties of heat cured whey protein isolate-based edible films: A comparison to commercial collagen and natural casings. S Amin*[1], A Booren[1], and Z Ustunol[1], Michigan State University.
2:30 PM		Break
3:00 PM	482	Role of polysaccharide stabilizers in the formation of yogurt structure. Rosalind McLeod and David W. Everett*, University of Otago, Dunedin, New Zealand.
3:15 PM	483	Conjugated Linoleic Acid and Docosahexaenoic Acid Enriched Milk Altered Physical Properties of Milk Fat and Polymorphic Structure of Butter. CA Avramis*[1], JKG Kramer[2], AGM Marangoni[1], and AR Hill[1], [1]Department of Food Science, University of Guelph, [2]Food Reserach Program, Agriculture and Agri-Food Canada.
3:30 PM	484	Dairy fats enriched in n-3 PUFA and CLA by feeding fish meal. C Cruz-Hernandez*[1], JKG Kramer[2], and AR Hill[1], [1]University of Guelph, [2]Agriculture and Agri-Food Canada.
3:45 PM	485	Milks from cloned cows: rennet coagulation properties of five clones over a single lactation cycle. J. A. Lucey*[1], S. Govindasamy-Lucey[2], J. E. Romero[2], M. M. Pace[3], and M. D. Bishop[3], [1]Department of Food Science, University of Wisconsin, Madison, Wisconsin, USA, [2]Center for Dairy Research, University of Wisconsin, Madison, Wisconsin, USA, [3]Infigen Inc., Deforest, Wisconsin, USA.
4:00 PM	486	Stability of oil in water emulsions formed in presence of skim milk powder: effect of calcium salts and heat treatments. Deepa Mathew* and Phillip S. Tong, California Polytechnic State University.

Extension Education

Chair(s): A. Williams, Mississippi State University

Room: 205A

Abstract Time	Number	
1:00 PM	487	Pork processing inservice program for high school ag educators. K. Kephart*, R. Mikesell, and W. Henning, Penn State University.
1:15 PM	488	Third-party evaluation of proposed sites for swine operations and estimation of the risk of odor conflict. R. Mikesell* and K. Kephart, Penn State University.
1:30 PM	489	Teaching environmental stewardship to commercial manure haulers through a certification program. R. Meinen*, K. Kephart, and L. Ressler, Penn State University, University Park, PA.
1:45 PM	490	Using animal waste management plans on dairies to increase productivity and reduce environmental impacts. T.W. Downing*[1] and T.T. Leonnig[2], [1]Oregon State University, [2]Oregon Dairy Farmers Association.
2:00 PM	491	The development of an educational program to reduce the feeding of supplemental phosphorus on dairy farms in the Lake Champlain Basin. W. C. Emerich, K. W. Cotanch*, C. S. Ballard, E. D. Thomas, C. J. Sniffen, and P. Mandebvu, W. H. Miner Agricultural Research Institute, Chazy, NY.
2:15 PM	492	A decade of change in the U.S. dairy industry. K. E. Olson*[1], [1]KEO Consulting.
2:30 PM	493	Results of a dairy herdsperson shortcourse conducted in the central valley of California. G. E. Higginbotham*[1], J. D. Robison[2], J. H. Kirk[1], J. W. Merriam[1], C. A. Collar[1], S. L. Berry[1], T. A. Shultz[1], and B. A. Reed[1], [1]University of California Cooperative Extension, [2]California State University-Fresno.
2:45 PM	494	The relationship between disease occurrence, feeding management and Return Over Feed in Ontario dairy herds. C.J. McLaren*[1], K.D. Lissemore[1], K.E. Leslie[1], T.F. Duffield[1], D.F. Kelton[1], and B. Grexton[2], [1]University of Guelph, Guelph, Canada, [2]Ontario Dairy Herd Improvement Corporation.

3:00 PM		Break
3:15 PM	495	Evaluating 4-H dairy animals for a combination of type and genetic value for Net Merit dollars. A. J. Seykora* and B. J. Heins, University of Minnesota.
3:30 PM	496	Evaluation of Back Fat as a Performance and Carcass Quality Indicator among Beef Cattle Sire Breeds. T. A. Gardner*[1], E. M. Willard, A. L. Bryant, W. B. McKinley, and A. R. Williams, [1]Mississippi State University.
3:45 PM	497	A web-based, economic selection index tool for terminal Charolais sires. W. O. Herring*[1], M. D. MacNeil[2], and R. E. Williams[3], [1]University of Florida, North Florida Research and Education Center, Marianna, [2]USDA-ARS, Fort Keogh Livestock and Range Laboratory, Miles City, MT, [3]American-International Charolais Association, Kansas City, MO.

International Animal Agriculture

Chair(s): E. Gutierrez-Ornelas, Univ. Autonoma de Nuevo Leon, and D. Hettinga, Land O'Lakes, Inc.

Room: 205B

Time	Abstract Number	
1:00 PM	498	Development of a Sustainable Sheep Production System for the Mexican Tropics. P. Fajersson*, S. Hernandez, E. Santacruz, A. Alonso, and E. Ocaña, Colegio de Postgraduados, Campus Veracruz.
1:15 PM	499	*In vitro* gas production and *in situ* degradability of four native species commonly consumed by grazing goats in North Mexico. M.A. Cerrillo*[1], O.O. Lopez[1], and R.A.S Juarez[1], Universidad Juarez del Estado de Durango. Durango,Dgo. Mexico.
1:30 PM	500	Release of urea from the mammary gland of lactating cows during a humid tropical summer. C. H. Lu[1], C. J. Chang*[1], P. N. Lee[1], C. P. Wu[2], and X. Zhao[3], [1]National Chung Hsing University, Taichung, Taiwan, [2]National Chia Yi University, Chia Yi, Taiwan, [3]McGill University, Ste-Anne-de-Bellevue, Canada.
1:45 PM	501	Withdrawn
2:30 PM	502	Characterization of commercial feedlots in Nuevo León, México. H. Morales-Treviño, E. Gutierrez-Ornelas, H. Bernal-Barragan, J. Colin-Negrete, and R. Gonzalez-Gonzalez, Universidad Autonoma de Nuevo Leon, Marin, Nuevo Leon, Mexico.
2:45 PM	503	Perceptions and value of international education in the Animal Science curriculum. Neil Forsberg*[1], Jesse Taur[1], and Helen Chesbrough[1], [1]Oregon State University.
3:00 PM	504	ASSESSING the Sustainability of Animal Traction among Maasai Agro-Pastoralists in Monduli District, Tanzan. A.B. Conroy*, R.T. Eckert, and M.L. Becker, University of New Hampshire, Durham, NH/USA.
3:15 PM	505	A livestock based child nutrition project in Malawi. S. Patten*[1], A. Woldeghebriel[2], G. Kanyama-Phiri[3], B. Mtimuni[3], H. Swartz[2], R. Savage[2], R. Phoya[3], L. Kamwanja[3], F. Chelera[3], and W. Boylan[4], [1]Macalester College, [2]Lincoln University, [3]University of Malawi, Bunda College of Agriculture, [4]University of Minnesota.

Meat Science and Muscle Biology

Meat Quality

Chair(s): E. Berg, University of Missouri

Room: 2000B

Time	Abstract Number	
1:00 PM		Consumer Expectations of Pork Quality, **R.C. Johnson**, Triumph Pork Group LLC Farmland Foods, Inc.
1:30 PM	506	Environmental effects on pig performance, meat quality, and muscle characteristics. J. G. Gentry*, J. J. McGlone, M. F. Miller, and J. R. Blanton, Jr., Texas Tech University, Lubbock, TX.
1:45 PM	507	Growth and meat quality of finishing hogs supplemented creatine monohydrate and a high glycemic carbohydrate 30 d pre-harvest.. C. A. Stahl*[1], M. L. Linville[1], G. K. Rentfrow[1], G. L. Allee[1], and E. P. Berg[1], [1]University of Missouri-Columbia.
2:00 PM	508	The effect of alpha lipoic acid on shelf life and Warner-Bratzler shear force values of fresh pork. T. B. Schmidt*, C. A. Stahl, D. L. McNamara, G. K. Rentfrow, and E. P. Berg, University of Missouri.
2:15 PM	509	The affects of alpha-lipoic acid on beef longissimus bloom time. G. Rentfrow*[1], M.L. Linville[1], C.A. Stahl[1], K.C. Olson[1], and E.P. Berg[1], [1]University of Missouri.
2:30 PM	510	Adaptations in muscle fiber characteristics and effects on meat quality traits induced by rearing conditions in pigs. G. Bee*, Swiss Federal Research Station for Animal Production.
2:45 PM	511	Effect of sex and slaughter weight on performance and carcass quality of pigs. J. Peinado[1], M. Cortes[1], A. Fuentetaja[2], R. Lazaro*[3], and P. Medel[1], [1]Imasde Agropecuaria, S.L., Madrid, Spain, [2]Copese, S.A., Segovia, Spain, [3]Universidad Politecnica de Madrid, Spain.
3:00 PM		Break
3:15 PM	512	Effect of breed, sex and final weight on performance and carcass quality of lambs. J. Peinado[1], P. De Miguel[2], G.G. Mateos*[3], and P. Medel[1], [1]Imasde Agropecuaria, S.L., Madrid, Spain, [2]Grupo Carnico Magnus, S.A., Zamora, Spain, [3]Universidad Politecnica de Madrid, Spain.
3:30 PM	513	Relationship of live animal performance to meat color and carcass characteristics of milk-fed veal calves. D.A. Vermeire*[1] and W.R. Henning[2], [1]Nouriche Nutrition Ltd., [2]Pennsylvania State University.
3:45 PM	514	Relationship of blood chemistry to meat color of milk-fed veal calves. D.A. Vermeire*[1] and W.R. Henning[2], [1]Nouriche Nutrition Ltd., [2]Pennsylvania State University.
4:00 PM	515	The effects of steroidogenic growth promotants on steer performance, carcass quality, tenderness, and intramuscular lipid content. L.B. Smith*, C.A. Daley, C.L. Cooley, and A.M. Early, College of Agriculture, California State University, Chico.
4:15 PM	516	*In vivo* inhibition of nitric oxide synthase increases post-slaughter lactate production and improves tenderness in ovine *Longissimus thoracis et lumborum*. J.J. Cottrell*[1,2], F.R. Dunshea[2], M.B. Mc Donagh[2], and R.D. Warner[1,2], [1]Victoria University, Werribee, Victoria, Australia., [2]Natural Resources and Environment, Werribee, Victoria, Australia.
4:30 PM	517	Mutation in turkey alpha-RyR genomic DNA. Wen Chiang*, John Linz, Mike Maile, and Gale Strasburg, Michigan State University.
4:45 PM	518	Phospholipids and plasmalogens as precursors of flavor in beef. Stephanie Lorenz*[1], Peter Schieberle[2], Klaus Ender[1], and Karin Nuernberg[1], [1]Research Institute for the Biology of Farm Animals, [2]Deutsche Forschungsanstalt fuer Lebensmittelchemie.

Nonruminant Nutrition

Amino Acid and Protein Nutrition

Chair(s): L. Southern, Louisiana State University, and N. Trottier, Michigan State University

Room: 2000C

Time	Abstract Number	
1:00 PM	519	Foundations for current knowledge of protein and amino acids for swine. **Wilson Pond**, Cornell University, Ithaca, NY.
1:15 PM	520	Whole Body and Hindlimb Protein Breakdown is Differentially Altered by Feeding in Piglets. M.C. Thivierge*[1,2], H.V. Nguyen[1], J.A. Bush[1], A. Suryana[1], R. Orellana[1], C.W. Liu[1], D.G. Burrin[1], F. Jahoor[1], and T.A. Davis[1], [1]USDA/ARS Children's Nutr. Res. Ctr., Dept. Pediatr. Baylor Coll. Med., Houston, Texas, [2]FSAA, Université Laval, QC, Canada.
1:30 PM	521	Low protein diets can be fed to gestating sows without adverse effects. S. Möhn*, D. J. McMillan, and R. O. Ball, [1]University of Alberta, Edmonton.
1:45 PM	522	Low protein diet for sows reduce carbon dioxide and heat production. J.K.A. Atakora*, D.J. McMillan, S. Möhn, and R.O. Ball, University of Alberta.
2:00 PM	523	Effect of litter size and day of lactation on amino acid uptake by the porcine mammary glands. T.T. Nielsen[1], N.L. Trottier*[2], H.H Stein[1], C. Bellaver[1], and R.A. Easter[1], [1]University of Illinois, Urbana-Champaign, Illinois, USA, [2]Michigan State University, East Lansing, Michigan, USA.
2:15 PM	524	Supplemental arginine in diets of lactating sows: effect on plasma nitric oxide and milk amino acid concentration. J. Perez Laspiur*, A. Zanella, P. K. Ku, and N. L. Trottier, Michigan State University.
2:30 PM	525	Effect of crude protein reduction and dietary fiber on nitrogen retention and excretion in the growing pig. J. Perez-Laspiur*, C. Wickens, L. Recker, J. Moore, P.K. Ku, and N.L. Trottier, Michigan State University, East Lansing, Michigan, USA.
2:45 PM	526	Effect of crude protein reduction and dietary fiber on fecal urease and urinary nitrogen form in the growing pig. J. Perez-Laspiur, C. Wickens*, L. Recker, J. Moore, P.K. Ku, and N.L. Trottier, Michigan State University, East Lansing, MI, USA.
3:00 PM		Break
3:15 PM	527	Optimal true ileal digestible (TID) lysine dietary level in growing hybrid pigs. N. Warnants[1], M.J. Van Oeckel[1], M. De Paepe[1], L. Le Bellego*[2], and C. Relandeau[2], [1]CLO-Ghent, Melle, Belgium, [2]Ajinomoto Eurolysine, Paris, France.
3:30 PM	528	Tryptophan:lysine ratios that optimize performance in 6 to 23-kg pigs. R.W. Fent*[1], R.D. Boyd[2], G.L. Allee[1], D.R. Cook[3], and M.M. Ward[3], [1]University of Missouri-Columbia, [2]PIC USA, Inc., Franklin, KY, [3]Akey, Lewisburg, OH.
3:45 PM	529	Evaluation of the lysine requirement for 11 to 20 kg pigs. D. C. Kendall*[1], G. L. Allee[1], J. L. Usry[2], M. M. Ward[3], and D. R. Cook[3], [1]University of Missouri-Columbia, [2]Ajinomoto Heartland Inc., [3]Akey.
4:00 PM	530	Evaluation of the tryptophan:lysine ratio for late finishing barrows. D. C. Kendall*, J. W. Frank, A. M. Gaines, and G. L. Allee, University of Missouri-Columbia.
4:15 PM	531	Effect of dietary protein content and phase feeding on performance and plasma urea nitrogen patterns of growing pigs. N.T. Rodgers*[1,2] and R.T. Zijlstra[1], [1]Prairie Swine Centre Inc., [2]University of Saskatchewan, Saskatoon, Canada.
4:30 PM	532	N-acetylcysteine is a highly bioavailable precursor of cysteine for protein accretion in piglets. A. K. Shoveller*[1], J. A. Brunton[1], P. B. Pencharz[1,2], and R. O. Ball[1,2], [1]Department of Agricultural, Food and Nutritional Science, University of Alberta, Canada, [2]Departments of Nutritional Science and Paediatrics, University of Toronto, Canada.
4:45 PM	533	The effect of dietary protein to energy ratio on carcass composition and fillet yields of rainbow trout and Atlantic salmon. P.A. Azevedo*, S. Leeson, and D.P. Bureau, University of Guelph, Guelph, Ontario.

Physiology

Estrus Synchronization II

Chair(s): M. Wiltbank, University of Wisconsin, and M. Lucy, University of Missouri

Room: 2000A

Time	Abstract Number	
1:00 PM	534	Administration of gonadotropin-releasing hormone (GnRH) on d 5 or 6 of the estrous cycle alters follicle dynamics and increases pregnancy rates in beef cattle. A. M. Arnett*, J. D. Rhinehart, J. D. Bailey, R. B. Hightshoe, and L. H. Anderson, University of Kentucky.
1:15 PM	535	Synchronizing ovarian follicular development with melengestrol acetate (MGA) and a CIDR in beef cattle. M.L. Mussard*[1], C.R. Burke[1], C.L. Gasser[1], and M.L. Day[1], [1]The Ohio State University.
1:30 PM	536	Follicular development and reproductive maturation are precociously activated in heifers by early weaning and feeding a high concentrate diet. C. L. Gasser*, C. R. Burke, M. L. Mussard, E. J. Behlke, D. E. Grum, J. E. Kinder, and M. L. Day, The Ohio State University, Columbus, OH.
1:45 PM	537	Effects of varying intervals from dominant follicle emergence to progestin removal on follicular dynamics and estrus synchronization.. M.D. Utt*, F.D. Jousan, and W.E. Beal, Virginia Polytechnic Institute and State University.
2:00 PM	538	Comparison of the efficiency of estradiol 17b, estradiol benzoate, and estradiol cypionate in stimulating atresia of dominant follicles in beef heifers. J. D. Rhinehart*, A. M. Arnett, R. B. Hightshoe, and L. H. Anderson, University of Kentucky.
2:15 PM	539	Effects of abomasal casein or essential amino acid infusions on splanchnic hormone metabolism in lactating dairy cows. C. K. Reynolds*[1], J. A. Benson[1], and A. Faulkner[2], [1]The University of Reading, Reading, UK, [2]The Hannah Research Institute, Ayr, UK.
2:30 PM		Break
3:00 PM	540	Efficacy of synthetic GnRH analogs for estrous synchronization. M. A. Cline*, J. B. Hall, and W. D. Whittier, Virginia Polytechnic Institute and State University, Blacksburg, VA.
3:15 PM	541	Time of ovulation, serum LH and progesterone concentrations in estrous synchronized Brahman cows. S.R. Tatman[1], D.A. Neuendorff[1], A.W. Lewis[1], T.W. Wilson[1], C.R. Looney[2], G.L. Williams[3], and R.D. Randel*[1], [1]Texas Agricultural Experiment Station, Overton, TX, [2]Ovagenix, LP, Bryan, TX, [3]Texas Agricultural Experiment Station, Beeville, TX.
3:30 PM	542	In vitro fertilization of cumulus-intact and cumulus-free bovine oocytes in medium supplemented with heparin and different concentrations of calf serum. Parviz Tajik*[1], [1]Faculty of Veterinary Medicine, University of Tehran.
3:45 PM	543	The Effect of small doses of Naloxone on the onset and Duration of the first Oestrus after weaning in the Sow. V. Fuentes*, R. Orozco, and A. Hernández, [1]Centro Universitario de los Altos Universidad de Guadalajara, México.
4:00 PM	544	Evaluating the benefit of melengestrol acetate (MGA) in synchronizing dairy heifers. R. L. Saltman*[1], A. P. Belschner[1], J. F. Boucher[1], C. E. Gardner[2], and A. J. Wormuth[2], [1]Pharmacia Animal Health, Kalamazoo, MI, [2]Agway Feed & Nutrition, Shippensburg, PA.
4:15 PM	545	Effects Of Progesterone (P4) With An Estradiol-17beta (E_2b) 7day Controlled Internal Drug Releasing (CIDR) Insert On Fertility To Timed Insemination In Beef Females. J.A. Meyer*[1], C.R. Looney[2], R.S. Walker[1], C.R. Long[2], M.L. Day[3], and D.W. Forrest[1], [1]Texas A&M University, College Station, TX, [2]Ovagenix LLC, College Station, TX, [3]The Ohio State University, Columbus, Ohio.

Production, Management, and the Environment

Nutrient Management and Manure Composition

Chair(s): T. Christensen, NRCS

Room: 206B

Time	Abstract Number	
1:00 PM	546	Development of standard methods to estimate manure production and nutrient characteristics from dairy cattle. D. Meyer*[1], J. Harrison[2], R. Kincaid[2], R. Koelsch[3], D. Mertens[4], W. Powers[5], W. Weiss[6], and P. Wright[7], [1]University of California, Davis, [2]Washington State University, [3]University of Nebraska, [4]Agriculatural Research Service, Madison, WI, [5]Iowa State University.
1:15 PM	547	Evaluation of manure production and nutrient characteristics from dairy goats. D. Meyer*[1], E. Tooman, M. Hyman, and M. Lie, [1]University of California, Davis CA.
1:30 PM	548	Horse manure production and composition. Jose Bicudo*[1], Laurie Lawrence[1], and Eileen Wheeler[2], [1]University of Kentucky, [2]Pennsylvania State University.
1:45 PM	549	Development of standard methods to estimate manure production and nutrient characteristics from livestock operations: Beef cattle. G. Erickson*[1], B. Auverman[2], R. Eigenberg[3], W. Greene[2], T. Klopfenstein[1], and R. Koelsch[1], [1]University of Nebraska-Lincoln, [2]Texas A&M University, [3]USDA Meat Animal Research Center.
2:00 PM	550	Estimation of manure nutrient excretion from swine based upon diet composition and feed intake. S. Carter*, P. Westerman, T. van Kempen, G. Cromwell, G. Hill, G. Shurson, B. Richert, and K. Casey, FASS-ASAE Manure Standards Review Committee.
2:15 PM	551	Opportunities for the Animal Scientist in the CNMP process and the EPA CAFO rule. A. L. Sutton*[1], [1]Purdue University.
2:30 PM	552	National standards for estimating manure nutrient excretion based upon animal feed program. W. Powers*[1] and R. Koelsch[2], [1]Iowa State University, [2]University of Nebraska.
2:45 PM	553	Estimating nutrients and characteristics of manure for land application following storage. W.J. Powers*[1], J.C. Lorimor[1], and A. Sutton[2], [1]Iowa State University, [2]Purdue University.
3:00 PM		Break
3:15 PM		Discussion
3:45 PM	554	A phosphorus management survey on Northeast and Mid-Atlantic dairy farms in the US. J. D. Toth*[1], Z. Dou[1], J. D. Ferguson[1], R. J. Munson[1], L. E. Chase[2], K. F. Knowlton[3], R. A. Kohn[4], J. T. Sims[5], and Z. Wu[6], [1]University of Pennsylvania, [2]Cornell University, [3]Virginia Polytechnic Institute, [4]University of Maryland, [5]University of Delaware, [6]Pennsylvaina State University.
4:00 PM	555	The effect of improved crop yields on whole-farm mass nutrient balance. G.L. Albrecht*[1], D.G. Fox[1], G.J. Birdsall[1], H.G. Nafziger[1], L.E. Chase[1], and J.H. Cherney[2], [1]Cornell University Department of Animal Science, [2]Cornell University Department of Crop and Soil Sciences.
4:15 PM	556	Flows of N through a dairy herd. J. D. Ferguson*[1], Z. Dou[1], B. Vecchiarelli[1], S. Lees[1], J. Beach[1], and C. F. Ramberg, Jr.[1], [1]University of Pennsylvania, School of Veterinary Medicine.
4:30 PM	557	Excretion of urine, feces, and nitrogen by lactating Holstein cows. L. M. Johnson*[1], J. H. Harrison[1], D. Davidson[1], and R. Kincaid[2], [1]Washington State University, Puyallup, WA, [2]Washington State University, Pullman, WA.
4:45 PM	558	Manure management, odor and diseases control. **Aron Itkin***, A.I. Engineering Services.

Ruminant Nutrition

Fat

Chair(s): G. Lindberg, Nutrition Professionals, Inc.

Room: 2000D

Time	Abstract Number	
1:00 PM	559	Use of the CPM-Dairy fat sub-model to predict absorption of total and individual LCFA from different fat supplements. P.J. Moate*, R.C. Boston, and W. Chalupa, University of Pennsylvania, Kennett Square, PA.
1:15 PM	560	Effects of feeding raw and micronized flaxseed on yield and composition of milk form Holstein cows. Arif Mustafa*[1], Yvan Chouinard[2], and David Christensen[3], [1]McGill University, [2]Université Laval, [3]University of Saskatchewan.
1:30 PM	561	Influence of barley grain variety on fatty acid synthesis and the expression of fat metabolism genes in bovine adipose tissue.. E. Okine*, E. Norberg, D.R. Glimm, G.R. Khorasani, and J.J. Kennelly, Department of AFNS, University of Alberta, Edmonton, Alberta, Canada.
1:45 PM	562	Effect of feeding calcium salts of soybean or palm oils on milk yield and composition, and on selected reproductive parameters by high producing dairy cows. P. Mandebvu*[1], C. S. Ballard[1], C. J. Sniffen[1], M. P. Carter[1], H. M. Wolford[1], T. Sato[1,2], Y. Yabuuchi[2], E. Block[3], and D. L. Palmquist[4], [1]W. H. Miner Agricultural Research Institute, Chazy, NY, [2]Zen-Noh National Federation of Agricultural Co-operative Associations, Tokyo, Japan, [3]Church & Dwight Co. Inc., NJ, [4]Ohio State University, Wooster, OH.
2:00 PM	563	Effects of long chain fatty acids on lipid metabolism in monolayer cultures of bovine hepatocytes. D. G. Mashek* and R. R. Grummer, University of Wisconsin, Madison.
2:15 PM	564	Effects of conjugated linoleic acid on lipid metabolism in monolayer cultures of bovine hepatocytes. D. G. Mashek* and R. R. Grummer, University of Wisconsin, Madison.
2:30 PM	565	Saturation effects of rumen-inert fat sources on feed intake, milk production, and feeding behavior in lactating cows varying in milk yield. K. J. Harvatine* and M. S. Allen, Michigan State University, East Lansing.
2:45 PM		Break
3:15 PM	566	Metabolic clearance rate of progesterone and estradiol-17b is decreased by fat. S. Sangsritavong, D.G. Mashek, A. Gücmen, J.M. Haughian, R.R. Grummer, and M.C. Wiltbank*, Department of Dairy Science University of Wisconsin-Madison.
3:30 PM	567	Influence of diet on conjugated linoleic acid content of milk, cheese and blood serum. R. C. Khanal*[1], T. R. Dhiman[1], D. J. McMahon[2], and R. L. Boman[1], [1]Department of Animal, Dairy and Veterinary Sciences, [2]Department of Nutrition and Food Sciences.
3:45 PM	568	Effect of fat source on microbial fermentation in continuous culture of rumen contents. G.I. Crawford*[1], M.D. Stern[1], R.L.K. Hulbert[1], K.A. Caperoon[1], and B.L. Miller[2], [1]University of Minnesota, [2]Land O'Lakes Farmland Feed.
4:00 PM	569	Effects of esterification, degree of saturation, and amount of fatty acids infused into the rumen or abomasum in lactating dairy cows. N.B. Litherland*[1], A.D. Beaulieu[1], and J.K. Drackley[1], [1]University of Illinois, Urbana.
4:15 PM	570	Fish oil inhibits the biohydrogenation of fatty acids in the rumen causing an increase in milk trans-octadecenoic and conjugated linoleic acid content. K. J. Shingfield*[1], S. Ahvenjärvi[2], V. Toivonen[2], A. Ärölä[2], P. Huhtanen[2], and J. M. Griinari[3], [1]The University of Reading, School of Food Biosciences, [2]MTT Agrifood Research Finland, Animal Production Research, [3]The University of Helsinki, Department of Animal Genetics.
4:30 PM	571	Biohydrogenation shift and milk fat depression in lactating dairy cows fed increasing levels of fish oil. A. Ärölä [1], K.J. Shingfield[2], A. Vanhatalo[1], V. Toivonen[1], P. Huhtanen[1], and J.M. Griinari*[3], [1]MTT, Agrifood Research Finland, [2]University of Reading, UK, [3]University of Helsinki, Finland.
4:45 PM	572	Effect of milk urea nitrogen level on probability of conception of dairy cows. K. Guo*, R. Kohn, E. Russek-Cohen, and M. Varner, University of Maryland, College Park.

WEDNESDAY, JULY 24, 2002[1]

Joint FASS-ADSA-ASAS Business Meeting

Room: 302AB

7:00 AM – 8:30 AM

ADSA Business Meeting

Chair(s): John Bruhn, University of California

Room: 206B

8:30 AM – 9:00 AM

ASAS Business Meeting

Chair(s): David Ames, Colorado State University

Room: 206A

8:30 AM – 9:00 AM

Congressional Insights

Facilitator: B. Glenn, FASS

Room: 303B

Sponsor: ASAS Board of Directors

Time: 9:00 AM – 12:00 PM

Description:

The Congressional Insights program is a novel, state-of-the-art, interactive computer model designed to simulate a two-year term of office in Congress. This computer simulation and educational tool introduces participants to the legislative and political process on Capitol Hill. It illustrates why politicians must (or should) make some of the decisions they do.

The program will introduce you to the pressures faced by members of Congress, show you the demands placed on their time, help you to understand that legislators are public officials whose actions are open to public scrutiny, and provide you with a better understanding of the role of elected officials and their staffs.

Participants are actively involved in this program. It focuses on policy and political issues and effectively demonstrates some of the tough decisions faced by elected officials.

[1]Names in bold indicate invited speakers.

SYMPOSIUM

Contemporary and Emerging Issues

Critical Perspective of Animal Agriculture

Chair(s): K. Schillo, University of Kentucky

Sponsors: Elanco Animal Health, ASAS Foundation, and European Association of Animal Production

Room: 200A

Time	Abstract Number	
9:00 AM		Introduction. K. Schillo, University of Kentucky.
9:20 AM	573	Livestock, ethics and quality of life. **J Hodges***, European Association for Animal Production.
9:50 AM	574	Value-added Agriculture:Inclusion of Race and Gender in the Professional Formula. **M.M. Beck***[1] and **J.C. Swanson**[2], [1]Univ of Nebraska, Lincoln, Nebraska, [2]Kansas State Univ, Manhattan, Kansas.
10:20 AM		Break
10:30 AM	575	Rethinking relationships in wretched contexts: the power of privilege. **C. Cuomo***, University of Cincinnati, Cincinnati, Ohio, USA.
11:00 AM		Response. **M. S. Weber-Nielsen**, Michigan State University, and **E. Bergfeld**, American Society of Animal Science.
11:30 AM		Discussion.

SYMPOSIUM

Dairy Foods

Extended Shelf-Life Technologies and Trends for Fluid Milks: Current Applications and Potentials for the Future

Chair(s): Kathyrn Boor, Cornell University

Sponsors: CDRF, DMI, and Land O'Lakes

Room: 301A

Time	
9:00 AM	Defining extended shelf-life (ESL) technologies for fluid milk. **C. Sizer**, National Center for Food Safety and Technology.
9:30 AM	Global trends in ESL for chilled dairy products. **G. Barnes**, Tetra Pak.
10:00 AM	Break
10:15 AM	New technologies: High pressure technologies. What are the advancements and potential applications in the dairy industry? **P. Paquin**, Dairy Research Centre, STELA.
10:45 AM	New technologies: Pulsed electric field and other electronic processing technologies. **C. P. Dunne**, US Army Natick Soldier Center.
11:15 AM	New technologies: High speed in-line electron beam sterilization of polymer containers. **S. V. Nablo**, Electron Processing Systems, Inc.

SYMPOSIUM

Goat Species

Potent Solutions for Impotent Dewormers: Controlling Resistant Internal Parasites

Chair(s): S. Hart, Langston University

Sponsors: Elanco Animal Health

Room: 203

Time	Abstract Number	
9:00 AM	576	The development of dewormer resistance in small ruminants and consequences. **W.E. Pomroy*[1]**, [1]Institute of Veterinary, Animal and Biomedical Science, Massey University, Palm/North, NZ.
9:45 AM	577	Emerging issues in control of nematode parasites of goats: anthelmintic resistance and biological control using nematophagous fungi. **T.H. Terrill*[1]**, R.M. Kaplan[2], M. Larsen[3], and J.E. Miller[4], [1]Fort Valley State University, Fort Valley, GA, [2]The University of Georgia, Athens, GA, [3]The Royal Veterinary and Agricultural University, Copenhagen, Denmark, [4]Louisiana State University, Baton Rouge, LA.
10:30 AM		Break
10:45 AM	578	Tannins for suppression of internal parasites. **B.R. Min*** and **S.P. Hart**. E (Kika) dela Garza Institute for Goat Research, Langston University, OK, 73050, USA.
11:15 AM	579	Pasture and animal management for control of gastrointestinal nematodes. **Daniel Miller*[1]** and **T. M. Craig[2]**, [1]E (Kika) de la Garza Institute for Goat Research, Langston Univ. OK, [2]Texas A & M University.

Mixed Models Workshop

Presenter(s): B. Craig, Purdue University; L. W. Douglass, University of Maryland; and R. J. Tempelman, Michigan State University

Room: 205B

Time: 8:00 AM – 5:00 PM

(Second session on 7/25, 8:00 AM – 12:00 PM; Interested parties should attend both sessions. Preregistration fee required.)

Description: A professional development opportunity in the use of mixed models for the analysis of common experimental designs in animal and dairy science. Emphasis on repeated measures analysis is continued with new extensions to curve (e.g., growth and lactation) modeling, including the use of nonlinear mixed effects models. Analyses of complete and incomplete block designs are also considered with applications including inference on microarray gene expression data. Emphasis is placed on the use of SAS PROC MIXED. All professionals and graduate students are invited to register.

SYMPOSIUM

Physiology

Developmental Endocrinology

Chair(s): R. Nebel, Virginia Polytechnic Institute & State University, and G. Williams, Texas A&M University

Sponsors: European Association of Animal Production, Monsanto, Pharmacia, and USDA

Room: 2000A

Time	Abstract Number	
9:00 AM	580	Integration of nutrient supply and growth during fetal life: roles of leptin and the IGF system. **R.A. Ehrhardt*[1]**, A.W. Bell[1], and Y.R. Boisclair[1], [1]Dept. of Animal Science, Cornell University, Ithaca, NY.
9:50 AM	581	Integrated roles of growth factors, integrins, and matrix proteins in conceptus development and implantation. **Laurie A. Jaeger*[1]**, Greg A. Johnson[2], Robert C. Burghardt[1], and Fuller W. Bazer[1], [1]Texas A&M University, College Station, Texas, USA, [2]University of Idaho, Moscow, Idaho, USA.
10:40 AM	582	Nutritional, metabolic and endocrine status of neonatal calves. **J. Blum***, University of Berne, Switzerland.

SYMPOSIUM

Ruminant Nutrition

New Concepts and Developments in Forage and Feedstuff Analysis and Applications to Ruminant Nutrition

Chair(s): J. Woodford, Nutrition Professionals, Inc.

Sponsor: Purina Mills, LLC

Room: 200B

Time	Abstract Number	
9:00 AM		Introduction. J. Woodford, Nutrition Professionals, Inc.
9:05 AM	583	Characterizing carbohydrates in feeds?. **M. B. Hall*[1]**, [1]Dept. of Animal Sciences, University of Florida.
9:45 AM	584	Characterization of proteins in feeds. **C.G. Schwab*[1]**, T.P. Tylutki[2], C. Sheaffer[3], and M.D. Stern[3], [1]University of New Hampshire, Durham, NH, [2]Cornell University, Ithaca, NY, [3]University of Minnesota, St. Paul, MN.
10:25 AM		Break
10:35 AM	585	The end products of silage fermentation and their relationships to forage management. **Limin Kung, Jr.*[1]** and Richard E. Muck[2], [1]The University of Delaware, [2]The US Dairy Forage Research Center, USDA, ARS.
11:15 AM	586	Use of new concepts in ration formulation and feeding for high producing cows. **R.G. Hinders***, Hinders Nutrition Consulting, Acampo, CA.

Breeding and Genetics

Applied Animal Breeding

Chair(s): M. Davis, The Ohio State University

Room: 205C

Time	Abstract Number	
9:00 AM	587	Organ weights and internal fat of Angus or Romosinuano steers finished in the feedlot or with grain-on-pasture. S. W. Coleman*[1], W. A. Phillips[2], C. C. Chase, Jr.[1], D. G. Riley[1], B. Morgan[3], J. Nelson[3], and T. A. Olson[4], [1]USDA, ARS SubTropical Agricultural Research Station, Brooksville, FL, [2]USDA, ARS Grazinglands Research Laboratory, El Reno, OK, [3]Oklahoma State University, Stillwater, OK, [4]University of Florida, Gainesville, FL.
9:15 AM	588	Winter and spring performance of steer calves reared in temperate or sub-tropic environments and used as stockers on winter wheat pasture in Oklahoma. W. A. Phillips*[1], E. E. Grings[2], S. W. Coleman[3], R. E. Short[2], D.G. Riley[3], C. C. Chase[3], H. S. Mayeux[1], and R. K. Heitschmidt[2], [1]USDA-ARS Grazinglands Research Laboratory, El Reno,OK, [2]USDA-ARS Fort Keogh Livestock and Range Research Laboratory, Miles City, MT, [3]USDA-ARS Subtropical Agricultural Research Station, Brooksville, FL.
9:30 AM	589	Scrotal circumference in yearling bulls may be related to number of facial hair whorls within a breeding program. M Meola*, T Grandin, P Burns, and M Enns, Colorado State University, Fort Collins, Colorado, USA.
9:45 AM	590	Correlated responses in carcass and meat quality traits in a line of Landrace pigs selected for increased ultrasound loin eye area.. D.L. Kuhlers*[1], K. Nadarajah[1], S.B. Jungst[2], and B.L. Anderson[1], [1]Auburn University, AL, [2]PIC, Franklin, KY.
10:00 AM	591	Between-breed variation in response to *Haemonchus contortus* infection in sheep. H. B. Vanimisetti*, S. P. Greiner, A. M. Zajac, and D. R. Notter, Virginia Polytechnic Institute and State University, Blacksburg.

Dairy Foods

Sensory

Chair(s): M. Drake, North Carolina State University, and W. Harper, The Ohio State University

Room: 301B

Time	Abstract Number	
9:00 AM	592	Trace Thiol compounds in Aged Cheddar Cheese. J.P. Kleinhenz[1], W.J. Harper*[1], and M. A. Drake[2], [1]The Ohio State University Columbus, Ohio,USA, [2]North Carolina State University, Raleigh, North Carolina, USA.
9:15 AM	593	Comparison of descriptive sensory analysis with electronic nose differentiation of commercial Swiss cheese. W. J. Harper*[1], J. Kuo[1], and M. A. Drake[2], [1]The Ohio State University, Columbus, Ohio, USA, [2]North Carolina State University, Raleigh, NC, USA.
9:30 AM	594	Impact of starter culture on flavor of liquid Cheddar cheese whey. M. E. Carunchia Whetstine *, J. D. Parker, D. K. Larick, and M. A. Drake, North Carolina State University, Raleigh, NC.
9:45 AM	595	Effect of feeding systems on composition and organoleptic quality of goat milk cheese. A. K. Soryal, S.S. Zeng*, B. Min, S. Hart, B. Bah, and K. Tesfai, Langston University.
10:00 AM		Break
10:30 AM	596	Impact of pasture on sensory properties of Ragusano. S Carpino*[1], J Horne[1], C Melilli[1], G Licitra[2], and D.M. Barbano[3], [1]Consorzio Ricerca Filiera Lattiero-Caseraia, s.p.25 km 5, 97100 Ragusa, Italy, [2]D.A.C.P.A, Catania University, 95100, Catania, Italy, [3]Department of Food Science, Cornell University, Ithaca, NY 14853.
10:45 AM	597	Flavors and off-flavors associated with full fat and low fat chocolate milk in the North Carolina marketplace and school lunch program. A.P. Hansen*, North Carolina State University, Raleigh, N.C. USA.

11:00 AM	598	Quality attributes of lightly salted sweet cream butter in the North Carolina marketplace. A.P. Hansen* and M.D. Keziah, North Carolina State University.
11:15 AM	599	Characterization of volatile nutty flavor compounds in Cheddar cheese. M.A. Drake*[1], Y.K. Avsar[2], Y. Karagul-Yuceer[1], and K.R. Cadwallader[3], [1]North Carolina State University, [2]Mustafa Kemal University, [3]University of Illinois.

Food Safety

Foodborne Pathogens

Chair(s): R. Anderson, USDA, ARS

Room: 206B

Time	Abstract Number	
9:00 AM	600	Acid resistance status of *Escherichia coli* O157 in bovine feces as shed from naturally contaminated cattle. E. D. Berry* and G. A. Barkocy-Gallagher, USDA, ARS, U.S. Meat Animal Research Center, Clay Center, NE.
9:15 AM	601	Effect of preconditioning and distance of transport on shedding of *Escherichia coli* and *E. coli* O157:H7 by calves destined for feedlot. S.J. Bach*[1], T.A. McAllister[1], G.J. Mears[1], A.L. Schaefer[2], and K.S. SchwartzkopfGenswein[3], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]Agriculture and Agri-Food Canada, Lacombe, AB, [3]Alberta Agriculture, Food and Rural Development, Lethbridge, AB.
9:30 AM	602	Intervention to reduce fecal shedding of enterohemorrhagic *Escherichia coli* O157:H7 in naturally infected cattle using neomycin sulfate. R.O. Elder*[1], J.E. Keen[2], T.E. Wittum[3], T.R. Callaway[1], T.S. Edrington[1], R.C. Anderson[1], and D.J. Nisbet[1], [1]USDA/SPARC, College Station, TX, [2]USDA/MARC, Clay Center, NE, [3]Ohio State University, Columbus, OH.
9:45 AM	603	Effect of co-mingling stress on fecal shedding of *Salmonella typhimurium* by early weaned piglets. T. R. Callaway*[1], J. L. Morrow[2], T. S. Edrington[1], K. J. Genovese[1], R. O. Elder[1], J. W. Dailey[2], R. C. Anderson[1], and D. J. Nisbet, [1]Agricultural Research Service/USDA, Food and Feed Safety Research Unit, College Station, TX, [2]Agricultural Research Service/USDA, Livestock Issues Research Unit, Lubbock, TX.
10:00 AM		Break
10:15 AM	604	The prevalence of multiple antibiotic-resistant *Salmonella* recovered from swine at a slaughter facility. F. M. Wallace*[1], L. Wonderling[1], P. J. Fedorka-Cray[2], A. Oser[3], R. Pearce[4], J. Call[1], M. L. Tamplin[1], I. F. Feder[1], L. Yoder[3], and J.B. Luchansky[1], [1]USDA-ARS Wyndmoor, Pa., [2]USDA-ARS Athens, Ga., [3]Hatfield, Pa., [4]National Food Center, Castleknock, Dublin, Ireland.
10:30 AM	605	Characterization of farm management practices that contribute to number and type of gram-negative bacteria in bulk tank milk. N. V. Hedge*, R. Butchko, C. Hampton, A. A. Sawant, and B. M. Jayarao, The Pennsylvania State University, University Park, PA, USA.
10:45 AM	606	Pasteurization effects on *Mycobacterium paratuberculosis*, *E. coli* 0157:H7, *Salmonella sp.*, *Listeria monocytogenes*, and *Staphylococcus aureus*. L. Green*, S. Godden, and J. Feirtag, University of Minnesota, St. Paul, MN.
11:00 AM	607	Detection comparison of *L. monocytogenes* in yogurt and cold pack cheese using enzyme-linked immunofluorescent assays. T. M. Silk* and C. W. Donnelly, University of Vermont, Burlington, Vermont, USA.

Growth and Development

Chair(s): D. Burrin, USDA-ARS Children's Nutrition Research Center, and M. Doumit, Michigan State University

Room: 206A

Time	Abstract Number	
9:00 AM	608	Effect of differences in pattern of prepubertal growth on response to realimentation: Relationships to reproductive development. John Klindt*, J.T. Yen, and R. K. Christenson, USDA, ARS, U.S. Meat Animal Research Center, Clay Center, NE.
9:15 AM	609	The effect of carbohydrate source on intestinal morphology of weaned pigs. M.A.M. Spreeuwenberg*[1], J.M.A.J. Verdonk[2], M.W.A. Verstegen[3], and A.C. Beynen[4], [1]Nutreco, Boxmeer, [2]IDTNO, Lelystad, [3]Wageningen University, [4]Utrecht University, The Netherlands.
9:30 AM	610	Dietary betaine (Betafin) and porcine somatotropin (Reporcin) have additive effects upon growth performance in restrictively-fed boars. D Suster[1], M Mottram[2], B.J. Leury[3], R.H. King[1], and F.R. Dunshea*[1], [1]Natural Resources and Environment, Werribee, Vic 3030, Australia, [2]Feedworks, Hamilton, Qld 4007, Australia, [3]Institute of Land and Food Resources, University of Melbourne, Vic 3010, Australia.
9:45 AM	611	The somatotropin (ST)/insulin-like growth factor (IGF) system is not affected by an infectious disease challenge in growing pigs. W.T. Oliver*[1], G.W. Almond[1], S.A. Mathews[1], J.A. Brown[1], and R.J. Harrell[1], [1]North Carolina State University, Raleigh, NC.
10:00 AM	612	Myostatin gene expression in nursery pigs infected with *Mycoplasma hyopneumoniae* (Mh) and Porcine Reproductive and Respiratory Syndrome Virus (PRRSV). J. Escobar*[1], T.L. Toepfer[1], W.G. Van Alstine[2], D.H. Baker[1], and R.W. Johnson, [1]University of Illinois, Urbana, IL, [2]Purdue University, W. Lafayette, IN.
10:15 AM		Break
10:30 AM	613	The Role of JAK2 in Terminal Differentiation in C2C12 Myoblasts. S. Miller and J.M. Reecy*, Iowa State University.
10:45 AM	614	Quantification of myogenin-positive satellite cells from bovine skeletal muscle. J.S. Scheffler*, N.T. Mesires, and M.E. Doumit, Michigan State University, East Lansing, MI.
11:00 AM	615	Development of the Callipyge phenotype during early post-natal growth in lambs. R. D. Sainz*[1], J. S. Cubbage[1], M. Dally[1], F. C. Castro[1], and B. Freking[2], [1]University of California, Davis, CA, USA, [2]US Meat Animal Research Center, Clay Center, NE, USA.
11:15 AM	616	Leptin reduces feed intake and increases serum fatty acid concentrations in growing pigs, but does not regulate acetyl Co-A carboxylase activity or PPARa expression in adipose tissue. K. M Ajuwon*[1], J Kuske[1], O Adeola[1], D. L Hancock[2], D. B Anderson[2], and M. E Spurlock[1], [1]Purdue University, West Lafayette, Indiana, [2]Elanco Animal Health, Inc., Greenfield, Indiana.
11:30 AM	617	The effect of conjugated linoleic acid on the differentiation and proliferation of porcine stromal-vascular cells. T.D. Brandebourg* and C.Y. Hu, Oregon State University, Corvallis.

Horse Species

Equine Research and Overview of Mare Reproductive Loss Syndrome

Chair(s): B. Nielsen, Michigan State University

Room: 202

Time	Abstract Number	
9:00 AM	618	Temporal variables of the flat walking Tennessee Walking Horse foal. M.C. Nicodemus and K.M. Holt, Mississippi State University, Mississippi State, MS/USA.

9:15 AM	619	The effect of *Kluyveromyces marxianus* and *Saccharomyces cerevisiae* on lactose concentration of equine milk. P. M. Yocum* and B. Alston-Mills, North Carolina State University, Raleigh, NC/USA.
9:30 AM	620	An ideal protein for the lactating mare. C.L. Wickens*, P.K. Ku, and N.L. Trottier, Michigan State University, East Lansing, Michigan, USA.
9:45 AM	621	Influence of short duration, high intensity exercise on bone mineral content in stalled weanlings. K.M. Hiney*, B.D. Nielsen, and D. Rosenstein, Michigan State University, East Lansing, MI, USA.
10:00 AM	622	Feeding-fasting cycle in meal fed yearling horses. W. B. Staniar*[1], D. S. Kronfeld[1], R. M. Akers[1], J. R. Burk[1], and P. A. Harris[2], [1]Virginia Polytechnic Institute and State University, Blacksburg, VA, [2]Equine Studies Group, WALTHAM Centre for Pet Nutrition, Melton Mowbray, UK.
10:15 AM		Break
10:45 AM	623	Pyrimethamine and sulfadiazine administration lowers plasma folate and increases plasma homocysteine in horses. A. L. Ordakowski*[1], D. S. Kronfeld[2], C. A. Williams[2], J. L. Holland[2], and L. S. Gay[2], [1]University of Maryland, College Park, MD 20742, [2]Virginia Polytechnic Institute and State University, Blacksburg, VA 24061.
11:00 AM	624	Age and exercise training alter plasma beta-endorphin, cortisol, and immune parameters in horses. K. Malinowski*[1], E. Shock[1], V. Roegner[1], P. Rochelle[1], C.F. Kearns[1], P.D. Guirnalda[2], and K.H. McKeever[1], [1]Rutgers University, New Brunswick, NJ, USA, [2]Sloan Kettering, New York, New York, USA.
11:15 AM		Mare reproductive loss syndrome: An overview. **R. J. Coleman**, University of Kentucky.

Milk Protein & Enzymes

Chair(s): J. Lucey, University of Wisconsin, and D. McMahon, Utah State University

Room: 205A

Time	Abstract Number	
9:00 AM	625	Effect of method and time of hydration on structure of dried milk proteins. B. S. Oommen*[1] and D. J. McMahon[1], [1]Utah State University.
9:15 AM	626	Aggregation reactions of apo- and holo-a-lactalbumin at neutral pH. M.K. McGuffey* and E.A. Foegeding, North Carolina State University, Raleigh, NC.
9:30 AM	627	The Change of Insulin-Like Growth Factor-1 (IGF-1) in Bovine Milk during Lactation Period. S. H. Kang*[1], J. W. Kim[2], J. Y. Imm[3], S. J. Oh[4], and S. H. Kim[2], [1]Seoul Dairy Cooperatives, [2]Korea University, Division of Food Science, [3]Kookmin University, Dept. of Food & Nutrition, [4]Korea Yakult Co. Ltd.
9:45 AM	628	The effect of stage of lactation on milk protein composition. J. A. Maas*[1], [1]Department of Animal and Food Sciences, University of Delaware.
10:00 AM		Break
10:30 AM	629	Antihypertensive effect of milk-based media fermented by *Lactobacillus helveticus* R-211 and R-389. P.-L. Leclerc*[1], S. F. Gauthier[1], H. Bachelard[2], and D. Roy[3], [1]Laval University, Quebec, Canada, [2]Hypertension unit, Laval University, Quebec, Canada, [3]Agriculture and Agri-Food Canada, St-Hyacinthe, Canada.
10:45 AM	630	Molecular structure and interactions of b-lactoglobulin studied by Fourier transform infrared spectroscopy. T Lefèvre[1] and M Subirade[2], [1]Universite Laval CERSIM, [2]Universite Laval STELA.
11:00 AM	631	Effects of Beta-Lactoglobulin enriched colostrum on IgG transport in neonatal piglets. L.F. Sutton*[1] and B. Alston-Mills[1], [1]North Carolina State University.
11:15 AM	632	Complex coacervation between beta-lactoglobulin and acacia gum. C. Schmitt*[1] and C. Sanchez[2], [1]Nestle Research Center, Lausanne, Switzerland, [2]ENSAIA/INPL, Nancy, France.

Nonruminant Nutrition

Nutrient Metabolism, Evaluation, and Modeling

Chair(s): J. Matte, Agriculture and Agri-Food Canada

Room: 2000B

Time	Abstract Number	
9:00 AM	633	Effects of feed restriction and subsequent re-feeding on energy utilization in growing pigs. P. A. Lovatto*[1], J. van Milgen[2], J. Noblet[2], and D. Sauvant[3], [1]Universidade Federal de Santa Maria, Santa Maria, RS, Brasil, [2]INRA, UMR sur le Veau et le Porc, Saint Gilles, France, [3]INAPG/INRA, UMR Physiologie de la Nutrition et Alimentation, Paris, France.
9:15 AM	634	Previous feeding level influences fasting heat production in growing pigs. C.F.M. de Lange*[1], J. van Milgen[2], J. Noblet[2], S. Dubois[2], and S.H. Birkett[1], [1]University of Guelph, Guelph, ON, Canada, [2]Institut National de la Recherche Agronomique, St. Gilles, France.
9:30 AM	635	Energy cost of excreting indigestible material in growing pigs is minimal. C.F.M. de Lange*[1], J. Noblet[2], J. van Milgen[2], S. Dubois[2], and S.H. Birkett[1], [1]University of Guelph, Guelph, ON, Canada, [2]Institut National de la Recherche Agronomique, St. Gilles, France.
9:45 AM	636	Modelling the effects of thermal environment and dietary composition on pig performance. I. J. Wellock*, I. Kyriazakis, and G. C. Emmans, Scottish Agricultural College, Edinburgh, UK.
10:00 AM	637	Influence of sex, genotype, and slaughter weight on performance and carcass quality of fattening pigs. M.A. Latorre*[1], A. Fuentetaja[2], R. Lazaro[1], E. Gomez[3], and G.G. Mateos[1], [1]Universidad Politecnica de Madrid, Spain, [2]Copese S.A., Segovia, Spain, [3]Centro de Pruebas de Porcino, Segovia, Spain.
10:15 AM	638	Effect of feeding strategies and sex on performance and homogeneity of pigs at slaughter. C. Pineiro*[1], E. Lorenzo[2], P. Medel[3], R. Lazaro[4], and G. G. Mateos[4], [1]PigCHAMP Pro Europa S.A, Spain, [2]Proinserga I+D, Spain, [3]Imasde Agropecuaria S.A., Spain, [4]Universidad Politecnica de Madrid, Spain.
10:30 AM	642	Comparison of a high starch concentrate with a low starch, added fat concentrate for weanling horses. E. A. Ott*, J. Kivipelto, and A. Kavazis, University of Florida.
10:45 AM	639	Effects of WEANMOR® feed additive on sow and litter performance. J. A. Loughmiller*[1], B. Hardy[2], E. Cerchiar[3], B. T. Christopherson[3], H. H. Stein[4], and K. Hugoson[5], [1]Omega Nutrition, Fairmont, MN, [2]NutriVision, Fairmont, MN, [3]SODA Feed Ingredients, Brookings, SD, [4]South Dakota State University, Brookings, [5]Hugoson Pork, East Chain, MN.
11:00 AM	640	Effect of soybean variety and processing on growth performance of young pigs. M. Palacios*, R. A. Easter, T. Hymowitz, K. T. Soltwedel, and J. E. Pettigrew, University of Illinois, Urbana.
11:15 AM	641	Effect of soybean meal origin on the growth performance in broilers and pigs. J. G. Kim*, Y. W. Shin, Y. H. Park, H. S. Kim, and K. Y. Whang, Korea University.
11:30 AM	643	The effects of guar gum (GG), hydroxypropylated starch (HPS), and xanthan gum (XG) on digestive dynamics in dogs fed canned foods. S.E. Kitts*[1], R.M. Yamka[1], A.D. True[1], W.D. Schoenherr[2], T.M. Dubbs[1], L.A. White[1], E.S. Vanzant[1], and D.L. Harmon[1], [1]University of Kentucky, Lexington, KY, [2]Hill's Pet Nutrition, Topeka, KS.

Nonruminant Nutrition

Mineral and Vitamin Nutrition

Chair(s): T. Crenshaw, University of Wisconsin

Room: 2000C

Time	Abstract Number	
9:00 AM	644	Unraveling mineral essentiality in swine. **Bud Harmon***, Purdue University.
9:15 AM	645	Effect of feeding chromium tripicolinate as a top dress to boars upon sperm production. M. E. Wilson*[1], T. J. Gall[2], K.J. Rozeboom[1], R. A. Moser[3], D. E. Orr[3], and K. W. Purser[4], [1]Minitube of America, Inc., Verona, WI, [2]Pork Technologies, Danville, IA, [3]United Feeds, Inc., Sheridan, IN, [4]Prince Agri Products, Inc., Quincy, IL.
9:30 AM	646	Effect of dietary protein and mineral content on water utilization patterns in growing pigs. M.I. Shaw[1,2], A.D. Beaulieu*[1], and J.F. Patience[1], [1]Prairie Swine Centre, Inc., Saskatoon, SK, [2]University of Saskatchewan, Saskatoon, SK.
9:45 AM	647	Bioavailability of supplemental minerals to animals with emphasis on method of determination. **C. B. Ammerman*** and P. R. Henry, University of Florida.
10:00 AM	648	Bioavailability of phosphorus associated with conventional corn is underestimated for growing pigs. Y. Shen*, M. Z. Fan, A. Ajakaiye, and T. Archbold, University of Guelph, Guelph, Ontario, Canada.
10:15 AM	649	Effect of lower dietary concentrations of zinc polysaccharide versus zinc oxide on growth performance and zinc excretion by weanling pigs. C. E. Huntington*[1], D. W. Bollinger[1], T. L. Veum[1], and W. A. Brommelsiek[2], [1]University of Missouri Columbia, MO, [2]Quali Tech, Inc. Chaska, MN.
10:30 AM		Break
10:45 AM	650	Contributions of swine research to understanding the roles of selenium and vitamin E. **James Oldfield***, Oregon State University.
11:00 AM	651	Influence of feeding system and diet on a-tocopherol concentration in muscle and microsome membranes of Iberian pigs. C. J. Lopez-Bote[1], G. G. Mateos*[2], A. Daza[2], B. Isabel[1], and R. Lazaro[2], [1]Universidad Complutense de Madrid, Spain, [2]Universidad Politecnica de Madrid, Spain.
11:15 AM	652	Efficacy of pantothenic acid as a modifier of body composition in pigs. B.A. Autrey*, T.S. Stahly, and T.R. Lutz, Iowa State University, Ames, IA.
11:30 AM	653	Dietary vitamin B_{12} supplements in gestating gilts and B_{12} transfer to piglets during lactation. F. Simard[1], F. Guay[1], J. P. Laforest[1], A. Giguère[2], C. L. Girard[2], and J. J. Matte*[2], [1]Universite Laval, Quebec, Qc, Canada, [2]Agriculture and Agri-Food Canada, Lennoxville, Qc, Canada.
11:45 AM	654	Effect of the meal on the utilization of some nutrients and vitamins by the mammary gland in lactating sows. J.Y. Dourmad*[1], J.J. Matte[2], and D. Renaudeau[1], [1]INRA-UMRVP 35590 Saint-Gilles, France, [2]Agric. and Agri-Food Canada, Lennoxville (QC), Canada, J1M 1Z3.

Undergraduate and Graduate Education

Chair(s): E. Jaster, California Polytechnic State University

Room: 204A

Time	Abstract Number	
9:00 AM	655	The use of peer review in an animal science course focusing on societal issues. W. A. Scheer* and J. N. Spain, University of Missouri, Columbia, MO.
9:15 AM	656	Practical student experiences aid in the education on controversial animal topics. K. D. Ange*, North Carolina State University, Raleigh, NC.

9:30 AM	657	A novel method for teaching animal welfare concepts: animal welfare judging teams. CR Heleski*[1], AJ Zanella[1], and EA Pajor, [1]Michigan State University, East Lansing MI, USA, [2]Purdue University, West Lafayette, IN, USA.
9:45 AM	658	A pre-capstone seminar to foster student interaction to improve educational quality of independent learning experiences. M. A. Wattiaux*, University of Wisconsin-Madison.
10:00 AM	659	''The Quail Project'': Integrating fundamental nutrition concepts with cross-disciplinary skills. D.J.R. Cherney*, A.W. Bell, W.R. Butler, and E.A. Oltenacu, Cornell University, Ithaca, NY.
10:15 AM		Break
10:30 AM	660	Ecology of grazing lands systems: A multi-disciplinary and multi-university course. J. C. Waller*[1], R. Mitchell[2], O. Abaye[3], and V. G. Allen[2], [1]University of Tennessee, [2]Texas Tech University, [3]Virginia Polytechnic Institute and State University.
10:45 AM	661	SheepSim: Teaching genetic and economic management of a flock of sheep. M. L. Thonney*, K. T. Egan, and D. O. Maizon, Cornell University, Ithaca, NY.
11:00 AM	662	Meat judging as a learning tool:gender comparison. Paul Berg*[1], North Dakota State University.
11:15 AM	663	Travel as a Teaching Method. M.A. Russell*[1], M.A. Latour[1], J.C. Forrest[1], G.N. Hinch[2], and R.S. Jessop[2], [1]Purdue University, W. Lafayette, IN, [2]University of New England, Armidale, NSW, AU.
11:30 AM	664	Recruitment value of an on-campus animal science youth program. J. S. McCann*[1], The University of Georgia, Athens, GA.
11:45 AM	665	Participation by the Animal and Poultry Sciences Department in the University Core Curriculum. C. M. Wood*, Virginia Tech, Blacksburg, VA.

SYMPOSIUM

Contemporary and Emerging Issues

Analytical Method Challenges for Measuring Nutrients and Anti-Nutrients in Plants

Chair(s): B. Price, CVM, FDA

Sponsors: Canadian Food Inspection Agency and FDA

Room: 200A

Time	Abstract Number	
1:00 PM		Motivation for this symposium. B. Price, CVM, FDA.
1:15 PM	666	A survey of methods of analysis used for minerals in feedstuffs. **Milan Ihnat***, Agiculture and Agri-Food Canada.
1:45 PM	667	Challenges with nonfiber carbohydrate methods. and **M. B. Hall*[1]**, [1]Dept. of Animal Sciences, University of Florida.
2:15 PM	668	Challenges with insoluble fiber methods. **D.R. Mertens*[1]**, [1]US Dairy Forage Research Center, Madison, WI.
2:45 PM		Break
3:00 PM	669	Challenges with fats and fatty acid methods. **D. L. Palmquist*[1]** and T. C. Jenkins[2], [1]Dept. of Animal Sciences, The Ohio State Univ., Wooster, [2]Dept. of Animal and Veterinary Sciences, Clemson Univ., Clemson, SC.
3:30 PM	670	Challenges and New Opportunities in the Analysis of Raffinose Oligosaccharides, Phytate and Glucosinolates. **Dutt Vinjamoori***, Pradip Das, and Thomas Hayes, Monsanto Co., St. Louis, MO/USA.
4:00 PM	671	Challenges in measuring moisture content of feeds. **N. Thiex*[1]** and C. R. Richardson[2], [1]South Dakota State University, Brookings, SD, [2]Texas Tech University, Lubbock, TX.
4:30 PM		Roundtable discussion.

SYMPOSIUM

ARPAS-FASS Symposium on Animal Care Training and Certification for Research Facilities and Commercial On-Farm Assessment Programs

Chair(s): J. Males, Oregon State University

Room: 2000C

Time	Abstract Number	
1:00 PM		Overview of FASS-ARPAS partnership in agricultural animal care training and certification. **D. Anderson**, Elanco.
1:15 PM	672	ARPAS Animal Care Certification Program. **J.C. Swanson*[1]**, [1]Kansas State University.
1:45 PM		FASS animal caretaker training modules. **J. McGlone**, Texas Tech University.
2:30 PM	673	The ARPAS-FASS-AAA Animal Care Project. **K. E. Olson*[1]**, B.R. Baumgardt[2], C. L. Sapp[3], and B.P. Glenn[3], [1]KEO COnsulting, [2]American Registry of Professional Animal Scientist, [3]Federation of Animal Science Societies.
3:00 PM		Panel question and answer

SYMPOSIUM

Food Safety

Interventions and Future Directions in Food Safety

Chair(s): S. Wells, University of Minnesota

Sponsors: Kemin

Room: 200C

Time	Abstract Number	
1:00 PM	674	Preharvest intervention strategies to reduce food borne pathogens in food animals. **T. R. Callaway***, R. C. Anderson, T. S. Edrington, R. O. Elder, K. J. Genovese, K. M. Bischoff, T. L. Poole, and D. J. Nisbet, Agricultural Research Service/USDA, Food and Feed Safety Research Unit, College Station, TX.
1:40 PM	675	Practical preharvest food safety interventions for dairy production. **P.L. Ruegg***, University of Wisconsin, Dept. of Dairy Science, Madison, WI.
2:20 PM		Break
2:35 PM		Antimicrobial intervention technologies for post-harvest meat processing. **R. Phebus**, Kansas State University.
3:15 PM	676	Effective methods for postharvest intervention in dairy processing. **J. R. Stabel*[1]**, USDA-ARS, National Animal Disease Center, Ames, IA.

SYMPOSIUM

Growth and Development

Skeletal Muscle Plasticity, Development, and Hypertrophy

Chair(s): T. Huiatt, Iowa State University, and M. Doumit, Michigan State University

Sponsors: Elanco, Monsanto, Pharmacia, and USDA

Room: 2000D

Time	Abstract Number	
1:00 PM	677	Importance of muscle fiber types in animal agriculture. **D.E. Gerrard*** and A.L. Grant, Purdue University, West Lafayette, IN USA.
1:30 PM	678	Heterogeneity of protein expression within muscle fibers. Everett Bandman[1] and **Benjamin W.C. Rosser*[2]**, [1]University of California, Davis, CA USA, [2]University of Saskatchewan, College of Medicine, Saskatoon, Saskatchewan, Canada.
2:20 PM		Physiological factors affecting muscle fiber types. **R.J. Talmadge***, California State Polytechnic University, Pomona, CA.
3:10 PM		Break
3:20 PM	679	Calcineurin and NFAT signaling in myogenesis. **G.K. Pavlath***, Emory University, Atlanta, GA USA.
4:10 PM	680	Calcineurin signaling in skeletal muscle growth. **R.N. Michel***, Laurentian University, Sudbury, Ontario, Canada.

SYMPOSIUM

Horse Species

Horses: Livestock Versus Companion Animals—Implication for Animal Agriculture

Chair(s): K. Malinowski, Rutgers University

Room: 202

Time	Abstract Number	
1:00 PM		Horses are agriculture. **R. J. Coleman**, University of Kentucky.
1:25 PM	681	Horses ARE companions, but. . . **M.A. Russell***, C.M. Brady, E.A. Pajor, and A.M. Beck, Purdue University, West Lafayette, IN USA.
1:50 PM	682	The California perspective- politics, reality, and society. **C. Stull***, Univsersity of California, Davis, CA.
2:15 PM	683	Value added equiculture: metamorphosis from livestock to companion. **D. S. Kronfeld***, Virginia Polytechnic Institute and State University.
2:40 PM		Round Table Discussion
3:00 PM		Break
3:15 PM	684	Evaluation of an introductory course in therapeutic horseback riding at Mississippi State University. M.C. Nicodemus* and K.M. Holt, Mississippi State University, Mississippi State, MS/USA.
3:30 PM	685	Dietary grain and endurance exercise. R. M. Hoffman*[1], T. M. Hess[1], C. A. Williams[1], D. S. Kronfeld[1], K. M. Griewe-Crandell[2], J. E. Waldron[3], P. M. Graham-Thiers[4], L. S. Gay[1], K. E. Saker[1], and P. A. Harris[5], [1]Virginia Polytechnic Institute and State University, Blacksburg, VA, [2]High Meadows Farm, The Plains, VA, [3]Rectortown Equine Clinic, Rectortown, VA, [4]Virginia Intermont College, Bristol, VA, [5]WALTHAM Centre for Pet Nutrition, Melton Mowbray, UK.

3:45 PM	686	Oxidative stress and antioxidant supplementation in horses during a competitive endurance ride. C.A. Williams*[1], R.M. Hoffman[1], D.S. Kronfeld[1], T.M. Hess[1], J.E. Waldron[2], R.K. Splan[1], K.E. Saker[1], and P.A. Harris[3], [1]Virginia Polytechnic Institute and State University, Blacksburg, VA, [2]Rectortown Equine Clinic, Rectortown, VA, [3]WALTHAM Centre for Pet Nutrition, Melton Mowbray, U.K.
4:00 PM	687	Endurance exercise: is potassium supplementation beneficial?. T.M. Hess*[1], R.M. Hoffman[1], J.E. Waldron[2], P.M. Graham-Thiers[1], C.A. Williams[1], K. Greiwe-Crandell[1], D.S. Kronfeld[1], and P.A. Harris[3], [1]Virginia Polytechnic Institute and State University, Blacksburg, VA, [2]Rectortown Equine Center, Rectortown, VA, [3]WALTHAM Centre for Pet Nutrition, Melton Mowbray, UK.
4:15 PM	688	Plasma hydrogen ion and bicarbonate changes during repeated sprints in horses are influenced by dietary protein. P.M. Graham-Thiers*[1], D.S. Kronfeld[2], and P.A. Harris[3], [1]Virginia Intermont College, Bristol, VA, [2]Virginia Polytechnic Institute and State University, Blacksburg, VA, [3]WALTHAM Centre for Equine Nutrition and Care, Melton Mowbray, UK.
4:30 PM	689	Effect of management practices and training on plasma tCO_2 concentration in horses. K.H. McKeever, A.M. Szucsik, V.B. Balaskonis, C.L. Betros, C.F. Kearns, and K. Malinowski, Rutgers University, New Brunswick, NJ, USA.

SYMPOSIUM

Nonruminant Nutrition

An Update on Modeling Pig Growth

Chair(s): J. Pettigrew, University of Illinois

Sponsors: Ajinomoto Heartland, AusGene International, Danbred, Degussa, European Association of Animal Production, Elanco Animal Health, National Pork Board, PIC, and United Feeds

Room: 200B

Time	Abstract Number	
1:00 PM		Introduction. J. Pettigrew, University of Illinois
1:15 PM	690	Pig growth models: Past and present. **J. L. Black***, John L. Black Consulting, Warrimoo, Australia.
1:40 PM	691	Partitioning of energy intake to heat, protein and fat in growing pigs. **J. van Milgen*** and J. Noblet, INRA-UMRVP, St-Gilles, France.
2:05 PM	692	The partitioning of dietary amino acid intake - a modelling perspective. **Paul J Moughan***, Institute of Food, Nutrition and Human Health, Massey University.
2:30 PM	693	Update on pig growth modeling: from chemical to physical body composition. **C.F.M. de Lange***[1], P.C.H. Morel[2], and S.H. Birkett[1], [1]University of Guelph, Canada, [2]Massey University, New Zealand.
2:55 PM		Break
3:15 PM	694	Characterization of pig genotypes. **PW Knap***[1], R Roehe[2], K Kolstad[3], C Pomar[4], and P Luiting[1], [1]PIC International Group, Schleswig, Germany, [2]Christian-Albrechts University, Kiel, Germany, [3]Akvaforsk and Agricultural University, Aas, Norway, [4]Agriculture and Agri-Food Canada, Lennoxville, Canada.
3:40 PM	695	Modelling stochasticity: dealing with populations rather than individual pigs. **C. Pomar***[1], P. W. Knap[2], I. Kyriazakis[3], and G. C. Emmans[3], [1]Agriculture and Agri-Food Canada, Lennoxville, Quebec, Canada, [2]PIC International Group, Schleswig, Germany, [3]Scottish Agricultural College, Edinburgh, UK.
4:05 PM	696	Pig growth models: Future. **J. L. Black***, John L. Black Consulting, Warrimoo, Australia.
4:20 PM		Disucssion. J. Pettigrew, University of Illinois.

SYMPOSIUM

Sheep Species

Sheep Production in China
The Importance of Small Ruminants for Managing Vegetation

Chair(s): S. Ramsey, Texas A&M University

Room: 203

Time	Abstract Number	
1:00 PM	697	Sheep genetic resources in northwest China. **M. A. Brown***[1], Jianping Wu[2], Yuzhu Luo[2], and S. Soderstrom[3], [1]USDA-ARS, Grazinglands Research Laboratory, El Reno, OK, [2]Gansu Agricultural University, Lanzhou, Gansu, PRC, [3]World Bank, Washington, D.C.
1:20 PM	698	A new paradigm for small ruminant production. **J.W. Walker***[1], [1]Texas Agricultural Experiment Station.
1:40 PM	699	Using sheep to graze noxious weeds in Montana. **B. Olson***, Montana State University.
2:00 PM		Break
2:20 PM		Multispecies grazing for controlling leafy spurge. **T. Faller**, Hettinger Research Center
2:40 PM	700	Using goats to control juniper. **C. A. Taylor, Jr.**, Texas Agricultural Experiment Station, Sonora.
3:00 PM		Genetics of dietary preference in sheep for targeting undesirable plants. **G. Snowder**, U. S. Sheep Experiment Station.

SYMPOSIUM

Women and Minority Issues in Animal Agriculture

Is There an "Issue" of Gender and/or Racial Inequality in Animal Science?

Chair(s): Karen Plaut, University of Vermont

Room: 207

Time	
1:00 PM	Survey results—Is there an "issue" of gender and/or racial inequality in animal and dairy science? **Karen Plaut**, University of Vermont.
1:20 PM	Profile of an uphill battle. **Brenda Alston-Mills**, North Carolina State University.
1:40 PM	Industry perspective on race and gender in animal and dairy science. **Jim Lauderdale**, Pharmacia Animal Health.
2:00 PM	Discussion session.
3:00 PM	Wrap Up and Conclusions. **Ray McKinnie**, North Carolina A&T State University.

Milk Synthesis

Chair(s): W. Cohick, Rutgers University

Room: 206A

Time	Abstract Number	
1:00 PM	701	Production of DNA Arrays by Expression Profiling. K.M.S. Smuga-Otto*, W. Luo, J.L. Smith, E. Reinfried, and L.G. Sheffield, University of Wisconsin, Madison.

1:15 PM	702	Relationship of lactose synthesis to glucose transport in bovine mammary epithelial cells in vitro. C.T. Xiao*, J.P. Cant, M.I. Lindinger, R.R. Hacker, and B.W. McBride, University of Guelph.
1:30 PM	703	Dose-dependent reduction in milk fat secretion with abomasal infusion of *trans*-10, *cis*-12 conjugated linoleic acid (CLA) and comparison to diet-induced milk fat depression. D. G. Peterson*, L. H. Baumgard, and D. E. Bauman, Cornell University, Ithaca, NY.
1:45 PM	704	Sphingomyelin content in milk from Jersey and Holstein cows. E.L.F. Graves*, A.D. Beaulieu, and J.K. Drackley, University of Illinois.
2:00 PM	705	Endogenous synthesis of *cis*-9, *trans*-11 conjugated linoleic acid in pasture-fed dairy cows. J.K. Kay*[1], T.R. Mackle[2], M.J. Auldist[3], N.A. Thomson[1], and D.E. Bauman[4], [1]Dexcel, Hamilton, New Zealand, [2]Fonterra, Auckland, New Zealand, [3]Depart. Natural Resources & Environment, Ellinbank, Victoria, Australia, [4]Department of Animal Science, Cornell University, Ithaca, NY.
2:15 PM	706	Effect of linoleic acid and oleic acid on conjugated linoleic acid (CLA) and milk fat content during feeding of low forage diet. T. W. Hanson*[1], M. L. Theurer[1], J.M. Griinari[2], and M. A. McGuire[1], [1]University of Idaho, Moscow, [2]University of Helsinki, Finland.
2:30 PM	707	Fatty acid changes in milk fat from Holstein cows fed rumen-protected CLA during the transition period. J. W. Perfield II*, G. Bernal-Santos, T. R. Overton, and D. E. Bauman, Cornell University, Ithaca, NY.

Production, Management, and the Environment

Management and Decision-Making

Chair(s): R. Cleale, American Cyanamid

Room: 206B

Time	Abstract Number	
1:00 PM	708	Flavoring drinking water for post-weaning pigs increases water and feed intake and improves average daily gain. M.J. Bertram*[1], J.A. Pudenz[1], and E. Roura[2], [1]Pork Technologies, Ames, IA, [2]Lucta SA, Montornés del Vallés,Barcelona, Spain.
1:15 PM	709	Specialization and contracting in the dairy industry: the case of custom heifer growers. C.A. Wolf*, Michigan State University.
1:30 PM	710	Calculating the cost of producing milk: methods and implications. C.A. Wolf* and S.B. Harsh, Michigan State University.
1:45 PM	711	Managing dairy herd data via interactive visualisation techniques. A. St-Onge*[1], R. Lacroix[1], and K. M. Wade[1], [1]McGill University, Montreal, Canada.
2:00 PM	712	Effect of grain type, milling method, and diet form on dust production in a laboratory dust generator. R.C. Thaler*[1], A.J.A. Aarnink[2], K. Koch[3], and T.E. Sauber, [1]South Dakota State University, Brookings, [2]IMAG, Wageningen, the Netherlands, [3]Northern Crops Institute, Fargo, ND, [4]DuPont Speciality Grains, Des Moines, IA.
2:15 PM	713	Impact of nursery feeder gap adjustment and group size/density on nursery pig performance. J.F. Patience*[1], L. Smith[1], A.D. Beaulieu[1], H.W. Gonyou[1], and R.D. Boyd[2], [1]Prairie Swine Inc., Saskatoon, SK., [2]Pig Improvement Co. Franklin, KY.
2:30 PM	714	Factors affecting the market value of cows sold through Arkansas auction barns, part 2: perceived breed composition, color, muscle and frame. M. S. Gadberry*, T. R. Troxel, D. Urell, J. Foley, R. Wiedower, S. Cline, and G. Ford, University of Arkansas Cooperative Extension Service, Little Rock, AR.
2:45 PM		Break
3:00 PM	715	Evaluating the Use of Benchmarks or Expert Opinion in Making Herd Management Decisions. C.N. Vierhout*[1] and J.S. Clay, [1]North Carolina State University.
3:15 PM	716	Effects of neck rail position on dairy cattle behavior. Cassandra Tucker* and Daniel Weary, University of British Columbia Vancouver BC Canada.

3:30 PM	717	Explanations associated with non-optimal culling rates. G. Hadley*[1], C. Wolf[2], and S. Harsh[2], [1]University of Wisconsin - River Falls, Agricultural Economics Department, [2]Michigan State University, Department of Agricultural Economics.
3:45 PM	718	Issues initial expanders should consider before expanding a dairy farm. G. Hadley*[1], C. Wolf[2], and S. Harsh[2], [1]University of Wisconsin - River Falls, Agricultural Economics Department, [2]Michigan State University, Department of Agricultural Economics.
4:00 PM	719	Identification and characterization of location factors for relocating dairy farms. J. E. Winkler* and N. R. St-Pierre, The Ohio State University, Columbus.
4:15 PM	720	Real Option Analysis to evaluate products used in dairy production. D. T. Galligan[1], H Groenendaal[1], J. D. Ferguson[1], and G Azzaro[2], [1]University of Pennsylvania, [2]Consorzio Ricerca Filiera Lattiero Casearia.
4:30 PM	721	The use of ear tags and injectable transponders for the electronic identification and traceability of pigs. G. Caja*, M. Hernandez-Jover, D. Garin, C. Conill, X. Alabern, B. Farriol, and J. Ghirardi, Universitat Autonoma de Barcelona, Bellaterra, Spain.
4:45 PM	722	Milk industry in Hungary. Huda F Salem, Zoltan Dr Lakner, J Sandor Dr Zsarnoczai*, and Laszlo Dr Villanyi, Szent Istvan University, Godollo, Hungary.

Ruminant Nutrition

Ruminal Fermentation

Chair(s): H. Freetly, USDA, ARS, MARC

Room: 2000B

Time	Abstract Number	
1:00 PM	723	Ruminal fluid effects on in vitro digestion kinetics of corn starch. F. M. Fickett* and M. S. Allen, Michigan State University, East Lansing.
1:15 PM	724	Comparison of fermentation parameters in ruminal fluid collected from lactating dairy cows at different production levels. S. A. Martin*[1], T. G. Nagaraja[2], T. C. Jenkins[3], S. E. Ives[2], H. J. Strobel[4], J. Sullivan[5], K. Murphy[5], D. Luchini[5], S. Koenig[5], and J. L. Klingener[1], [1]University of Georgia, Athens, [2]Kansas State University, Manhattan, KS, [3]Clemson University, Clemson, SC, [4]University of Kentucky, Lexington, [5]Bioproducts, Inc., Fairlawn, OH.
1:30 PM	725	Dose-response effects of propionate infusion on feeding behavior and plasma metabolites in lactating dairy cows. M. Oba* and M. S. Allen, Michigan State University, East Lansing, MI.
1:45 PM	726	Metabolism of stable isotopically labeled elaidic acid to stearic acid and other *trans* monoenes by ruminal microbes. J. Proell, E. E. Mosley, and T. C. Jenkins*, Clemson University, Clemson, SC.
2:00 PM	727	Effects of pH on nutrient digestion and microbial fermentation in a dual flow continuous culture system fed a high concentrate diet. P.W. Cardozo, S. Calsamiglia*, and A. Ferret, Universitat Autonoma de Barcelona.
2:15 PM	728	Advancements in the quantification of protozoal nitrogen flow to the duodenum using molecular-based analyses. J. T. Sylvester*[1], S. K. R Karnati[1], Z Yu[1], C. J. Newbold[2], B. A. Dehority[1], M. Morrison[1], and J. L. Firkins, [1]The Ohio State University, Columbus, OH, USA, [2]Rowett Research Institute, Bucksburn, Aberdeen, UK.
2:30 PM		Break
3:00 PM	729	Effect of medium pH on microbial crude protein yield, pH, and neutral detergent fiber digestion from fermentation of neutral detergent fiber and sucrose in vitro. L. Holtshausen*[1] and M. B. Hall[1], [1]Dept. of Animal Sciences, University of Florida.
3:15 PM	730	Enhancing ruminal concentrations of conjugated linoleic acid and trans vaccenic acid. E. S. Kolver*, M. J. de Veth, J. R. Roche, and A. Chand, Dexcel (formerly Dairying Research Corporation), Hamilton, New Zealand.
3:30 PM	731	Nutrient yields from in vitro fermentations of sucrose and neutral detergent fiber by mixed ruminal microorganisms. M. B. Hall*[1] and P. J. Weimer[2], [1]Dept. of Animal Sciences, University of Florida, [2]U.S. Dairy Forage Res. Ctr., Agricultural Research Service, USDA, Madison, WI.

3:45 PM	732	Effects of mild heat challenge on rate of passage and rumen fermentation in lactating dairy cattle. K. M. Spurlin*, J. Porter, M. Ellersieck, and J. N. Spain, University of Missouri - Columbia.
4:00 PM	733	Characterizing volatile fatty acids and other gases in a rumen closed in vitro fermentation system. Jarett Spinhirne[1], Jacek Koziel*[1], and Norbert Chirase[1,2], [1]Texas Agricultural Experiment Station, Texas A&M University, [2]West Texas A&M University.
4:15 PM	734	Inhibition of methanogenesis in Methanobrevibacter (Mbr.) smithii cultures and ruminal cultures by p-aminobenzoate (pABA) analogs. B. A. DeMontigny*, R. Dumitru, S. Schroeder, H. Palencia, S. W. Ragsdale, J. M. Takacs, and J. L. Miner, [1]University of Nebraska-Lincoln.
4:30 PM	735	Modeling starch digestion in the rumen: a comparative approach. A. Offner*[1], A. Bach[2], and D. Sauvant[1], [1]INA P-G INRA, Paris, France, [2]Agribrands, Barcelona, Spain.

Ruminant Nutrition

Transition Cow

Chair(s): J. Vicini, Monsanto

Room: 2000A

Time	Abstract Number	
1:00 PM	736	Metabolic nutrients for transition dairy cows. D. P. Casper*[1], G. Wernet[2], and G. B. Ayangbile, [1]Agri-King, Inc., Fulton, IL, [2]Purdue University, West Lafayette, IN.
1:15 PM	737	Effect of timing of sample collection and sample handling on urine pH of close-up dry Holstein dairy cows. P. W. Jardon*, West Central Soy.
1:30 PM	738	Effects of dry cow grouping strategy and body condition score at dry off on performance of dairy cows during early lactation. L. L. Contreras*, C. M. Ryan, and T. R. Overton, Cornell University, Ithaca, NY.
1:45 PM	739	Peripartal changes in fatty acid profiles of blood, adipose tissue, and liver of dairy cows can be modulated by diet. G. N. Douglas[1], J. Rehage[2], A. D. Beaulieu[1], A. O. Bahaa[1], and J. K. Drackley*[1], [1]University of Illinois, Urbana, IL, [2]Clinic for Cattle, Hannover, Germany.
2:00 PM	740	Rumen fermentation and fiber degradability in pre-fresh transition dairy cows as affected by different levels of dietary crude protein. S. G. Onetti* and R. R. Grummer, University of Wisconsin - Madison.
2:15 PM	741	Effects of prefresh diet and post parturition drenching on early lactation performance of multiparous holstein cows. B. M. Visser*, J. G. Linn, S. M. Godden, and M. L. Raeth-Knight, University of Minnesota, St. Paul, MN.
2:30 PM	742	Metabolic adaptations in dairy cows to changes in diet and lactational status. A.F. Park*, J.E. Shirley, E.C. Titgemeyer, R.C. Cochran, J.M. DeFrain, and E.E. Ferdinand, [1]Kansas State University, Manhattan Kansas.
2:45 PM		Break
3:15 PM	743	Characterization of ruminal fermentation in transition dairy cows. A.F. Park*, J.E. Shirley, E.C. Titgemeyer, R.C. Cochran, J.M. DeFrain, E.E. Ferdinand, and T.G. Nagaraja, [1]Kansas State University, Manhattan Kansas.
3:30 PM	744	Effect of sampling time and different commercial anionic products on urinary pH from prepartum cows. L.M Rode*[1], K.A. Beauchemin[2], and G.R. Bowman[2], [1]Rosebud Technology Development Ltd., [2]Agriculture and Agri-Food Canada.
3:45 PM	745	Periparturient responses of multiparous Holstein cows to varying prepartum dietary phosphorus. A. B. Peterson* and D. K. Beede, The Michigan State University, East Lansing, Michigan/U.S.A.
4:00 PM	746	Breed differences in ruminal fibre digestibility in cows receiving high concentrate diets. C.W. Cruywagen*[1], N. Bangani[1], and C.J. Muller[2], [1]University of Stellenbosch, [2]Western Cape Department of Agriculture.
4:15 PM	747	Preliminary report on gas pressure sensors in the reticulorumen of sheep. W.M. Shaik Mossadeq* and W.L. Grovum, University of Guelph, Guelph, Ontario, Canada.

4:30 PM 748 Availability of phosphorus in dairy feeds. M.J. Aguerre*[2], S. Marcot[1], H. Henselmeyer[1], and L.D. Satter[1,2], [1]U.S. Dairy Forage Research Center USDA/ARS, [2]Dairy Science Department, University of Wisconsin, Madison.

4:45 PM 749 Phosphorus balance in Holstein cows fed normal or low-phosphorus diets for 2 lactations. **R. Kohn***, T. Oleas, K. French, C. Sutcliffe, L. Scott, and T. Moreland, University of Maryland, College Park.

Undergraduate and Graduate Education

Roundtable Discussion: Technology in the Classroom

Chair(s): D. Aaron, University of Kentucky

Time: 2:00 PM – 3:30 PM

Room: 303B

Description: A panel discussion by several ASAS and ADSA members about their experiences (positive and negative) in using multimedia technology in the classroom. The roundtable will focus on both acceptance and resistance to the adoption of technology as a teaching tool. Panelists will discuss potential benefits, present examples of multimedia lecture material, and discuss integration of technology with traditional teaching methods. Potential pitfalls will also be addressed. Session is open to all meeting attendees.

THURSDAY, JULY 25, 2002[1]

SYMPOSIUM

Beef Species

Status and Application of Genetic Technologies in the Beef Industry

Chair(s): H. Ritchie, Michigan State University

Sponsors: ABS Global

Room: 200B

Time	Abstract Number	
8:00 AM		Background, demographics of worldwide beef production systems. **D. Brown**, Brown Ranch.
8:30 AM	750	Consumer attitudes toward biotechnology: Impact on animal related applications. **Christine Bruhn***, University of California, Davis.
9:00 AM	751	Genomic and computing strategies in optimizing the genetic component of specification beef. **J.W. Wilton***, University of Guelph, Guelph, Ontario, Canada.
9:30 AM	752	Status of bovine sperm sexing technology. **J.L. Schenk***[1] and G.E. Seidel, Jr.[2], [1]XY, Inc., [2]Colorado State University.
10:00 AM		Application of genetic technologies in the seedstock industry. **L. Leachman**, Leachman Cattle Co.
10:30 AM		Panel discussion.

Mixed Models Workshop

Presenter(s): B. Craig, Purdue University; L. W. Douglass, University of Maryland; and R. J. Tempelman, Michigan State University

Room: 205B

Time: 8:00 AM – 12:00 PM

(Previous session on 7/24, 8:00 AM – 5:00 PM; Interested parties should attend both sessions. Preregistration fee required.)

Description: A professional development opportunity in the use of mixed models for the analysis of common experimental designs in animal and dairy science. Emphasis on repeated measures analysis is continued with new extensions to curve (e.g., growth and lactation) modeling, including the use of nonlinear mixed effects models. Analyses of complete and incomplete block designs are also considered with applications including inference on microarray gene expression data. Emphasis is placed on the use of SAS PROC MIXED. All professionals and graduate students are invited to register.

[1]Names in bold indicate invited speakers.

Animal Health

Transition Cow Health

Chair(s): T. Overton, Cornell University

Room: 200C

Time	Abstract Number	
8:00 AM	753	Effects of nonesterified fatty acids on lymphocyte functions in dairy heifers. U. Bernabucci*, D. Scalia, O. Franci, B. Ronchi, A. Nardone, and N. Lacetera, Dipartimento di Produzioni Animali, Viterbo, Italy.
8:15 AM	754	Acute Phase Response Indicates Inflammatory Conditions may Play a Role in the Pathogenesis of Fatty Liver in Dairy Cows. B. N. Ametaj*, B. J. Bradford, G. Bobe, Y. Lu, R. Nafikov, R. N. Sonon, J. W. Young, and D. C. Beitz, [1]Iowa State University, Ames, IA.
8:30 AM	755	Titration of the proper dose of calcium propionate (NutroCAL) to be included in an oral drench for fresh cows. J.P. Goff*[1], T.F. Brown[2], S.R. Stokes[3], C.L. Brawley[2], and F.R. Valdez[4], [1]USDA-Agricultural Research Service, [2]Tarleton State University, [3]Texas A&M University, [4]Kemin Industries.
8:45 AM	756	Effects of oral drenching of glycerol on blood parameters and milk production in dairy cattle at parturition. S. R. Stokes[1], G. E. Kaiser*[2], J. P. Goff[3], and C. L. Brawley[2], [1]Texas A&M University, Stephenville, TX, [2]Tarleton State University, Stephenville, TX, [3]USDA-ARS NADC, Ames, IA.
9:00 AM	757	Effect of 14-day Subcutaneous Injections of Several Dosages of Glucagon on the Health of Lactating Dairy Cows. G. Bobe*[1], B. N. Ametaj[2], D. C. Beitz[1], and J. W. Young[1], [1]Iowa State University, Ames, IA, [2]Purdue University, West Lafayette, IN.
9:15 AM	758	Effect of 14-day Subcutaneous Injections of Several Dosages of Glucagon on Reproductive Success in Lactating Dairy Cows. G Bobe*[1], B. N. Ametaj[2], D. C. Beitz[1], and J. W. Young[1], [1]Iowa State University, Ames, IA, [2]Purdue University, West Lafayette, IN.
9:30 AM	759	The relationship of postpartum endometrial cytology and reproductive performance in dairy cows. R. Kasimanickam*, R. Foster, T. Duffield, C. Gartley, K. Leslie, J. Walton, and W.H. Johnson, University of Guelph, Guelph, Ontario, Canada.
9:45 AM		Break
10:00 AM	760	Strategic herd selection to maximize the benefit of a Rumensin® controlled release capsule in transition dairy cows. Todd Duffield*[1], Randal Bagg[2], and Paul Dick[2], [1]Department of Population Medicine, University of Guelph, Guelph, Ontario, Canada, [2]Provel, Division of Eli Lilly, Inc, Guelph, Ontario, Canada.
10:15 AM	761	Effect of method of delivery of Rumensin® on metabolic parameters in the periparturient dairy cow. T.M. Osborne*[1], K.E. Leslie[1], T. Duffield[1], B. McBride[1], T. Geishauser[1], R. Bagg[2], and G. Vessie[2], [1]University of Guelph, [2]Elanco Animal Health, Division of Eli Lilly Canada Inc.
10:30 AM	762	Associations of serum vitamin A and E concentrations with health in peripartum dairy cows. S.J. LeBlanc*[1], T.H. Herdt[2], T.F. Duffield[1], and W.M. Seymour[3], [1]University of Guelph, Ontario, Canada, [2]Michigan State University, E.Lansing, MI, [3]Roche Vitamins, Parsippany, NJ.
10:45 AM	763	Influence of days fed a close-up dry cow ration and heat stress on subsequent milk production in western dairy herds. R.B. Corbett*[1], [1]Dairy Health Consultation.
11:00 AM	764	Efficacy of two sustained-release intraruminal selenium supplements. B Renquist*[1], C Maas[2], J Oltjen[1], M Sween[1], and D Flavell[1], [1]University of California, Davis, [2]Pacific Trace Minerals, Inc.
11:15 AM	765	Evaluation of Mannan Oligosaccharide on the immune status of dairy cows and their calves. S.T. Franklin[1], K.E. Newman*[2], and M.C. Newman[1], [1]University of Kentucky, [2]Venture Laboratories, Inc.

Goat Species

Chair(s): N. Whitley, University of Maryland Eastern Shore

Room: 204A

Time	Abstract Number	
8:00 AM	766	Feed intake and efficiency measurements in goats. J.M. Dzakuma* and E. Risch, Prairie View A&M University, Prairie View, TX. USA.
8:15 AM	767	Prediction of energy requirements for maintenance and gain of growing goats. J. Luo, A. L. Goetsch, and T. Sahlu, E (Kika) de la Garza Institute for Goat Research, Langston University, OK.
8:30 AM	768	Influence of nutrition on ovarian activity in goats.I. Effect of fat by-pass supplementation. Cesar A. Meza H.*[1], Denia Lopez A.[1], Jose G Chavez P.[2], Homero Salinas[3], Manuel Valencia[4], and Miguel Mellado[5], [1]Universidad Autonoma Chapingo, [2]Gabinete de Radiodiagnostico y Ultrasonografia, [3]Instituto Nacional de Investigaciones Agricolas Forestales y Pecuarias, [4]Universidad Juarez del Estado de Durango, [5]Universidad Autonoma Agraria Antonio Narro.
8:45 AM	769	Influence of nutrition on ovarian activity in goats. II. Interactions among body condition, by-pass protein suplementation and endocrine profile. Cesar A. Meza H.*[1], Jose A. Ortiz[1], Raul A. Cuevas[1], Jose G. Chavez P.[2], Homero Salinas[3], Manuel Valencia[4], and Miguel Mellado[5], [1]Universidad Autonoma Chapingo, [2]Gabinete de Radiodiagnostico y Ultrasonografia, [3]Instituto Nacional de Investigaciones Agricolas Forestales y Pecuarias, [4]Universidad Juarez del Estado de Durango, [5]Universidad Autonoma Agraria Antonio Narro.
9:00 AM	770	Effect of pasture feeding and lactation stage on the biochemical composition of goat milk and cheese flavor. K.A. Soryal*, S. Zeng, B. Min, S. Hart, K. Tesfai, and T. Sahlu, E (kika de la Garza Institute for Goat Research, Langston Univ., OK.
9:15 AM	771	Rotational grazing as a parasite management tool for goats. W.E. Pomroy[1,2], S.P. Hart*[1], and B.R. Min[1], [1]E (Kika) dela Garza Institute for Goat Research, Langston University, OK, [2]Institute of Veterinary, Animal and Biomedical Sciences, Massey University, NZ.
9:30 AM	772	*In situ* degradability kinetics of the diet consumed by grazing goats in a semiarid region of north Mexico. A.S. Juarez-Reyes R.A. Alvarez-Gamboa G. Nevarez-Carrasco *M.A. Cerrillo-Soto, 1Universidad Juarez del Estado de Durango. Durango, Dgo. Mexico.
9:45 AM	773	In vitro maturation of caprine oocytes in different sera. Parviz Tajik*[1] and Mehrdad Hashemi[2], [1]Faculty of Veterinary medicine, Islamic Azad University, Science and Research Branch, [2]Islamic Azad University, Tehran North Branch.

Growth and Development

Somatropic Axis and Leptin in Cows

Chair(s): E. Connor, USDA-ARS, and M. Van Amburgh, Cornell University

Room: 204B

Time	Abstract Number	
8:00 AM	774	Correlation of circulating IGF-I with IGF-I mRNA and growth hormone receptor (GHR) 1A mRNA expression in calves exposed to long or short day photoperiod. P.E. Kendall*, T.L. Auchtung, and G.E. Dahl, University of Illinois, Urbana.
8:15 AM	775	Plasma IGF-I does not reflect growth rate and fattening in finishing-fed dry dairy cows. M Vestergaard*[1], KF Jorgensen[1], HR Andersen[1], HB Bligaard[2], and K Sejrsen[1], [1]Danish Institute of Agricultural Sciences, Tjele, Denmark, [2]Danish Meat Research Institute, Roskilde, Denmark.
8:30 AM	776	Evaluation of the Use of a Human cDNA Microarray to Profile Hepatic Gene Expression in Transition Dairy Cows. J.R. Townsend*, D.E. Moody, and S.S. Donkin, Purdue University, West Lafayette, IN.

8:45 AM	777	Effect of insulin on the GH-IGF-I axis in the periparturient dairy cow. R. P. Rhoads*[1], B. J. Leury[2], L. H. Baumgard[1], S. S. Block[1], D. A. Dwyer[1], A. W. Bell[1], D. E. Bauman[1], and Y. R. Boisclair[1], [1]Cornell University, Ithaca, NY, [2]University of Melbourne, Victoria, Australia.
9:00 AM	778	Leptin Binding Moieties in Bovine Serum. R. A. Hill*[1], S. Margetic[2], and N. Hughes[1], [1]University of Idaho, [2]Central Queensland University, Australia.
9:15 AM	779	Role of insulin and growth hormone in regulating the concentration of plasma leptin in lactating dairy cows. S. S. Block*[1], R. P. Rhoads[1], D. E. Bauman[1], R. A. Ehrhardt[1], M. M. McGuire[1], B. A. Crooker[2], J. M. Griinari[1], T. R. Mackle[1], M. E. Van Amburgh[1], and Y. R. Boisclair[1], [1]Cornell University, Ithaca, NY, [2]University of Minnesota, St. Paul, MN.
9:30 AM	780	Effect of sunflower seed inclusion on conjugated linoleic acid concentrations in milk fat of Holstein cows. D. B. Carlson*[1], M. S. Laubach[1], W. L. Keller[1], J. W. Schroeder[1], J. H. Herbein[2], and C. S. Park[1], [1]North Dakota State University, Fargo, ND, [2]Virginia Polytechnic and State University, Blacksburg, VA.

Nonruminant Nutrition

Young Pig Nutrition and Management

Chair(s): D. Nelson, Land O'Lakes, and H. Yang, ADM-Alliance Nutrition

Room: 200A

Time	Abstract Number	
8:00 AM	781	Baby pig nutrition and management. **Virgil W. Hays***, University of Kentucky, Lexington.
8:15 AM	782	Dipeptide transport in the small intestinal brush broder membrane vesicles of the weaned pigs. J.G. Dai[1], D.F. Li*[1], X.S. Piao[1], J.R. Pan[1], H.L. Chen[1], and G.F. Yi[2], [1]China Agricultural University, [2]University of Missouri-Columbia.
8:30 AM	783	Effects of feeding supplemental milk replacer to piglets on pre-and post-weaning performance. M. E. Davis*[1], C. V. Maxwell[1], D. C. Brown[1], Z. B. Johnson[1], K. J. Touchette[2], and J. A. Coalson[2], [1]University of Arkansas, Fayetteville, [2]Merrick's, Inc., Middleton, WI.
8:45 AM	784	Gut integrity of piglets fed a diet in liquid and dry form. J.M.A.J. Verdonk[1], M.A.M. Spreeuwenberg*[2], G.C.M. Bakker[1], Z. Mroz[1], and M.W.A. Verstegen[3], [1]ID TNO Animal Nutrition, Lelystad, [2]Nutreco, Boxmeer, [3]Wageningen University, the Netherlands.
9:00 AM	785	Effect of segregated early weaning on growth performance and immune parameters of pigs. D. C. Brown*, C. V. Maxwell, M. E. Davis, and S. Singh, University of Arkansas, Fayetteville.
9:15 AM	786	Pigs weaned from the sow at 10 d of age respond to dietary energy source. W. T. Oliver*[1], K. J. Touchette[2], J. A. Coalson[2], C. S. Whisnant[1], J. A. Brown[1], S. A. Mathews[1], J. Odle[1], and R. J. Harrell[1], [1]North Carolina State University, Raleigh, NC, [2]Merrick's Inc., Union Center, WI.
9:30 AM	787	Effect of menhaden fish oil supplementation and starter diet complexity on the performance and immune response of nursery pigs. A. M. Gaines*[1], G. L. Allee[1], J. A. Carroll[2], J. W. Frank[1], D. C. Kendall[1], J. D. Spencer[1], and G. F. Yi[1], [1]University of Missouri-Columbia, [2]Animal Physiology Research Unit, ARS-USDA.
9:45 AM	788	Effects of different fat sources in milk replacer on growth performance, body composition and plasma fatty acid profile in neonatal pigs. H. K. Kim*, Y. W. Shin, J. G. Kim, Y. H. Park, and K. Y. Whang, Korea University, Seoul, Korea.
10:00 AM	789	Impact of glutamine, glutamate, and nucleotides on the growth performance and intestinal morphology of weaned piglets. G.F. Yi*[1], G.L. Allee[1], Y. Toride[2], J.L. Usry[3], and A.M. Gaines[1], [1]University of Missouri-Columbia, [2]Ajinomoto Co., Inc., [3]Ajinomoto Heartland Lysine, Inc.
10:15 AM	790	Solutein™ supplementation and growth of nursery piglets in commercial farms. Michel Vignola*, Shur-Gain, a member of Maple Leaf Foods Inc., Saint-Romuald, Quebec, Canada.
10:30 AM	791	Weaner feed efficiency is determined by lower small intestine morphology. R. D. Slade* and H. M. Miller, University of Leeds, Leeds, UK.
10:45 AM	792	Influence of litter size and creep feeding on preweaning gain and influence of preweaning growth on growth to slaughter in barrows. John Klindt*, USDA, ARS, U.S. Meat Animal Research Center.

11:00 AM	793	Impact of pig weight at weaning. I. subsequent growth rate, feed conversion, and carcass composition. R. Cabrera*[1], S. Jungst[1], R.D. Boyd[1], M.E. Johnston[1], E. Wilson[1], and J. Vignes[2], [1]PIC USA, Franklin, KY, [2]ABN Inc., St. Louis Park, MN.
11:15 AM	794	Impact of pig weight at weaning. II. post-weaning growth and economic assessment of weights ranging from 4.1 to 8.6 kg. R. Cabrera*[1], S. Jungst[1], R.D. Boyd[1], M.E. Johnston[1], E. Wilson[1], and J.L. Usry[2], [1]PIC USA, Franklin, KY, [2]Ajinomoto Heartland, Chicago, IL.
11:30 AM	795	Influence of type of heat-processed cereal and oat hulls inclusion in the diet on nutrient digestibility and productive performance of young pigs. G.G. Mateos*, M.A. Latorre, F. Martin, M.I. Gracia, and R. Lazaro, Universidad Politecnica de Madrid.
11:45 AM	796	The effect of the addition of a starter culture on the fermentation of liquid milled wheat. C. A. Moran*[1] and R. H. J. Scholten[2], [1]Alltech Inc., Nicholasville, KY, [2]Beuker, Doetinchem, The Netherlands.

Physiology

Reproduction

Chair(s): M. Lucy, University of Missouri, and W. Thatcher, University of Florida

Room: 203

Time	Abstract Number	
8:00 AM	797	Evidence for uterine Effects on fetal Development in the Pig. S.C. Town*, J.L. Patterson, and G.R. Foxcroft, Swine Research & Technology Centre,University of Alberta, Edmonton, Alberta, Canada, T6G 2P5.
8:15 AM	798	Estradiol benzoate (EB) delays new follicular wave emergence in a dose dependent manner after ablation of the dominant follicle in the ovaries of cattle. C.R. Burke*[1,2], M.L. Mussard[1], and M.L. Day[1], [1]The Ohio State University, Columbus OH, [2]Dexcel Research Ltd, Hamilton, New Zealand.
8:30 AM	799	Metabolic and endocrine risk factors for repeat breeder cows. N. Moss[1,2], I.J. Lean*[1,2], S.W.J. Reid[3], and D.R. Hodgson[2], [1]Bovine Research Australasia, [2]University of Sydney, [3]University of Glasgow.
8:45 AM	800	Use of quantitative milk progesterone testing in lactating dairy cows for determination of post calving cyclicity, estrus detection, and pregnancy diagnosis. J.D. Ferguson[1], D.T. Galligan[1], J.W. Brooks*[2], G. Azzaro[2], S. Ventura[2], and G. Licitra[3], [1]University of Pennsylvania, [2]Consorzio Ricerca Filiera Lattiero-Casearia, Ragusa, Italy, [3]University of Catania, Italy.
9:00 AM	801	The Effect of Dexamethasone to Prevent Induced Luteolysis in Holstein Heifers. M Mohammadsadegh*[1], P Hovareshti[2], M Bolourchi[2], and I Noroozian[2], [1]Faculty Of Vet. Med., Azad Univ. of Garmsar, [2]Faculty of Vet. Med., Tehran Univ.
9:15 AM	802	Repeated exposure to novel females enhances sexual behavior of bulls. J.D. Bailey*, J.D. Rhinehart, L.H. Anderson, and K.K. Schillo, University of Kentucky, Lexington, KY.
9:30 AM	803	Effect of Hormone Addition to Semen on Backflow, Sperm Reservoir, Uterine Contractions and Fertility following AI in Pigs. K.L. Willenburg*, G.M. Miller, and R.V. Knox, University of Illinois.
9:45 AM		Break
10:00 AM	804	A comparison of the determination of bull sperm concentration and motility using IVOS®, Optibreed® and traditional techniques. Alana Cent*[1], Peter Chenoweth[1], Alice Lee[2], and Duane Steffey[2], [1]Department of Clinical Sciences, College of Veterinary Medicine, Kansas State University, [2]Statistical Consulting Center, San Diego State University.
10:15 AM	805	Effects of osmotic stress and bovine serum albumin on sperm motion characteristics and plasma membrane integrity in boars. H. D. Guthrie*[1], G. R. Welch[1], and J. R. Critser[2], [1]Germplasm and Gamete Physiology Lab, ARS, USDA, Beltsville, MD 20705, [2]Comp. Med. Ctr, Res Anim Diagnostic Lab, College of Vet. Med., Univ Missouri, Columbia, MO 65211.
10:30 AM	806	The effects of winter photoperiod and rate of body weight gain on serum prolactin, puberty and first service pregnancy in spring-born beef heifers. J. A. Small*[1], N. D. Glover[1], and A. D. Kennedy[2], [1]Agriculture & Agri-Food Canada, [2]University of Manitoba.

10:45 AM	807	Evidence Against Lamprey GnRH-III as the Mammalian FSH-Releasing Hormone. M. Amstalden*[1,2], D.A. Zieba[1,2], M.R. Garcia[1,2], P.J. Bridges[3], R.L. Stanko[1,4], T.H. Welsh, Jr.[2], J.E. Fortune[3], Hansel W.H.[5], and G.L. Williams[1,2], [1]Texas A&M University Agricultural Research Station, Beeville, TX, [2]Texas A&M University, College Station, TX, [3]Cornell Universtiy, Ithaca, NY, [4]Texas A&M University-Kingsville, Kingsville, TX, [5]Pennington Biomedical Research Center, Baton Rouge, LA.
11:00 AM	808	Serum estradiol and FSH concentrations in lactating sows before and after ovariectomy. C. J. Bracken*, B. L. McCormack, R. P. Radcliff, T. C. Cantley, and M. C. Lucy, University of Missouri, Columbia MO.
11:15 AM	809	Effects of Treatment With LH or FSH Between 4 To 8 Weeks of Age on The Attainment of Puberty In Bull Calves. ET Bagu*[1], S Madgwick[2], R Duggavathi[1], PM Bartlewski[3], DMW Barrett[1], S Huchkowsky[1], S Cook[1], and NC Rawlings[1], [1]Department of Veterinary Biomedical Sciences, University of Saskatchewan., [2]Department of Agriculture, University of Newcastle., [3]Department of Obstetrics, Gynecology and Reproductive Sciences, University of Saskatchewan.
11:30 AM	810	Luteinizing hormone (LH) release during the pre-ovulatory period, in two strains of Holstein-Friesian cows being fed two different diets. S Meier*[1], S Morgan[1], J Fahey[2], E Kolver[1], and G Verkerk[1], [1]Dexcel Limited, Hamilton, New Zealand, [2]VIAS, Werribee, Victoria, Australia.

Ruminant Nutrition

Silage and Intake

Chair(s): K. Knowlton, Virginia Tech

Room: 202

Time	Abstract Number	
8:00 AM	811	Endosperm type and kernel processing of corn silage: effects on short-term lactational performance in dairy cows. R. A. Longuski*[1], K. C. Fanning[2], M. S. Allen[1], R. J. Grant[2], and J. F. Beck[3], [1]Michigan State University, East Lansing, [2]University of Nebraska, Lincoln, [3]Syngenta Seeds, Golden Valley, MN.
8:15 AM	812	Endosperm type and kernel processing of corn silage: effect on starch and fiber digestion and ruminal turnover in lactating dairy cows. K. C. Fanning*[1], R. A. Longuski[2], R. J. Grant[1], M. S. Allen[2], and J. F. Beck[3], [1]University of Nebraska, Lincoln, [2]Michigan State University, East Lansing, [3]Syngenta Seeds, Golden Valley, MN.
8:30 AM	813	The effect of corn silage particle size and cottonseed hulls on cows in early lactation. P.J. Kononoff*[1] and A.J. Heinrichs, [1]The Pennsylvania State University.
8:45 AM	814	Effects of brown midrib 3 mutation of corn silage on feed intake and ruminal adaptation of Holstein cows during the peri-parturient period. Y. Ying* and M. S. Allen, Michigan State University, East Lansing.
9:00 AM	815	Influence of non-fibrous carbohydrates on milk production and composition of cows fed fescue silage. D.J.R. Cherney*, J.H. Cherney, and L.E. Chase, Cornell University, Ithaca, NY.
9:15 AM	816	Incorporating risk in dairy cattle nutrition. T.P. Tylutki* and D.G. Fox, Cornell University, Ithaca NY USA.
9:30 AM	817	Effectiveness of strategic ration balancing on efficiency of milk protein production and enviornmental impact. J. H. Harrison*[1], L. Johnson[1], D. Davidson[1], J. Werkhoven[2], A. Werkhoven[2], S. Werkhoven[2], M. Vazquez-Anon[3], G. Winter[3], N. Barney[4], and W. Chalupa[5], [1]Washington State University, [2]Werkhoven Dairy, Monroe, WA, [3]Novus Int., St. Louis, [4]LignoTech USA, Prairie Village, KS, [5]University of Pennsylvania, Kennett Square.
9:45 AM		Break
10:00 AM	818	Balancing diets for cows grazing pasture post-peak lactation using forage mixed rations.. A.V. Chaves*[1,2], S.L. Woodward[3], G.C. Waghorn[1], I.M. Brookes[2], C. Holmes[2], and W. McNabb[1], [1]AgResearch, [2]Massey University, [3]Dexcel, Ltd.
10:15 AM	819	Effects of simultaneous evaluation of cooling strategies on production responses and intake behavior during heat challenge in dairy cattle. K. M. Spurlin*, D. E. Spiers, M. Ellersieck, and J. N. Spain, University of Missouri - Columbia.

10:30 AM	820	Methane and manure production in cattle with different net feed intakes.. E. Okine*[1], J.A. Basarab[2], V. Baron[2], and M.A. Price[1], [1]AFNS, University of Alberta, Edmonton, AB T6G 2P5, [2]Western Forage Beef Group, Lacombe Res. Centre, 6000 C & E Trail, Lacombe, AB T4L 1W1.
10:45 AM	821	The interaction between plane of nutrition and success of estrus synchronization using two methods. E. Charmley*[1], J. Wichtel[2], G. Richardson[2], and R. Lofstedt[2], [1]AAFC, Crops and Livestock Research Centre, [2]Atlantic Veterinary College.
11:00 AM	822	Effects of the forage source on feeding behavior and selectivity of dairy cows. G.M. Burato*[1], G. Cozzi[1], F. Gottardo[1], E. Ragno[1], and I. Andrighetto[1], [1]Dipartimento di Scienze Zootecniche, University of Padova, Italy.
11:15 AM	823	Methane emission from lactating Holstein Friesian cows from the northern Hemisphere and New Zealand grazing pasture or fed TMR over one lactation.. G.C. Waghorn*[1], K.R. Lassey[2], E.S. Kolver[3], G. Molano[1], and L. Robertson[4], [1]AgResearch, [2]NIWA, [3]Dexcel, [4]Dairy Research Institute, New Zealand.
11:30 AM	824	Fractional synthesis rates in lambs infected with *Trichostrongylus colubriformis*. E.N. Bermingham*[1,2], N.C. Roy[1], G.W. Reynolds[2], G. C. Waghorn[1], I.A. Sutherland[1], D.K. Revell[3], and W.C. McNabb[1], [1]AgResearch Limited, Palmerston North, New Zealand, [2]Massey Universtiy, Palmerston North, New Zealand, [3]University of Adelaide, Adelaide, Australia.

POSTER PRESENTATIONS[1]

MONDAY, JULY 22, 2002

AM POSTER SESSION

Room: 400ABC

Presentation Times
Odd-Numbered Poster Boards: 8 AM to 10 AM
Even-Numbered Poster Boards: 10 AM to 12 PM

Extension Education

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number	
825	2001 results from Ohio's beef quality assurance program. S. Boyles*[1], W. Shulaw[1], D. Glauer[2], A. Henry[3], H. Zerby[1], F. Fluharty[1], and G. Fike[1], [1]The Ohio State University, Columbus, OH, [2]Ohio Department of Agriculture, Reynoldsburg, OH, [3]Ohio Cattlemen's Association, Marysville, OH.
826	Uniformity of mixing and delivery of total mixed rations. A. Predgen* and L. E. Chase, Cornell University,Ithaca,NY.
827	A heifer development system emphasizing genetics - The Virginia Premium Assured Heifer Program: program development and requirements. J. B. Hall, S. P. Greiner*, B. R. McKinnon, and W. D. Whittier, Virginia Tech, Blacksburg, VA.
828	A heifer development system emphasizing genetics - The Virginia Premium Assured Heifer Program: marketing. J. B. Hall*, B. R. McKinnon, S. P. Greiner, and W. D. Whittier, Virginia Tech, Blacksburg, VA.

Growth and Development

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number	
829	Porcine leptin alters fatty acid metabolism by swine adipocytes. T.G. Ramsay*[1], [1]USDA-ARS.
830	Maternal n-3 Fatty Acid Supplementation to Enhance Brown Fat Thermogenesis in Newborn Lambs. C. Chen*, G. E. Carstens, C. M. Theis, S. L. Archibeque, M. W. Kurz, C. D. Gilbert, L. J. Slay, and S. B. Smith, Texas A&M University.

[1]Posters will be displayed continuously from Monday 8 AM to Wednesday 1 PM.

831 Effects of daidzein supplementation to the diet of pregnant sows on maternal performance and neonatal piglet growth. Gerda Kuhn[1], Mingqiang Ren[2], Falk Schneider[1], Ellen Kanitz[1], Margrit Tuchscherer[1], Karin Nürnberg[1], Bernd Stabenow[1], Klaus Ender[1], and Charlotte Rehfeldt*[1], [1]Research Institute for the Biology of Farm Animals, Dummerstorf, Germany, [2]Nanjing Agricultural University, Nanjing, China.

832 Effects of exogenous somatotropin during early gestation on postnatal development of muscle fibers in pigs. C. Rehfeldt*, G. Kuhn, and K. Ender, Research Institute for the Biology of Farm Animals, Dummerstorf, Germany.

833 Effect of reconstitution with commensal bacteria on intestinal physiology and performance in the germ-free pig. T.W. Shirkey*, B.G. Goldade, J.K. Marshall, R.H. Siggers, M.D. Drew, B. Laarveld, A. Estrada, and A.G. Van Kessel, University of Saskatchewan, Saskatoon, SK, Canada.

834 Ghrelin induces GH secretion in pigs. D. H. St-Pierre* and P. Dubreuil, University of Montreal.

835 The effects of zeranol implantation on pituitary growth hormone-releasing hormone receptor expression in growing beef steers. E. E. Connor*, S. Kahl, T. H. Elsasser, and T. S. Rumsey, USDA-ARS, Animal and Natural Resources Institute, Beltsville, MD.

836 Steady-state levels of IGF-I, IGFBP-3, IGFBP-5, myostatin and hepatocyte growth factor mRNA in semimembranosus muscles and /or livers of steroid implanted and non-implanted steers. M.E. White*, B.J. Johnson, M.R. Hathaway, and W.R. Dayton, University of Minnesota, St. Paul, MN/USA.

837 Effect of Revalor-S® on hepatic and muscle expression of components of the somatotropic axis in Simmental calves and yearling steers. B. A. Crooker*, L. S. Ma, W. J. Weber, M. E. White, M. R. Hathaway, and W. R. Dayton, Department of Animal Science, University of Minnesota.

838 Production, purification and characterization of porcine recombinant insulin-like growth factor binding protein (rpIGFBP)-3 and an anti-rpIGFBP-3 antibody that inhibits IGFBP-3 activity. M. S. Pampusch, E. I. Kamanga-Sollo, M. E. White, M. R. Hathaway, and W. R. Dayton*, University of Minnesota, St. Paul, MN.

839 Serum insulin-like growth factor binding protein-3 (IGFBP-3) concentrations parallel antimicrobial-induced increases in serum insulin-like growth factor I (IGF-I) concentrations in pigs. M. R. Hathaway*, M. S. Pampusch, M. E. White, and W. R. Dayton, University of Minnesota, St. Paul, MN.

840 Insulin-like growth factor binding protein (IGFBP)-3 is partially responsible for the proliferation-suppressing activity of transforming growth factor beta (TGF beta) on porcine embryonic myogenic cell cultures. E. I. Kamanga-Sollo, M. S. Pampusch, M. E. White, M. R. Hathaway, and W. R. Dayton*, University of Minnesota, St. Paul, MN.

841 Polyclonal antibodies recognize only the latent peptide of myostatin but not the active form of myostatin in the chicken. Y.S. Kim*, Y.K. Lee, and M.A. Dunn, University of Hawaii at Manoa, Honolulu, HI.

842 The effect of conjugated linoleic acid on the differentiation of L8 myoblasts. C.S. Chung[1], T.D. Brandebourg*[2], and C.Y. Hu[2], [1]Department of Animal Science, Chungbuk National University, Republic of Korea, [2]Oregon State University, Corvallis.

843 Effects of synthetic conjugated linoleic acid (CLA) or bio-formed CLA as high CLA beef on rat growth and adipose tissue development. P.S. Mir*[1], E.K. Okine[2], L. Goonewardene[3], M.L. He[1], and Z. Mir, [1]Agriculture and Agri-Food Canada, Lethbridge AB, [2]University of ALberta, Edmonton AB, [3]Alberta Agriculture Food and Rural Development, AB.

844 Study of carcass, organ, muscle, fat tissue weight, and concentration in rats fed CLA or its precursors by Principal Component Analysis (PCA). L.A. Goonewardene*[1], Z. Wang[1], P.S. Mir[2], E. Okine[3], Z. Mir[2], and M. He[2], [1]Alberta Agriculture, Food and Rural Development, Edmonton, AB, [2]Agriculture and Agri-Food Canada, Lethbridge, AB, [3]University of Alberta, Edmonton, AB.

845 Measurement of bone mineral content and bone mineral density of pig carcasses by dual energy x-ray absorptiometry. A. D. Mitchell*[1], A. M. Scholz[2], and V. G. Pursel[1], [1]USDA, Agricultural Research Service, Beltsville, MD, [2]Ludwig Maximillians University-Munich, Oberschleissheim, Germany.

846 Predicting growth efficiency in live animals using infrared thermography (IRT). S.L. Scott*[1], A.L. Schaefer[2], A.D. Kennedy[3], R.J. Christopherson[4], A.K.W. Tong[2], and H. Harrison[5], [1]Agriculture and Agri-Food Canada, Brandon, Manitoba, Canada, [2]Agriculture and Agri-Food Canada, Lacombe, Alberta, Canada, [3]University of Manitoba, Winnipeg, Manitoba, Canada, [4]University of Alberta, Edmonton, Alberta, Canada, [5]VitaHealth Inc., Winnipeg, Manitoba, Canada.

847 Application of the Richard's function to characterize growth potential for different biological types of cattle. C. B. Williams*, U.S. Meat Animal Research Center, Clay Center, NE.

Meat Science and Muscle Biology

Meat Quality

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number	
848	Effect of days fed on live weight gains and carcass traits in feedlot heifers. G. L. Bishop*, T. E. Lawrence, J. R. Brethour, T. T. Marston, and B. J. Johnson, Kansas State University, Manhattan.
849	The effect of pregnancy status on feedlot performance and carcass quality. G. L. Bishop*, T. E. Lawrence, J. R. Brethour, and T. T. Marston, Kansas State University, Manhattan.
850	Metabolism of 3-methylindole (skatole) by porcine hepatocytes. F. Lanthier, Y. Lou, and E.J. Squires, University of Guelph, Guelph, ON, Canada.
851	Influence of sex class and slaughter weight on meat quality of pig. M.A. Latorre*[1], M. Nieto[2], M.D. Garcia-Cachan[3], M.I. Gracia[1], and G.G. Mateos, [1]Universidad Plitecnica de Madrid, Spain, [2]Copese S.A., Segovia, Spain, [3]Estación Tecnologica de la Carne, Salamanca, Spain.
852	Effect of exercise on the activity of proteolytic enzymes in skeletal muscle and carcass quality of Iberian pigs. R. Lazaro*[1], F. Toldra[2], J.M. Ferrer[2], L. Silio[3], M.C. Rodriguez[3], and C.J. Lopez-Bote[4], [1]Universidad Politecnica de Madrid, [2]Instituto de Agroquimica y Tecnologia de los Alimentos (CSIC), [3]Instituto Nacional de Investigaciones Agroalimentarias, [4]Universidad Complutense de Madrid.
853	Study of residual feed intake and frame type on carcass composition using Principal Component Analysis (PCA). Z. Wang*[1], J.A. Basarab[1], L.A. Goonewardene[1], M.A. Price[2], J.L. Aalhus[3], E. K. Okine[2], and W.M. Snelling[4], [1]Alberta Agriculture, Food and Rural Development, [2]University of Alberta, [3]Agriculture and Agri-Food Canada, [4]Beefbooster, Canada, AB, Ltd.
854	Oxidation and color of stored pork from pigs given supplemental magnesium through drinking water. B. R. Frederick*, E. van Heugten, and M. T. See, North Carolina State University, Raleigh, NC.
855	Effect of dietary levels of vitamin E on fiber characteristics of lamb longissimus. Francesco Nicastro*, Lelio Zezza, Francesco Pinto, and Rafaela Gallo, Department of Animal Production, University of Bari, Bari, Italy.
856	Control of dietary energy level and vitamin E intramuscular supplementation to optimize lamb meat production and quality II. Intramuscular collagen properties. A. Manchisi, F. Filetti, C. Cavone, M. Gambacorta, and G. Maiorano*, University of Molise, Campobasso, Italy.
857	Control of dietary energy level and vitamin E intramuscular supplementation to optimize lamb meat production and quality I. Feedlot performance and carcass quantitative and qualitative characteristics. F. Filetti, G. Maiorano*, C. Cavone, A. Prisciantelli, M. Gambacorta, and A. Manchisi, University of Molise, Campobasso, Italy.
858	Application of a sensitive and robust ELISA for haptoglobin measurement in meat juice and its relation to blood haptoglobin concentrations. S. Hiss[1,2], S. Knura-Deszczka[1], G. Regula[3], B. Petersen[1], and H. Sauerwein*[1], [1]Bonn University, [2]Biofocus GmbH, Recklinghausen, Germany, [3]Swiss Federal Veterinary Office, Bern, Switzerland.
859	Estimation of Canadian and European lean yields and composition of pig carcasses by dual-energy X-ray absorptiometry. M. Marcoux*[1,2], J.F. Bernier[2], and C. Pomar[1], [1]Agriculture and Agri-Food Canada, Lennoxville, Québec, Canada, [2]Université Laval, Sainte-Foy, Québec, Canada.
860	Comparing the Canadian lean yield predicted from Destron and Hennessy probe measurements in pork. C. Pomar*, J. Rivest, and M. Marcoux, Agriculture and Agri-Food Canada, Lennoxville, Québec, Canada.
861	Estimating the Canadian lean yield and European lean content of pork carcasses based on different methodologies for measuring fat and muscle depth. C. Pomar*[1], A. Fortin[2], and M. Marcoux[1], [1]Agriculture and Agri-Food Canada, Lennoxville, Quebec, Canada, [2]Agriculture and Agri-Food Canada, Lacombe, Alberta, Canada.
862	Use of 25-hydroxyvitamin D_3 to improve beef tenderness. A. E. Wertz*[1], A. Trenkle[1], R. L. Horst[2], F. C. Parrish[1], E. J. Huff-Lonergan[1], T. J. Knight[1], R. N. Sonon[1], and D. C. Beitz[1], [1]Iowa State University, Ames, IA, [2]National Animal Disease Center, USDA-ARS, Ames, IA.

863 The effect of antemortem harvest conditions on stress and meat quality in Muskox. A.L. Schaefer*[1], W.M. Robertson[1], J.L. Aalhus[1], J.A. Nagy[2], and B. Elkin[3], [1]Agriculture and Agri-Food Canada, Lacombe, AB, [2]Dept. Resources, Wildlife and Economic Development, Inuvik, NWT, [3]Dept. of Resources, Wildlife and Economic Development, Yellowknife, NWT.

864 Effect of cooking methods on camel meat quality. I.B. Hashim*, United Arab Emirates University, Al-Ain, UAE.

865 Pharmacological modulation of nitric oxide in beef longissimus lumborum causes chemical, not physiological changes to meat quality. J.J. Cottrell*[1,2], F.R. Dunshea[2], and R.D. Warner[1,2], [1]Victoria University, Werribee, Victoria, Australia., [2]Natural Resources and Environment, Werribee, Victoria, Australia.

Nonruminant Nutrition

Nutrient Metabolism and Feed Evaluation or Processing

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number

866 Predicting amino acids in triticale by NIRS and simple regression equations. Sam Jaikaran*, Ervin Prommer, Donald Salmon, Hua Hsu, and Guillermo Recinos-Diaz, Alberta Agriculture Food and Rural Development.

867 Evaluation of maternal muscle protein mobilization during lactation in first-litter sows of differing body size. E. J. Clowes*[1], F. X. Aherne[1], A. L. Schaefer[2], and V. E. Baracos[1], [1]University of Alberta, Edmonton, AB, Canada, [2]Agriculture and Agri-Food Canada, Lacombe, AB, Canada.

868 Ileal endogenous crude protein and amino acid outputs and true ileal amino acid digestibility values associated with soybean meal are affected by growth stages of pigs. K. Bregendahl*, L. Liu, T. Archbold, and M. Z. Fan, University of Guelph, Guelph, Ontario, Canada.

869 Ileal amino acid digestibilities by pigs fed soybean meal samples from five different countries. L. K. Karr-Lilienthal*, N. R. Merchen, C. M. Greishop, M. A. Flahaven, and G. C. Fahey, Jr., University of Illinois, Urbana-Champaign.

870 Ileal nutrient digestibilities by pigs fed selected soybean meals. E.L. Propst*, D.M. Albin, M.R. Smiricky, C.M. Grieshop, V.M. Gabert, N.R. Merchen, and G.C. Fahey, Jr., University of Illinois, Urbana, IL 61801.

871 Effect of dietary L-carnitine and oil supplementation on the metabolic response to handling in finishing pigs. T. M. Bertol*[1,2], M. Ellis[1], D. N. Hamilton[1], and E. W. Johnson[1], [1]University of Illinois at Urbana-Champaign, [2]CNPq-Brazil.

872 Effect of dietary lysine and leucine levels on carcass composition, meat quality, and growth performance in finishing pigs. J. D. Kim*, Y. Hyun, D. N. Hamilton, D. H. Baker, F. K. McKeith, and M. Ellis, University of Illinois, Urbana.

873 The effect of ractopamine dose and duration of feeding on growth performance and carcass characteristics of finishing pigs. T. A. Armstrong*[1], D. J. Ivers[1], J. R. Wagner[1], D. B. Anderson[1], D. J. Jones[1], W. C. Weldon[1], K. R. Maddock[2], and E. P. Berg[2], [1]Elanco Animal Health, Greenfield, IN, [2]Univ. of Missouri, Columbia.

874 Apparent ileal amino acid digestibility in sorghum, corn and wheat for growing pigs. B.A. Araiza, M. Cervantes*, S. Espinoza, V.M. González, M. Cervantes, N. Torrentera, and L. Avendaño, ICA, Universidad Autónoma de Baja California, Mexicali.

875 Influence of nucleotides and glutamine dietary supplementation on gut health of weanling piglets. V. Dell'Orto, A. Di Giancamillo, G. Savoini*, R. Paratte, C.M. Domeneghini, and V. Bontempo, University of Milan, Italy.

876 Compensatory growth and nitrogen balance in grower-finisher pigs. J. Fabian*, L. I. Chiba, L. T. Frobish, W. H. McElhenney, D. L. Kuhlers, and K. Nadarajah, Auburn University, Auburn University, AL.

877 Effect of a protein source derived from yeast extract on performance and health of weanling piglets. S.V. Hunziker and P. Spring, Swiss College of Agriculture, Zollikofen, Switzerland.

878 Molecular cloning of a turkey intestinal peptide transporter (tPepT1) and developmental regulation of PepT1 expression in turkey and broiler embryos. L. Van*, Y-X. Pan, E. A. Wong, and K. E. Webb, Jr., Virginia Polytechnic Institute and State University, Blacksburg.

879 Effect of protein sources on cholesterol and amino acid levels in Pacific white shrimp (*Litopenaeus vannamei*). Zongjia Cheng* and R.W. Hardy, University of Idaho, Hagerman Fish Culture Experiment Station.

880 Evaluating apparent digestibility coefficients of nutrients in alternative animal protein sources for rainbow trout (*Oncorhynchus mykiss*). Zongjia Cheng* and R.W. Hardy, University of Idaho, Hagerman Fish Culture Experiment Station.

881 Synthetic lysine and methionine supplementation into distillers dried grain based diets improves growth and feed conversion ratio for rainbow trout *Oncorhynchus mykiss*. Zongjia J. Cheng* and R.W. Hardy, Hagerman Fish Culture Experiment Station, University of Idaho.

882 Apparent digestibility of the nutrients with growing rabbits fed diets with different starch levels and fiber sources. Alex M.V. Arruda*[1], Darci C. Lopes[2], Augusto C. Queiroz[2], Horacio S. Rostagno[2], Walter M. Ferreira[3], Luiz F.T. Albino[2], and Elzania S. Pereira[1], [1]UNIOESTE Universidade Estadual do Oeste do Parana, [2]Universidade Federal de Vicosa, [3]Universidade Federal de Minas Gerais.

883 Performance and carcass characteristics of growing rabbits fed diets with different starch levels and sources of fiber. Alex M.V. Arruda*[1], Darci C. Lopes[2], Augusto C. Queiroz[2], Walter M. Ferreira[3], Horacio S. Rostagno[2], Luiz F.T. Albino[2], Elzania S. Pereira[1], and Aloizio S. Ferreira[2], [1]UNIOESTE Universidade Estadual do Oeste do Parana, [2]Universidade Federal de Vicosa, [3]Universidade Federal de Minas Gerais.

884 Caecal microbial activity and caecotrophy nutritional contribution of growing rabbits fed diets with different starch levels and sources of fiber. Alex M.V. Arruda*[1], Darci C. Lopes[2], Walter M. Ferreira[3], Augusto C. Queiroz[2], Horacio S. Rostagno[2], Luiz F.T. Albino[2], Elzania S. Pereira[1], and Aloizio S. Ferreira[2], [1]UNIOESTE Universidade Estadual do Oeste do Parana, [2]Universidade Federal de Vicosa, [3]Universidade Federal de Minas Gerais.

885 Hormonal and reproductive performance of young hybrid boars fed rations supplemented with soybean oil as a source of fatty acids. L. D. S. Murgas[1], L. F. Uribe-Velásquez*[2], and E. T. Fialho[1], [1]Federal University of Lavras-UFLA-Lavras-Minas Gerais-Brazil., [2]University of Caldas-Manizales-Caldas-Colombia.

886 Effect of lipid sources on cholesterol and W-3 fatty acid levels in Pacific white shrimp (*Litopenaeus vannamei*). Zongjia Cheng* and R.W. Hardy, University of Idaho, Hagerman Fish Culture Experiment Station.

887 Effects of extrusion processing on apparent digestibility coefficients of nutrients in soybeans for rainbow trout *Oncorhynchus mykiss*. Zongjia J. Cheng* and R.W. Hardy, Hagerman Fish Culture Experiment Station, University of Idaho.

888 Feed intake and performance of swine consuming barley-based diets with low levels of deoxynivalenol (DON) contamination. J.D. House*[1], G.H. Crow[1], D. Abramson[2], and C.M. Nyachoti[1], [1]University of Manitoba, Winnipeg, MB, [2]Agriculture & Agri-Food Canada, Winnipeg, MB.

889 Effect of harvest weight on performance and carcass quality of finishing pigs. P. G. Lawlor* and P. B. Lynch, Teagasc, Moorepark Research Centre, Fermoy, Co. Cork, Ireland.

890 Effect of protein and energy dense diets on feed intake and protein deposition in pigs from 20 to 65 kg bodyweight. A. Roy*[1,2], J.F. Bernier[2], and C. Pomar[1], [1]Agriculture and Agri-Food Canada, Lennoxville, Quebec, Canada, [2]Université Laval, Sainte-Foy, Québec, Canada.

891 Energy of various soybean meal, rapeseed meal and coconut meal in finishing pigs. J. W. Hong[1], I. H. Kim*[1], Y. K. Han[2], J. H. Kim[3], O. S. Kwon[1], S. H. Lee[1], B. J. Min[1], and W. B. Lee[1], [1]Department of Animal Resource & Science, Dankook University, Cheonan, [2]Feed Res. Inst., National agri. Coop. Fed., [3]Agribrands Purina Korea, Inc., Seoul, Koera.

892 Effect of substitution of a corn-soybean meal blend with cull chickpeas on growth performance and carcass traits in pigs. J. F. Obregon*, H. R. Guemez, J. M. Uriarte, G. Contreras, and R. Barajas, FMVZ-Universidad Autonoma de Sinaloa (Mexico).

893 Effect of triticale on nutrient excretion in grow-finish pigs. Amy Lopez*, Walter Owsley, and Lowell Frobish, Auburn University, Auburn, AL.

894 Comparison of swine performance when fed diets containing Roundup Ready Corn® (event NK603), control, or conventional corn grown during 2000 in Nebraska. R. L. Fischer[1], A. J. Lewis[1], P. S. Miller*[1], E. P. Stanisiewski[2], and G. F. Hartnell[2], [1]University of Nebraska, Lincoln, [2]Monsanto Company, St. Louis, MO.

895 Fermented tuna fish sludge in diets for growing pigs: Intake, gain, and feed efficiency. R. Sanchez, C. S. Santana, A. A. Rodriguez*, V. Siberio, and A. E. Sanjuan, University of Puerto Rico, Mayaguez Campus, P. R.

896 Fermented tuna fish sludge in diets for growing pigs: Carcass characteristics. R. Sanchez, C. S. Santana, A. A. Rodriguez*, and V. Siberio, University of Puerto Rico, Mayaguez Campus, P. R.

897 Effects of dietary types and levels of fiber on digestive and post-absorptive utilization of dietary nutrients in pigs. Y. Gao, T. C. Rideout*, and M. Z. Fan, University of Guelph.

898 A technique for endoscopic insertion of a percutaneous endoscopic gastrostomy tube in swine. J.S. Radcliffe*[1], J.P. Rice[1], and R.S. Pleasant[2], [1]Purdue University, West Lafayette, IN, [2]Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, VA.

899 Dry post-pellet application of heat-labile dry products to livestock diets. J. L. Pierce*, C. A. Moran, and A. E. Sefton, Alltech, Inc., Nicholasville, KY.

900 The effect of pearling on the removal of deoxynivalenol (DON) from hulled barley. J.D. House*[1], C.M. Nyachoti[1], and D. Abramson[2], [1]University of Manitoba, Winnipeg, MB, Canada, [2]Agriculture and Agri-Food Canada, Winnipeg, MB, Canada.

901 Effect of quality and enzyme supplementation of wheat based diets on feed consumption and growth performance of pigs from 19 to 89 kg live weight. T.A. Van Lunen[1], K.D. Foote*[2], and P.H. Simmins[3], [1]Agriculture and Agri-Food Canada, Charlottetown, PEI, [2]Atlantic Veterinary College, Charlottetown, PEI, [3]Finnfeeds International, Marlborough, UK.

Production, Management and the Environment

Livestock Management

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number

902 Comparison of silvopastures and open pastures for cow-calf production. S.M. DeRouen* and T.R. Clason, Louisiana State University Agricultural Center, Homer.

903 Commercial Evaluation of Prototype Meishan Hybrid Pigs for Reproductive Performance and Carcass Composition Traits. C. Okere*, J. Cosgrove, and L. Nelson, Genex Swine Group Inc., Regina, Saskatchewan, Canada.

904 Location and breed effects on cashmere production by goats. C. J. Lupton*[1], A. R. Dooling[2], K. Lankford[3], and F. A. Pfeiffer[1], [1]Texas Agricultural Experiment Station, San Angelo, [2]Pioneer Mountain Farm, Inc., Dillon, Montana, [3]Susitna Ranch, Willow, Alaska.

905 Polymer assisted solid separation is similar for gestation, farrowing, nursery and grow-finish swine surry. P. Walker and J. Olson*, [1]Illinois State University, Normal.

906 The use of two types of reduced size boluses for the electronic identification of fattening lambs. D. Garin, G. Caja*, J. Ghirardi, and M. Hernandez-Jover, Universitat Autonoma de Barcelona, Bellaterra, Spain.

907 Using blood urea nitrogen to predict nitrogen excretion in cattle, horses, pigs, sheep, goats, and rats. M. M. Dinneen* and R. A. Kohn, University of Maryland, College Park.

908 Effect of bovine somatotropin on pregnancy rates in beef cows following presynchronization with MGA and synchronization with GnRH and PGF_{2a}. M.L. Borger and W.A. Greene*, The Ohio State University, Wooster USA.

909 Location and season effects on mohair production by Angora goats. F. A. Pfeiffer*[1], C. J. Lupton[1], and A. R. Dooling[2], [1]Texas Agricultural Experiment Station, San Angelo, [2]Pioneer Mountain Farm, Inc., Dillon, Montana.

910 Animal performance and carcass quality of stocker calves on grass pasture with ad libitum access to a high energy diet. W. A. Phillips*[1], M. A. Brown[1], J. W. Holloway[2], and H. S. Mayeux[1], [1]USDA-ARS Grazinglands Research Laboratory, El Reno,OK, [2]Texas Agricultural Experiment Station, Uvalde.

911 Time of suckling implant influences on weaning weight and post-weaning performance in steer calves. S. M. Holt*[1], R. H. Pritchard[1], and H. M. Blalock[1], [1]South Dakota State University.

912 Effects of feed form and placement immediately postweaning on the growth performance of piglets. B. P. Corrigan*, M. Ellis, B. F. Wolter, J. M. DeDecker, and S. E. Curtis, University of Illinois, Urbana, IL/USA.

913 Reducing cattle impact on water quality through the use of off-stream waterers. D Veira* and L Liggins, AAFC Range Research Unit, Kamloops, BC.

914 The Effects of Additional Lighting and Glucose Supplemented Drinking Water on the Performance of Dairy Calves. V. R. Osborne*, B. W. McBride, and R. R. Hacker, University of Guelph, Guelph, Ontario, Canada.

915 Effect of shade in feedlot pen on growth performance of Brahman bull calves during heat raining season under Mexican dry tropic environment. R. Barajas*[1] and J.A. Felix[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).

916 Utilization of Forage Cubes to Deliver Feed Additives to Cattle on All-forage Diets. K. Ominski* and K. Wittenberg, University of Manitoba, Winnipeg, Manitoba, Canada.

917 Optimization of dairy heifer purchasing decisions under herd constraints with a genetic algorithm. A. de Vries*, University of Florida.

918 The effect of feeding period length on performance, carcass traits and net return of finishing steer calves. J.D. Arseneau*, M.C. Claeys, and R.P. Lemenager, Purdue University.

919 A comparison of the performance and injury scores of broiler breeder flocks illuminated by high-pressure sodium, compact fluorescent and incandescent lighting. C.M. Vandenberg*[1] and T.M. Widowski[1], University of Guelph, Guelph, Ontario/Canada.

Ruminant Nutrition

Byproducts, Growing Cattle, and Protein

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number

920 Composition of DDGS from Dry Grind Ethanol Plants. R. Belyea*[1], K. Rausch[2], A. Mueller[1], and M. Tumbleson[2], [1]University of Missouri, [2]University of Illinois at Urbana-Champaign.

921 Nonenzymatically browned sunflower seeds as a source of ruminal undegraded lipid in combination with a wet corn milling feed for lactating dairy cows. S.B. Al-Suwaiegh* and R.J. Grant, University of Nebraska, Lincoln.

922 Ruminal Behavior of Protein and Starch Free Organic Matter of Vicia Faba in Dairy Cows. P. Yu*[1], B.J. Leury[2], and A.R. Egan[2], [1]Department of Animal and Poultry Science, University of Saskatchewan, [2]School of Agriculture and Food Systems, University of Melbourne.

923 Effect of substitution of a soybean meal-sorghum grain blend for cull chickpeas on growth performance and carcass traits in sheep. J.F. Obregon*[1] and R. Barajas[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).

924 Effect of substitution of a soybean meal-sorghum grain blend for cull chickpeas on apparent digestibility of finishing diets for sheep. J.F. Obregon*[1] and R. Barajas[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).

925 Effect of substitution of whole cotton seed by naturally heat-humedity damaged cotton seed on apparent digestibility of finishing diets for sheep. A. Estrada*[1] and R. Barajas[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).

926 Evaluation of feeding value of the corn steep liquor as an energy and protein source for finishing cattle diets. C. C. Ribeiro-Filho* and A. Trenkle, Iowa State University.

927 Evaluation of white corn in finishing diets fed to beef cattle. C. L. Warrick* and A. Trenkle, Iowa State University.

928 Effects of steam-flaking on the nutritive value of yellow, high available phosphorus, high-oil, and white corn varieties. K. F. Wilson[1], T. C. Bramble*[2], G. V. Pollard[3], and C. R. Richardson[2], [1]Loveland Ind., Greeley, CO, [2]Texas Tech Univ., Lubbock, [3]Southwest Texas State Univ., San Marcos.

929 Impact of the chemical and physical properties of yellow, high available phosphorus, high-oil, and white corn varieties on steam-flaking. K.F. Wilson[1], G.V. Pollard*[2], C.R. Richardson[3], and T.C. Bramble[3], [1]Loveland Ind., Greeley, CO, [2]Southwest Texas State Univ., San Marcos, [3]Texas Tech Univ., Lubbock.

930 Methane production of lactating dairy cows fed grass silage and beet pulp based concentrates. F.P. O'Mara*, J.F. Connolly, and D.K. Lovett, University College Dublin.

931 Effect of iron sulfate supplementation of the diet on plasma gossypol concentration and productivity of lactating Holstein cows fed cracked Pima cottonseed. K. McCaughey*, E. DePeters, P.H. Robinson, J. Santos, J. Pareas, and S. Taylor, University of California, Davis, CA.

932 Relationship between Bulk Tank Milk Urea Nitrogen and Individual Cow Milk Urea Nitrogen Values. Pipat Arunvipas*, John VanLeeuwen, Ian Dohoo, Emery Leger, and Greg Keefe, Atlantic Veterinary College, UPEI, Charlottetown PE Canada.

933 Effects of an emulsifier on the steam-flaking properties and nutrient characteristics of yellow, high available phosphorus, high-oil, and white corn varieties with regards to retrogradation. K.F. Wilson*[1], L.D. Thompson[2], G.V. Pollard[3], C.R. Richardson[2], D. Hughes[4], and T.C. Bramble[2], [1]Loveland Ind., Greeley,CO, [2]Texas Tech Univ., Lubbock, [3]Southwest Texas State Univ., San Marcos, [4]Ultimate Resource, Dallas, TX.

934 Optimal level of supplemental distillers dried grains plus solubles (DDGS) for heifers grazing tall fescue pastures. J. B. Corners*, K. J. Barnhart, M. Ellersieck, and J. E. Williams, University of Missouri-Columbia, Columbia, MO.

935 Effect of substitution of whole cotton seed by naturally heat-humedity damaged cotton seed on growth performance and carcasss traits in sheep. A. Estrada*[1] and R. Barajas[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).

936 Ensiling wet corn distillers grains alone or in combination with soyhulls. K. F. Kalscheur*, A. D. Garcia, A. R. Hippen, and D. J. Schingoethe, South Dakota State University, Brookings, SD.

937 Effects of Flaxseed Supplementation on Nutrient Utilization, Milk Production and Composition by Lactating Dairy Cows. H.W. Soita*[1], J.A. Meier[1], M. Fehr[1], D.A. Christensen[1], J.J. Mckinnon[1], and A.F Mustafa[2], [1]University of Saskatchewan, Saskatoon SK. CANADA, [2]University of Mcgill, QC. CANADA.

938 In situ rate and extent of ruminal DM and N degradation of byproduct feeds in steers fed a high-concentrate diet. S.S. Swanek*[1], C.R. Krehbiel[1], D.R. Gill[1], and B.A. Gardner[2], [1]Oklahoma State University, Stillwater, OK, [2]Steve Armbruster Consulting, Inc., Stillwater, OK.

939 Cheese whey silage for growing holstein heifers and beef finishing steers. D.R. ZoBell*[1], K.C. Olson[1], and R.D. Wiedmeier[1], Utah State University.

940 Accelerated growth of dairy calves fed various levels of whole milk or milk replacer. G. D. Marx*[1] and M. C. Jacobson, [1]University of Minnesota, Crookston.

941 Skeletal muscle growth and hepatic urea kinetics in lambs offered different dietary supplies of sodium propionate or metabolisable protein. A.P. Moloney*[1] and G. E. Lobley[2], [1]Teagasc, Grange Research Centre, Dunsany, Co. Meath, Ireland, [2]Rowett Research Institute, Bucksburn, Aberdeen AB21 9SB, UK.

942 Kid preference for supplement. T.W. White*[1], H.G. Bateman[1], C.C. Williams[1], and S. Alford[1], [1]Louisiana State University Agricultural Center, Baton Rouge, LA 70803.

943 Effect of Aminophylline on Metabolic and Thermoregulatory Responses During Hypothermia Associated with Cold Exposure in Lambs. B. Zimmermann*[1], G. Diebold[1], J. Galbraith[2], W. Whitmore[2], G. Murdoch[2], R. Mosenthin[1], and R.J. Christopherson[2], [1]Hohenheim University, Institute of Animal Nutrition (450), 70593 Stuttgart, Germany, [2]Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, T6G2P5 Ca.

944 Effects of ruminal and post-ruminal infusion of starch hydrolysate or glucose on the microbial ecology of the gastrointestinal tract in growing steers. J. S. Van Kessel*[1], P. C. Nedoluha, A. Williams-Campbell[1], R. L. Baldwin, VI[1], and K. R. McLeod[2], [1]USDA-ARS, Beltsville, MD, [2]University of Kentucky, Lexington, KY.

945 Replacing corn silage with sorghum silage to supplement growing steers grazing high quality pastures: effects on productive performance. L. O. Abdelhadi*[1,2,3], F. J. Santini[1,2], and E. L. Villarreal[2], [1]Fac. Cs. Agrarias-UNMdP, [2]INTA EEA Balcarce, [3]CONICET - Argentina.

946 Effects of ruminal infusion of electrolyte solutions on calf performance parameters. S. I. Wawrzyniak*[1], H. D. Tyler[1], and J. D. Quigley, III[2], [1]Iowa State University, Ames, [2]American Protein Corporation, Ames, IA.

947 Effect of nitrogen intake on total nitrogen excretion and its partition between urine and feces in Holstein heifers. JC Marini* and ME Van Amburgh, Cornell University.

948 The response of growing dairy calves to additional dietary chromium on growth and humoral characteristics. J.A. Jackson, S.T. Franklin, L.J. Driedger*, and C.H. Hamilton, University of Kentucky, Lexington, KY.

949 Effects of ruminal infusion of electrolyte solutions on calf performance parameters. S. I. Wawrzyniak*[1], H. D. Tyler[1], and J. D. Quigley, III[2], [1]Iowa State University, Ames, [2]American Protein Corporation, Ames, IA.

950 Corn processing and soybean meal treatment on performance of growing beef steers fed grass silage-based diet. D. R. Ouellet*[1], M. D'Amours[2], R. Berthiaume[1], L. Faucitano[1], and D. Pellerin[2], [1]Dairy and Swine R&D Centre, AAFC, Lennoxville (QC), Canada, [2]Animal Science Dept., Laval University, Quebec (QC), Canada.

951 The effect of dietary roughage and processed corn on rumen development and growth in dairy calves. D.L.J. Benschop*[1], J.P. Cant[1], and R. Spratt[2], [1]University of Guelph, Animal and Poultry Science, [2]Agribrands Purina Canada Inc.

952 Influence of ruminal and postruminal carbohydrate infusion on visceral organ mass and adipose tissue accretion in growing beef steers. K.R. McLeod*[1], R.L. Baldwin[1], M.B. Solomon[1], A.V. Capuco[1], and D.L. Harmon[2], [1]USDA, ARS, Beltsville MD 20705, [2]Univ. of Kentucky, Lexington, 40546.

953 Effects of Alimet® on performance of growing cattle fed forage diets and molasses based liquid supplements. E. R. Rodriguez*[1], W. E. Kunkle[1], and M. Vazquez-Añon[2], [1]University of Florida, Gainesville, FL, [2]Novus International, Inc., St. Charles, MO.

954 Intake, Digestibility and Plasma Urea Nitrogen in Heifers Fed Supplements with Different Ruminal Undegradable Protein Levels. Ronaldo Lopes Oliveira*[1], Jose Carlos Pereira[2], Domicio Nascimento Junior[2], Ricardo A. M. Vieira[3], and Marinaldo Dias Ribeiro[2], [1]Faculdades UPIS, Brasilia, DF, Brazil, [2]Universidade Federal de Vicosa-MG, Brazil, [3]Instituto Melon de Estudos e Pequisas, Silvania-GO, Brazil.

955 Use of soybean hulls as a replacement for rolled corn in receiving calf diets. C.J. Mueller*, H.M. Blalock, and R.H. Pritchard, South Dakota State University.

956 Effect of source and level of supplemental bypass total sulfur amino acids (tsaa)on performance of growing cattle fed bermudagrass hay diets supplemented with molasses based supplements. B. R. Austin*[1], L. B. Davis[1], P. A. Davis[1], B. A. Reiling[1], and W. E. Kunkle[1], [1]University of Florida, Gainesville, FL, US.

957 Using non-pasteurized fermented whey in calf feeding. F.I. Juarez*[1], M. Montero[1], and H.S. Garcia[2], [1]CIRGOC-INIFAP, [2]UNIDA-Instituto Tecnológico de Veracruz.

958 Effects of 2-hydroxy-4-(methylthio) butanoic acid (HMB) and dl-methionine on microbial growth, VFA production and nutrient digestion in continuous culture. S. Noftsger*, J. Firkins, and N. St-Pierre, The Ohio State University, Columbus OH.

959 Milk protein synthesis as a function of amino acid supply. L. Doepel*[1], M.D. Hanigan[2], J.J. Kennelly[1], and H. Lapierre[3], [1]University of Alberta, Edmonton, Canada, [2]Purina Mills LLC, St. Louis, Mo, [3]Dairy and Swine R & D Centre, Lennoxville, Canada.

960 Influence of 2-hydroxy-4 (methyl thio) butanoic acid isopropyl ester (HMBi) on the digestibility of organic matter and energy value of corn silage measured in vitro. J.C. Robert, N. Ballet, C. Richard, and B. Bouza, Aventis Animal Nutrition, Antony, France.

961 Ruminal metabolism of 2-hydroxy-4 (methyl thio) butanoic acid isopropyl ester (HMBi). J.C. Robert, N. Ballet, C. Richard, and B. Bouza, Aventis Animal Nutrition, Antony, France.

962 Effect of crude protein levels and forage source on nitrogen balance of dairy cows. K.L. Karg* and M.A. Wattiaux, University of Wisconsin-Madison.

963 Effects of moist heat treatment on ruminal nutrient degradability of sunflower seed. Arif Mustafa*[1], Yvan Chouinard[2], and Daniel Ouellet[3], [1]McGill University, [2]Université Laval, [3]Agriculture and Agri-Food Canda.

964 Antagonistic amino acids to the inhibitory amino acids on growth of mixed ruminal bacteria. H. Kajikawa*, M. Mitsumori, K. Tajima, and M. Kurihara, National Institute of Livestock and Grassland Science, Tsukuba, Ibaraki, Japan.

965 Effects of the level of rumen undegradable protein on microbial fermentation and amino acid flow from a continuous culture system. S. Gargallo, S. Calsamiglia*, and A. Ferret, Universitat Autonoma de Barcelona.

966 A dietary protein to metabolizable energy ratio: Altering soluble and potentially rumen degradable protein fractions on rumen ammonia, volatile fatty acid production, and nitrogen balance of prepubertal Holstein heifers. M.T. Gabler* and A.J. Heinrichs, The Pennsylvania State University.

967 The degradability and fermentation characteristics of diets containing extruded soybean meal. A.L. Mueller*, L.M. Lake, M.S. Kerley, M.R. Ellersiek, and R.L. Belyea, University of Missouri-Columbia, Columbia, MO.

968 Effect of level of rumen-degraded protein on milk production, ruminal metabolism and N utilization in lactating dairy cows. S M Reynal*[1] and G A Broderick[2], [1]University of Wisconsin-Madison, [2]U. S. Dairy Forage Research Center, Madison, WI.

969 Comparison of in situ and TCA methods for fractioning amino acids in tropical forages. L. F. Miranda*[1], N. M. Rodriguez[1], R. D. Sainz[2], E. S. Pereira[3], E. O. S. Saliba[1], and M. M. Gontijo Neto[4], [1]Universidade Federal de Minas Gerais, Brazil, [2]University of California, Davis, USA, [3]Universidade Estadual Oeste Paraná, Brazil, [4]EMBRAPA Gado de Corte, Brazil.

970 Milk from forage as affected by rumen degradable protein and corn grinding with corn silage-based rations. E. Charbonneau*[1], P.Y. Chouinard[1], G. Allard[1], H. Lapierre[2], and D. Pellerin[1], [1]Universite Laval, QC, Canada, [2]AAC, Lennoxville, QC, Canada.

971 Effect of protein source on microbial protein synthesis in beef cattle fed barley grain-based diets. K. M. Koenig*[1], K. A. Beauchemin[1], and L. M. Rode[2], [1]Agriculture and Agri-Food Canada, Research Centre, Lethbridge, AB, Canada, [2]Rosebud Technology, Ltd., Lethbridge, AB, Canada.

972 Effect of protein intake on synthesis of albumin and plasma total protein in lactating dairy cows. G. Raggio*[1], G.E. Lobley[2], D. Pellerin[1], G. Allard[1], R. Berthiaume[3], P. Dubreuil[4], M. Babkine[4], and H. Lappiere[3], [1]Universite Laval, QC, Canada, [2]Rowett Research Institute, Aberdeen, UK, [3]AAC, Lennoxville, QC, Canada, [4]Coll. Vet. Med., U. Montreal, QC, Canada.

973 Hepatic propionate metabolism in postparturient dairy cows as affected by prepartum carbohydrate source, chromium supplementation, and insulin addition in vitro. L. C. Ruzzi*[1], M. S. Piepenbrink[1], K. L. Smith[1], T. R. Overton[1], J. K. Drackley[2], and M. T. Socha[3], [1]Cornell University, Ithaca, NY, [2]University of Illinois, Urbana, [3]Zinpro Corporation, Eden Prairie, MN.

974 Effect of substitution of soybean meal for sesame meal on apparent digestibility of dry matter and crude protein in diets for sheep. R. Barajas*[1], J.F. Obregon[1], E. Romero[1], and A. Estrada[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).

975 Effect of dietary protein content and alfalfa:corn silage ratios on nitrogen excretion and milk production of late lactation cows. H.H.B. Santos*[2], S. Lardoux[1], V.R. Moreira[2], and and L.D. Satter[1,2], [1]U.S. Dairy Forage Research Center USDA-ARS, [2]Dairy Science Department, University of Wisconsin, Madison.

976 Effect of substitution of soybean meal for Chop-suey beans (Vigna radiata) on apparent digestibility of dry matter and crude protein in diets for sheep. A. Estrada*[1], J.F. Obregon[1], O. Tovar[1], and R. Barajas[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).

977 Dietary inclusion of silymarin in peripartum dairy cows: Effects on milk productivity, plasma metabolite and liver tissue. D. Tedesco*[1], A. Tava[2], C. Domeneghini[1], A. Costa[1], D. Sciannimanico[1], and M. Tameni[1], [1]Dipart. di Scienze e Tecnologie Veterinarie per la Sicurezza Alimentare, Universiy of Milano, Italy, [2]Ist. Sper. Colt. Foragg., Lodi, Italy.

978 Influence of soybean meal processing techniques on milk yield response of dairy cows. T. R. Dhiman*[1], [1]Utah State University.

979 Rumen undegradable protein from forage grass. Pierre Groenenboom*[1], James Shelford[1], and Shabtai Bittman[2], [1]UBC Education and Research Centre, [2]Pacific Agri-Food Research Centre.

980 Effect of nitrogen intake on nitrogen recycling and urea transporter expression in lambs. JC Marini*[1], JD Klein[2], JM Sands[2], and ME Van Amburgh[1], [1]Cornell University, [2]Emory University.

MONDAY, JULY 22, 2002
PM POSTER SESSION

Presentation Times
Odd-Numbered Poster Boards: 1 PM to 3 PM
Even-Numbered Poster Board: 3 PM to 5 PM

Animal Health
Management and Immunology

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number

981 Immunoglobulin binding in cows with Staphylococcus aureus mastitis. Amy Johnston-Ward*[1], Mulumebet Worku[1], Kevin Anderson[2], and Roberta Lymann[2], [1]North Carolina Agricultural and Technical State University, [2]North Carolina State University College of Veterinary Medicine.

982 Effect of time and frequency of administration of ketoprofen during surgical castration of beef cattle. S. T. L. Ting*[1,2], B. Earley[1], and M. A. Crowe[2], [1]Teagasc, Grange Research Centre, Dunsany, Co. Meath, [2]Faculty of Veterinary Medicine, University College Dublin, Ballsbridge, Dublin 4, Ireland.

983 Effect of body condition loss on cholesterol concentration and occurrence of postparturient diseases in holstein cows. I. H. Kim*[1], G. H. Suh[2], and D. S. Son[2], [1]Chungbuk National University, Chongju, Chungbuk, Korea, [2]National Livestock Research Institute, Cheonan, Chungnam, Korea.

984 Autoclaved ruminal fluid immediately after birth improves the growth and health of neonate dairy calves. J.B. Russell*[1], T.V. Muscato[2], and L.O. Tedeschi[2], [1]ARS/USDA, [2]Cornell University.

985 Transition period in dairy cows: immune system, inflammatory conditions and liver activity. L. Calamari, F. Librandi, E. Trevisi, and G. Bertoni*, UCSC, Facolta di Agraria, Piacenza, Italy.

986 Testing measures of lameness: using behaviour to predict presence and severity of hoof lesions in dairy cattle. F Flower* and D Weary, Animal Welfare Program, Faculty of Agricultural Sciences, Univeristy of British Columbia.

987 Determining the incidence of Johnes Disease in Maine dairy herds using three ELISA tests. D.P. Marcinkowski[1], G. W. Anderson[1], M. M. Bryant*[1], and D. E. Hoenig[2], [1]University of Maine, Orono, [2]Maine Department of Agriculture, Food and Rural Resources, Augusta.

988 Retrospective associations of prepartum intake, body condition score, body weight, and blood chemistry with the occurrence of retained placenta in dairy cows. H. M. Dann*, J. K. Drackley, and D. E. Morin, University of Illinois, Urbana.

989 Correlation between liver dry matter and liver lipid concentrations in periparturient dairy cows. O. Rosendo*[1], C. R. Staples[1], and L. R. McDowell[1], [1]University of Florida.

990 Influence of *Lactobacillus brevis*1E-1 on the gastrointestinal microflora of pre-weaning and weaning pigs. S Banach*[1], T Rehberger[1], T Parrott[1], C Maxwell[2], J Coalson[3], and K Touchette[3], [1]Agtech Products, Inc., [2]University of Arkansas, [3]Merrick's, Inc.

991 Endotoxin (LPS) challenge increases plasma xanthine oxidase (XO) activity in cattle: effect of growth hormone (GH) and vitamin E (E) treatment. S. Kahl* and T.H. Elsasser, USDA, Agricultural Research Service, Beltsville, MD.

992 Measurement of Bovine inflammatory cytokines by RT-PCR using an ex-vivo whole blood assay: Relevance to endotoxin levels in animal pharmaceuticals. M. L. Scott* and M. J. Myers, U.S. FDA, CVM, Division of Animal Research.

993 Preparation and characterization of monoclonal antibodies to recombinant bovine CD14. E. J. Sohn*[1], M. J. Paape[1], and R. R. Peters[2], [1]Immunology and Disease Resistance Laboratory, USDA-ARS, Beltsville, MD, [2]Department of Animal and Avian Sciences, University of Maryland, College Park.

994 Comparisons of functional capacities of blood mononuclear leukocytes (MNL) and neutrophils (PMN) from calves and heifers vaccinated with attenuated *Mycobacterium bovis* (BCG). M. Foote*[1], B. Nonnecke[1], W. Waters[1], T. Rahner[1], M. Palmer[1], W. Miller[2], M. Fowler[2], T. Johnson[2], B. Perry[2], and D. Hammell[2], [1]National Animal Disease Center, USDA, ARS, Ames, [2]Land O'Lakes, Inc., Webster City.

995 DNA vaccination in dairy cows: I. Effect of targeting a DNA vaccine to professional antigen presenting cells using bovine CTLA-4 sequences. L. Shkreta*[1], B.G. Talbot[1], and P. Lacasse[2], [1]Sherbrooke University, Sherbrooke, QC, Canada, [2]AAFC - Dairy and Swine R&D Centre, Lennoxville, QC, Canada.

996 DNA vaccination in dairy cows: II. Effect of injection site on immune responses to plasmid DNA immunization. L. Shkreta*[1], B.G. Talbot[1], and P. Lacasse[2], [1]Sherbrooke University, Sherbrooke, QC, Canada, [2]AAFC - Dairy and Swine R&D Centre, Lennoxville, QC, Canada.

997 Recombinant bovine soluble CD14 reduces fatality of endotoxin challenged mice. J. W. Lee*[1], X. Zhao[1], and M. J. Paape[2], [1]Department of Animal Science, McGill University, Quebec, Canada, [2]Immunology and Disease Resistance Laboratory, USDA-ARS, Beltsville, MD.

998 Alterations in immune parameters of cows and calves from four weeks prior to parturition through 24 hours after birth. S. T. Franklin*[1], M. C. Newman[1], K. E. Newman[2], and J. A. Jackson[1], [1]University of Kentucky, [2]Venture Laboratories.

999 Evaluation of a starch-oil composite versus phosphate buffered saline (PBS) as a vehicle for lipopolysaccharide (LPS) induced immune activation in growing pigs. J. W. Frank*[1], G. L. Allee[1], R. D. Boyd[2], F. C. Felker[3], and M. A. Mellencamp[2], [1]University of Missouri - Columbia, [2]PIC USA, Inc., Franklin, KY, [3]National Center for Agricultural Utilization Research, USDA/ARS, Peoria, IL.

1000 Regulation of immunoglobulin binding and Fc receptor expression on bovine neutrophils. M Worku*[1], K Campbell[1], and M Paape[2], [1]North Carolina Agricultural and Technical State University, [2]Immunology and Disease resistance Laboratory ARS USDA.

1001 Flow cytometric evaluation of the effects of Sodium Butyrate on apoptosis of bovine neutrophils. M Worku*[1], K Campbell[1], and M Paape[2], [1]North Carolina Agricultural and Technical State University, [2]Immunology and Disease resistance Laboratory ARS USDA.

1002 Interferon-? (IFN) and tumor necrosis factor-a (TNF) secretion by blood mononuclear leukocytes (MNL) from young and adult cattle vaccinated with attenuated *Mycobacterium bovis* (BCG): modulation by 1,25-$(OH)_2$vitamin D_3. B Nonnecke*[1], W Waters[1], M Foote[1], R Horst[1], M Fowler[2], and B Miller[2], [1]Natl. Anim. Dis. Ctr., Ames, IA, [2]Land O'Lakes Inc., Webster City, IA.

Graduate Paper Competition

CSAS Graduate Student Competition

Abstract Number	
1003	A bioeconomic model of the broiler chicken supply chain. M. J. Zuidhof*[1], R. J. Hudson[2], T. Joro[2], and J. J. R. Feddes[2], [1]Alberta Agriculture, Food and Rural Development, [2]University of Alberta.
1004	Exposing sows and their litters to recorded gruntings at fixed intervals : effects on piglet growth, sow performance and nursing behavior. K Fisette*[1], J.P Laforest[1], S Robert[2], and C Farmer[2], [1]Laval University, Quebec, Quebec, Canada., [2]Agriculture and Agri-food Canada, Dairy and Swine R&D Centre, Lennoxville, Quebec, Canada.
1005	Anatomical measurements of the digestive tract and nutrient digestibility in the Asian Bear Cat (*Arctictis binturong*). C. Crapo*[1], A. Moresco[2], S. Hurley[1], T. Hanner[1], and C. Kadzere[1], [1]North Carolina Agricultural & Technical State University, [2]Carnivore Preservation Trust.
1006	Expression of peroxisome proliferator-activated receptor (PPAR?) mRNA in adipose and muscle tissue of German Holstein and Charolais cattle. P. Huff*[1,2], J. Wegner[1], M. Ren[1], F. Lozeman[2], R. Weselake[2], and K. Ender[1], [1]Research Institute for the Biology of Farm Animals, Dummerstorf Germany, [2]University of Lethbridge, Lethbridge, Alberta Canada.
1007	Effects of feeding blends of grains naturally-contaminated with *Fusarium* mycotoxins on growth, serum chemistry and hematology of starter pigs. H.V.L.N. Swamy*[1], T.K. Smith[1], E.J. MacDonald[2], H.J. Boermans[1], N.A. Karrow[1], and W.D. Woodward[1], [1]University of Guelph, Guelph, ON, Canada, [2]University of Kuopio, Kuopio, Finland.
1008	Bacterial inoculant applied with or without hydrolytic enzymes to barley at harvest: effects on fermentation and nutrient retention in silage. H. Zahiroddini*[1,2], J. Baah[1], and T.A. McAllister[1], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]University of Tehran, Karaj, Iran.
1009	Predicting phytate content of Ontario soybean samples by near infrared reflectance spectroscopy. S.D. Leech*, E.V. Valdes, and C.F.M. de Lange, University of Guelph, Guelph, Ontario.
1010	Degradation of cell wall polysaccharides by a combination of carbohydrase enzymes: In vitro and in vivo studies. X. F. Meng*, F. O. Omogbenigun, C. M. Nyachoti, and B. A. Slominski, Department of Animal Science, University of Manitoba, Winnipeg, MB, Canada.

Dairy Foods

Cheese and Sensory

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number	
1011	A survey of California specialty cheese consumers' opinions and shopping habits. B. A. Reed*[1] and C. M. Bruhn[2], [1]University of California Cooperative Extension, Glenn County, [2]Center for Consumer Research, University of California, Davis.
1012	Cheese making properties of milk enriched with ß-casein. Sylvie Haché* and Daniel St-Gelais, Food Research and Development Centre, Agriculture and Agri-Food Canada, St-Hyacinthe, Quebec.
1013	Impacts of salt on the composition, proteolysis and functional properties of Mozzarella cheese. Annie Caron*[1], Daniel St-Gelais[1], and Pierre Audet[2], [1]Food Research and Development Centre, Agriculture and Agri-Food Canada, St-Hyacinthe, Quebec, [2]Agropur, Granby, Canada.
1014	Effect of pre fermentation of different portions of milk retentate on Prato cheese composition and proteolysis. J.R.F. Dornellas, L.M. Spadoti, C.R. Cunha, and S. Massaguer-Roig*, Universidade Estadual de Campinas, Campinas, SP, BRASIL.
1015	Composition, protein and fat recovery and yield evaluation on Prato cheese manufactured with Ultrafiltration concentrated milk. L.M. Spadoti, J.R.F. Dornellas, C.R. Cunha, and S. Massaguer-Roig*, Universidade Estadual de Campinas, Campinas, SP, BRASIL.

1016 Characterization of compositional and rheological properties of fresh cheeses made in the state of Chihuahua, Mexico. D. L. Van Hekken*[1], M. H. Tunick[1], F. J. Molina-Corral[2], J. E. Call[1], P. M. Tomasula[1], J. B. Luchansky[1], and A. A. Gardea[2], [1]USDA, ARS, Eastern Regional Research Center, Wyndmoor, PA, [2]Centro de Investigacion en Alimentacion y Desarrollo, Cuauhtemoc, Mexico.

1017 Effect of frozen storage on the proteolysis and rheology of soft goat milk cheese. D. L. Van Hekken*[1], M. H. Tunick[1], and Y. W. Park[2], [1]USDA, ARS, Eastern Regional Research Center, Wyndmoor, PA, [2]Agricultural Research Station, Fort Valley State University, GA.

1018 Melt and color changes of heated Hispanic-style cheeses. D. W. Olson*, D. L. Van Hekken, and M. H. Tunick, USDA, ARS, Eastern Regional Research Center, Wyndmoor, PA.

1019 Reversibility of pH-induced changes in the texture and serum phase of cultured cream cheese. M. Almena-Aliste*[1], M.L. Gigante[2], and P.S. Kindstedt[1], [1]University of Vermont, Burlington VT/USA, [2]State University of Campinas, Campinas/SP/Brazil.

1020 Microstructure of Feta cheese made using different cultures as determined by confocal scanning laser microscopy. Ashraf Hassan*, Joseph Frank, and Milena Corredig, The University of Georgia, Athens, GA, USA.

1021 Effects of various ingredients on a model process cheese. A.L. Dees* and E.A. Foegeding, [1]North Carolina State University.

1022 Comparison of Shelf-life of Fresh and Frozen Soft Goat Milk Cheeses in Relation to the Extent of Proteolytic and Lipolytic Properties. Y. W. Park*[1], A. Kalantari[1], V. Gutta[1], R. Gundelly[1], and J. H. Lee[1], [1]Fort Valley State University, Fort Valley, GA 31030.

1023 Effect of pre fermentation of different portions of milk retentate on Prato cheese composition and melting capacity. J.R.F. Dornellas, L.M. Spadoti, C.R. Cunha, and S. Massaguer-Roig*, Universidade Estadual de Campinas, Campinas, SP, BRASIL.

1024 Effect of post-manufacture modulation of cheese pH on the aging behavior of Mozzarella cheese. M.A.S. Cortez*[1], M.M. Furtado[1], M.L. Gigante[2], and P.S. Kindstedt[3], [1]Federal University of Vicosa/CAPES, MG/Brazil, [2]State University of Campinas, Campinas, SP/Brazil, [3]University of Vermont, Burlington, VT/USA.

1025 Seasonal Differences in the Concentration of Free Amino Acids and Volatile Compounds of Roncal Cheese. Maria Ortigosa[1], Noemi Munoz[1], Paloma Torre[1], and Jesus M. Izco*[2], [1]Dpto. Ciencias Medio Natural, Universidad Publica de Navarra, Spain, [2]Dairy Products Technology Center, Cal Poly University, San Luis Obispo, CA.

1026 Effect of Frozen Storage on Microbial Changes in Soft Goat Milk Cheese Compared with Fresh Ones. Aref Kalantari[1] and Young Park*[1], [1]Fort Valley State University, Fort Valley, GA 31030.

1027 Swiss cheese properties related to culture usage rate and warm room time. H. Ruiz-Espinosa, V.B. Alvarez, W.J. Harper, T. Ji*, and P.D. Courtney, The Ohio State University.

1028 Use of starter cultures in milk of mexican white cheese. F. A. Rodríguez-Almeida*[1], R. Terrazas[1], H. García[1], O.M. Cano[1], J.A. Jiménez[1], and M.C. Olivas[2], [1]Universidad Autónoma de Chihuahua, Chihuahua, México, [2]CBeta No. 90, Cd. Cuauhtémoc, Chihuahua, México.

1029 Differentiation of cheese type and maturity: Comparison of a new SE-HPLC method with the RP-HPLC method. C. J. Coker[1], K. A. Johnston[1], R. A. Crawford[1], R. L. Motion[2], H. Singh[3], and L. K. Creamer*[1], [1]New Zealand Dairy Research Institute, Palmerston North, NZ, [2]Forest Research Institute, Rotorua, New Zealand, [3]IFNHH, Massey University, Palmerston North, New Zealand.

1030 Use of Dynamic Rheological Data for Prediction of Meltability of Gaziantep Cheese with Various Fat Contents. Talip Kahyaoglu*[1] and Sevim Kaya[1], [1]University of Gaziantep.

1031 Effect of high pressure treatment of Swiss cheese starter organisms on growth and activity in a sterile slurry system. W. J. Harper*[1], N. Akin[2], and G. Y. Kim[3], [1]The Ohio State University, Columbus, Ohio, [2]Sekcuk University, Konya/Turkey, [3]Kangwon National University, Chunchon, Korea.

1032 Lactic acid bacteria from natural biofilm of Tina, a wooden vat, potential contributors to Ragusano cheese fermentation. L. Corallo[1], P.S Cocconcelli[2], R. Gelsomino[1], P. Campo[1], S. Carpino*[1], and G. Licitra[3], [1]Consorzio Ricerca Filiera Lattiero- Casearia, Ragusa, Italy., [2]Ist. di Microbiologia e Centro Ricerche Biotecnologiche, Università Cattolica, Piacenza e Cremona, [3]D.A.C.P.A., Catania University, 95100 Catania.

1033 Impact of nisin producing culture, liposome-encapsulated nisin and *Lactobacillus casei*on Cheddar cheese ripening. R-O Benech*, E Kheadr, C Lacroix, and I Fliss, Centre de recherche STELA, Universite Laval.

1034 Study of ß-lactoglobulin-xanthan gum complexation by small-angle laser light scattering. S.I. Laneuville*[1], C. Sanchez[2], S.L. Turgeon[1], J. Hardy[2], and P. Paquin[1], [1]Dairy Research Center STELA, Laval University, Quebec, Canada, [2]Institut National Polytechnique de Lorraine-ENSAIA, Vandoeuvre-lès-Nancy, France.

1035 Emulsion stabilizing properties of chitosan in presence of whey protein isolate: effect of characteristics of chitosan and emulsification process. S. Laplante, S.L. Turgeon, and P. Paquin, Dairy Research Center, Laval University.

1036 Manufacture of hard ''requeijao'' cheese with reduced fat content using whey protein concentrate. F. M. Soares and L.M. Fonseca*, University of Minas Gerais, Brazil.

1037 Brazilian commercial pasteurized fluid milks flavor judging by the ADSA score card methodology. G.S.B. Aires and S. Massaguer-Roig*, Universidade Estadual de Campinas, Campinas, SP, BRASIL.

1038 The effect of milkfat on the sensory threshold of three impact odorants of strawberry flavor. S. Gaddamu, N. Slaughter, K. Adhikari*, and I. Gruen, Department of Food Science, University of Missouri.

1039 Odor profile of typical Sicilian cheeses: Maiorchino, Pecorino, Provola dei Nebrodi and Ricotta infornata. S. Mallia[1], S. Carpino*[1], E. Lavin[2], G. Di Rosa[1], G. Licitra[3], and T.E. Acree[2], [1]Consorzio Ricerca Filiera Lattiero Casearia, 97100 Ragusa, Italy, [2]Cornell University, Geneva, NY 14853, [3]D.A.C.P.A., Catania University, 95100 Catania, Italy.

1040 Effect of the Utilization of an Adjunct Starter Culture on the Volatile Compounds and Sensory Characteristics of a Spanish Raw Ewes' Milk Cheese. Maria Ortigosa[1], Jesus M. Izco*[2], Cristina Arizcun[1], and Paloma Torre[1], [1]Dpto. Ciencias Medio Natural, Universidad Publica de Navarra, Spain, [2]Dairy Products Technology Center, Cal Poly University, San Luis Obispo, CA.

Food Safety

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number

1041 The use of immunoaffinity columns for the isolation of ractopamine from edible tissues of food animals. W. L. Shelver* and D. J. Smith, USDA/ARS/Biosciences Research Laboratory, Fargo, ND.

1042 Decline of PCB concentration in milk of accidentally highly contaminated cows. G. Piva*[1], M. Morlacchini[2], T. Bertuzzi[1], and F. Rossi[1], [1]Facoltà di Agraria, Piacenza, Italy, [2]CERZOO, San Bonico, Piacenza, Italy.

1043 Excretion of aflatoxin M1 in milk of dairy ewes treated with different doses of aflatoxin B1. G. Battacone, A. Nudda, A. Cannas, A. Cappio Borlino, and G. Pulina*, Dipartimento di Scienze Zootecniche - University of Sassari, Sassari, Italy.

1044 Isolation of *Clostridium botulinum* (types A, B & E) in sediments from coastal areas of the north of Iran. H. R. Tavakoli*, Nutrition and Food Hygiene Dept; Faculty of Hygiene, Univ. of Baghyatollah Medical Sciences, Tehran.

1045 HACCP - Have another Cup of Coffee and Pray?. N. Unger*[1], J. Shelford[1], D. Fraser[1], A. Moore[2], B. Skura[1], D. Weary[1], and F. Brunger[1], [1]University of British Columbia, Vancover, BC, [2]BC Ministry of Agriculture, Food and Fisheries.

1046 Food Safety in the Retail Ice cream (soft serve) market. I. Okpala*[1], [1]Michigan State University, Lansing, MI, [2]Michigan Department of Agriculture, Lansing, MI.

1047 Prevalence and Distribution of *Campylobacter* spp. in a Swine Slaughter and Processing Facility. R Pearce[1], R Dudley[2], F.M. Wallace*[2], J.E. Call[2], and J.B. Luchansky[2], [1]The National Food Centre, Teagasc, Dunsinea, Castleknock, Dublin, Ireland, [2]USDA, Agricultural Research, Eastern Regional Research Center, Wyndmoor, PA.

1048 Evaluation of bacteriophage DC22 for control of *Escherichia coli* O157:H7. S.J. Bach*[1], T.A. McAllister[1], D.M. Veira[2], V.P.J. Gannon[3], and R.A. Holley[4], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]Agriculture and Agri-Food Canada, Kamloops, BC, [3]Health Canada, Animal Diseases Research Institute, Lethbridge, AB, [4]University of Manitoba, Winnipeg.

1049 Antimicrobial Activity of Ginkgo Biloba and Origanox on *Escherichia coli* O157:H7 and *Salmonella agona*. H. Nasri, S. A. Ibrahim*, T. N. Evans, T. Jordan, C. W. Seo, and G. Shahbazi, North Carolina A&T State University, Greensboro, NC.

Physiology

Estrus Synchronization

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number

1050 Postpartum suppression of ovarian activity with a Deslorelin implant enhanced uterine involution in lactating dairy cows. F.T. Silvestre*[1], J.A. Bartolome[1], S. Kamimura[1], A. C. M. Arteche[1], S.M. Pancarci[1], T. Trigg[2], and W.W. Thatcher[1], [1]University of Florida, Gainesville, FL, USA, [2]Peptech Animal Health, North Ryde, Australia.

1051 Effect of bovine somatotropin on ovarian function and pregnancy in nonlactating dairy cows. S Kamimura*, T.R. Bilby, S.M. Pancarci, A. Guzeloglu, and W.W. Thatcher, University of Florida.

1052 Effect of a deslorelin implant in a timed AI protocol on follicle development, luteal activity and reproductive performance of dairy cows. J.E.P. Santos*[1], J. Bartolome[2], R.L.A. Cerri[1], S.O. Juchem[1], T.E. Trigg[3], and W.W. Thatcher[2], [1]University of California Davis, [2]University of Florida, [3]Peptech Animal Health, Australia.

1053 Effect of presynchronization on conception rate to a timed artificial insemination protocol in lactating dairy cows. C. Navanukraw*[1], L.P. Reynolds[1], A.T. Grazul-Bilska[1], D.A. Redmer[1], and P.M. Fricke[2], [1]Department of Animal and Range Sciences, North Dakota State University, Fargo, ND, 58105-5727, [2]Department of Dairy Science, University of Wisconsin-Madison, Madison, WI, 53706.

1054 Effect of a single progesterone injection on ovarian follicular cysts in lactating dairy cows. T. B. Hatler*, S. H. Hayes, A. M. Nugent, D. W. Yelton, and W. J. Silvia, University of Kentucky, Lexington.

1055 Ovarian follicular activity in lactating Holstein cows supplemented with monensin. S. K. Tallam*[1], T. F. Duffield[1], K. E. Leslie[1], R. Bagg[2], and J. S. Walton[1], [1]University of Guelph, Guelph, Ontario, Canada, [2]Elanco Animal Health, Division Eli Lilly Canada Inc., Guelph, Ontario, Canada.

1056 Use of milk letdown after prostaglandin F_{2a} to initiate OVSYNCH in lactating dairy cows. B.R. Keith*, J.S. Walton, K.E. Leslie, and W.H. Johnson, University of Guelph, Guelph, Ontario, Canada.

1057 Effects of experimentally-induced clinical mastitis one estrous behavior, luteal function, and establishment of pregnancy during early lactation of dairy cows. M.E. Hockett*[1], N.R. Rohrbach, R.A. Almeida, H.H. Dowlen, K. Lamar, S.P. Oliver, and F.N. Schrick, [1]The University of Tennessee, Knoxville, Tennessee.

1058 Supplementing transition cows with organic trace minerals or calcium propionate-propylene glycol drenching: Implications for reproductive performance. Daniela Monardes*[1], A. R. Melton[2], I. D. Peeler[2], J. H. Bame[2], O. A. Peralta[2], W. S. Swecker[2], R. L. Nebel[2], and D. J. Tomlinson[3], [1]University of Chile, Santiago, [2]Virginia Polytechnic Institute and State University, Blacksburg, [3]Zinpro Corp., Eden Prairie, MN.

1059 Effects of experimentally-induced clinical mastitis during the preovulatory period on endocrine function, follicular growth and ovulation in lactating dairy cows. M.E. Hockett*[1], N.R. Rohrbach, R.A. Almeida, S.P. Oliver, and F.N. Schrick, [1]The University of Tennessee, Knoxville, Tennessee.

1060 Effect of bST and reproductive management on reproductive and lactational performance of Holstein cows. J.E.P. Santos*[1], S.O. Juchem[1], R.L.A. Cerri[1], C. Dei[2], W.W. Thatcher[3], and C. Bilby[2], [1]University of California Davis, [2]Monsanto Company, [3]University of Florida.

1061 Effect of resynchronization with GnRH on day 21 after artificial insemination on conception rate and pregnancy loss in lactating dairy cows. R.C. Chebel*[1], J.E.P. Santos[1], S.O. Juchem[1], R.L.A. Cerri[1], K.N. Galvao[1], and W.W. Thatcher[2], [1]University of California Davis, [2]University of Florida.

1062 Path analysis of metabolic and endocrine risk factors for repeat breeder cows. N. Moss[1,2], I.J. Lean*[1,2], S.W.J. Reid[3], and D.R.H. Hodgson[2], [1]Bovine Research Australasia, [2]University Of Sydney, [3]University of Glasgow.

1063 Comparison of Ovsynch vs Estrous Detection in Anovulatory and Ovulatory Lactating Dairy Cows. Ahmet Gumen*, Jerry N. Guenther, and Milo C. Wiltbank, Department of Dairy Science, University of Wisconsin-Madison.

1064 Estradiol cypionate in postpartum dairy cattle: effect on reproduction and milk production. J. M. Haughian*, R. Sartori, A. Gümen, J. N. Guenther, and M. C. Wiltbank, University of Wisconsin, Madison.

1065 Factors affecting the intensity and duration of estrus of Holstein and Jersey cattle. R. L. Nebel*, J. H. Bame, and R. E. Pearson, Virginia Polytechnic Institute and State University, Blacksburg, VA/USA.

1066 Synchronization of estrus in dairy heifers using GnRH, PGF_{2a} and ECP. H. Rivera* and P.M. Fricke, University of Wisconsin-Madison.

1067 Pregnancy rates to a timed insemination protocol using estradiol cypionate or GnRH in Holstein heifers and cows. J.D. Ambrose*[1], J.P. Kastelic[2], and R. Rajamahendran[3], [1]Alberta Agriculture Food and Rural Development, Edmonton, [2]Agriculture Agri-Food Canada, Lethbridge, [3]University of British Columbia, Vancouver, Canada.

1068 Induction of a new follicular wave in holstein heifers synchronized with norgestomet. F.EO. Garacia*[1,2], M.J.L. Cordero[1], E.A. Hizarza[1], O.J.G. Peralta[1], C.M.E. Ortega[1], M. Cardenas[4], C. G. Gutierrez[3], and T.E.M.T. Sanchez[1], [1]Colegio de Postgraduados, [2]Universidad de Guadalajara, [3]Universidad Nacional Autonoma de Mexico, [4]Instituto Nacional de la Nutricion, Salvador Zubiran.

1069 Effect of sodium azide and glucose on post-compaction development of in vitro produced bovine embryos. J. F. De La Torre-Sanchez* and G. E. Seidel Jr., Colorado State University, Fort Collins, Colorado.

1070 Dynamic Changes in Body Composition Quality Traits as Influenced by Sampling Interval and Handling in Beef Heifers. H. L. Evans*[1], S. T. Willard[2], R. King[3], and R. C. Vann[1], [1]Brown Loam Branch Experiment Station, [2]Mississippi State University, [3]Designer Genes Technologies, Inc.

1071 Use of melengestrol acetate for estrus synchronization in an artificial insemination program in ewe. F.W. Castonguay*[1,2], G. Leduc[2], and F. Goulet[1,2], [1]Agriculture and Agri-Food Canada, Lennoxville, Quebec, Canada, [2]Depart. Sciences animales, Universite Laval, Quebec, Québec, Canada.

1072 Synchronization of estrus with SucroMate-D bovine and prostaglandin F2a in beef heifers. P. Ryan*[1], S. Willard[1], B. Gandy[1], S. Bowers[1], P. Burns[2], and B. Simon[2], [1]Mississippi State University, Mississippi State, MS, [2]Thorn BioScience Inc., Lexington, KY.

1073 Induced twinning in postpartum suckled beef cows using artificial insemination and embryo transfer. G. C. Lamb[1], D. R. Brown[1], C. R. Dahlen*[1], and A. R. Spell[2], [1]University of Minnesota, Grand Rapids, MN, [2]Cyagra LLC., Manhattan, KS.

1074 Effects of calf removal on the diameter of the dominant follicles and on ovulation rates at GnRH and Estradiol Benzoate injections in anestrous Nelore cows. J.L.M. Vasconcelos*, E.R. Vilela, A.H. Souza, M. Meneghetti, and N. Ferreira Jr., FMVZ-UNESP, Botucatu, SP, Brazil.

1075 Effect of PGF2a timing on the reproductive performance of beef cows treated with CIDR-B and estradiol benzoate. A.T. Estrada*, J. Walton, K. Bateman, and W.H. Johnson, University of Guelph, Guelph, Ontario, Canada.

1076 Induction of ovulation in dairy cattle with a deslorelin implant. JA Bartolome*[1], JEP Santos[2], SM Pancarci[1], P Melendez[1], ACM Arteche[1], O Hernandez[1], LF Archbald[1], TE Trigg[3], and WW Thatcher[1], [1]University of Florida, Gainesville, Florida, [2]University of California, Davis, California, [3]Peptech Animal Health, North Ryde, Australia.

Ruminant Nutrition

Feedlot, Transition Cow, and Silage

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number

1077 Effect of sugar cane level on intake, digestibility, and ruminal fermentation in crossbreed steers fed stargrass. E. Aranda[1], G.D. Mendoza*[1], C. Garcia-Bojalil[1], J.A. Ramos[1], F. Castrejon[2], and R. Rojo[3], [1]Colegio de Postgraduados, Montecillo, Texococo, Mexico, [2]UNAM-FMVZ, Cd. Universitaria Mexico, D.F., Mexico, [3]Universidad Autonoma de Guerrero, FMVZ-URCCH, Cuajinicuilapa, Gro. Mexico.

1078 Influence of level and method of supplementation on the utilization of supplemental tallow fatty by feedlot steers. R.A. Zinn[1] and A. Plascencia*[2], [1]University of California, Davis, [2]Instituto de Investigaciones en Ciencias Veterinarias-UABC.

1079 Effect of exogenous addition of liquid enzyme on performance of feedlot cattle. O.G. Lozano*[1], J. Angulo[2], V.M. Basurto-Kuba[3], P. Frumholtz[3], and E. Vazquez[1], [1]Universidad Autonoma de Sinaloa, [2]Ganadería Flexi, Culiacán Sinaloa, [3]Agribrands Purina Cargill, México.

1080 Effect of feeding diets containing corn grain with Roundup (event GA21 or NK603), control, or conventional varieties on steer feedlot performance and carcass characteristics. L.L. Berger*[1], N.D. Robbins[1], and E.P. Stainisiewski[2], [1]University of Illinois-Urbana, [2]Monsanto Company, St. Louis, MO.

1081 Evaluation of a controlled-release capsule of n-alkanes for studies with ruminants. D.E. Oliveira*[1], M.Q. Manella[1], C. Boin[1], D.P.D Lanna[1], J.J.A.A. Demarchi[2], and G.F. Alleoni[2], [1]Esalq-USP, [2]Instituto de Zootecnia.

1082 Sites of digestion in steers fed fresh oats and supplement with flint or dent corn grain offered whole or ground. J.M. Grigera*[1-]2, F.J. Santini[1-2], and J.C. Elizalde[1-3], [1]Fac. Cs. Agrarias-UNMdP., [2]INTA-Balcarce., [3]CONICET, Argentina.

1083 Effect of linoleic or oleic acid-rich oils on ruminal fermentation, nutrient digestibility and performance of finishing cattle. A. N. Hristov*, L. R. Kennington, M. A. McGuire, C. W. Hunt, and J. K. Ropp, Department of Animal and Veterinary Science, University of Idaho, Moscow, ID 83844-2330.

1084 Effect of dietary starch level on carcass characteristics and the hematin contents of beef. Kyouko Hodate*[1], Yumi Higashiyama[1], Hiroyuki Abe[1], Akihiro Iguchi[2], Masakazu Kobayashi[2], Tomoo Mori[2], Katsumi Kasai[3], Yoshihiro Kanbe[4], Hideto Mashiyama[4], and Tsutomu Asada[5], [1]National Institute of Livestock and Grassland Science, [2]Chiba Livestock Experimental Station, [3]Ibaraki Livestock Experimental Station, [4]Tochigi Livestock Experimental Station, [5]Gunma Livestock Experimental Station.

1085 Fall and winter supplementation of post-weaning steers of two different mature body weight grazing high quality pastures supplemented with two types of energy source. F. J. Santini, E. Pavan, E. L. Villarreal, and J. M. Grigera, National Institute of Agricultural Technology (INTA).

1086 Influence of abomasal starch hydrolysate and/or casein on pancreatic exocrine secretion and plasma hormone concentrations in beef steers. J. A. Benson*, K. C. Swanson, J. C. Matthews, and D. L. Harmon, University of Kentucky, Lexington.

1087 The influence of treating wet distiller's grains and solubles with three levels of preservative (KI-151) on feedstuff stability, intake and performance of finishing steers. K. E. Tjardes*[1], C. L. Wright[1], C. Myers[2], and M. Martinez[2], [1]South Dakota State University, Brookings, [2]Kemin Americas, Inc., Des Moines, IA.

1088 Effect of Low Calcium Diet (Ca) and Vitamin D_3 (D_3) on Ca Metabolism of Finishing Steers. G. Aranda-Osorio* and J.J. McKinnon, University of Saskatchewan, Saskatoon, SK. Canada.

1089 Methods for calculating diet energy values from feedlot performance of cattle. F. N. Owens*, M. A. Hinds, and D. W. Rice, Pioneer Hi-bred Int'l, Johnston, IA.

1090 Effects of Dietary Cation Anion Balance on Blood Parameters and Performance Characteristics of Beef Cattle during the Pre-Receiving and Receiving Phases of the Feedlot. J. J. Williams*[1] and L. W. Greene[1], [1]Texas A&M University Agricultural Research and Extension Center, Amarillo TX.

1091 Effect of high linoleic sunflower oil on growth performance and carcass characteristics of feedlot steers. J. Baah*[1], T.A. McAllister[1], A.N. Hristov[2], F.H. Van Herk[1], and M. Ivan[1], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]University of Idaho, Moscow.

1092 Substitution of sorghum for citrus pulp on finishing yearlings. I. Mejia-Haro*[1], G. Tirado-Estrada[1], F. Gonzalez-Castaneda[2], J. Fajardo-Pena[1], J. Mejia-Haro[3], and B. Ortiz-de la Rosa[4], [1]CIGA ITA de Aguascalientes, Mexico, [2]INIFAP - Aguascalientes, Mexico, [3]Universidad de Guanajuato, Mexico, [4]CIGA ITA de Conkal, Yucatan, Mexico.

1093 Effects of Monensin (Rumensin®) and Salinomycin (Salocin®) on Feedlot Performance of Beef Cattle in Northern Mexico. B.I. Giner-Chavez*[1], G.J. Vogel[2], and M.A. Hernandez[1], [1]Elanco Animal Health, Eli Lilly de Mexico, [2]Elanco Animal Health, Eli Lilly and Company, U.S.A.

1094 Influence of close-up dry period protein supplementation on full lactation productive and reproductive performance of primiparous Holstein cows. J.M. Moorby*[1] and P.H. Robinson[2], [1]Institute of Grassland and Environmental Research, Aberystwyth, Wales, UK, [2]UCCE, Dept. Anim. Sci., UC Davis, Davis, CA.

1095 Influence of close-up dry period protein supplementation on full lactation productive and reproductive performance of multiparous Holstein cows. P.H. Robinson*[1] and J.M. Moorby[2], [1]UCCE, Dept. Anim. Sci., UC Davis, Davis, CA, [2]Institute of Grassland & Environmental Science, Aberystwyth, Wales, UK.

1096 Influence of early dry-off of twin-carrying multiparity Holstein cows on their productive performance in the first 120 days of lactation. P.H. Robinson*[1], J.H. Kirk[2], and T. Riordan[3], [1]UCCE, Dept. Anim. Sci., UC Davis, Davis, CA, [2]UCCE, Vet. Med. Teaching Research Centre, Tulare, CA, [3]Nutri-Systems, Fresno, CA.

1097 Dietary supplementation of polyunsaturated fatty acids affects the immune response in dairy cows during the transition period. N. Gagnon*, H.V. Petit, and M. Lessard, Dairy and Swine R and D Centre, Lennoxville, Qc, Canada.

1098 Energy balance (EB) during the transition period in high producing Holstein cows. M.A. McGuire*, B. Shafii, G. Orthel, and J.G. Giesy, University of Idaho, Moscow.

1099 Vitamin B12 metabolism and bioactivity during the transition period in the dairy cows. B Graulet*[1], A Desrochers[2], and C.L. Girard[1], [1]Dairy and Swine R&D Centre, Agriculture and Agrifood Canada, Lennoxville, [2]Faculte de Medecine Veterinaire, St-Hyacinthe, Canada.

1100 Metabolic Responses of Lactating Dairy Cows to 14-day Subcutaneous Infusions of Several Dosages of Glucagon. G. Bobe*[1], B. N. Ametaj[2], Y. Lu[1], D. C. Beitz[1], and J. W. Young[1], [1]Iowa State University, Ames, IA, [2]Purdue University, West Lafayette, IN.

1101 *E. coli* O157:H7 intervention strategies for feedlot cattle. T. J. Klopfenstein*[1], D. R. Smith[1], R. A. Moxley[1], G. E. Erickson[1], J. D. Folmer[1], S. Hinkley[1], and C. N. Macken[1], University of Nebraska, Lincoln, NE.

1102 Effects of anionic and cationic diets fed in prepartum on blood parameters on peripartum of Holstein cows with different dry periods, associated or not with estradiol injection. Lucia Teixeira*[1], Mehme Gulay[2], Daniel Furtado[1], Juan Perez[1], Jose Souza[1], Marcio Liboni[2], and Henry Herbert[2], [1]Universidade Federal de Lavras, [2]University of Florida.

1103 Effects of feedings soybeans and rumen protected choline during late gestation and early lactation on performance of dairy cows. W. A. Scheer*, M. C. Lucy, M. Kerley, and J. N. Spain, University of Missouri - Columbia.

1104 Body condition replenishment during the dry period and its effects on metabolic status and lactation of dairy cows. D. B. Carlson*, M. S. Laubach, D. E. Schimek, W. L. Keller, J. W. Schroeder, and C. S. Park, North Dakota State University, Fargo, ND, USA.

1105 The effect of monensin controlled release capsule at dry-off on calving-related disorders and milk yield in Holstein cows. P. Melendez*, C. Risco, and A. Donovan, University of Florida, Gainesville, FL, USA.

1106 Replacing alfalfa silage with chopped alfalfa hay in a coarse barley silage based total mixed ration for dairy cows. M.S. Einarson*[1] and J.C. Plaizier[1], [1]Department of Animal Science, University of Manitoba.

1107 Effects of microbial inoculation of alfalfa haylage on milk production of dairy cows. V. J. Magalhaes[1], S. Manginelli[1], P. M. Meyer[2], and P. H. M. Rodrigues*[1], [1]Faculdade de Medicina Veterinaria e Zootecnia, University of Sao Paulo, Brazil, [2]Escola Superior de Agricultura Luiz de Queiroz, University of Sao Paulo, Brazil.

1108 The effect of microbial inoculation of alfalfa haylage on ruminal and total digestibility in dry cows. S. Manginelli[1], V. J. Magalhaes[1], P. M. Meyer[2], and P. H. M. Rodrigues*[1], [1]Faculdade de Medicina Veterinaria e Zootecnia, University of Sao Paulo, Brazil, [2]Escola Superior de Agricultura Luiz de Queiroz, University of Sao Paulo, Brazil.

1109 Effect of feeding carrot pulp silage on digestibility,performance and immune response of sheep. F.T. Sleiman*, R.K. Sarkis, E.K. Barbour, M.G. Uwayjan, and M.N. Nimah, American University of Beirut.

1110 Effects of replacing dietary alfalfa silage with formate-treated alfalfa silage or red clover silage on milk production and nutrient utililization in dairy cows. G. A. Broderick* and W. J. Radloff, U.S. Dairy Forage Research Center, Madison, WI.

1111 Milk from forage as affected by degradability of carbohydrates in the rumen with alfalfa silage-based rations. E. Charbonneau*[1], P.Y. Chouinard[1], G. Allard[1], H. Lapierre[2], and D. Pellerin[1], [1]FSAA, Universite Laval, Qc, Canada, [2]AAC, Lennoxville, Qc, Canada.

1112 Effect of differents roughages conserved in silage form on the nutrient intake, digestibility and milk production of lactating cows. Elzania S. Pereira*[1], Alex M.V. Arruda[1], Lidia F. Miranda[3], Leandro F. Silva[2], Ivone Y. Mizubuti[2], Andre Kraap[1], Julio C. Barreto[1], Mirna A. Syperreck[1], and Alberto M. Fernandes[4], [1]UNIOESTE Universidade Estadual do Oeste do Parana, [2]Universidade Estadual de Londrina, [3]Universidade Federal de Minas Gerais, [4]Universidade Federal de Vicosa.

1113 Ingestive behaviour of lactating cows feeding with differents roughages conserved in the silage form. Elzania S. Pereira*[1], Alex M.V. Arruda[1], Lidia F. Miranda[3], Leandro F. Silva[2], Ivone Y. Mizubuti[2], Andre Kraap[1], Julio C. Barreto[1], Mirna A. Syperreck[1], and Alberto M. Fernandes[4], [1]UNIOESTE Universidade Estadual do Oeste do Parana, [2]Universidade Estadual de Londrina, [3]Universidade Federal de Minas Gerais, [4]Universidade Federal de Vicosa.

1114 Corn Silage Chop Length and Long Hay Effects on Intake, Chewing Activity, and Digestion in Early Lactatig Dairy Cows. J. Couderc*[1], D. Rearte[2], G. Pieroni[2], F. Santini[2], O. Di Marco[2], and G. Eyherabide[2], [1]CONICET / PGPA INTA Balcarce-UNMdP, Argentina, [2]INTA Balcarce-UNMdP, Argentina.

1115 Corn silage of different chop length as base of mid lactation dairy cows rations 1. Effect on dry matter intake, milk production, live weight gain and body condition score. P. Gregorini*, F. J. Santini, H. H. Fernandez, and D. H. Rearte, Universidad NAcional de Mar del PLata. INTA, Balcarce, Buenos Aires/ Argentina.

1116 Corn silage of different chop lengths as a base of mid-lactation dairy cow rations. 2. Effect on the ruminal environment and chewing activities. P. Gregorini*, F. J. Santini, H. H. Fernandez, and D. H. Rearte, Universidad Nacional de Mar del Plata. INTA, Balcarce, Buenos Aires/ Argentina.

1117 Replacing corn silage with sorghum silage to supplement growing steers grazing high quality pastures: effects on ruminal fermentation and nutrient digestion. L. O. Abdelhadi*[1,2,3] and F. J. Santini, [1]Fac. Cs. Agrarias-UNMdP, [2]INTA EEA Balcarce, [3]CONICET - Argentina.

1118 Effects of replacing corn silage with superior third of cassava foliage silage on the production of dairy cows. E.C. Modesto[1], G.T. Santos*[1], J.C. Damasceno[1], C.C. Jobim[1], E. Detmann[3], and H.V. Petit[2], [1]Universidade Estadual de Maringa, [2]Agri Food Canada, [3]Universidade Federal de Vicosa.

1119 Influence of genotype and infestation with European corn borer for nutritive value and quality of fresh and ensiled material from Bt and non-Bt corn hybrids. G. P. Munkvold, M. A. Faust*, and J. A. Schnitzler, Iowa State University, Ames, Iowa.

1120 Fermentation of non-pasteurized whey with probiotic Lactobacilli for calf feeding. M. Montero*[1], F.I. Juarez[1], B.I. Escudero[2], and H.S. Garcia[2], [1]CIRGOC-INIFAP, [2]UNIDA-Instituto Tecnológico de Veracruz.

Swine Species

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number

1121 Comparing profiles of piglet mortality when administering medium-chain triglycerides, colostrum, oxygen and additional heat. H. Y. Zhang, B. Szkotnicki, M. Z. Fan, V. Osborne, and R. R. Hacker*, University of Guelph, Guelph, ON. Canada.

1122 Use of a natural carbon-mineral supplement in swine diets: effects on pig growth. S. W. Kim*, F. Ji, and J. J. McGlone, Texas Tech University.

1123 Effects of bromocriptine on immune response of pregnant gilts and foetuses and on foetal development. M. Lessard*, M. Dupuis, and C. Farmer, Dairy and Swine R and D Centre, Lennoxville, Quebec, Canada.

1124 Puberty induction and the effect on gilt growth characteristics. H.J. Willis*[1], M.J. Zuidhof[2], A.I. Whelan[1], and G.R. Foxcroft[3], [1]Swine Research and Technolgy Centre (AAFRD), 6909 - 116 Street, Edmonton, AB T6H 4P2, [2]Poultry Research Centre (AAFRD), 7000 - 113 Street, Edmonton, AB T6H 5T6, [3]Swine Research and Technology Centre, Rm 410 Ag/For Centre, Univ. of Alberta, Edmonton, AB T6G 2P5.

1125 Reducing odor in swine production: Effect of enzymes and probiotics on ammonia production. F. Ji* and S. W. Kim, Texas Tech University.

1126 Productive performance and specific immunoglobulin G response in sows and their offspring fed a live strain of *Saccharomyces cerevisiae*. L. E. Zapata*[1], A. M. Martinez[1], M. A. Coba[1], V. G. Perez-Mendoza[2], M. L. Angeles[2], A. M. Anaya[2], F. Diaz[1], and J. A. Cuaron[2], [1]CNID-Microbiologia, INIFAP, [2]CNI-Fisiologia y Mejoramiento Animal, INIFAP.

1127 Analysis of the fecal microflora of lactating sows consuming *Saccharomyces cerevisiae*. A. M. Martinez*[1], C. Juste[2], J. Dabard[2], M. Sutren[2], C. Bridonneau[2], F. Beguet[2], C. Lay[2], J. Dore[2], and E. Auclair[3], [1]CNID-Microbiologia, INIFAP, Mexico, [2]Unite d'Ecologie et de Physiologie du Systeme Digestif, INRA, France, [3]Lesaffre International, Marcq-en-Baroeul, France.

1128 A good quality meat and bone meal is an effective protein source for piglets if diets are formulated to true ileal digestibility of amino acids. C. Urbano[1], C. H. Dobler[1], and J. A. Cuaron*[2], [1]Agroporcina del Centro y PAIEPEME, A.C., Mexico., [2]CNI-Fisiologia y Mejoramiento Animal, INIFAP, Mexico.

1129 Difference between estimated energy intake and requirements during gestation in sows from a commercial herd. H. Guimont*, R. Bergeron, and J. F. Bernier, Université Laval, Ste-Foy, Québec, Canada.

1130 From farm to table : effects of a microbial feed additive, Pediococcus acidilactici MA18/5M, along the production chain of cooked ham. J. Combes[1], H. Durand*[2], E. Chevaux[2], G. Deschodt[3], and Y. Le Treut, [1]University of Tours, France, [2]Lallemand Animal Nutrition, Toulouse, France, [3]Fleury Michon, Pouzauges, France, [4]Invivo, Saint-Gregoire, France.

1131 Effect of micronization on indicators of nutritional quality of peas for pigs. Z. Zhang*[1], C.M. Nyachoti[1], S.D. Arntifield[1], W. Guenter[1], S. Cenkowski[1], and I. Seddon[2], [1]University of Manitoba, Winnipeg, MB, [2]Manitoba Agriculture and Food, Winnipeg, MB.

1132 Evidence for Oocyte Penetration Rate as an effective Indicator of proven boar Fertility. Ana Ruiz-Sanchez*[1], Rose O'Donoghue[1], and George Foxcroft[1], [1]Department of Agricultural, Food and Nutritional Science, University of Alberta.

1133 Effects of removing pigs from pens and floor space allocation on growth performance post-removal in finishing pigs. J. M. DeDecker*[1], M. Ellis[1], B. F. Wolter[1], B. P. Corrigan[1], S. E. Curtis[1], E. N. Parr[2], and D. M. Webel[2], [1]University of Illinois, Urbana, IL/USA, [2]United Feeds, Inc., Sheridan, IN/USA.

TUESDAY, JULY 23, 2002

AM POSTER SESSION

Presentation Times
Odd-Numbered Poster Boards: 8 AM to 10 AM
Even-Numbered Poster Boards: 10 AM to 12 PM

Dairy Foods

Chemistry

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number

1134 Changes in fatty acid composition during yogurt processing and their effects on yogurt and probiotic bacteria in milk procured from cows fed with different diets. R. I. Dave*, N. Ramaswamy, and R. J. Baer, Dairy Science College, South Dakota State University.

1135 Methods of milk storage and age of samples on milk components percentage, somatic cells count and urea nitrogen. P.M. Meyer*[1], P.F. Machado[1], A. Coldebella[1], C.H. Corassin[1], L.D. Cassoli[1], C.A. Oliveira[1], and P.H.M. Rodrigues[2], [1]Clinica do Leite. Escola Superior de Agricultura Luiz de Queiroz/University of Sao Paulo, Brazil, [2]Faculdade de Medicina Veterinaria e Zootecnia, University of Sao Paulo, Brazil.

1136 Environmental influences on bovine kappa-casein: reduction and conversion to fibrillar (amyloid) structures. H. M. Farrell, Jr.*, P. H. Cooke, and E. D. Wickham, USDA ERRC.

1137 Fatty acid profile of bovine, ovine, and caprine milks. J. Wojtowski, R. Dankow, and R. Skrzypek*, Agricultural University, Poznan, Poland.

1138 Treatment of microencapsulated ß-galactosidase with ozone: Effect on enzyme and microorganism. H. S. Kwak*, J. B. Lee, and J. Ahn, Dept. Food Science and technology, Sejong University.

1139 Cholesterol removal of Cheddar cheese by ß-cyclodextrin. H. S. Kwak*, C. S. Jung, S. Y. Shim, and J. Ahn, Dept. Food Science and Technology, Sejong University.

1140 Microencapsulated iron for milk fortification. H. S. Kwak*, K. M. Yang, and J. Ahn, Dept. Food Science and Technology, Sejong University.

1141 Protein profile and other characteristics of sheep milk. L. Basiricò[1], D. Giontella[1], F. Librandi[1], N. Lacetera[1], B. Ronchi[1], U. Bernabucci*[1], and A. Nardone[1], [1]Department of Animal Production, University of Tuscia, Viterbo, Italy.

1142 Effect of seasons and breeds on composition and some physico-chemical properties of goat milk. Sophie Turcot*[1], Daniel St-Gelais[1], and Abdelghani Ould Baba Ali[2], [1]Food Research and Development Centre, Agriculture and Agri-Food Canada, St-Hyacinthe, Quebec, [2]Laiterie Tournevent Inc., Drummondville, Quebec, Canada.

1143 Solution structures of casein peptides: contributions of terminal peptides to the associative behavior of alpha-s1 casein. Edyth L. Malin*, Harold M. Farrell, Jr., Eleanor M. Brown, and Edward D. Wickham, Eastern Regional Research Center, ARS, U.S. Dept. of Agriculture.

1144 Validation of Capillary Electrophoresis for the Ultra-rapid Determination of Inorganic Phosphate and Citrate in Milk. Jesus M. Izco*, Monica Tormo, Phil S. Tong, and Rafael Jimenez-Flores, Dairy Products Technology Center, Cal Poly University.

1145 Effect of physicochemical parameters on peptide-peptide interactions in a tryptic hydrolysate from ß-lactoglobulin. P.E. Groleau*, P. Morin, S.F. Gauthier, and Y. Pouliot, Centre STELA, Universite Laval, Quebec, Canada.

1146 Total radical trapping potential of whey based edible films containing spice oleoresins and antioxidants as determined by chemiluminescence. Zahur Zee Haque*[1], Pirjo Rantamäki[2], Pertti Marnila[2], and Hannu Korhonnen[2], [1]Mississippi State University, MS State, MS 39762, [2]Food Chemistry, MTT Agrifood Research Finland, FIN-31600 Jokioinen, Finland.

1147 Anti-inflammatory factor in bovine colostrum. H Zhang, J. Guo, H. Guan, and L. Li, Inner Mongolian Agriculture Unversity, Huhhot, P.R. China.

1148 Molecular size and rheological characterization of whey proteins crosslinked by immobilized transglutaminase. V. D. Truong*, V. G. Janolino, G. L. Catignani, and H. E. Swaisgood, Southeast Dairy Foods Research Center, North Carolina State University, Raleigh.

1149 Assessment of hydrophobicity of adsorbed casein layers on latex particle and emulsion surfaces by fluorescence spectroscopy. Jiahong Su and David W. Everett*, University of Otago, Dunedin, New Zealand.

1150 Extraction of lipids from buttermilk using supercritical carbon dioxide. Johanna C. Astaire*[1], Harit K. Vyas[1], and Rafael Jiménez-Flores[1], [1]Dairy Products Technology Center; California Polytechnic State University, San Luis Obispo.

1151 Variability in atherogenic and thrombogenic potential of milk fat of standard and elevated *cis*-9, *trans*-11 CLA content. D. G. Peterson*[1], C. M. Luhman[2], J. A. Kelsey[1], and D. E. Bauman[1], [1]Cornell University, Ithaca, NY, [2]Land O'Lakes Research Farm, Webster City, IA.

1152 Thermodynamical Equilibrium between *cis*#9,*trans*#11 and *trans*#8,*cis*#10 Conjugated Linoleic Acid (CLA) Isomers in Butter and Ruminant Fats. F Destaillats*, C Japiot, PY Chouinard, and P Angers, Dairy Research Center (STELA), Laval University, Quebec, Canada.

1153 Effect of flax oil emulsion processing conditions on the oxidative stability of omega-3 enriched milk beverages. S. Lamothe*[1], L.P. Des Marchais[1], G. Trudeau[2], and M. Britten[1], [1]FRDC, Agriculture and Agri-Food Canada, St-Hyacinthe, Qc, Canada, [2]Agropur, Granby, Qc, Canada.

1154 Fe2+-induced cold gelation of whey protein : One strategy for increases iron bioavailability. Gabriel Remondetto[1], Erick Beyssac[2], and Muriel Subirade[1], [1]Institut des nutraceutiques et des aliments fonctionnels, FSAA (Universite Laval), [2]ERT CIDAM, Faculté de Pharmacie, Universite d'Auvergne, Clermont-Ferrand, France.

1155 Effect of heat treatment on carnitine in milk and model systems. C. R. Smith*, M. Cattie, and M. R. Guo, University of Vermont, Burlington VT USA.

1156 Effects of Seasonal and Regional Variations in Milk Components on the Buffering Capacity of Milk in California. A Harris*[1], P Tong[1], S Vink[1], J Izco[1], and R Jimenez-Flores[1], [1]California Polytechnic State University.

1157 Rheological characterization and comparison of derivatized whey protein ingredients. J.J Resch* and C.R. Daubert, North Carolina State University, Department of Food Science, Raleigh, NC 27695-7624.

1158 Monthly and regional variation in nitrogen and protein distribution of milk in California manufacturing plants. Phillip Tong* and Sean Vink, California Polytechnic State University.

Goat Species

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number

1159 Use of 48-hour kid removal to decrease the post-partum rebreeding interval in meat does. C. M. Fletcher*, D. J. Jackson, and N. C. Whitley, University of Maryland Eastern Shore.

1160 Reproductive seasonality in Spanish and Boer x Spanish does in south Texas. M. A. Lerma*[1] and R. L. Stanko[1,2], [1]Texas A&M University-Kingsville, Kingsville, TX, [2]Texas Agricultural Research Station, Beeville, TX.

1161 A model to test the effect of manipulating photoperiod on the liveweight gain of goats in southern Queensland, Australia. M Flint*[1] and P.J. Murray[2], [1]School of Veterinary Science, The University of Queensland, St Lucia, Queensland 4072, Australia, [2]School of Animal Studies, The University of Queensland, Gatton Campus, Queensland 4343, Australia.

1162 Effect of sun radiation on plasma cortisol leveles in goats under high ambient temperature. R. Rodriguez-Martinez*[1], F. Sanchez[2], R. Bañuelos-Valenzuela[3], C. F. Arechiga[3], and M. Arenas[2], [1]Universidad Autonoma Agraria Antonio Narro, U.L. Torreon, Coah., Mexico, [2]Universidad Autonoma Metropolitana Xochimilco, D.F. Mexico, [3]Universidad Autonoma de Zacatecas, Zacatecas, México.

1163 Blood metabolites, visceral organ mass, meat quality, and calpain system in goats treated with low doses of bovine Somatotropin hormone. B. Kouakou*[1], S. Gelaye[1], G. Kannan[1], T. D. Pringle[2], T. H. Terrill[1], and E. A. Amoah[1], [1]Agricultural Research Station, Fort Valley State University, Fort Valley, GA 31030, [2]The University of Georgia, Athens, GA 30602.

1164 Serum and milk leptin in does and growth of their offspring. N. C. Whitley*[1], S. A. Harley[1], D. J. Jackson[1], E. L. McFadin[2], and D. H. Keisler[2], [1]University of Maryland Eastern Shore, [2]University of Missouri.

1165 Effect of clinical *Staphylococcus aureus* mastitis on early lactation dairy goats. G. M. Tomita*[1], S. P. Hart[1], and M. J. Paape[2], [1]E (Kika) de la Garza Institue for Goat Research, Langston University, Langston, OK 73050, [2]USDA, ARS, ANRI, IDRL, Beltsville, MD 20705.

1166 Prevalence of Coagulase Negative Staphylococci (CNS) and correlation with somatic cell counts in Italian dairy goat herds. Paolo Moroni*[1], Micaela Antonini[2], Fabio Luzi[3], Donata Cattaneo[4], Giovanni Savoini[4], and Valerio Bronzo[1], [1]Department of Animal Pathology, Hygiene and Veterinary Public Health, [2]National Research Centre, [3]Animal Husbandry, [4]Department of Veterinary Sciences for Food Safety.

1167 Morphology of infiltrated neutrophils obtained from goat mammary gland. S. Z. Tian, M. C. Hsu, W. J. Su, and C. J. Chang, National Chung Hsing University, Taichung, Taiwan.

1168 Effects of dietary fish oil on colostrum fatty acid profile in dairy goats. D. Cattaneo[1], V. Dell'Orto[1], A. Agazzi[1], V. Moretti[1], P. Moroni[2], and G. Savoini*[1], [1]Dipart. di Scienze e Tecnologie Veterinarie per la Sicurezza Alimentare, Università di Milano, Italy, [2]Dipart. di Patologia Animale, Igiene e Sanità Pubblica Veterinaria, Università di Milano, Italy.

1169 Effects of the administration of fish oil on immune system in periparturient goats. G. Savoini*[1], A. Agazzi[1], D. Cattaneo[1], P. Moroni[1], L. Bonizzi[2], D. Pasotto[2], and V. Bronzo[1], [1]University of Milan, Italy, [2]University of Padua, Italy.

1170 Physiological responses, immune function, and live weight shrinkage due to simulated preslaughter stress in goats fed a diet (Tasco) containing seaweed extract. G. Kannan*[1], T. H. Terrill[1], B. Kouakou[1], S. Galipalli[1], K. E. Saker[2], R. A. Kircher[1], S. Gelaye[1], and K. M. Gadiyaram[1], [1]Agricultural Research Station, Fort Valley State University, Fort Valley, GA, [2]Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, VA.

1171 Adjustment factors for fat, protein, and somatic cell count for goat milk using different species-specific calibration standards. T.A. Gipson*[1] and T. McKinney[1], [1]E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK.

1172 Metabolizable protein requirements of lactating goats. I. V. Nsahlai*[1,2], A. L. Goetsch[1], J. Luo[1], and T. Sahlu[1], [1]E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK, [2]Department of Animal and Poultry Science, University of Natal, Scottsville, R. South Africa.

1173 Effect of ruminally degraded nitrogen source and level in a high concentrate diet on site of digestion in Boer # Spanish wethers. S. A. Soto-Navarro*, A. L. Goetsch, T. Sahlu, R. Puchala, and L.J. Dawson, E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK 73050.

1174 A comparison of two heart rate monitoring systems for goats. R. Puchala*, I. Tovar Luna, A. L. Goetsch, T. Sahlu, and J. Luo, E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK.

1175 Effects of ad libitum consumption of concentrate and forage offered separately or mixed on growth of Alpine Doelings. A. L. Goetsch*, G. Detweiler, J. Hayes, R. Puchala, and T. Sahlu, E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK.

1176 Effects of method of offering broiler litter and level of prairie hay intake on growth of Boer × Spanish wethers. Y. Mekasha, R. C. Merkel, A. L. Goetsch, T. Sahlu*, and K. Tesfai, E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK.

1177 Poultry litter pellets in meat goat diets. D. J. Jackson*[1], B. J. Rude[2], K. K. Karanja[1], D. M. Ferara[1], and N. C. Whitley[1], [1]University of Maryland Eastern Shore, [2]Mississippi State University.

1178 Effect of high dietary copper on growth performance and carcass characteristics in goat kids. Carla Hopkins* and Sandra Solaiman, Tuskegee University.

1179 Effect of two types of multinutrient blocks on kids browsing during the dry season. A. Boubaker* and C. Kayouli, Institut National Agronomique de Tunis.

1180 Variation in browse nutrient content in western Oklahoma throughout the growing season. R. C. Merkel*[1], A. L. Goetsch[1], M. Moseley[2], R. Blackwell[3], and T. Curtis[4], [1]E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK, [2]USDA, NRCS, Stillwater, OK, [3]U.S. Forest Service, USDA/Black Kettle National Grassland, Cheyenne, OK, [4]USDA, NRCS, Taloga, OK.

1181 Rumen fermentation parameters in goats fed on a thorn scrubland in North Mexico. G. C. Nevarez[1], M.A. Cerrillo[1], and R.A.S. Juarez*, Universidad Juarez del Estado de Durango. Durango, Dgo. Mexico.

1182 *In vitro* gas production in diets consumed by grazing goats in a semiarid region of North Mexico. O.O. Lopez[1], C.G. Nevarez[1], R.A.S. Juarez[1], and M.A. Cerrillo*[1], Universidad Juarez del Estado de Durango. Durango, Dgo. Mexico.

Horse Species

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number

1183 Effects of feeding a blend of grains naturally-contaminated with *Fusarium* mycotoxins in feed intake, serum chemistry and hematology of horses. S.L. Raymond*[1], T.K. Smith[2], and H.V.L.N. Swamy[2], [1]Equine Research Centre, University of Guelph, [2]University of Guelph.

1184 Serum vitamin E and trace minerals levels and blood parameters in growing Throughbred horses during the period of pasture grazing and the stable feeding. C. E. Lee*[1], N. K. Park[1], S. B. Ko[1], S. H. Jin[1], D. H. Kang[2], and K. I. Kim[3], [1]National Jeju Agri. Exp. Station, Jeju, Rep. of Korea, [2]Korea Racing Association, Jeju, Rep. of Korea, [3]Cheju National University, Jeju, Rep. of Korea.

1185 Pilot study investigating the potential of ginseng (Panax quinquefolium) to potentiate routine vaccination in horses. W. O'Neill*[1], J. T. Arnason[2], S. McKee[3], and A. F. Clarke[4], [1]Nutraceutical Alliance Inc., Guelph, Ontario, Canada, [2]University of Ottawa, Ottawa, Ontario, Canada, [3]Equine Research Centre, Guelph, Ontario, Canada, [4]University of Melbourne, Melbourne, Australia.

1186 Illinois equine checkoff initiative. K Kline*[1], [1]University of Illinois at Urbana-Champaign.

1187 Development of a light-weight, microwavable equine artificial vagina. K. Bennett-Wimbush*, B. Raimonde, and P. Stull, Ohio State University Agricultural Technical Institute, Wooster, Ohio USA.

Milk Synthesis

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number

1188 Conjugated linoleic acids (CLA), *trans* fatty acids, and lipid content in milk from Holstein cows fed a high- or low-fiber diet with two levels of linseed oil. J. Loor, A. Ferlay, A. Ollier, M. Doreau, and Y. Chilliard*, Unite de Recherche sur les Herbivores, INRA-Theix, 63122 St.-Genes Champanelle, France.

1189 Intestinal supply of *trans*10,*cis*12-18:2 lowers milk fat output in Holstein cows fed a high- or low-fiber diet with two levels of linseed oil. J. Loor, A. Ferlay, M. Doreau, and Y. Chilliard*, Unite de Recherche sur les Herbivores, INRA-Theix, 63122 St.-Genes Champanelle, France.

1190 A dynamic model of concentrate supplementation effects on milk production in high producing ewes. Reza Imamidoost*[1] and John Cant[1], [1]University of Guelph.

1191 Effects of two levels of protein and conjugated linoleic acid (CLA) prills on performance, milk composition and fatty acid profile of dairy cows[1]. Marco A. S. Gama*[2], Sergio R. Medeiros[2], Luis J. M. Aroeira[3], and Dante D. P. Lanna[2], [1]Supported by FAPESP and Agribrands Int., [2]LNCA-ESALQ/USP, SP, Brazil, [3]CNPGL-EMBRAPA, MG, Brazil.

1192 Effect of histidine and histamine on mammary blood flow in lactating dairy cows. T. G. Madsen[1], D. R. Trout[2], S. Cieslar*[2], M. O. Nielsen[1], and J. P. Cant[2], [1]The Royal Veterianary and Agricultural University, Copenhagen, Denmark, [2]University of Guelph, Guelph, Ontario, Canada.

1193 Enzyme regulation of mammary fatty acid synthesis in vitro. T Wright*, J Cant, and B McBride, University of Guelph.

1194 Effect of breed, parity, and stage of lactation on milk fat content of CLA in the dairy cow. J.A. Kelsey*[1], B.A. Corl[1], R.C. Collier[2], and D.E. Bauman[1], [1]Cornell University, Ithaca, NY, [2]University of Arizona, Tucson, AZ.

1195 Effect of feeding or abomasal infusion of canola oil on feed intake, digestion and milk fatty acid composition in late-lactation Holstein cows. P.K. Chelikani*, J.A. Bell, and J.J. Kennelly, University of Alberta, Edmonton, Canada.

1196 Effect of different levels of mixed corn plant and tomato pomace on milk production and composition in Holstein dairy cows. Reza Tahmasbi, Hassan Nasiri moghadam, Abbasali Naserian, and Behnam Saremi*, Ferdowsi University Of Mashhad, Mashhad, Khorasan, Iran.

1197 Bovine Leukemia Virus in Mammary Epithelial Cells: Effects on Mitosis and Lactogenesis. Deborah Motton* and Gertrude Buehring, University of California, Berkeley, CA.

1198 Quality Control of PCR Products for DNA array Production by Real-Time PCR. W. Luo, J.L. Smith, K.M.S. Smuga-Otto*, and L.G. Sheffield, University of Wisconsin, Madison.

Physiology

Reproduction

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number

1199 Effect of Feeding Fish Oil on Uterine Secretion of PGF_{2a}, Milk Composition, and Metabolic Status of Periparturient Holstein Cows. R.C. Mattos*[1], C.R. Staples[1], A.M. Arteche[1], M.C. Wiltbank[2], F.J. Diaz[2], T.C. Jenkins[3], and W.W. Thatcher[1], [1]University of Florida, [2]University of Wisconsin, [3]Clemson University.

1200 Characterization of uterine epidermal growth factor receptor expression during the estrous cycle and early pregnancy in pigs. J.G. Kim*, J.L. Vallet, and R.K. Christenson, USDA, ARS, U.S. Meat Animal Research Center, Clay Center, Nebraska.

1201 Evidence for a intrafollicular role of alpha-2-macroglobulin in regulation of estradiol production. F Jimenez-Krassel*, M Winn, JLH Ireland, and JJ Ireland, Michigan State University.

1202 Placental weights are greater in gilts homozygous for a secreted folate binding protein (sFBP) gene polymorphism. J. L. Vallet*, R. K. Christenson, and B. A. Freking, USDA, ARS, Roman L. Hruska U.S. Meat Animal Research Center.

1203 Cervical responses to a graded dose of genistein in postpubertal gilts. J.A. Ford, Jr.* and W.L. Hurley, University of Illinois, Urbana, Illinois.

1204 The use of a deslorelin implant during the late embryonic period to enhance embryo survival. JA Bartolome*[1], S Kamimura[1], FT Silvestre[1], ACM Arteche[1], TR Bilby[1], LF Archbald[1], TE Trigg[2], and WW Thatcher[1], [1]University of Florida, Gainesville, Florida, [2]Peptech Animal Health, North Ryde, Australia.

1205 Nuclear transfer using nonquiescent bovine cumulus cells from primary cell populations. M. Murakami*, O. Perez, C.E. Ferguson, R.S. Denniston, and R.A. Godke, Louisiana State University, Baton Rouge, LA, USA.

1206 Large-scale generation and analysis of expressed sequence tags from porcine ovaries or ovarian follicles at different stages of development. H. Jiang*[1], K. M. Whitworth[1], N. Bivens[1], J. Ries[1], J. A. Green[1], L. J. Forrester[1], G. K. Springer[1], A. Guillen[1], B. A. Didion[2], and M. C. Lucy[1], [1]University of Missouri-Columbia, [2]Monsanto Company.

1207 Transplantation of testicular explants from prepubertal bulls to nude mice and *ex situ* production of haploid germ cells over a 20-week period. Michael T. Kaproth*[1,2], Dong Ryul Lee[1], and John E. Parks[1], [1]Cornell University, Ithaca, NY, [2]Genex Cooperative, Inc, Shawano, WI.

1208 Mechanism by which high progesterone levels reduced diameter of dominant follicle during the growing phase of wave 1. L.F. Uribe-Velásquez*[1], E. Oba[2], H. Villa-Velásquez[2], M.I.L. Souza[2], L.C. Lara-Herrera[2], and L.D.S. Murgas[3], [1]University of Caldas, Manizales, Caldas, Colombia, [2]UNESP, Botucatu, Sao Paulo, Brazil, [3]Federal University of Lavras, UFLA, Lavras, Minas Gerais, Brazil.

1209 Differential expression of pyruvate carboxylase 5#UTR variants during transition to lactation. C. Agca* and S.S. Donkin, Purdue University, West Lafayette, IN.

1210 Manganese inhibits in vitro nuclear maturation in cumulus-enclosed bovine oocytes through the cAMP/protein kinase A pathway. S. Bilodeau-Goeseels*, Agriculture and Agri-Food Canada Reserach Centre, Lethbridge, Alberta, Canada.

1211 Interferon tau does not regulate integrin aVß3 expression in bovine endometrium. Sarah Kimmins and L.A. MacLaren*, Nova Scotia Agricultural College, Truro, NS Canada.

1212 Suppression of basal and pulsatile LH with a GnRH antagonist is not sufficient to initiate ovulatory cycles in all cows with ovarian follicular cysts (cysts). MD Calder*, BE Salfen, M Manikkam, J Bader, RS Youngquist, and HA Garverick, University of Missouri.

1213 Assessment of the effects of flavonoids on the post-thaw motility of cryopreserved bovine spermatozoa. J. A. Pitchford*, S. A. Ericsson, K. K. Korth, L. L. Green, and W. T. Campbell, Sul Ross State University, Alpine, Texas.

1214 Stress during behavioral estrus delays the preovulatory surge of LH and ovulation in sheep. D. Wolfenson*[1], B.M. Adams[2], M.R. Dally[2], and T.E. Adams[2], [1]Hebrew University, Rehovot, Israel, [2]University of California, Davis, CA.

1215 The effects of a chronic elevation in plasma insulin during the early postpartum period on luteinizing hormone pulsatility and plasma estradiol in dairy cows. S.T. Butler* and W.R. Butler, Cornell University, Ithaca, NY.

1216 Effects of GnRH administered at onset of estrus on endocrine responses and conception in lactating cows. M. Kaim[1], A. Bloch[2], D. Wolfenson*[2], M. Rosenberg[1], H. Voet[2], and Y. Folman[1], [1]Agricultural Research Organization, Bet-Dagan, Israel, [2]Hebrew University, Rehovot, Israel.

Production, Management, and the Environment

Dairy Management

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number

1217 Non-nutritional factors that influence milk urea nitrogen concentration. P.M. Meyer*[1], P.F. Machado[1], A. Coldebella[1], C.H. Corassin[1], L.D. Cassoli[1], and P.H.M. Rodrigues[2], [1]Clinica do Leite. Escola Superior de Agricultura Luiz de Queiroz/University of Sao Paulo, Brazil, [2]Faculdade de Medicina Veterinaria e Zootecnia, University of Sao Paulo, Brazil.

1218 Relationship among having mud in milking-cow barns, somatic cell counts and decreased milk yield in Thai dairy herds. W. Suriyasathaporn*[1], P. Maneeratanarungroj[1], S. Sangmaneedej[1], P. Tungtanatanich[1], S. Takong[1], U. Parinyasutinun[2], and S. Pangjuntuk[2], [1]Faculty of Veterinary Medicine, Khonkean University, Thailand, [2]Dairy Farming Promotion Organization of Thailand.

1219 Interpretation of Protein-Energy Balance of Feeding by Milk Urea Nitrogen and Milk Protein Contents of Lactation Holstein Cow in Korea. J. S. Moon*[1], Y. S. Joo[1], G. C. Jang[1], J. M. Kim[1], B. K. Lee[2], B. W. Yoo[2], and Y. H. Park[3], [1]National Veterinary Research and Quarantine Servie, MAF, [2]Agrigrands Purina Korea, Inc., [3]College of Veterinary Medicine and School of Agricultural Biotechnology, Seoul National University.

1220 Effect of duration of sequential teat cleaning by two rolling brushes on milking characteristics in a single stall automatic milking system. A. Dzidic[1] and R.M. Bruckmaier*[1], [1]Institute of Physiology, Tech. Univ. Munich - Weihenstephan, Freising, Germany.

1221 Effects of manure handling systems on volatile nitrogen loss from dairy manure. V.R. Moreira*[2] and and L.D. Satter[1,2], [1]U.S. Dairy Forage Research Center USDA-ARS, [2]Dairy Science Department, University of Wisconsin, Madison.

1222 An evaluation of the cost of feeding dairy cows in Ragusa, Italy. G. Azzaro*[1], D.T. Galligan[2], J.D. Ferguson[2], R. Petriglieri[1], S. Carpino[1], and G. Licitra[3], [1]Consorzio Ricerca Filiera Lattiero-Casearia, Ragusa, Italy, [2]University of Pennsylvania, [3]University of Catania, Italy.

1223 Environmental stress on N'Dama cattle raised in tropical conditions and its implications on production and traditional management. P. Ezanno*[1], A. Ickowicz[2], and P. Lecomte[1], [1]CIRAD-EMVT, Montpellier, FRANCE, [2]CIRAD-EMVT, ISRA-LNERV, Dakar, SENEGAL.

1224 Effect of ß-Carotene Supplementation on Milk Yield and Reproductive Function of Holstein Cows Exposed to Heat Stress in a Semiarid Environment in Northern Mexico. R. Rodriguez-Martinez*[1], P.A. Robles-Trillo[1], G. Castillo[2], R. Bañuelos-Valenzuela[3], and C.F. Arechiga[3], [1]Universidad Autonoma Agraria Antonio Narro-UL, [2]Syntex-Roche, [3]Universidad Autonoma de Zacatecas.

1225 The level of inbreeding of Senepol bulls in a closed herd in the US Virgin Islands. R.W. Godfrey* and R.E. Dodson, Agricultural Experiment Station, University of the Virgin Islands.

1226 The efficacy of a reduced dose of GnRH on ovulation rate and time of ovulation in Jersey and Holstein dairy cows. A. Ahmadzadeh[1], R. Manzo*[1], C. B. Sellars[1], L. E. Palmer[1], and R. L. Nebel[2], [1]University of Idaho, Moscow, ID, [2]Virginia Tech, Blacksburg, VA.

1227 Dairy MAP: udder health module for evaluating dairy herd management. L. O. Ely*[1], W.D. Gilson[1], J. W. Smith[1], A. M. Chapa[2], and S. Chandrasekaran[1], [1]University of Georgia, Athens, GA, [2]Mississippi State University, Mississippi State, MS.

1228 Incorporating estradiol cypionate (ECP®) into the OvSynch® (OVS) protocol to improve conception rates in dairy cattle. C. B. Sellars*[1], A. Ahmadzadeh[1], R. Manzo[1], J. C. Dalton[2], and J. Day[3], [1]University of Idaho, Moscow, ID, [2]Southwest R & E Center, University of Idaho, Caldwell, ID, [3]Dairy Health Services, Jerome, ID.

1229 Evaluation of dried whole egg and egg components in calf milk replacers. D. R. Catherman*, Strauss Feeds, Watertown, WI.

1230 Contacts between milking cow husbandry and vertical co-operation. Huda F. Salem, Sandor J. Dr. Zsarnoczai*, Laszlo Dr. Villanyi, and Endre Dr.(DSc)Szucs, Szent Istvan University, Godollo, Hungary.

1231 Vertical co-ordination in the Hungarian milk production Vertical co-ordination in the Hungarian milk production Vertical co-ordination in the Hungarian milk Vertical co-ordination in the Hungarian milk production. Huda F. Salem, Laszlo Dr. Villanyi, Istvan Dr. Feher, and J.Sandor Dr. Zsarnoczai*, Szent Istvan University, Godollo, Hungary.

1232 Withdrawn

1233 Lactose concentration in milk from Quebec dairy cattle. D.M. Lefebvre*[1], R.K. Moore[1], and R.I. Cue[2], [1]PATLQ-Quebec Dairy Herd Analysis Service, [2]McGill University, Ste-Anne-de-Bellevue, QC, Canada.

1234 Determining the relationships among milk urea nitrogen and milk production, milk protein, milk fat and somatic cells counts from lactating cows in Texas. G. M. Goodall*[1], M. A. Tomaszewski[1], E. M. Sudweeks[1], J. W. Stuth[1], L. W. Green[2], and R. B. Schwart[1], [1]Texas A&M University, [2]Texas A&M University and Extension Research Center.

1235 Incidence of metabolic and reproductive conditions and mastitis in Holsteins and impact on performance during the first 100 days of lactation. R. K. McGuffey*[1], R. R. Hozak[1], J. I. D. Wilkinson[1], and H. B. Green[1], [1]Elanco Animal Health.

1236 The impact of tunnel ventilation on heat stress in lactating dairy cows: Effects on intake, milk production and composition. T. R. Smith*[1], S. Willard[1], A. Chapa[1], R. J. Williams[1], T. Riley[2], and D. Pogue[2], [1]Mississippi State University, Starkville, [2]North Mississippi Branch Experiment Station, Holly Springs.

1237 Characteristics of expansion in the Utah-Idaho dairy industry. J. W. MacAdam*, D. Jackson-Smith, C. Groseclose, and R. Krannich, Utah State University.

1238 The effect of the amount of sawdust on geotextile mattresses on free stall preference and usage. Cassandra Tucker* and Daniel Weary, University of British Columbia, Vancouver BC Canada.

1239 The effects of strategic cooling on thermal balance of late gestation dairy cows. E Oetting, J Spain, and J Sampson*, University of Missouri-Columbia/USA.

1240 Use of management practices to define Friesian and Brown Swiss herd environments in Southeastern Sicily. E Raffrenato*[1,2], R W Blake[2], and P A Oltenacu[2], [1]Consorzio Ricerca Filiera Lattiero-Casearia, Ragusa, Italy, [2]Cornell University, Ithaca, NY.

1241 Impact of regrouping on feeding behaviour of early lactation cows. L.G. Baird*[1], M.A.G. von Keyserlingk[1], D.M. Weary[1], J.A. Shelford[1], and K.A. Beauchemin[2], [1]The University of British Columbia, Vancouver, Canada, [2]Agriculture and Agri-Food Canada, Lethbridge Research Centre, Canada.

1242 A systems on farm comparison between confinement and management intensive grazing for dairy heifers. M. Rudstrom[1], H. Chester-Jones[2], R. Imdieke[3], D.G. Johnson*[1], A. Singh[1], G. Cuomo[1], and M. Reese[1], [1]University of Minnesota, WCROC, [2]SROC, [3]Dairy Progeny Management.

1243 Factors affecting conception rate and pregnancy loss in actating holstein cows. Ricardo Chebel*[1], Jose Santos[1], Jim Reynolds[1], Michael Overton[1], Ronaldo Cerri[1], and Sergio Juchem[1], [1]University of California Davis.

1244 A non-linear approach to modeling methane emissions from dairy cows. J. A. N. Mills*, E. Kebreab, L. A. Crompton, C. M. Yates, and J. France, The University of Reading.

1245 Physiological variations of milk components in relation to seasonal changes over two years. F. Brulisauer[1], J. Moll[2], and R. Eicher*[3], [1]Swiss Federal Veterinary Office, Berne, Switzerland, [2]Swiss Braunvieh Cattle Association, Zug Switzerland, [3]Univerity of Berne, Switzerland.

Ruminant Nutrition

Fat and Intake

Presentation Times

Odd-Numbered Poster Boards: 8 AM to 10 AM

Even-Numbered Poster Boards: 10 AM to 12 PM

Abstract Number

1246 Partial replacement of corn grain by calcium salts of unsaturated fatty acids in grazing dairy cows : 1- Dry matter intake, milk production and composition. L.I. Vidaurreta[1], G.A. Gagliostro[2], G.F. Schroeder*[1-3], and G. Eyherarbide[2], [1]Fac. Cs. Agrarias. UNMdP, [2]INTA EEA Balcarce, [3]CONICET, Argentina.

1247 Partial replacement of corn grain by calcium salts of unsaturated fatty acids in grazing dairy cows: 2-Milk fatty acid composition. L.I. Vidaurreta[1], G.A. Gagliostro[2], G.F. Schroeder*[1-3], A. Rodriguez[4], and P. Gatti[4], [1]Fac. Cs. Agrarias. UNMdP, [2]INTA EEA Balcarce, [3]CONICET, [4]INTI CITIL PTM, Argentina.

1248 Ruminal environment and pasture digestion in grazing dairy cows supplemented with calcium salts of unsaturated fatty acids. L.I. Vidaurreta[1], G.F. Schroeder*[1-2], and G.A. Gagliostro[3], [1]Fac. Cs. Agrarias. UNMdP, [2]CONICET, [3]INTA EEA Balcarce, Argentina.

1249 Reproduction of dairy cows fed flaxseed, Megalac or micronized soybeans. H. V. Petit*[1] and H. Twagiramungu[2], [1]Agriculture and Agri-Food Canada, [2]L'Alliance Boviteq.

1250 The effect of different types of dietary fat on rumen fermentation and total tract digestion of sheep. H. Febel*[1], E. Andrasofszky[2], and Sz. Huszar[1], [1]Research Institute of Animal Breeding and Nutrition, Herceghalom, [2]Szent Istvan University, Faculty of Veterinary Science, Budapest, Hungary.

1251 Conjugated linoleic acid (CLA) content of milk from cows on different ryegrass cultivars. V. R. Loyola*[1,4], J. J. Murphy[2], M. O'Donovan[2], R. Devery[3], M. D. S. Oliveira[4], and C. Stanton[1], [1]Teagasc, Dairy Products Research Centre, Moorepark, Fermoy, Ireland, [2]Teagasc, Dairy Production Research Centre, Moorepark, Fermoy, Ireland, [3]Dublin City University, Ireland, [4]Universidade Estadual Paulista, UNESP, Jaboticabal, Brasil.

1252 *In vitr*o ruminal biohydrogenation of n-3 fatty acid from two fish oils as influenced by inclusion levels. F. Dohme*[1], V. I. Fievez[2], K. Raes[2], and D. I. Demeyer[2], [1]Swiss Federal Research Station for Animal Production, [2]Ghent University, Belgium.

1253 Effects of DMI, addition of buffer, and source of fat on duodenal flow and milk concentration of conjugated linoleic acid and *trans*-$C_{18:1}$ in dairy cows. X. Qiu*[1], M. L. Eastridge[1], J. L. Firkins[1], K. E. Griswold[2], and G. A. Apgar[2], [1]The Ohio State University, Columbus, [2]Southern Illinois University, Carbondale.

1254 Performance of lactating holstein cows fed catfish oil in summer. A.K.Amorocho* and C.R. Staples. Department of Animal Sciences, University of Florida, Gainesville. A. K. Amorocho* and C. R. Staples, University of Florida, Gainesville, Florida.

1255 Patterns of biohydrogenation and duodenal flow of *trans* fatty acids and conjugated linoleic acids (CLA) are altered by dietary fiber level and linseed oil in dairy cows. J. Loor*, K. Ueda, A. Ferlay, Y. Chilliard, and M. Doreau, INRA, Unite de Recherche sur les Herbivores, 63122 St.-Genes Champanelle, France.

1256 Effect of linseed oil supplementation to different forage/concentrate ratio diets on ruminal digestion in dairy cows. K. Ueda, A. Ferlay, J. Loor*, Y. Chilliard, and M. Doreau, INRA, Unite de Recherche sur les Herbivores, 63122 St.-Genes Champanelle, France.

1257 Milk fatty acid composition from cows fed a total mixed ration or grazing different pasture species. C. Benchaar*[1], T. D. Whyte[2], R. Berthiaume[1], T. Astatkie[2], G. F. Tremblay[3], A. H. Fredeen[2], R. C. Martin[2], and P. Y. Chouinard[4], [1]Agriculture and Agri-Food Canada, Lennoxville, QC, [2]Nova Scotia Agriculutral College,Truro, NS, [3]Agriculture and Agri-Food Canada, Ste-Foy, QC, [4]Universite Laval, QC.

1258 Effect of linoleic or oleic acid-rich oils on conjugated linoleic acid (CLA) content of adipose and muscle of finishing cattle. M.A. McGuire*, A.N. Hristov, L.R. Falen, L. Kennington, C.W. Hunt, and J.K. Ropp, University of Idaho, Moscow.

1259 Effect of fat sources differing in fatty acid profile on lactational and reproductive performance of Holstein cows. S.O. Juchem*[1], J.E.P. Santos[1], R. Chebel[1], R.L.A. Cerri[1], E.J. DePeters[1], K.N. Galvao[1], S.J. Taylor[1], W.W. Thatcher[2], and D. Luchini[3], [1]University of California Davis, [2]University of Florida, [3]Bioproducts Inc.

1260 Breed of dairy cows has influence on conjugated linoleic acid (CLA) content of milk. T. R. Dhiman*[1], M. S. Zaman[1], L. Kilmer[2], and D. Gilbert[3], [1]Utah State University, [2]Iowa State University, [3]New Generation Genetics, Inc., Wisconsin.

1261 Effect of tallow and Ca-salts of fatty acids on milk production and nutrients digestibility in lactating Holstein cows. Eeman Nooraee*, Abbasali Naserian, and Reza Valizadeh, Ferdowsi University Of Mashhad, Mashhad, Khorasan,Iran.

1262 Modifications in the percentages of the C18 milk fatty acids due to the unsaturation level of dietary fats fed to dairy goats at the onset of lactation (linseed vs rapeseed). S. Giger-Reverdin[1], C. Duvaux-Ponter[1], P. Morand-Fehr[1], P. Weill[2], and D. Sauvant*[1], [1]UMR INRA - INAPG Physiologie de la Nutrition et Alimentation, [2]Valorex-Prodex.

1263 Milk fatty acid profiles of cows fed fish oil with fat sources that differed in fatty acid profiles. A. A. Abu-Ghazaleh*[1], D. J. Schingoethe[1], A. R. Hippen[1], K. F. Kalscheur[1], and L. A. Whitlock[1], [1]South Dakota State University.

1264 Investigation of exogenous fibrolytic enzyme activity on barley straw using in vitro incubation. Y. Wang* and T.A. McAllister, Agriculture and Agri-Food Canada, Lethbridge, AB.

1265 Calcium salts of conjugated linoleic acid were more effective than calcium salts of *trans* fatty acids in reducing milk fat of lactating cows. U. Moallem*, B. Teter, L. Piperova, J. Sampugna, and R. Erdman, University of Maryland, College Park, MD.

1266 Digestion and ruminal parameters of fresh winter oats supplemented with protected fatty acids in substitution or addition to corn grain energy. P. V. van Olphen*[1], F. J. Santini$_{1-2}$, E. Pavan[2], G. A Gagliostro[2], and J. C. Elizalde$_{1-3}$, [1]Facultad de Ciencias Agrarias, Universidad Nacional de Mar del Plata, [2]Instituto Nacional de Tecnologia Agropecuaria, Balcarce, [3]CONICET.

1267 Effects of feeding encapsulated and unprotected docosahexaenoic acid on feed intake, milk production, milk composition, and fatty acid profile in dairy cows. S.A. Crowder*[1], J.E. Garrett[2], and S.S. Donkin[1], [1]Purdue University, West Lafayette,IN, [2]OmegaTech, Boulder,CO.

1268 Dry matter intake and rumen-fill from lactating cows receiving elephant grass (*Pennisetum purpureum*, Schum.) at three harvesting date. J.P.G. Soares[1,4], L.J.M. Aroeira*[2], F. Deresz[2], T.T. Berchielli[3], R.S. Verneque[2], and P. Andrade[3], [1]Embrapa Rondonia, Porto Velho - RO - Brasil, [2]Embrapa Gado de Leite, Juiz de Fora - MG - Brasil, [3]FCAVJ/UNESP, Jaboticabal - SP - Brasil, [4]Part of Ph.D. Thesis of the 1st author at FCAVJ/UNESP, supported by FAPESP.

1269 The effect of diet on milk production, lactation curve, composition, and processing characteristics in dairy goats. B.R. Min*[1], K.A. Soryal, S.P. Hart, S. Zeng, R. Puchala, A. Goetsch, and T. Sahlu, [1]E (Kika) dela Garza Institute for Goat Research, Langston University, OK 73050, USA.

1270 Intake preferences and nitrogen metabolism in beef steers grazing Bermudagrass, Caucasian bluestem, or Gamagrass. G.B. Huntington*[1], J.C. Burns[2], and S.A. Archibeque[1], [1]North Carolina State University, [2]USDA-ARS.

1271 Effect of feed intake on mean retention time of fibre in the rumen. M.R. Weisbjerg*, P. Lund, and T. Hvelplund, Danish Institute of Agricultural Sciences, DK-8830 Tjele, Denmark.

1272 Effect of diet forage:concentrate ratio on odd-chain fatty acids in milk from Holstein-Friesian cows. R. J. Dewhurst[1], J. M. Moorby*[1], J. Danelón[2], and J. K. S. Tweed[1], [1]Institute of Grassland and Environmental Research, Aberystwyth, UK, [2]University of Buenos Aires, Argentina.

1273 Effect of diet forage:concentrate ratio on digesta flow and milk production in mid-lactation Holstein-Friesian cows. J. M. Moorby*[1], R. J. Dewhurst[1], J. Danelón[2], R. T. Evans[1], and M. A. Neville[1], [1]Institute of Grassland and Environmental Research, Aberystwyth, UK, [2]University of Buenos Aires, Argentina.

1274 Milk production and composition from Holstein cows fed a total mixed ration or grazing different types of pasture under an intensive management system. C. Benchaar[1], T. D. Whyte*[2], R. Berthiaume[1], G. F. Tremblay[3], T. Astatkie[2], A. H. Fredeen[2], R. C. Martin[2], and P. Y. Chouinard[4], [1]Agriculture and Agri-Food Canada, Lennoxville, QC, [2]Nova Scotia Agricultural College, NS, [3]Agriculture and Agri-Food Canada, Ste-Foy, QC, [4]Universite Laval, QC.

1275 Effects of forage particle size, forage source and corn processing on ruminal pH, chewing activity and milk production in dairy cows. K. M. Krause* and D. K. Combs, University of Wisconsin-Madison.

1276 Feeding Behavior of Dairy Cows in Hot Climate. I. Halachmi, E. Maltz, N. Livshin, A. Antler, D. Ben-Ghedalia, and J. Miron*, ARO, The Volcani Center, Bet Dagan, Israel.

1277 Daily energy intake influences fat and protein concentration of the milk. C.F. Borsting*, M.R. Weisbjerg, and V.F. Kristensen, Danish Institute of Agricultural Sciences, DK-8830 Tjele, Denmark.

1278 Increasing feed availability for dairy cows. T. J. DeVries*[1], M. A. G. von Keyserlingk[1], J. A. Shelford[1], D. M. Weary[1], and K. A. Beauchemin[2], [1]The University of British Columbia, Vancouver, Canada, [2]Agriculture and Agri-Food Canada, Lethbridge Research Centre, Canada.

1279 The effect of non-nutritional factors on Milk Urea Nitrogen levels in Ayrshire dairy cows. Pipat Arunvipas*, Ian Dohoo, John VanLeeuwen, Emery Leger, and Greg Keefe, Atlantic Veterinary College, UPEI.

1280 The effect of steam flaked or ground corn and supplemental phytic acid on N excretion in lactating cows and ammonia emission from manure. K. Burkholder*, A. Guyton, J. McKinney, and K. Knowlton, Virginia Polytechnic Institute and State University.

1281 Use of Cannulated Pigs to Model Intestinal Nutrient Disappearance in Cattle. D. Loveday[1], J.J. McKinnon [1], P. Thacker[1], and A. Mustafa[2], [1]University of Saskatchewan, [2]McGill University.

1282 Development and evaluation of models to predict the feed intake of dairy cows in early lactation. M. A. Shah* and M. R. Murphy, University of Illinois at Urbana- Champaign.

1283 Effect of stage of lactation on visceral tissue mass and intestinal proliferation. R. L. Baldwin*[1], K. R. McLeod[1], and A. V. Capuco[1], [1]USDA, ARS, Beltsville, MD 20705.

1284 Effects of duodenal amino acid and starch infusion on milk production and nitrogen balance in dairy cows. H. Volden and O. M. Harstad, Agricultural University of Norway.

TUESDAY, JULY 23, 2002

PM POSTER SESSION

Presentation Times
Odd-Numbered Poster Boards: 1 PM to 3 PM
Even-Numbered Poster Board: 3 PM to 5 PM

Breeding and Genetics

Quantitative Genetics

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number

1285 Live weights and carcass traits of steers from heifer calving ease selection and control lines. G. L. Bennett*, USDA, ARS, US Meat Animal Research Center, Clay Center, NE.

1286 Year, Season, Dam Age and Sex Effect on Weaning Performance of Hungarian Simmental Beef Calves. F. Szabo[1], Z. Lengyel[1], Zs. Wagenhoffer[1], I. Komlosi[2], J. P. Polgar[1], and L. Nagy[1], [1]University of Veszprem, Georgikon Faculty of Agricultural Sciences, [2]Debrecen University, Centre for Agricultural Sciences.

1287 Genetic parameter estimates for yearling traits of N'Dama cattle in humid tropics of Nigeria. O.T.F. Abanikannda*[1], O. Olutogun[2], and A.O. Leigh[1], [1]Department of Zoology, Lagos State University, Nigeria, [2]Department of Animal Science, University of Ibadan, Nigeria.

1288 Effect of sire on rate and extent of postmortem increase in myofibrillar fragmentation indices of Brahman longissimus steaks. D. G. Riley*[1], C. C. Chase, Jr.[1], T. D. Pringle[2], R. L. West[3], D. D. Johnson[3], A. C. Hammond[4], T. A. Olson[3], and S. W. Coleman[1], [1]USDA, ARS, Subtropical Agricultural Research Station, Brooksville, FL, [2]University of Georgia, Athens, [3]University of Florida, Gainesville, [4]USDA, ARS, SAA, Athens, GA.

1289 Sire differences for growth, carcass, and tenderness traits of Brahman steers. J. D. Domingue*[1], T. Smith[1], T. D. Bidner[1], J. C. Paschal[2], G. Whipple[3], and D. E. Franke[1], [1]Louisiana State University Agricultural Center, Baton Rouge, [2]Texas A&M University, Corpus Christi, [3]University of Nebraska, Lincoln.

1290 Use of computer image analysis to evaluate heart-shaped ribeyes in Wagyu cattle. K Kuchida*[1], A Kikuchi[1], K Kato[2], M Suzuki[1], and S Miyoshi[1], [1]Obihiro Univ. of AVM, Obihiro-shi Japan, [2]Livestock Improv. Assoc. Makubetsu-cho Japan.

1291 Pedigree analysis using the Python programming language. J. B. Cole* and D. E. Franke, Louisiana State University, Baton Rouge, LA.

1292 A population study of milk urea nitrogen. J. E. Vallimont[1], J. Hyman[1], G. W. Rogers*[2], L. A. Holden[1], M. L. O'Connor[1], C. D. Dechow[2], and J. B. Cooper[2], [1]Penn State University, University Park, PA, [2]University of Tennessee, Knoxville, TN.

1293 Analysis of calving interval, age at first calving, and herd life in Japanese Holstein cows. C Fujita*[1], M Suzuki[1], and S Matsumoto[2], [1]Obihiro University of A&VM, [2]Livestock Improvement Association of Japan.

1294 Factors affecting fertility traits of Holsteins and Jerseys. R. H. Miller*[1], H. D. Norman[1], and J. S. Clay[2], [1]Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD, [2]North Carolina State University, Raleigh, NC.

1295 Heritabilities and correlation among body condition scores, dairy form, stature, strength and final score. C. D. Dechow*[1], G. W. Rogers[1], L. Klei[2], and T. J. Lawlor[2], [1]The University of Tennessee, Knoxville, TN, [2]Holstein Association USA, Inc., Brattleboro, VT.

1296 Estimation of genetic and phenotypic correlations between type traits and milk yield in Holstein dairy cows in Iran. Ali Toosi*, Ferdowsi University,College of Agriculture.

1297 Genetic and environmental factors affecting some linear type traits in Holstein dairy cows in Iran. Ali Toosi* and Fereidoon Eftekhari, Ferdowsi University.

1298 Comparison of occurrence and yields of daughters of progeny-test and proven bulls in artificial insemination and natural-service bulls. H. D. Norman*, R. L. Powell, and J. R. Wright, Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD.

1299 Genetic correlations between semen production and economic traits of swine. S. H. Oh*[1], M. T. See[1], T. E. Long[2], and J. M. Galvin[2], [1]North Carolina State University, Raleigh, NC, [2]NPD USA, Roanoke Rapids.

1300 Relationship of body length to number of teats and litter size for four breeds of swine. Z.B. Johnson*[1] and R.A. Nugent, III[2], [1]University of Arkansas, Fayetteville, [2]The Pork Group, Rogers, AR.

Dairy Foods

Micro

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number

1301 Efficacy of Spices alone or in Combined with Bifidobacteria to Control *Escherichia coli* O157:H7. S.A. Ibrahim*, S.R.K. Dharmavaram, G. Shahbazi, and C.W. Seo, North Carolina Agricultural and Technical State University, Greensboro, NC.

1302 Production of conjugated linoleic acid by *Lactobacillus acidophillus* and *Lactobacillus casei* of human intestinal origin. Leocadio Alonso, Paloma Cuesta Alonso*, and Stanley Gilliland, Oklahoma State Universtiy, Stillwater, OKlahoma, USA.

1303 Colonization Property of *Lactobacillus reuteri* and Its Antagonistic Activity in Mice Infected With *Salmonella enterica* serovar Typhimurium DT104. S. H. Kim[1], N. H. Kwon*[1], J. Y. Kim[1], J. Y. Lim[1], H. J. Kang[2], D. S. Lee[2], I. B. Kwon[2], B. W. Yoo[3], and Y. H. Park[1], [1]College of Veterinary Medicine and School of Agricultural Biotechnology, Seoul National University, [2]Lotte R&D Center, [3]Agribrands Purina Korea, Inc.

1304 Antimicrobial Activity of *Lactobacillus reuteri* SD 2112 against Bovine Pathogens and *Escherichia coli* O157:H7. N. H. Kwon[1], S. H. Kim*[1], J. Y. Kim[1], J. Y. Lim[1], J. S. Ahn[2], B. W. Yoo[3], H. J. Kang[4], D. S. Lee[4], I. B. Kwon[4], and Y. H. Park[1], [1]College of Veterinary Medicine and School of Agricultural Biotechnology, Seoul National University, [2]National Veterinary Research and Quarantine Service, [3]Agribrands Purina Korea, Inc., [4]Lotte R&D Center.

1305 Autoaggregation Behavior of Bifidobacteria as Influence by Media Composition and Incubation Temperatures. V. Rada[1], J. Medkova[1], S. A. Ibrahim*[2], O.A. Hassan[2], G. Shahbazi[2], and Y. Murad[3], [1]Czech University of Agriculture Prague, Prague, Czech Republic, [2]North Carolina Agricultural and Technical State University, Greensboro, NC., [3]Rush-Presbyterian-St. Luke's Medical Center, Chicago, IL.

1306 Bacteriological quality of bulk tank milk in Pennsylvania. B. M. Jayarao*, S. R. Pillai, D. R. Wolfgang, C. M. Burns, and L. J. Hutchinson, The Pennsylvania State University, University Park, PA, USA.

1307 Production of exopolysaccharides by *Lactobacillus rhamnosus* RW-9595M: influence of carbon source and ratio carbon / nitrogen. M. I. Cote*[1], D. Roy[1], and J. C. Vuillemard[2], [1]Food Research and Developement Centre, [2]Dairy Research Centre STELA.

1308 Utilization of dot blots to screen probiotic Lactobacilli for mucin binding. J. Newman* and R. Jimenez-Flores, California Polytechnic State University, San Luis Obispo, CA.

1309 The use of a *Lactobacillus* cell extract in growth media designed for lactic cultures. H. Gaudreau*[1], C.P. Champagne[1], and P. Jelen[2], [1]Food Research and Development Center, [2]Alberta University, Edmonton, Canada.

1310 Development and validation of immunological approachs for the evaluation of probiotic adhesion to Caco-2 cells. Gwenaelle Le Blay*, Melanie Gagnon, Christophe Lacroix, and Ismail Fliss, Dairy research centre (STELA), Laval university.

1311 Development of endospore-specific primers for the TRFP analysis of microbial populations in milk powder. Marni M. Arendts*, Amy J. Rife, and Dr.Rafael Jimenez-Flores, California Polytechnic State University, San Luis Obispo CA.

1312 Survival of a five strain cocktail of E. coli O157:H7 during thermalization and the 60 days aging period of hard cheese made from unpasteurized milk. Joseph Schlesser *[1], Joseph Dunn [2], Kevin Madsen [2], and Robert Gerdes [2], [1]Food and Drug Administration, NCFST, Summit-Argo, IL, [2]Illinois Institute of Technology, NCFST, Summit-Argo, IL.

1313 Microbiological analysis of processor obtained milk samples: Experimental determination of shelf-life. Todd Pritchard*[1] and Emmanuelle Monteith[2], [1]Northeast Dairy Foods Research Center, Burlington, VT, [2]Dept. Nutrition and Food Sciences, University of Vermont, Burlington, VT.

1314 Characterization of the novel lactococcal food-grade vector pRAF800 based on melibiose fermentation. I. Boucher*, C. Vadeboncoeur, and S. Moineau, Universite Laval, Quebec, Canada.

1315 Bifidobacteria protection study using whey protein matrice. Viel Louise-Marie*[1-2], Fliss Ismail[1], and Subirade Muriel[1-2], [1]Centre de recherche STELA (Université Laval)Québec, Canada, [2]Functional Food and Nutraceutical Institute (INAF) (Université Laval) Québec, Canada.

1316 Factors influencing cell count of a probiotic *Lactobacillus crispatus* strain. Kevin Bourzac*, Ann Bernard, Dr. M. E. Sanders, and Dr. Rafael Jimenez-Flores, California Polytechnic State University, San Luis Obispo, CA.

1317 Production of Lactic Acid and Antimicrobial Compounds from Cheese Whey. A. Shahbazi* and S.A. Ibrahim, North Carolina Agricultural and Technical State University, Greensboro, NC.

1318 INHIBITION of Lactococcus lactis ssp lactis ml3 and c2 bacteriophage proliferation by chelation of Ca^{2+} with monosodium glutamate. C. L. Hicks* and I Surjawan, University of Kentucky, Lexington, KY 40546-0215.

1319 Study of the Attachment of Hepatitis A Virus (HAV) to Stainless steel, Copper, Polyethylene and PVC Surfaces. Irena Kukavica-Ibrulj*[1], Andre Darveau[2], and Ismail Fliss[1], [1]Dairy Research Centre STELA, Laval University, [2]Biochemistry department, Laval University.

1320 Molecular characterisation of lactic acid bacteria of Ragusano cheese. L. Corallo[1], R. Gelsomino[1], P.S. Cocconcelli[2], P. Campo[1], S. Carpino*[1], and G. Licitra[3], [1]Consorzio Ricerca Filiera Lattiero-Casearia, Ragusa, Italy, [2]Ist. di Microbiologia e Centro Ricerche Biot., Università Cattolica, Piacenza e Cremona, Italy, [3]D.A.C.P.A., Catania University, 95100 Catania, Italy.

1321 Cloning of heterologous pedA1 in different microbial systems. L. Beaulieu*[1,2], J-F. Jette[2], L. Laramee[2], C. Miguez[2], D. Groleau[2], and M. Subirade[1], [1]STELA Dairy Research Centre, [2]Biotechnology Research Institute.

1322 *In vitro* and *in vivo* inhibition of vaginal Group B *Streptococcus* (GBS) by bifidobacterial strain of human origin. Josee Beaulieu*[1], Naceur Naimi[2], Denis Richard[2], Yvan Boutin[3], and Ismail Fliss[1], [1]Dairy Research Centre STELA, Universite Laval, Quebec, Canada., [2]Centre for Research on Energy Metabolism, School of Medicine, Universite Laval, Quebec, Canada., [3]Transbiotech, Cegep de Levis-Lauzon, Levis, Canada.

1323 Effectiveness of cleaning and sanitizing agents against a biofilm of lactobacilli isolated from slit-defected Cheddar cheese. Cecilia Golnazarian* and Catherine Donnelly, University of Vermont, Burlington, VT.

1324 Incidence of *B. cereus* spore in raw milk by membrane filtration. Yoosoung Shin* and Heidi Schraft, [1]University of Guelph.

Forages and Pastures

Grasses and Legumes

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number	
1325	Effects of camphene, myrcene, caryophyllene oxide, and ß-pinene on consumption of alfalfa pellets by sheep. R. E. Estell*[1], E. L. Fredrickson[1], D. M. Anderson[1], K. M. Havstad[1], and M. D. Remmenga[2], [1]USDA/ARS Jornada Experimental Range, [2]New Mexico State University Statistics Center.
1326	Influence of sward height, daily timing of concentrate supplementation and grazing time management on intake, digestibility and grazing efficiency of lactating beef cows. O.J. Gekara*, E. C. Prigge, W. B. Bryan, E. L. Nestor, and W. V. Thayne, West Virginia University, Morgantown, WV.
1327	Assessment of gamagrass based diets without and with corn supplementation on ruminal fermentation in continuous cultures. J-S. Eun*[1], V. Fellner[1], J. C. Burns[2], and M. L. Gumpertz[1], [1]North Carolina State University, Raleigh, NC, USA, [2]USDA-ARS, Raleigh, NC, USA.
1328	Effect of Variety and Maturity Stage on Chemical Composition and Energy Content of Alfalfa and Timothy Hay. P. Yu*[1], D.A. Christensen[1], J.J. McKinnon[1], H Soita[1], and J. Markert[1], [1]Department of Animal and Poultry Science, University of Saskatchewan.
1329	Effect of Variety and Maturity Stage on *In Vitro* Rumen Degradability of Alfalfa and Timothy Hay. P. Yu*[1], D.A. Christensen[1], J.J. McKinnon[1], and J. Markert[1], [1]Department of Animal and Poultry Science, University of Saskatchewan.
1330	Yield and composition of milk from cattle grazing various binary mixtures of grass and Kura clover. R. F. Gregoret*, K. A. Albrecht, and D. K. Combs, University of Wisconsin-Madison.
1331	Mineral concentrations in four tropical forages as affected by increasing daylength. D. Arizmendi-Maldonado[1], L.R. McDowell*[1], T.R. Sinclair[2], P. Mislevy[2], F.G. Martin[3], and N.S. Wilkinson[1], [1]University of Florida, Departments of Animal Sciences, [2]Agronomy, [3]Statistics.
1332	Steer performance and clover persistence in Georgia-5 tall fescue pastures. J.A. Parish*[1], R.H. Watson[1], M.A. McCann[2], C.S. Hoveland[1], and J.H. Bouton[1], [1]The University of Georgia, Athens, [2]Virginia Polytechnic Institute and State University.
1333	Nutrient cycling in cool season grasses. T.W. Downing*[1] and T.T. Leonnig[2], [1]Oregon State University, [2]Oregon Dairy Farmers Association.
1334	Forage Quality Management of Kura Clover in Binary Mixtures with Selected Cool-Season Grasses. B. W. Kim*[1] and K. A. Albrecht[2], [1]Kangwon National University, Korea, [2]University of Wisconsin-Madison, USA.
1335	Digestion and fermentation of fresh alfalfa as affected by season and level of intake in steers fed indoors. P. Pavan*[1], F.S. Santini[1,2], and J.C. Elizalde[2,3], [1]Instituto Naciopnal de Tecnología Agropecuaria (INTA), [2]Facultad de Ciencias Agrarias, UNMdP, [3]Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET).
1336	Prediction of the energy content of Canadian grown forages for growing cattle. B. Gosselin[1], J.F. Bernier[1], G. Allard[1], H. Lapierre[2], and D. Pellerin*[1], [1]Universite Laval, QC, Canada, [2]AAC, Lennoxville, Qc, Canada.
1337	Effect of sainfoin incorporated into alfalfa pasture on ruminal fluid characteristics and development of bloat in grazing steers. Y. Wang*[1], T.A. McAllister[1], L.R. Barbieri[1], and B.P. Berg[2], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]Alberta Agriculture, Food and Rural Development, Lethbridge, AB.
1338	Ca and P endogenous losses and true absorption of alfalfa and fescue diets when fed to dairy cows. M. F. Weiss*, F. A. Martz, R. L. Belyea, and A. T. Belo, University of Missouri, Columbia MO.
1339	Continuous vs 8-paddock rotational stocking of rye-ryegrass pastures at three stocking rates. F.M. Rouquette, Texas Agricultural Experiment Station.
1340	Use of dosed and endogenous herbage alkanes as markers for estimating intake of alfalfa and alfalfa:sainfoin pastures by grazing steers. Y. Wang*[1], T.A. McAllister[1], L.R. Barbieri[1], B.P. Berg[2], and D.M. Veira[3], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]Alberta Agriculture, Food and Rural Development, Lethbridge, AB, [3]Agriculture and Agri-Food Canada, Kamloops, BC.
1341	Withdrawn

Growth and Development

Dairy Calf and Heifer Growth

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number	
1342	Development of a repeatable procedure for rumen tissue sampling. K. E. Lesmeister*, A. J. Heinrichs, and P. R. Tozer, The Pennsylvania State University, University Park, Pennsylvania.
1343	Absorption of IgG from maternal colostrum or fractions of bovine or porcine plasma proteins. J. D. Quigley* and T. A. Wolfe, APC, Inc.
1344	Colostrum intake in the newborn calves. R. Skrzypek*[1], D. Hofmanski[2], and S. Osieglowski[3], [1]Agricultural University, Poznan, Poland, [2]Kombinat 2000, Smigiel, Poland, [2]National Research Institute of Animal Production, Balice, Poland.
1345	Feeding liquid whey to newborn Holstein dairy calves. Reza Valizadeh*, Mostafa Jamchi, and Abbasali Naserian, Ferdowsi University, Agriculture college, Animal Sci. Dep.,Mashhad, Khorasan, Iran.
1346	Analysis of body composition of Jersey bull calves fed varying levels of fat and protein with dual energy X-ray absorptiometry. S. S. Bascom*, C. S. Huffard, S. M. Nickols-Richardson, E. P. Hovingh, R. E. James, and M. L. McGilliard, Virginia Polytechnic Institute and State University.
1347	Growth hormone influences growth performance, but does not affect gluconeogenesis from lactate or propionate in 60-d old veal calves. H.M. Hammon*[1] and S.S. Donkin[2], [1]University of Berne, Berne, Switzerland, [2]Purdue University, West Lafayette, IN.
1348	Effect of feed intake and genetic potential for milk yield on somatotropin (ST) response to growth hormone releasing factor (GRF) in Holstein heifers. W. J. Weber*, S. H. Wu, H. Chester-Jones, L. B. Hansen, and B. A. Crooker, Department of Animal Science, University of Minnesota.
1349	Effect of feed intake, bST administration, and genetic potential for milk yield on hepatic IGF-I and growth hormone receptor mRNA in growing Holstein heifers. S. H. Wu*, W. J. Weber, H. Chester-Jones, L. B. Hansen, and B. A. Crooker, Department of Animal Science, University of Minnesota.
1350	Comparison between measurement of parenchymal development of heifer mammary glands by computed tomography and traditional dissection techniques. J. M. Smith*[1], S. S. Block[1], N. L. Dykes[2], D. E. Bauman[1], and M. E. Van Amburgh[1], [1]Cornell University, Ithaca, NY, [2]College of Veterinary Medicine, Cornell University, Ithaca, NY.
1351	Effect of feeding a calcium salt of conjugated linoleic acid (CLA) prior to puberty on body composition and mammary development in Holstein heifers. J. M. Smith*, S. S. Block, D. E. Bauman, and M. E. Van Amburgh, Cornell University, Ithaca, NY.
1352	Leptin reduces proliferation of a bovine mammary epithelial cell line (MAC-T). L.F.P. Silva*, M.J. VandeHaar, M.S. Weber Nielsen, and B.E. Etchebarne, Michigan State University, East Lansing MI.
1353	Effect of dietary energy and protein density on body condition and ovarian follicular dynamics in peripubertal dairy heifers. P.K. Chelikani*[1], J.D. Ambrose[2], and J.J. Kennelly[1], [1]University of Alberta, [2]Alberta Agriculture, Food & Rural Development, Edmonton,Canada.
1354	Analysis of the spatial, hormonal, and developmental regulation of the estrogen receptor a gene in cattle. M. J. Meyer*[1], R. P. Rhoads[1], A. L. Marr[2], W. R. Butler[1], Y. R. Boisclair[1], and M. E. Van Amburgh[1], [1]Cornell University, Ithaca, NY, [2]Elanco Animal Health, Greenfield, IN.
1355	Effects of chronic in vitro growth hormone treatment on insulin receptor substrates and PI3 kinase in adipose tissue. Fernanda Castro*[1], Eduardo Delgado[2], and Dante Lanna[2], [1]University of California, Davis/ CA/ USA, [2]Esalq-USP/ SP/ Brazil.

Milk Protein and Enzymes

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number	
1356	Characterization of carbohydrate structure of MUC1 and MUCX in porcine and bovine milk by exoglycosidase treatment and lectin blot test. C. Liu*, A.K. Erickson, and D.H. Francis, South Dakota State University, Brookings, SD.
1357	Structural studies of bovine ß-casein by CD, FTIR and molecular modeling. P. X. Qi* and H. M. Farrell, Jr., USDA-ARS-ERRC, Wyndmoor, PA, USA.
1358	Conformational change in alpha-lacatalbumin produces an alternative biological function. K Stokes and B Alston-Mills*, North Carolina State University, Raleigh, North Carolina, USA.
1359	Estrogen response of the human lactoferrin promoter in mammary gland cells. K Stokes[1], C Teng[2], and B Alston-Mills*[1], [1]North Carolina State University, Raleigh, North Carolina USA, [2]National Institutes of Environmental Health Sciences, Research Triangle Park, North Carolina USA.
1360	Disulfide bonding patterns between ß-lactoglobulin and ?-casein in a heated and spray-dried milk-model. A. Bienvenue*[1], C.S. Norris[2], M.J. Boland[2], L.K. Creamer[2], and R. Jimenez-Flores[1], [1]DPTC, California Polytechnic State University, San Luis Obispo, CA, [2]New Zealand Dairy Research Institute, Palmerston North, New Zealand.
1361	Interactions between ß-lactoglobulin and xanthan gum studied by capillary electrophoresis. M. Girard*, S.L. Turgeon, and S.F. Gauthier, Universite Laval, Quebec, Canada.
1362	Coisolation of Plasmin/Plasminogen with Xanthine Oxidoreductase. D.A. Clare*, G.L. Catignani, and H.E. Swaisgood, Southeast Dairy Foods Research Center, Dept. of Food Science, NCSU, Raleigh, N.C.
1363	Identification of catalytic amino acid residues at the active site of mouse glucosidase II. Jie Feng[1] and Inder K. Vijay*[1], [1]University of Maryland.
1364	Stimulation of the functional expression of glucosidase I by calnexin and identification of catalytic Amino acids at its active site. Xaio-Lian Zhang[1] and Inder K. Vijay*[1], [1]University of Maryland.
1365	Photoaffinity labeling of the active site of glucosidase I. A.V. Romaniouk [1], A. Silva[1], and I.K. Vijay*[1], [1]University of Maryland.
1366	Molecular models for bovine $_{as2}$-casein. P.D. Hoagland* and H.M. Farrell, Jr., USDA ERRC, Wyndmoor PA.
1367	Effect of Sugars on Milk Protein Gels and Stabilized-Milk Protein Emulsion Gels. L Matia* and E Dickinson, University of Leeds, Leeds, U.K.
1368	Impact of genetic variants of ß-lactoglobulin on their binding capacity to peptide ß-LG 102-105. I. Noiseux*, S.L. Turgeon, and S.F. Gauthier, Centre STELA, Universite Laval.
1369	Study on the molecular mass changes of bovine k-casein glycomacropeptide and on its separation in ultrafiltration with and without application of electric fields. M.-J. Michel*[1], Y. Pouliot[1], M. Britten[2], I. Noel[1], and R. Lebrun[3], [1]Dairy Research Center STELA, Universite Laval, [2]Food Research and Development Center, FRDC, [3]Laboratory of engineering of membrane process, UQTR.
1370	Characterization of heat-induced whey protein-anionic surfactant complexes. H.J. Giroux* and M. Britten, FRDC, Agriculture and Agri-Food Canada, St-Hyacinthe, Qc, Canada.
1371	Characterization of bovine lactoferrin isolates by cation-exchange chromatography. G. Brisson*[1], M. Britten[2], and Y. Pouliot[1], [1]Dairy Research Centre (STELA), Laval University, Quebec (Quebec), Canada., [2]Food Research and Development Centre (FRDC), St-Hyacinthe (Quebec), Canada.
1372	Effect of calcium on reaction products released during thermolysin hydrolysis of tryptic peptides from ß-casein. J.-F. Lapointe*[1], G. Henry[2], D. Molle[2], S.F. Gauthier[1], and Y. Pouliot[1], [1]Centre de recherche STELA, [2]INRA, Laboratoire de Recherches de Technologie Laitiere.
1373	Use of a model system to determine the effects of milk protein and denatured whey protein concentrations on mass balance during cheese making. N. Remillard*[1], G. Trudeau[2], and M. Britten, [1]FRDC, Agriculture and Agri-Food Canada, St-Hyacinthe, Qc, Canada, [2]Agropur, Granby, Qc, Canada.

Nonruminant Nutrition

Phytase, Other Enzymes, and Mineral Nutrition

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number	
1374	Characteristics of phytase secreted in saliva of the transgenic enviropig™. M. Cottrill, J. P. Phillips, R. G. Meidinger, M. Z. Fan, R. R. Hacker, and C. W. Forsberg*, University of Guelph, Guelph, Ontario.
1375	Phosphorus associated with soybean meal is completely digested and absorbed in the transgenic phytase growing-finishing enviro-pig™. A. Ajakaiye*, M. Z. Fan, C. W. Forsberg, J. P. Phillips, R. G. Meidinger, M. Z. Weiderkehr, T. Archbold, S. P. Golovan, R. R. Hacker, and D. Barney, University of Guelph, Guelph, Ontario, Canada.
1376	Efficacy of a new phytase preparation on phosphorus and calcium digestibility and on bone mineralization in weanling piglets. S. Jakob*, R. Maillard, O. Nore, and P.A. Geraert, Aventis Animal Nutrition, Antony, France.
1377	The effects of supplemental plant or microbial phytase and organic acid on growth performance and nutrient digestibilities in nursery pigs. O. S. Kwon*[1], I. H. Kim[1], J. W. Hong[1], Y. K. Han[2], J. H. Kim[3], S. H. Lee[1], B. J. Min[1], and W. B. Lee[1], [1]Department of Animal Resource & Science, Dankook University, Cheonan, [2]Feed Res. Inst., National agri. Coop. Fed., [3]Agribrands Purina Korea, Inc., Seoul, Koera.
1378	Phytase proved ineffective for young weaned pigs. H. M. Miller[1] and P. Toplis*[2], [1]University of Leeds, Leeds, UK, [2]Primary Diets Ltd, Melmerby, UK.
1379	Phytase and dietary zinc and copper effects on performance and mineral status of grow-finish pigs. J. W. Spears*[1], M. D. Corns[1], E. van Heugten[1], W. L. Flowers, and G. M. Hill[2], [1]North Carolina State University, [2]Michigan State University.
1380	Nitrogen and phosphorus balance in growing pigs fed crude protein-adequate or -deficient, low-phosphorus diets with graded levels of phytase. J.S. Sands*[1], D. Ragland[1], and O. Adeola[1], [1]Purdue University.
1381	Growth response to phytase and apparent ileal and fecal digestibility of nutrients in pigs fed diets of different intrinsic phytate concentration. J.S. Sands*[1], D. Ragland[1], R.N. Dilger[1], and O. Adeola[1], [1]Purdue University.
1382	Digestibility of low phytic acid corn (LPA) and elevated fat and protein corn (EFP) with phytase in finishing pigs. S. L. Hankins*, A. L. Sutton, and B. T. Richert, Purdue University, West Lafayette, IN.
1383	The effect of CP level and phytase inclusion on apparent amino acid digestibilities and the estimation of endogenous amino acid losses using an enzymatically hydrolyzed casein diet. J.P. Rice*[1], J.S. Radcliffe[1], R.S. Pleasant[2], and J.L. Pierce[3], [1]Purdue University, West Lafayette, IN, [2]Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, VA, [3]Alltech, Inc., Nicholasville, KY.
1384	Apparent digestibility coefficients of nutrients are improved by phytase supplementation in corn distiller's dried grain with solubles for rainbow trout (*Oncorhynchus mykiss*). Zongjia Cheng* and R.W. Hardy, University of Idaho, Hagerman Fish Culture Experiment Station.
1385	Effect of phytase supplementation on apparent digestibility coefficients of nutrients in soybean meal-based semi-purified diets for rainbow trout (*Oncorhynchus mykiss*). Zongjia Cheng*[1], R.W. Hardy[1], V. Verlhac[2], and J. Gabaudan[2], [1]University of Idaho,Hagerman Fish Culture Experiment Station, [2]Research Center for Animal Nutrition and Health, STE Chimique Roche, Ltd, France.
1386	Performance of growing-finishing pigs fed diets supplemented with a carbohydrase combination. J. N. Hsu, L. C. Cheng, T. S. Sheu, and C. Y. Liu*, Animal Technology Institute Taiwan, ROC.
1387	Growth and feed intake of pigs fed wheat-based diets differing in digestible energy content without or with xylanase. W. R. Caine*[1], B. T. Li[1], J. He[2], W. C. Sauer[2], S. Jaikaran[1], and P. H. Simmins[3], [1]Alberta Agriculture, Food and Rural Development, [2]University of Alberta, [3]Finnfeeds International Ltd.
1388	Effect of Rovabio™ Excel AP on nutrient digestibility and on performance of weaned piglets. S. Jakob*[1], G. Gotterbarm[1], and F. X. Roth[2], [1]Aventis Animal Nutrition, Antony, France, [2]Division of Animal Nutrition and Production Physiology, TU-Munich, Weihenstephan, Germany.
1389	Addition of a fungal xylanase to wheat-based diets for growing pigs. M. Cervantes*, M.A. Barrera, A.B. Araiza, N. Torrentera, S. Espinoza, and M. Cervantes, ICA, Universidad Autónoma de Baja California.

1390 The effect of multi-enzyme supplementation on the ileal and fecal digestibility of corn-soybean meal based diet in the finishing Pigs. B. J. Min*[1], I. H. Kim[1], J. W. Hong[1], Y. H. Han[2], J. H. Lee[3], O. S. Kwon[1], S. H. Lee[1], and W. B. Lee[1], [1]Department of Animal Resource & Science, Dankook University, [2]Feed Res. Inst., National agri. Coop. Fed., [3]EASY-BIO SYSTEM, Inc., Seoul, Korea.

1391 Influence of 1-dose Fe dextran administration with organic trace mineral supplementation on the performance of piglets. S. P. Acda[1], J. W. Joo[2], W. T. Kim[2], Y. H. Shim[2], S. H. Lee[2], and B. J. Chae*[2], [1]Institute of Animal Science, University of the Philippines Los Banos, College, Laguna, Philippines, [2]Division of Animal Resources, Kangwon National University, Chunchon 200-701, Kangwon, Korea.

1392 Effects of feeding organic trace minerals on the production traits of sows and neonates. B. J. Chae*[1] and S. P. Acda[2], [1]Division of Animal Resources, Kangwon National University, Chunchon 200-701, Korea, [2]Institute of Animal Science, University of the Philippines Los Banos, College, Laguna, Philippines.

1393 Evaluation of recombinant human lactoferricin culture as a substitute for antibiotic in pig starter diets. J. W. Hong*[1], I. H. Kim[1], T. H. Moon[2], J. H. Kim[3], O. S. Kwon[1], and S. H. Lee[1], [1]Department of Animal Resource & Science, Dankook University, Cheonan, [2]EASY-BIO SYSTEM, Inc., Seoul, [3]Agribrands Purina Korea, Inc., Seoul, Koera.

1394 Effects of iron-enriched yeast supplementation on iron utilization in nursery pigs. J. W. Hong*[1], I. H. Kim[1], J. H. Lee[2], O. S. Kwon[1], S. H. Lee[1], B. J. Min[1], and W. B. Lee[1], [1]Department of Animal Resource & Science, Dankook University, Cheonan, [2]EASY-BIO SYSTEM, Inc., Seoul, Korea.

1395 Interaction of chromium methionine supplementattion and feed restriction on reproductive performance of Japanese quail. G. Contreras*, R. Soto, A. Montoya, and R. Barajas, FMVZ-Universidad Autonoma de Sinaloa (Mexico).

1396 True phosphorus digestibility and the endogenous phosphorus outputs associated with canola meal for growing pigs. M. Z. Fan*, T. Archbold, A. Ajakaiye, Y. Shen, K. Bregendahl, J. L. Atkinson, and R. R. Hacker, University of Guelph, Guelph, Ontario, Canada.

1647 The effect of dietary tribasic copper chloride, Availa®Cu copper amino acid complex, zinc oxide, and combinations on nursery pig growth performance. Terry L. Ward*[1], Timothy M. Fakler[1], Murray J. Pettitt[2], and Eduardo Beltranena[2], [1]Zinpro Coporation, [2]Prairie Swine Centre Inc.

Physiology

Endocrinology and Metabolism

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number

1397 Cloning and characterization of genomic fragments encoding a putative ovine epidermal growth factor puedogene. Sushil J. John* and Sylvie Bilodeau-Goeseels, Agriculture and Agri-Food Canada, Lethbridge Research Centre, Lethbridge, Alberta, Canada.

1398 Expression of growth hormone receptor (GHR) 1A, IGF-I, total GHR and cyclophilin (cyclo) mRNA in hepatic tissue of periparturient Holstein cows. R. P. Radcliff*, B. L. McCormack, and M. C. Lucy, University of Missouri, Columbia MO.

1399 Inhibition of nitric oxide synthase increases glucose uptake and lipolysis in ovine hind-limb by a mechanism independant of insulin. J.J. Cottrell*[1,2], M.B. Mc Donagh[2], R.D. Warner[1,2], and F.R. Dunshea[2], [1]Victoria University, Werribee, Victoria, Australia., [2]Natural Resources and Environment, Werribee, Victoria, Australia.

1400 Glucose and hormonal profiles of Large White and Genex-Meishan gilts in early and late gestation. C. Farmer*[1] and J.R. Cosgrove[2], [1]Agriculture and Agri-Food Canada, Dairy and Swine R & D Centre, Lennoxville, QC, Canada, [2]Genex Swine Group, Regina, SK, Canada.

1401 Effect of Time and Day of Injection on Plasma ß-hydroxybutyrate, NEFA, and Urea N during 14-day Subcutaneous Injections of Several Dosages of Glucagon in Dairy Cows. G. Bobe*[1], B. N. Ametaj[2], R. N. Sonon[1], D. C. Beitz[1], and J. W. Young[1], [1]Iowa State University, Ames, IA, [2]Purdue University, West Lafayette, IN.

1402 Effect of Time and Day of Injection on Plasma Glucose and Insulin during 14-day Subcutaneous Injections of Several Dosages of Glucagon in Dairy Cows. G. Bobe *[1], B. N. Ametaj[2], R. N. Sonon[1], D. C. Beitz[1], and J. W. Young[1], [1]Iowa State University, Ames, IA, [2]Purdue University, West Lafayette, IN.

1403 Effect of oxytocin injection before milking, attachment delay of milking teat cup and milking frequency on performance of Holstein cows. Gholam Ghorbani*[1] and Ali jafari[1], [1]isfahan University of Technology.

1404 Endocrine responses to isoglucogenic infusions of whey protein and propionic acid in dairy cows. L. Misciattelli*, M. Vestergaard, and T. Hvelplund, Danish Institute of Agricultural Sciences.

1405 Glucose metabolism and insulin sensitivity in Gulf Coast Native and Suffolk ewes during late gestation and early lactation. C.C. Williams*[1], K.J. Calmes[1], J.M. Fernandez[1], C.C. Stanley[1], J.C. Lovejoy[2], H.G. Bateman[1], L.R. Gentry[1], D.T. Gantt[1], and G.D. Harding[1], [1]Louisiana State University Agricultural Center, Baton Rouge, LA 70803, [2]Pennington Biomedical Research Center, Baton Rouge, LA 70808.

1406 Influence of zinc deficiency on the mRNA expression of zinc transporters in adult rats. MW Pfaffl*[1] and W Windisch[1], [1]Department of Animal Physiology, Center of Life and Food Sciences, Techn. Univ. Munich.

1407 Metabolic effects of zinc deficiency on the somatotropic axis in non-growing rats as a new animal model to adult individuals. MW Pfaffl[1], RM Bruckmaier*[1], and W Windisch[1], [1]Department of Animal Physiology, Center of Life and Food Sciences, Techn. Univ. Munich.

1408 Effect of drinking diluted seawater on some physiological aspects of camels. H. Abdel Rahman*[1], M. El Sherif[2], S.S. Omar[1], M.A. ElSayed[1], and N.M. Ibrahim[2], [1]Minufiya University, Faculty of Agriculture, [2]Desert Research Institute, Egypt.

1409 Effect of different levels of passive immunity on response to intravenous immunoglobulin in calves. C. J. Hammer*[1], J. D. Quigley[2], and H. D. Tyler[1], [1]Iowa State University, [2]APC Company, Inc.

1410 Characterization of *Staphylococcus* species in bulk tank milk. N. V. Hegde*, R. Butchko, and B. M. Jayarao, The Pennsylvania State University, University Park, PA, USA.

1411 Leptin attenuates the central effects of neuropeptide-Y on somatotropin but not gonadotropin secretion in cows. M. R. Garcia*[1,2], M Amstalden[1,2], D. H. Keisler[3], N Raver[4], A Gertler[4], and G. L. Williams[1,2], [1]Texas A&M University Agricultural Research Station, Beeville, TX/USA, [2]Texas A&M University, College Station, TX/USA, [3]University of Missouri, Columbia, MO/USA, [4]The Hebrew University of Jerusalem, Rehovot/Isreal.

1412 Effects of three post-weaning management regimes on protein-abundance of lipogenic enzymes and adipogenic activities in adipose tissues of beef cattle. E. Okine*[1], M.A. Price[1], L. Goonewardene[2], P. Mir[3], Z. Mir[3], J.A. Basarab[2], V. Baron[4], and J.J. Kennelly[1], [1]AFNS, University of Alberta, Edmonton, AB T6G 2P5, [2]Livestock Industry Division, AAFRD, Edmonton, AB. T6H 5T6, [3]Agriculture and Agri-Food Canada, Lethbridge, AB T1J 4B1, [4]Agriculture and Agri-Food Canada, Lacombe, T4L 1W1.

1413 Effects of diets high in linoleic acid on carcass fat and CLA content, serum leptin, and age at puberty in beef heifers. M. R. Garcia*[1,2], M Amstalden[1,2], C. D. Morrison[3], D. H. Keisler[3], and G. L. Williams[1,2], [1]Texas A&M University Agricultural Research Station, Beeville, TX, USA, [2]Texas A&M University, College Station, TX, USA, [3]University of Missouri, Columbia, MO, USA.

1414 The role of ghrelin and GHS receptor on proliferation and differentiation of ovine preadipocytes. SG Roh*, KC Choi, Y Shrestha, C Yoon[1], and S Sasaki, Lab of Animal Molecular Physiology, Faculty of Agriculture, Shinshu University, JAPAN, [1]Dept of Animal Science, Iksan College, Iksan, KOREA.

1415 Slow-release somatotropin reduces plasma leptin in lactating dairy cows. F. Rosi*[1] and L. Pinotti[2], [1]Ist. Zootecnia Generale, Facoltà di Agraria, [2]Dept. VSA, Facoltà di Medicina Veterinaria- Università di Milano I-20133 Milan Italy.

1416 The influence pre-calving Somatotropin treatment on the quantity and quality of colostrum in beef cattle. N. Macewko, G.A. Angliss, E.F. Jones, K.E. Govoni, M.F. Loughlin, D. Cissel, S.A. Zinn, D. Schreiber, and T.A. Hoagland, University of Connecticut, Storrs, Connecticut.

1417 Protocols for detection of EPSP synthase gene in sheep fed diets containing Roundup Ready® canola. R. Sharma*[1], T.W. Alexander[1,2], D. Damgaard[1], R.J. Forster[1], and T.A. McAllister[1], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]University of Alberta, Edmonton.

1418 Influence of nutrition and body condition score on plasma concentrations of IGF-I and thyroxine (T4) in gestating beef cows. C. A. Lents*[1], R. P. Wettemann[1], J. M. Bolanos[2], F. J. White[1], I. Rubio[1], N. H. Ciccioli[1], and L. J. Spicer[1], [1]Department of Animal Science, Oklahoma Agricultural Experiment Station, Stillwater, 74078, [2]Ministry of Agriculture, San Jose, Costa Rica.

Ruminant Nutrition

Feed Additives, Fiber, and Minerals

Presentation Times

Odd-Numbered Poster Boards: 1 PM to 3 PM

Even-Numbered Poster Board: 3 PM to 5 PM

Abstract Number	
1419	Preliminary report on chemical composition and ruminal degradation of *Aloe vera*. J. A. Vergara, M. A. Cuauro, and O. E. Araujo Febres*, The University of Zulia, Maracaibo, Venezuela.
1420	Influence of addition of fibrolytic enzymes on enzyme activities and fermentation patterns of pure substrates *in vitro*. D. Colombatto*, D. P. Morgavi, and K. A. Beauchemin, Research Center, Lethbridge, Alberta, Canada.
1421	Screening of fibrolytic enzymes as feed additives for ruminants: can the effect of enzyme additives on *in vitro* fermentations be predicted by enzyme activities and feed hydrolysis?. D. Colombatto*, D. P. Morgavi, A. F. Furtado, and K. A. Beauchemin, Research Center, Lethbridge, Canada.
1422	Fibrolytic exogenous enzymes improve performance in steers fed sugar cane and stargrass. A. Gomez[1], J. Perez[1], G.D. Mendoza*[1], E. Aranda[1], A. Hernandez[1], J.A. Ramos[1], and R. Rojo[2], [1]Colegio de Postgraduados, Montecillo, Texococo, Mexico, [2]Universidad Autonoma de Guerrero, FMVZ-URCCH, Cuajinicuilapa, Gro. Mexico.
1423	Exogenous fibrolytic enzymes and sugar cane improve performance in steers fed stargrass. A. Gomez[1], J. Perez[1], G.D. Mendoza*[1], E. Aranda[1], A. Hernandez[1], J.A. Ramos[1], and R. Rojo[2], [1]Colegio de Postgraduados, Montecillo, Texococo, Mexico, [2]Universidad Autonoma de Guerrero, FMVZ-URCCH, Cuajinicuilapa, Gro. Mexico.
1424	Effects of fibrolytic enzyme supplementation for dairy goats in mid lactation. E. González[1], G. Caja*[1], E. Albanell[1], C. Flores[1], A. Castro[1], R. Casals[1], X. Such[1], A. Bach[2], and C. Torre[2], [1]Universitat Autonoma de Barcelona, Spain, [2]Agribrands Europe-España S.A., Spain.
1425	Effects of direct-fed microbials on ruminal fermentation, digestibility, and bacterial protein synthesis during continuous culture. W. Z. Yang*, K. A. Beauchemin, and D. D. Vedres, Agriculture and Agri-Food Canada, Lethbridge, Canada.
1426	Effects of ruminal pH and fibrolytic enzymes on digestibility, bacterial protein synthesis, and ruminal fermentation during continuous culture. W. Z. Yang*, K. A. Beauchemin, and D. D. Vedres, Agriculture and Agri-Food Canada.
1427	Fibrolytic enzymes as feed additives for lactating dairy cows: effects on chewing behavior, salivation and ruminal pH. G. R. Bowman*[1], K. A. Beauchemin[1], and J. A. Shelford[2], [1]Agriculture and Agri-food Canada, Lethbridge, Canada, [2]University of British Columbia, Vancouver, Canada.
1428	Effects of *Saccharomyces cerevisiae* culture and *Saccharomyces cerevisiae* live cells on in vitro mixed ruminal microorganism fermentation. H. A. Lynch and S. A. Martin*, University of Georgia, Athens.
1429	Response of lactating Holstein dairy cows to betaine supplementation. R.O. Kellems*, Plant and Animal Sciences Department, Brigham Young University, Provo, Utah 84602.
1430	Rumen microbial ecology and *Saccharomyces cerevisiae* CNCM I 1077: ten years of collaborative research. F. Chaucheyras-Durand*[1,2] and G. Fonty[2], [1]Lallemand Animal Nutrition, Toulouse (France), [2]INRA Microbiology Laboratory, Theix (France).
1431	Supplementation of a fibrolytic enzyme complex in the concentrate of dairy ewes during lactation. C. Flores[1], G. Caja*[1], R. Casals[1], E. Albanell[1], X. Such[1], G. Vera[1], E. Gonzalez[1], A. Bach[2], and C. Torre[2], [1]Universitat Autonoma de Barcelona, Spain, [2]Agribrands Europe-Spain S.A., Spain.
1432	Effects of glycosylation on the stability of fungal xylanase exposed to proteases or rumen fluid *in vitro*. W. F. J. van de Vyver[1], K. A. Dawson[2], and J. M. Tricarico*[2], [1]University of Pretoria, Pretoria, South Africa., [2]Alltech Biotechnology Inc., Nicholasville, KY.
1433	The effects of enzyme treatment on ruminal digestibility of feather meal with and without supplemental blood. C.A. Moran*, J. Skaggs, and J.M. Tricarico, Alltech Inc. Nicholasville, KY.
1434	The effect of direct-fed microbials on calf health and performance. L.D. Roth*, Conklin Co. Inc.; Shakopee, MN.
1435	Performance of lactating dairy cows fed glyphosate-tolerant corn (event NK603). I. R. Ipharraguerre*[1], R. S. Younker[1], J. H. Clark[1], E. P. Stanisiewski[2], and G. F. Hartnell[2], [1]University of Illinois, Urbana, [2]Monsanto Company, St. Louis, MO.

1436 Effects of *Propionibacterium acidipropionici*, strain DH42, as a direct-fed microbial on the performance and carcass characteristics of feedlot steers. S.-W. Kim*, S. R. Rust, and M. T. Yokoyama, Michigan State University, East Lansing, MI.

1437 Impact of ethoxyquin on productivity of dairy cattle. J.L. Smith*[1], L.G. Sheffield[1], and D. Saylor[2], [1]University of Wisconsin, Madison, [2]Solutia, Inc., St. Louis, MO.

1438 Effect of live yeast culture supplementation on nitrogen digestion and ruminal liquid kinetics in cattle. M. Murillo*[1], M.S. Vazquez[1], A. Quiñones[1], J.F. Sanchez[1], F.G. Rios[2], and R. Barajas[2], [1]FMVZ-Universidad Juarez del Estado de Durango (Mexico), [2]FMVZ-Universidad Autonoma de Sinaloa.

1439 Dietary inclusion of silymarin in peripartum dairy cows: Effects on milk quality and detection of silymarin residue. D. Tedesco[1], A. Tava*[2], and G. Varisco[3], [1]Dipart. di Scienze e Tecnologie Veterinarie per la Sicurezza Alimentare, University of Milano, Italy, [2]Ist. Sper. Colt. Foragg., Lodi, Italy, [3]Ist. Zoopr. Sper. Lomb. Em. Rom., Brescia, Italy.

1440 The effects of prepartum diet composition and supplemental yeast culture on rumen fermentation. D Chatman, J Spain*, R Belyea, M Ellerseick, and M Kerley, University of Missouri-Columbia/USA.

1441 The effects of prepartum diet composition and supplemental yeast culture on rumen fermentation during the transition to a typical lactation diet. D Chatman, J Spain*, R Belyea, M Ellerseick, and M Kerley, University of Missouri-Columbia/USA.

1442 The effect of monensin controlled release capsule at dry-off on calving-related disorders and milk yield in Holstein cows. P. Melendez*, C. Risco, and A. Donovan, University of Florida, Gainesville, FL, USA.

1443 Effect of Urea and/or Fibrozyme Supplementation on Intake, Degradability, Digestibility and Kinetics of Oat Hulls Included in a Basal Ration for Dairy Steers. J.I. Aguilera[1], J. Jimenez-Castro[1], M.A. Castillo-Pecina[2], C.F. Arechiga[2], and O. Ruiz-Barrera*[1], [1]Universidad Autonoma de Chihuahua, [2]Universidad Autonoma de Zacatecas.

1444 Effects of Administration of Rumensin Either as a Controlled-Release Capsule or a Premix on Attenuation of Sub-Acute Ruminal Acidosis in Lactating Holstein Dairy Cows. T. Mutsvangwa*[1], J. P. Walton[1], J. C. Plaizier[2], T. Duffield[1], G. Vessie[3], R. Bagg[3], and B. W. McBride[1], [1]University of Guelph, Guelph, ON, Canada, [2]University of Manitoba, Winnipeg, MB, Canada, [3]Provel Division, Eli Lilly Inc., Guelph, ON, Canada.

1445 Influence of fibrous feed supplements on rumen morphology and production parameters in veal calves. V. Dell'Orto[1], R. Paratte, A. Di Giancamillo, C.A. Sgoifo Rossi, V. Bontempo, A. Agazzi, C.M. Domeneghini, and G. Savoini*, [1]University of Milan, Italy.

1446 Comparison of three sieving methods to measure particle size distribution of forages. Paolo Berzaghi*[1,2] and Dave Mertens[2], [1]University of Padova, Italy, [2]US Dairy Forage Research Center, Madison, WI.

1447 Gas production kinetics and fermentation end product formation from neutral detergent fiber and sucrose by mixed ruminal microorganisms in vitro. P. J. Weimer*[1] and M. B. Hall[2], [1]USDA-Agricultural Research Service, Madison, WI, [2]University of Florida, Gainesville, FL.

1448 Relationship of forage fiber content and mechanical strength to particle size reduction during ingestive mastication by steers. H. G. Jung*[1] and S. K. Baker[2], [1]USDA-ARS, St. Paul, MN, [2]CSIRO, Perth, Australia.

1449 Effects of feeding corn silage that was allowed to spoil for five days with or without yeast cell walls on production parameters in early lactation Holstein cows. S.M. Bolt*, D.E. Diaz, S. Davidson, S.R. Hill, B.A. Hopkins, V. Fellner, C. Brownie, and L.W. Whitlow, North Carolina State University, Raleigh, NC.

1450 Peak strains and strain energy transferred through the jaws and skull of sheep eating roughage and concentrate diets. W.L. Grovum*[1], J.J. Thomason[1], W.W. Bignell[1], and A.G. Deswysen[2], [1]University of Guelph, Ontario, Canada, [2]Universite Catholique Louvain, Belgium.

1451 Effects of buffer selection and level of digestible dry datter on *in vitro* NDF digestion. P.H. Doane, M.L. Henry*, and J.L. Adcock, ADM Alliance Nutrition, Inc., Decatur, IN.

1452 Fiber hydrolysis in the rumen: effects of pH and forage type. C. Spackman*, R.L. Baldwin, R.D. Sainz, and M.L. Sweany, University of California, Davis, CA.

1453 Vitamin A administration as a means of udder protection in lactating cows. F.T. Sleiman*, L.S. Jaber, M.Z. Habbal, M.T. Farran, M.G. Uwayjan, and E.K. Barbour, American University of Beirut.

1454 Effects of dietary supplements of vitamin B_{12} and biotin (B_8) on the net flux of nutrients across the splanchnic tissues of lactating dairy cows. C.L. Girard*[1], J.J. Matte[1], and A. Desrochers[2], [1]Agriculture and Agri-Food Canada, Lennoxville, QC, Canada, [2]Universite de Montreal, S-Hyacinthe, QC, Canada.

1455 The effect of feeding complexed trace minerals to pregravid Holstein heifers on the incidence of prepartum and postpartum claw diseases. T.R. Drendel*[1], P.C. Hoffman[1], and M.T. Socha[2], [1]University of Wisconsin, Madison, [2]Zinpro Corp., Eden Prairie, MN.

1456 Characterization of prepartum and postpartum serum mineral concentrations in periparturient Holstein dairy cows. A. B. Todd* and G. A. Varga, The Pennsylvania State University, University Park, PA.

1457 Effect of chromium methionine and zinc methionine supplementation on blood concentrations of immunoglobulin G and M and inflamatory response to a phytohemaglutinin in stressed fedlot calves. L. Almeida*[1] and R. Barajas[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).

1458 Effect of chromium methionine and zinc methionine supplementation on cortisol, glucose, aspartate amino transferase, and cratinin in blood of stressed feedlot calves. L. Almeida*[1] and R. Barajas[1], [1]FMVZ- Universidad Autonoma de Sinaloa (Mexico).

1459 Release of phosphorus from feedstuffs for cattle. J. Sehested* and M.R. Weisbjerg, Danish Institute of Agricultural Sciences, Denmark.

1460 Effect of dietary phosphorus concentration on reproductive performance of lactating dairy cows. H. Lopez*[1], F. D. Kanitz[2], V. R. Moreira[2], M. C. Wiltbank[1], and L. D. Satter[1,2], [1]University of Wisconsin, Madison WI, [2]US Dairy Forage Research Center, USDA-ARS, Madison WI.

1461 Effects of Dietary Calcium (Ca), Anionic Salts (AS) and Vitamin D_3(D_3) on Ca and Acid-Base Status of Steers. G. Aranda-Osorio* and J. J. McKinnon, University of Saskatchewan, Saskatoon, SK, Canada.

1462 Offering sodium bicarbonate and sodium bentonite free-choice to lactating dairy cattle. L.E. Wester*, C.C. Stallings, M.L. McGilliard, and W.S. Swecker, Jr., Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

1463 The Effects of Sub-Acute Rumen Acidosis on Sodium Bicarbonate Supplemented Water Intake for Lactating Dairy Cows. G. Cottee*[1], V. R. Osborne[1], I. Kyriazakis[2], T. M. Widowski[1], and B. W. McBride[1], [1]University of Guelph, Guelph, Ontario, Canada, [2]Scottish Agriculural College, Edinburgh, UK.

1464 Effect of Dietary Cations-Anions Difference on physiological and productive responses in dairy goats during early lactation. F. Meschy and D. Sauvant*, INRA-INAPG Physiologie de la Nutrition et Alimentation Paris France.

1465 Use of organically complexed trace minerals in lactating dairy cow diets. H. Chester-Jones*[1], J. G. Linn[3], G. D. Marx[2], W. G. Olsen[3], M. C. Jacobson[2], D. M. Ziegler[1], K. Brokken[4], W. Brommelsiek[4], and D. A. Vermeire[5], [1]University of Minnesota, Waseca, MN, [2]University of Minnesota, Crookston, MN, [3]University of Minnesota, St. Paul, MN, [4]Quali-Tech Inc., Chaska, MN, [5]Nouriche Nutrition, St. Louis, MO.

1466 The effect of steam flaked or ground corn and supplemental phytic acid on ruminal phytase activity and P balance in lactating cows. A.D. Guyton*, J.M. McKinney, and K.F. Knowlton, Virginia Polytechnic Institute and State University.

1467 Comparative metabolism of calcium from calcium carbonate and calcium propionate in growing steers. J. W. Spears*[1], V. Fellner[1], and F. R. Valdez[2], [1]North Carolina State University, [2]Kemin Americas, Inc., Dex Moines, Iowa.

1468 Production and economic responses of high producing lactating dairy cows to increasing Dietary Cation Anion Difference during non-heat stress seasons. W.K. Sanchez*[1], M.A. DeGroot[2], E. Block[2], D.E. Weber[1], and K.R. Cummings[1], [1]Arm & Hammer Animal Nutrition Group, Church & Dwight Co., Inc., Princeton, NJ, [2]Fresno State University, Fresno, CA.

1469 Selenium status of beef calves from dams receiving different forms of selenium supplementation. G. Valle[1], L. R. McDowell[1], P. A. Davis*[1], D. L. Prichard[2], P. J. Chenoweth[3], D. L. Wright[2], F. G. Martin[4], W. E. Kunkle[1], and N. S. Wilkinson[1], [1]University of Florida, Department of Animal Sciences, Gainesville, [2]UF-IFAS North Florida Research and Education Center, [3]College of Veterinary Medicine, University of Florida, Gainesville, [4]University of Florida, Department of Statistics, Gainesville.

1470 Estimating bone mineral content in dairy cows. B.E. Keene*, A.M. Rutledge, S.M. Nickols-Richardson, C. Holtaway, J.M. McKinney, and K.F. Knowlton, Virginia Polytechnic Institute and State University, Blacksburg.

1471 Organic chromium and selenium effects on immunoglobulins concentration, and carcass composition of finishing lambs. I. Dominguez-Vara[1], S. Gonzalez*[2], R. Barcena[2], M. Cobos[2], and G. Mendoza[2], [1]Universidad Autónoma del Estado de México, [2]Colegio de Postgraduados.

WEDNESDAY, JULY 24, 2002

AM POSTER SESSION

Presentation Times
Odd-Numbered Poster Boards: 9 AM to 11 AM
Even-Numbered Poster Boards: 11 AM to 1 PM

Animal Behavior and Well-Being

Presentation Times

Odd-Numbered Poster Boards: 9 AM to 11 AM

Even-Numbered Poster Boards: 11 AM to 1 PM

Abstract Number	
1472	Effect of greenhouse housing on performance of neonatal dairy calves housed in hutches. D.R. McKnight*[1], P.H. Sharpe, and R.S. Rana, [1]Kemptville College, University of Guelph.
1473	Rearing calves outdoors compared with indoor housing on calf health, immunity, behaviour and performance. B Earley*[1], [1]Teagasc, Grange Research Centre, Dunsany, Co. Meath, Ireland.
1474	Preference of dairy cows for four commercial free stall mattresses. J. K. Bernard*, B. G. Mullinix, J. W. West, and H. Cross, University of Georgia, Tifton, GA/USA.
1475	Effect of recycling sand and sand retaining devices on bacterial counts in free stalls. J. K. Bernard*[1], D. R. Bray[2], J. W. West[1], and D. S. Trammell[1], [1]University of Georgia, Tifton, GA/USA, [2]University of Florida, Gainesville, FL/USA.
1476	Circadian activity profiles of loose housed dairy cows. B.L. Nielsen*[1,2] and P. Lovendahl[2], [1]Scottish Agricultural College (SAC), [2]Danish Institute of Agricultural Sciences (DIAS).
1477	Behavioral comparisons of cloned and non-cloned pigs during maintenance, dominance and intelligence testing, and in the peripartum period. F.C. Gwazdauskas*[1], A.H. Walters[1], M.L. McGilliard[1], S.F. Ball[2], S.S. Flesher[1], W.F. Nicholson[1], K.S. Rosoff[1], L.L. Keyes[1], M.R. Wheeler[1], and D.L. Ayares[2], [1]Virginia Tech, Blacksburg, VA, [2]PPL Therapeutics, Blacksburg, VA.
1478	Cross-sucking before and after weaning by calves fed with a computerized milk feeding system. A. M. de Passille* and J. Rushen, Agriculture and Agri-Food Canada, Lennoxville, QC, Canada.
1479	Behavior and meat quality of veal calves provided with drinking water for welfare purpose. G. Cozzi*[1], F. Gottardo[1], S. Mattiello [2], E. Canali[2], S. Segato[1], and I. Andrighetto[1], [1]Dipartimento di Scienze Zootecniche, University of Padova, Italy, [2]Istituto di Zootecnica, University of Milano, Italy.
1480	Head coloration is related to Holstein cow temperament. S. Rose*, T. Grandin, and W.R. Wailes, Colorado State University, Fort Collins, Colorado, U.S.A.
1481	Effect of the presence of a foraging substrate on the welfare of nutritionally satiated sows. J.A. de Leeuw*[1,2], E.D. Ekkel[2], A.W. Jongbloed[1], and M.W.A. Verstegen[2], [1]ID TNO Animal Nutrition, Lelystad, The Netherlands, [2]Wageningen Institute of Animal Sciences, Wageningen, The Netherlands.
1482	Importance of the activity sort level when using pedometry to detect estrus. O. A. Peralta*, R. L. Nebel, and R. E. Pearson, Virginia Polytechnic Institute and State University, Blacksburg, VA/USA.
1483	Reproductive performance of guinea pigs subjected to 10, 12, and 14 hour continuous and intermittent photoperiods. N.P. Johnston*[1] and M.E. Uzcategui[2], [1]Brigham Young University, [2]University of San Francisco-Quito, Ecuador.
1484	Feed consumption pattern of young pigs. S. Salgado[2], H. Herrera*[1], and A.G. Borbolla[1], [1]Universidad Nacional Autonoma de Mexico, [2]Universidad Autonoma Metropolitana.
1485	Defining feeding bouts for lactating dairy cows housed in a free stall barn. M.A.G. von Keyserlingk*[1], L.G. Baird[1], D.M. Weary[1], and K.A. Beauchemin[2], [1]The University of British Columbia, Vancouver, Canada, [2]Agriculture and Agri-Food Canada, Lethbridge Research Centre, Canada.

1486 Neuroma formation following tail docking of dairy calves. C. A. Lunam[1], A. M. de Passille[2], and J. Rushen*, [1]Flinders University, Adelaide, SA, Australia, [2]Agriculture and Agri-Food Canada, Lennoxville, QC, Canada.

1487 Comparison of analgesia methods for removing velvet antler in elk. N.J. Cook*[1], J.R. Webster[2], J. Church[3], L.R. Matthews[2], T. Church[4], and A.L. Schaefer[1], [1]Agriculture and Agri-Food Canada, Lacombe, AB, [2]AgResearch, Hamilton, New Zealand, [3]Agriculture Food and Rural Development, Red Deer,AB, [4]Canadian Rocky Mountain Ranch, Calgary, AB.

1488 Influence of tail docking and tooth resection on behaviour and performance of piglets. M.C. Meunier-Salaun*[1], G. Bataille[2], Y. Rugraff[2], and A. Prunier[1], [1]INRA-UMRVP Saint-Gilles/ France, [2]ITP Le Rheu / France.

1489 Behavior of primi- and multiparous lactating dairy cattle in commingled groups. W.C. Matzke* and R.J. Grant, University of Nebraska.

1490 Effect of sprinkling cattle on behavior and incidence of zoonotic pathogens. J.L. Morrow*[1], T. Callaway[2], F.M. Mitloehner[3], M.L. Galyean[4], J.W. Dailey[1], T. Edrington[2], R. Anderson[2], and D. Nisbet[2], [1]USDA-ARS Livestock Issues Research Unit, Lubbock TX, [2]USDA-ARS Food and Feed Safety Research Unit, College Station TX, [3]Dept. Animal Science, University of California, Davis CA, [4]Dept. Animal Science, Texas Tech University, Lubbock, TX.

1491 Evaluation of compression analgesia for velvet removal in red deer. L.R. Matthews, K.J. Bremner, A.J.T. Pearse, C.J. Morrow, and J.R. Webster*, AgResearch, Hamilton, New Zealand.

1492 The effect of transport and preconditioning on radiated temperature in calves. A.L. Schaefer*[1], N.J. Cook[1], J.S. Church[2], K.S. Schwartzkopf-Genswein[3], M.E. Booth[4], G.J. Mears[4], and T.A. McAllister, [1]Agriculture and Agri-Food Canada, Lacombe, AB, [2]Agriculture Food and Rural Development, Red Deer, AB, [3]Agriculture Food and Rural Development, Lethbridge, AB, [4]Agriculture and Agri-Food Canada, Lethbridge, AB.

1493 Sole lesions in dairy cattle. E. Bell and D. Weary*, University of British Columbia, Vancouver, BC, Canada.

1494 Preferences of pigs for floor types according to ambient temperature. E. Ducreux[1], V. Courboulay[2], and M.C. Meunier-Salaun*[1], [1]I.N.R.A. Joint Research Unit for Calf and Pig production Saint-Gilles/ France, [2]I.T.P. Pig Technical Institute, Le Rheu /France.

Animal Health

Mastitis

Presentation Times

Odd-Numbered Poster Boards: 9 AM to 11 AM

Even-Numbered Poster Boards: 11 AM to 1 PM

Abstract Number

1495 The effects of pre-milking procedures on hygienic quality of milk. R. Skrzypek* and J. Wojtowski, Agricultural University, Poznan, Poland.

1496 Impact of lactoferrin or lactoferricin with or without penicillin G on the morphology and ultrastructure of *Staphylococcus aureus*. M.S. Diarra*[1], P. Lacasse[1], G. Grondin[2], C. Paradis-Bleau[1], and D. Petitclerc[1], [1]AAFC-Dairy and Swine Research and Development Centre, Lennoxville, Quebec, Canada, [2]Sherbrooke University, Sherbrooke, Quebec, Canada.

1497 Synergetic effect of neomycin and cefazolin with bovine lactoferrin and lactoferricin against *Escherichia coli*and *Klebsiella pneumoniae*. M. S. Diarra*, D. Petitclerc, and P. Lacasse, Dairy and Swine Research and Development Centre, Lennoxville, QC, Canada.

1498 Bulk tank milk analysis inference program. B. M. Jayarao*[1] and T. Kim[2], [1]The Pennsylvania State University, PA, USA, [2]Kyungsung University, Pusan, South Korea.

1499 Farm management practices that influence the number and type of Streptococci and Streptococci-like organisms in dairy herds. D. R. Wolfgang, B. M. Jayarao*, A. A. Sawant, S. R. Pillai, C. M. Burns, and L. J. Hutchinson, The Pennsylvania State University, University Park, PA, USA.

1500 Antimicrobial susceptibility patterns of streptococci isolated from quarter milk and bulk tank milk. A. A. Sawant*, B. C. Love, and B. M. Jayarao, The Pennsylvania State University, University Park, PA, USA.

1501 Thermographic measurement of udder temperature:Predictability and potential of an early warning system for mastitis. R. J. Berry[1], A. D. Kennedy*[1], S. L. Scott[2], B. Kyle[1], and A. L. Schaefer[3], [1]University of Manitoba, Winnipeg, Manitoba Canada, [2]Agriculture and Agri-Food Canada, Brandon, Manitoba Canada, [3]Agriculture and Agri-food Canada, Lacombe, Alberta, Canada.

1502 Effect of copper source on resistance to coliform mastitis. R. W. Scaletti*, C. H. Hamilton, and R. J. Harmon, University of Kentucky, Lexington, KY.

1503 Effect of prepartum milking of primigravid cows on mammary gland health and lactation performance. J.E.P. Santos*[1], R.L.A. Cerri[1], J.H. Kirk[1], S.O. Juchem[1], M. Villasenor[1], and M.A. Ballou, [1]University of California Davis.

1504 Effect of clinical mastitis incidence on lactational and reproductive performance of Holstein dairy cows. J.E.P. Santos*[1], R.L.A. Cerri[1], M.A. Ballou[1], G. Higginbotham[1], J.H. Kirk[1], and S.O. Juchem[1], [1]University of California Davis.

1505 Bacterial counts in bedding and on teat ends of cows housed on sand and sawdust. M. Zdanowicz*, J. A. Shelford, C. B. Tucker, and D. M. Weary, University of British Columbia, Vancouver, Canada.

1506 Sensitivity and specificity of MAS-D-TEC to detect subclinical mastitis in dairy cattle. H. Ghasemzadeh-Nava*[1], M. R. Hosseini[2], and F. Gharagozloo[1], [1]Dept. of Large Animal Clinical Sciences, Faculty of Vet. Med; University of Tehran, [2]Private Practitioner, Garmsar, Iran.

Breeding and Genetics

Molecular Genetics

Presentation Times

Odd-Numbered Poster Boards: 9 AM to 11 AM

Even-Numbered Poster Boards: 11 AM to 1 PM

Abstract Number

1507 The bovine gastrointestinal tract: A gene expression profile. C. Hansen[1], A. Fu[1], Y. Meng[1], C. Li[1], E. Okine[1], C. W. Sensen[2], P. Gordon[2], and S. S. Moore*[1], [1]Dept. of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Canada, [2]Dept. of Biochemistry and Molecular Biology, University of Calgary, Calgary, AB, Canada.

1508 Construction and characterization of ORESTES cDNA libraries generated from bovine mammary gland tissues. A. F. da Mota*[1], T. S. Sonstegard[1], C. P. Van Tassell[1], E. E. Connor[1], A. V. Capuco[1], M. A. P. Brito[2], M. A. Machado[2], M. L. Martinez[2], and L. L. Coutinho[3], [1]Gene Evaluation & Mapping Laboratory, [2]EMBRAPA, Gado de Leite, [3]University of Sao Paulo-ESALQ.

1509 Influence of a differential allelic expression of bovine kappa-casein gene on micelle properties and renneting parameters. G. Lapointe*[3], G. Robitaille[1], M. Britten[3], J. Morisset[1], Y. Pouliot[3], and D. Petitclerc[2], [1]Sherbrooke University, [2]DSRDC, Agriculture & Agri-Food Canada (AAC), Lennoxville (Qc), Canada, [3]FRDC, AAC, St-Hyacinthe (Qc), Canada.

1510 A differential allelic expression of bovine-kappa casein gene is maintained throughout lactation. D. Vachon*[1], G. Robitaille[1], M. Britten[3], J. Morisset[1], and D. Petitclerc[2], [1]University of Sherbrooke, Sherbrooke, (Qc) Canada, [2]DSRDC, Agriculture & Agri-Food Canada, Lennoxville (Qc) Canada, [3]FRDC, Agriculture & Agri-Food Canada, St-Hyacinthe (Qc) Canada.

1511 Polymorphism within the bovine kappa-casein gene. G Robitaille*[1], M Britten[3], J Morisset[1], and D Petitclerc[2], [1]Sherbrooke University, [2]DSRDC, Agriculture & AgriFood Canada, [3]FRDC, Agriculture & AgriFood Canada.

1512 SNP discovery in candidate genes for a bovine ovulation rate QTL. K.J. Tessanne*[1], K.E. Gregory[2], and B.W. Kirkpatrick[1], [1]University of Wisconsin-Madison, [2]USDA Meat Animal Research Center.

1513 Genetic diversity among the Angus, the American Brahman, the Senepol, and the Romosinuano cattle breeds. R. A. Brenneman[1], C. C. Chase, Jr.*[1], D. G. Riley[1], T. A. Olson[2], and S. W. Coleman[1], [1]USDA, ARS, SubTropical Agricultural Research Station, Brooksville, FL, [2]University of Florida, Gainesville, FL.

1514 Identical by descent haplotype sharing analysis: application in fine mapping of QTLs for birth weight in commerical lines of *Bos taurus*. C. Li[1], J. Basarab[2], W. M. Snelling[3], B. Benkel[4], B. Murdoch[1], J. Kneeland[1], C. Hansen[1], and S. S. Moore*[1], [1]Department of AFNS, University of Alberta, Edmonton, AB, Canada, [2]Lacombe Research Centre, AAFRD, 6000 C&E Trail, Lacombe, AB, Canaa, [3]USDA, ARS, US MARC, Clay Center, Nebraska, USA, [4]AAFC, Lethbridge Research Center, AB, Canada.

1515 Investigation of the association between the estrogen receptor beta gene and reproductive components in swine. B.J. Isler*, K.M. Irvin, S.M. Neal, and S.J. Moeller, The Ohio State University, Columbus, OH.

1516 Polymorphisms at the mink prolactin locus. T.L. Vardy and A. Farid, Nova Scotia Agricultural College.

Dairy Foods

Processing

Presentation Times

Odd-Numbered Poster Boards: 9 AM to 11 AM

Even-Numbered Poster Boards: 11 AM to 1 PM

Abstract Number

1517 Implementation of HACCP System to Large Scale Processing Line of Plain Set Yogurt. A. Rabi[1], R.R. Shaker[2], A. Banat[1], and S.A. Ibrahim*[3], [1]Jordan University of Science and Technology, [2]Washington State University, Pullman, WA, [3]North Carolina Agriculture and Technical State University, Greensboro, NC.

1518 Influence of lactic cultures, added linoleic acid, and fructo-oligosaccharides on conjugated linoleic acid concentration in nonfat set yogurt. Tung Lin*, Chinese Culture University, Taipei, Taiwan.

1519 Viability of Bifidobacteria in Yogurt Products Found in North Carolina. J.P. Carr*, S.A. Ibrahim, G. Shahbazi, M. Worku, and C.W. Seo, North Carolina Agricultural and Technical State University, Greensboro, NC.

1520 Effect of high pressure CO_2 on *Pseudomonas fluorescens* in saline and milk. Madhumathi Rajagopal* and Joseph Hotchkiss, Northeast Dairy Foods Research Center, Ithaca, NY/USA.

1521 Develop an environmentally safe wood finish product using whey protein as a co-binding material. Jiancai Li* and Mingruo Guo, University of Vermont, Burlington VT 04505.

1522 Combined effects of casein concentration and stabilizers on textural properties of stirred yoghurt. Caroline Lapointe*[1], Daniel St-Gelais[1], and Mario Proulx[2], [1]Food Research and Development Centre, Agriculture and Agri-Food Canada, St-Hyacinthe, Quebec, [2]Ultima Foods Inc., Granby, Quebec, Canada.

1523 Effect of ultrasound treatment on total bacteria and *Listeria monocytogenes* levels in milk. M. Guo*, T. M. Silk, and J. Wu, Univerisity of Vermont, Burlington VT 05045.

1524 Coagulation properties of skim milk fortified with various dried milk proteins. B. S. Oommen*[1] and D. J. McMahon[1], [1]Utah State University.

1525 Effect of temperature on strain ratio during continuous production of lactic starters containing probiotics with immobilized cell technology. Y Doleyres, I Fliss, and C Lacroix, Dairy Research Centre STELA, Université Laval, Québec, PQ, Canada.

1526 Development of vanilla-flavored ice cream using sucralose as sweetener. K. Adhikari*, R.D. Linhardt, A.T. Woods, K.A. Hein, and H. Heymann, [1]University of Missouri.

1527 Large-scale production of water-soluble whey protein-based microcapsules for stabilization and controlled release of food ingredients. A. Picot[1] and C. Lacroix*[1], [1]Dairy Research Centre STELA.

1528 Evaluation of sodium caseinate isolate and whey protein concentrate in liquid coffee creamers. A. E. Golde and K. A. Schmidt*, [1]Kansas State University, ASI Dept.

1529 The effect of antioxidants on solubility of trace minerals in infant formula. C. R. Smith*, M. R. Guo, and R. S. Tyzbir, University of Vermont, Burlington VT 05405.

1530 Carbonation of frozen soft-serve confections. L.V. Ogden*, L.K. Jefferies, and A. Ellsworth, [1]Brigham Young University, Provo UT.

1531 Effect of homogenization pressure on rheological properties and microstructures of heat-set whey protein emulsion gels. Rudianto Suhareli*, Gabriela Perez-Hernandez, and Ron Richter, Texas A&M University, College Station, TX.

1532 FOLIC acid fortified fat free sugar free plain set yogurt. Kayanush Aryana*, Louisiana State University.

Forages and Pastures

Silages, Small Grains, and Fertilization

Presentation Times

Odd-Numbered Poster Boards: 9 AM to 11 AM

Even-Numbered Poster Boards: 11 AM to 1 PM

Abstract Number	
1533	Effects of molasses-based preservative on fermentation and nutritive value of Albizia lebbeck silage. T. Clavero* and R. Razz, La Universidad del Zulia.
1534	Effects of molasses-formic acid silage preservatives on fermentation of Leucaena leucocephala silage. M. Betancourt*[1], T. Clavero[2], R. Razz[2], S. Pietrosemoli[2], and O. Araujo[2], [1]INIA, [2]La Universidad del Zulia.
1535	The effects of height of cutting, hybrid, and stage of maturity at harvest on the nutritive value of corn silage for lactating dairy cows. J. M. Neylon*[1], T. L. Ebling[1], C. C. Taylor[1], M. P. Lynch[1], M. A. Reddish[1], M. I. Endres[2], and L. Kung, Jr.[1], [1]University of Delaware, Newark, Delaware, [2]Mycogen Seeds, Egan, MN.
1536	Comparison of physical and chemical characteristics of mechanically processed brown midrib, unprocessed brown midrib, or processed normal corn silage. T. L. Ebling*, J. M. Neylon, D. H. Kleinschmit, J. M. Ladd, C. C. Taylor, and L. Kung, Jr., University of Delaware, Newark, DE.
1537	Effect of feeding mechanically processed brown midrib (PBMR), unprocessed brown midrib (UBMR), or processed normal corn silage (P7511) in diets for dairy cows on DM intake, milk production and digestion. T. L. Ebling*, J. M. Neylon, D. H. Kleinschmit, J. M. Ladd, C. C. Taylor, and L. Kung, Jr, University of Delaware, Newark, DE.
1538	The effect of adding *Lactobacillus buchneri* 40788 (LB), enzymes (ENZ), or ENZ and LB on the fermentation and aerobic stability of high moisture corn in lab silos. T. L. Ebling*, J. M. Neylon, C. C. Taylor, M. A. Reddish, M. P. Lynch, and L. Kung, Jr., University of Delaware, Newark, DE.
1539	Effect of fresh and ensiled alfalfa and red clover on the microbial protein synthesis in the rumen of sheep. J.M.J. Gosselink* and C. Poncet, Institut National de la Recherche Agronomique, Theix, France.
1540	Influence of glyphosate tolerant (trait NK603) corn silage and grain on feed consumption and milk production in Holstein dairy cattle. R.J. Grant[1], D. Kleinschmit[1], A.L. Sparks*[1], E.P. Stanisiewski[2], and G.F. Hartnell[2], [1]University of Nebraska, Lincoln, [2]Monsanto Company, St. Louis, MO.
1541	Effect of feeding brown midrib-3 corn silage or conventional corn silage cut at either 23 or 71 cm on milk yield and milk composition. D.D. Dominguez*[2], V.R Moreira[2], and and L.D. Satter[1,2], [1]U.S. Dairy Forage Research Center, USDA-ARS, [2]Dairy Science Department, University of Wisconsin, Madison.
1542	Characteristics of silage prepared from alfalfa, sainfoin, and alfalfa:sainfoin mixtures. Y. Wang*, L.R. Barbieri, and T.A. McAllister, Agriculture and Agri-Food Canada, Lethbridge, AB.
1543	The effect of Tween 80 on kinetics of *in vitro* ruminal fermentation of silages. J. Baah*[1], J.A. Shelford[2], Y. Wang[1], T.A. McAllister[1], and K.-J. Cheng[3], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]University of British Columbia, Vancouver, [3]Academia Sinica, Taipei, Taiwan.
1544	Performance of dairy cattle fed high moisture shelled corn inoculated with *Lactobacillus buchneri*. C. Kendall, D. K. Combs*, and P. C. Hoffman, University of Wisconsin, Madison.
1545	Evaluation of small grain cultivars for forage in north Alabama. M. Lema*, E. Cebert, and V. Sapra, Alabama A & M University.
1546	Assessment of Ruminal N Disappearance Kinetics for Wheat Forage as Affected by Harvest Technique and Sampling Date. W. K. Coblentz*, K. P. Coffey, J. E. Turner, D. A. Scarbrough, J. B. Humphry, J. V. Skinner, and D. W. Kellogg, University of Arkansas.
1547	Effects of sampling date and nitrogen fertilization on forage yield, quality and tetany hazard of soft red winter wheat. C. R. Bailey*, W. K. Coblentz, L. B. Daniels, E. B. Kegley, T. J. Wistuba, and L. J. McBeth, Department of Animal Science, University of Arkansas, Fayetteville.
1548	Effect of soil type and fertilization level on mineral concentration of pasture: relationship to ruminant performance and health. K.J. Soder*, W.L. Stout, W.J. Gburek, and G.J. Folmar, USDA-ARS, Pasture Systems and Watershed Management Research Unit, University Park, PA.

1549 Forage macro- and trace mineral concentrations from pastures fertilized with broiler litter. K. P. Coffey*[1], J. B. Humphry[1], T. J. Sauer[2], H. L. Goodwin[1], P. A. Moore, Jr.[3], Z. B. Johnson[1], E. B. Kegley[1], L. J. McBeth[1], B. C. McGinley[1], and W. K. Coblentz[1], [1]University of Arkansas, Fayetteville, AR, [2]USDA National Soil Tilth Lab, Ames, IA, [3]USDA-ARS, Fayetteville, AR.

1550 Chemical characterization and ruminal nutrient degradabilities of spineless cacti. Angela Batista[1], Arif Mustafa[2], and Isaac Adeleye *[2], [1]Bolsista da coordenacoa de Aperfeicoamento de Pessoal de Nivel Superior, Brasilia, DF-Brazil, [2]McGill University.

1551 Predicting the production of milk form forage on Quebec dairy farms using their ration characteristics. N. St-Pierre*[1], G. Allard[1], D. Lefebvre[2], A. Bregard[1], and D. Pellerin[1], [1]Universite Laval, QC, Canada, [2]PATLQ inc, Montréal, Qc, Canada.

1552 Effects of Tasco (a kelp extract) and heat stress on metabolism of wether lambs. J. H. Fike*[1], K. E. Saker[2], N. G. Marriott[3], S. F. O'Keefe[3], D. L. Ward[2], J. P. Fontenot[4], and H. P. Veit[2], [1]Crop and Soil Environmental Sciences, [2]VA-MD Regional College of Veterinary Medicine, [3]Food Science and Technology, [4]Animal and Poultry Sciences, Virginia Tech.

1553 Validation of the GrassGro decision support tool: steer methane emissions and intakes. R.D.H. Cohen*[1], J.P. Stevens[1], A.D. Moore[2], M. Freer[2], and J.R. Donnelly[2], [1]Department of Animal Science, University of Saskatchewan, Canada, [2]CSIRO Division of Plant Industry, Canberra, Australia.

1554 Influence of nitrogen fertilization rate on content and in situ solubility of selected macrominerals from common bermudagrass harvested on two dates. N. W. Galdamez*[1], K. P. Coffey[1], W. K. Coblentz[1], J. L. Gunsaulis[2], D. A. Scarbrough[1], J. E. Turner[1], E. B. Kegley[1], K. A. Teague[2], and M. B. Daniels[3], [1]University of Arkansas, Fayetteville, AR, [2]Cooperative Extension Service, Fayetteville, AR, [3]Cooperative Extension Service, Little Rock, AR.

1555 Effect of poultry litter applied as fertilizer on forage mineral concentrations. E. B. Rayburn, W. L. Shockey*, D. A. Seymour, B. D. Smith, T. J. Basden, and J. D. Lozier, West Virginia University, Morgantown, WV.

1556 Forage pasture species selection and nitrogen fertilization rates. G. Cuomo, D.G. Johnson*, A. Singh, and M. Rudstrom, University of Minnesota, Morris, MN.

International Animal Agriculture

Presentation Times

Odd-Numbered Poster Boards: 9 AM to 11 AM

Even-Numbered Poster Boards: 11 AM to 1 PM

Abstract Number

1557 TRANSPORT of Preimplantation Embryos in the Genitalia of Buffalo Heifers Superovulated with pFSH and Variable Doses of LH. A.M. Osman* and S.H. Shehata, [1]Dept.Theriogenology,Fac.Vet.Medicine,Assiut Univ.Assiut,Egypt.

1558 Factors affecting the reproductive performance of Bali cattle in Manokwari, Papua, Indonesia. O.R. Faidban[1], J.B. Gaughan*[2], and R.S. Copland[2], [1]The Papua State University, Manokwari, Papua Province, Indonesia, [2]The University of Queensland, Gatton, Australia.

1559 Survey of milking characteristics and milk quality of Brazilian dairy cows. D. A. Costa* and D.J. Reinemann, University of Wisconsin, Madison, Wisconsin, USA.

1560 Ectoparasite Control In Lactating Cows Using Aqueous Extracts of Neem (*Azadirachta Indica* A. Juss) Leaves. S. Pietrosemoli*, R. Olavez, and K. Noriega, Facultad de Agronomia. La Universidad del Zulia. Maracaibo/Venezuela.

1561 Coccidiosis (*Eimeria sp*) control in calves using aqueous extract of neem (*Azadirachta indica* A. Juss) Seeds. S. Pietrosemoli*[1], R. Olavez[1], C. Plaza[1], and Z. Valera[2], [1]Facultad de Agronomia., [2]Facultad de Ciencias Veterinarias. La Universidad del Zulia. Maracaibo/Venezuela.

1562 Coccidiosis (*Eimeria* sp) control in grazing calves using aqueous extract of neem (*Azadirachta indica* A. Juss) leaves. S. Pietrosemoli*[1], R. Olavez[1], C. Plaza[1], and Z. Valera[2], [1]Facultad de Agronomia., [2]Facultad de Ciencias Veterinarias. La Universidad del Zulia. Maracaibo/Venezuela.

1563 Use of Prickly Pear forage in sheep diets. I. Mejia-Haro*[1], I.B. Camarillo-Solis[1], J. Mejia-Haro[2], and J.T. Frias-Hernandez[2], [1]CIGA ITA de Aguascalientes, Mexico, [2]Universidad de Guanajuato, Mexico.

1564 Effects of fibrolytic enzymes on degradation of Prickly pear forage (Opuntia ficus-indica L.(Mill). M. A. Medina-Romo[1], C. R. Cruz-Vazquez[1], I. Mejia-Haro[1], G. Tirado-Estrada*[1], and G. D. Mendoza-Martinez[2], [1]CIGA ITA de Aguascalientes, Mexico, [2]Colegio de Posgraduados, Texcoco, Mexico.

Nonruminant Nutrition

Antimicrobial Agents, Additives, and Fermentation Modulators

Presentation Times

Odd-Numbered Poster Boards: 9 AM to 11 AM

Even-Numbered Poster Boards: 11 AM to 1 PM

Abstract Number

1565 Zinc oxide and avilamycin enhance pig performance. L. J. Broom[1], H. M. Miller*[1], K. G. Kerr[1], and P. Toplis[2], [1]University of Leeds, Leeds, UK, [2]Primary Diets Ltd, Melmerby, UK.

1566 Effect of dietary supplementation of probiotcs (Calsporin™) on sow and litter performance. Q. Yang*[1], S.K. Baidoo[1], R.D. Walker[1], T. Marubashi[2], and T. Imabayashi[2], [1]Southern Research and Outreach Center, University of Minnesota, MN 56093, [2]Calpis USA Inc., Torrance, CA 90503.

1567 Evaluation of Calsporin™ (Bacillus subtilis C-3102) on growth performance of nursery pigs. S.K. Baidoo[1], Q. Yang*[1], R.D. Walker[1], T. Marubashi[2], and T. Imabayashi[2], [1]Southern Research and Outreach Center, University of Minnesota, MN 56093, [2]Calpis USA Inc., Torrance, CA 90503.

1568 Evaluation of germanium biotite as a substitute for antibiotics in growing pig diets. O. S. Kwon*[1], I. H. Kim[1], J. W. Hong[1], S. H. Lee[1], and Y. K. Jung[2], [1]Department of Animal Resource & Science, Dankook University, [2]Seobong Biobestech. Co., Ltd, Korea.

1569 Effects of an in-feed antibiotic on the morphology of the porcine small intestine. V. Rayadurg*, D.H. Zeman, M.B. Hildreth, and H.H. Stein, South Dakota State University, Brookings, SD.

1570 Utilization of spray-dried egg protein containing specific egg yolk antibodies for weaned pigs. J. W. Hong*[1], I. H. Kim[1], O. S. Kwon[1], J. H. Kim[2], S. H. Lee[1], and J. M. Lee[1], [1]Department of Animal Resource & Science, Dankook University, [2]Agribrands Purina Korea, Inc., Seoul, Koera.

1571 Dietary effect of egg immunoglobulins containing anti-pathogenic antibodies to pre- and postweaning pigs on growth performance till market weight. C. Y. Liu*[1], B. J. Chang[1], G. Y. Lee[1], and Y. Kodama[2], [1]Animal Technology Institute Taiwan, ROC, [2]Immunology Research Institute, Japan.

1572 Effects of dietary bacterial biodegradation velocity and electrolyte balance on nutrient digestibility, retention, and excretory patterns in finishing pigs. Z. Mroz*[1], A.J. Moeser[2], J.Th.M. van Diepen[1], and J. Kogut[1], [1]Institute for Animal Science and Health, Lelystad, The Netherlands, [2]North Carolina State University, Raleigh, NC, USA.

1573 Effects of in-feed acidifiers for multiparous sows. Z. Mroz*[1] and W. Krasucki[2], [1]Institute for Animal Science and Health, Lelystad, The Netherlands, [2]Agricultural University of Lublin, Lublin, Poland.

1574 The interaction between lactofeed level and soybean meal on growth performance of weanling pigs. J. V. O' Doherty*[1], C. S. Nolan[1], J. J. Callan[1], and P. McCarthy[2], [1]University College Dublin, Ireland, [2]Volac International, UK.

1575 Interaction between lactofeed level and antimicrobial growth promoters on growth performance of weanling pigs. J. V. O' Doherty*[1], C. S. Nolan[1], and P. McCarthy[2], [1]University College Dublin, [2]Volac International, UK.

1576 Effect of dietary soy isoflavone concentrations on pig growth and meat quality. T.S. Stahly* and T.R. Lutz, Iowa State University.

1577 Evaluation of chicory inulin extracts as feed additiove for early-weaned pigs. G He*[1], S.K. Baidoo[1], Q. Yang[1], D. Golz[2], and B. Tungland[3], [1]Southern Research and Outreach Center, University of Minnesota, MN 56093, [2]Encore Technologies, MN 55305, [3]Imperial Sensus, TX 77487.

1578 Milky flavor alone but not in combination with sweeteners improves preference at the dietary change from piglet prestarter to starter feeds. E. van Heugten*[1], E. Roura[2], and M. Gibson[3], [1]North Carolina State University, Raleigh, NC, [2]Lucta SA, Barcelona, Spain, [3]Lucta USA Inc., Northbrook, IL.

1579 Interactive effects of diet complexity and a combination of flavor, acid and enzymes on growth of starter pigs. E. Roura*[1], M. Gibson[2], and J. Brennan[3], [1]Lucta SA, Barcelona, Spain, [2]Lucta USA, Northbrook IL, USA, [3]Maple Leaf Foods Agresearch, Burford, ON Canada.

1580 Effects of germanium biotite supplementation on the growth performance and serum characteristics in nursery pigs. O. S. Kwon*[1], I. H. Kim[1], J. W. Hong[1], S. H. Lee[1], and Y. K. Jung[2], [1]Department of Animal Resource & Science, Dankook University., Cheonan, [2]Seobong Biobestech. Co., Ltd, Korea.

1581 Dietary botanical product improves performance of nursery pigs. B. Z. de Rodas*, B. L. Miller, R. Walker, D. A. Nelson, and J. Marin-Guzman, Land O'Lakes, Webster City, Iowa/USA.

1582 Effect of plant extracts and formic acid on the performance and gut microflora of early-weaned piglets. E. G. Manzanilla*[1], M. Martin[1], F. Baucells[1], J. F. Perez[1], C. Kamel[2], and J. Gasa[1], [1]Universitat Autonoma de Barcelona, [2]AXISS France, S.A.S. Archamps, France.

1583 Supplementation of diets with herbal extracts enhances growth performance in newly-weaned piglets. M. Radford*[1], E. Jeaurond[1], B. Schumann[2], M. Clunies[2], and C.F.M. de Lange[1], [1]University of Guelph, [2]Grand Valley Fortifiers, Cambridge, Ontario.

1584 Fermentation and microbial kinetics along the large bowel of growing pigs (20-60 kg) fed on 25% of cornstarch and raw potatoe starch. D. Martínez-Puig, E. G. Manzanilla*, J. F. Pérez, M. Anguita, J. Morales, and J. Gasa, Universitat Autònoma de Barcelona, Barcelona/Spain.

1585 Effect of carvacrol on indigenous *Enterobacteriaceae* levels and fermentation products in an in vitro cecal fermentation system. A. Piva*[1], C. Cervellati[1], J. E. Call[2], and J. B. Luchansky[2], [1]University of Bologna-Italy, [2]United States Department of Agriculture, Agricultural Research Service, Wyndmoor, PA.

1586 High dose of carvacrol, and not oregano, controls swine cecal fermentation. A. Piva*, C. Cervellati, G. Biagi, and G. Casadei, University of Bologna.

1587 In vitro fermentation characteristics of selected oligosaccharides using swine fecal inoculum. M. R. Smiricky*, E. A. Flickinger, C. M. Grieshop, L. L. Bauer, and G. C. Fahey, Jr., University of Illinois at Urbana-Champaign.

1588 Effects of elevated and reduced dietary N and S concentration upon growth and concentration of odor causing components in waste of finishing pigs. G. Apgar*, K. Griswold, B. Jacobson, and J. Salazar, Southern Illinois University, Carbondale.

1589 Effects of dietary supplementation of diatomaceous earth and zeolite on fecal excretion of major odor-causing compounds from growing-finishing pigs fed corn and soybean meal-based diets. Y. Gao, T. C. Rideout*, D. Lackeyram, M. Z. Fan, G. Duns, E. J. Squires, and T. K. Smith, University of Guelph.

1590 Efficacy of various microbial urease inhibitors in controlling ammonia and volatile sulfide emission from swine manure slurry. T. C. Rideout* and M. Z. Fan, University of Guelph, Guelph, Ontario.

Ruminant Nutrition

Ruminal Fermentation

Presentation Times

Odd-Numbered Poster Boards: 9 AM to 11 AM

Even-Numbered Poster Boards: 11 AM to 1 PM

Abstract Number

1591 Effects of barley grain particle size on dairy cow performance. G. R. Ghorbani*[1] and A. Moradai[1], [1]Isfahan University of Technology.

1592 Determination of energy values and degradability characteristics of triticale varieties. Ulku Gursoy*[1] and Aydan Yilmaz, [1]Ankara University Agriculture Faculty, Ankara, Turkey.

1593 Metabolism of 1,2-propanediol in lactating cows under washed reticulo-rumen conditions. N.B. Kristensen*, A. Danfaer, B.A. Rojen, B.-M.L. Raun, M.R. Weisbjerg, and T. Hvelplund, Danish Institute of Agricultural Sciences, Tjele, Denmark.

1594 A comparison between rumen evacuation and gas production techniques in screening forages. H. Z. Taweel, B. Tas, B. A. Williams, J. Dijkstra, and S. Tamminga, Animal Nutrition Group, Wageningen, The Netherlands.

1595 Effect of Stage of Growth on the Protein and Carbohydrate Subfractions of Alfalfa and Timothy Hay. P. Yu*[1], D.A. Christensen[1], and J.J. McKinnon[1], [1]Department of Animal and Poultry Science, University of Saskatchewan.

1596 Site of digestion when soyhulls replace corn in diets of dairy cows. I. R. Ipharraguerre*, Z. Shabi, J. H. Clark, and D. E. Freeman, University of Illinois.

1597 Effects of combinations of crotonate and three methane inhibitors on rumen fermentation in vitro. E.M. Ungerfeld*, S.R. Rust, and R. Burnett, Michigan State University, East Lansing, MI.

1598 Effects of natural plant extracts on nitrogen metabolism and fermentation profile in continuous culture. M. Busquet[1], S. Calsamiglia*[1], A. Ferret[1], and C. Kamel[2], [1]Universitat Autonoma de Barcelona, Spain, [2]Axiss France.

1599 Influence of grain density on rumen and digestive characteristics. A. Offner*[1], A. Bach[2], and D. Sauvant[1], [1]INA P-G INRA, Paris, France, [2]Agribrands, Barcelona, Spain.

1600 The binding and degradation of nisin by mixed ruminal bacteria. S.S. Lee*[1], H.C. Mantovani[1], and J.B. Russell[2], [1]Cornell University, [2]ARS/USDA.

1601 A decision support system to evaluate methane and nitrogen emissions from dairy cows. E. Kebreab*, J.A.N. Mills, L.A. Crompton, and J. France, The University of Reading, Reading, United Kingdom.

1602 The effect of condensed tannins from *Lotus corniculatus* on growth and proteolytic activity of rumen bacteria. B.R. Min*[1], G.T. Attwood[2], T.N. Barry[3], and W.C. McNabb[2], [1]E (Kika) dela Garza Institute for Goat Research, Langston University, OK 73050, USA, [2]AgResearch, Grasslands Research Center, Palm/North, [3]Massey University, Palm/North, NZ.

1603 Dose-response effects of intra-ruminal infusion of propionate on feeding behavior of lactating dairy cows in early or mid-stage of lactation. M. Oba* and M. S. Allen, Michigan State University, East Lansing, MI.

1604 Monensin by fat interactions on *trans* fatty acid concentrations in cultures of mixed ruminal microbes grown in continuous fermenters fed corn or barley. T. C. Jenkins*[1] and V. Fellner[2], [1]Clemson University, Clemson, SC, [2]North Carolina State University, Raleigh, NC.

1605 Utilization of fermentable carbohydrate and protein by ruminal microbes in continuous cultures. K.S. Mohney*[1], V. Fellner[1], A.L. Mueller[2], R.L. Belyea[2], and M.L. Gumpertz[1], [1]North Carolina State University, Raleigh, NC, [2]University of Missouri, Columbia, MO.

1606 Ruminant N intestinal digestibility estimated by mobile bag or ''in vitro" technique. M. de J. Marichal*, M. Carriquiry, and A.I. Trujillo, Facultad de Agronomia, Universidad de la Republica, Montevideo, Uruguay.

1607 Development of a real-time quantitative PCR assay to control the yield of DNA extracted from rumen content samples spiked with an exogenous bacteria. G. Talbot*[1] and J. Chiquette[1], [1]Dairy and Swine Research and Development Centre, Agriculture and Agri-Food Canada, Lennoxville, QC.

1608 Digestion kinetics of pasture and forage mixed rations prepared by mincing fresh material. A.V. Chaves*[1,2], G.C. Waghorn[1], S.L. Woodward[3], and I.M. Brookes[2], [1]AgResearch, [2]Massey University, [3]Dexcel Ltd, New Zealand.

1609 Evaluation of dry matter disappearance of roughage sources alone or in combination with ground corn for ruminants. G.V. Pollard*[1], K.F. Wilson[2], C.R. Richardson[3], and T.C. Bramble[3], [1]Southwest Texas State Univ., San Marcos, [2]Loveland Industries, Greeley, CO, [3]Texas Tech Univ., Lubbock.

1610 Influence of Rinsing Technique and Sample Size on In Situ Protein Degradation of Protein Sources. K.M. Whittet*, K.W. Creighton, K.J. Vander Pol, G.E. Erickson, and T.J. Klopfenstein, University of Nebraska, Lincoln, NE.

1611 Influence of buffer pH and biotin addition on forage fiber digestibility in vitro. O Rosendo*[1], D Bates[1], C. R. Staples[1], R. J. McMahon[1], and L. R. McDowell[1], [1]University of Florida.

1612 Comparison of in vitro and in situ methods for measuring dry matter disappearance of ruminant fiber sources. G.V. Pollard[1], K.F. Wilson[2], T.C. Bramble*[3], and C.R. Richardson, [1]Southwest Texas State Univ., San Marcos, [2]Loveland Industries, Greeley, CO, [3]Texas Tech Univ., Lubbock.

1613 Evaluation and refinement of ruminal volatile fatty acid absorption equations in a dynamic, metabolic model of the lactating dairy cow. M. D. Hanigan*, D. C. Weakley, F. Standaert, and L. R. Reuzel, Purina Mills, LLC, St. Louis, MO.

1614 Nucleic acid content and profile of protozoal and bacterial fractions isolated from ruminal contents of lactating dairy cows. L. T. Mydland* and H. Volden, Agricultural University of Norway.

1615 Effects of rumen degradable protein and fiber quality on microbial growth, digestion, and fermentation in continuous culture. K. E. Griswold*, D. L. Hastings, B. N. Jacobson, J. Salazar, and G. A. Apgar, Southern Illinois University, Carbondale, IL.

1616 Comparative kinetic of dry matter ruminal degradation of alfalfa hay and clitoria hay (Clitoria ternatea) in sheep. R. Barajas*[1], M. Placencia[1], A. Estrada[1], and J.F. Obregon[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).

1617 Effect of extracting soluble proteins on estimates of in situ and in vitro degradability. Y.-G. Goh*[1] and G. A. Broderick[2], [1]Kangwon National University, Chunchon, South Korea, [2]U.S. Dairy Forage Research Center, Madison, WI.

1618 Nutritive value of ground and expanded yellow corn determined in digestibility trials with sheep. N.M. Rodriguez[1], E.N. Rodrigues[1], G.L. Teixeira[1], I. Borges[1], E.O.S. Saliba[1], and L. Goncalves[1], [1]Federal University of Minas Gerais, Belo Horizonte - MG/ Brazil.

1619 Comparative ruminal degradation of dry matter of alfalfa hay, peanuts hay, and common beans hay from cultivars for green beans, using nylon bag technique in sheep. R. Barajas*[1], A. Estrada[1], and J.F. Obregon[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).

1620 Effects of nitrogen type and level on *in vitro* digestion, VFA production and gas yield. K.J. Harvatine* and P.H. Doane, ADM Alliance Animal Nutrition.

1621 Evaluation of quillaja extract, quebracho tannin and safflower oil as selective defaunating agents in cattle. J. Baah*[1], A.N. Hristov[2], T.A. McAllister[1], M. Ivan[1], K.M. Koenig[1], and L.M. Rode[3], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, [2]University of Idaho, Moscow, [3]Rosebud Technology Development, Lethbridge, AB.

1622 Characterization of microbial adaptation in dairy cows with changes in diet and lactational state. A.F. Park*, J.E. Shirley, E.C. Titgemeyer, R.C. Cochran, J.M. DeFrain, E.E. Ferdinand, N Wallace, and T.G. Nagaraja, [1]Kansas State University, Manhattan Kansas.

1623 The effect of buffers on rumen fermentation patterns. A Jackson[1], J Spain[2], J Sampson*[2], D Chatman[2], and M Ellerseick[2], [1]University of Arkansas-Pine Bluff, [2]University of Missouri-Columbia.

1624 Effects of level of pelleted beet pulp substituted for high-moisture corn on rumen digestion kinetics and microbial protein efficiency in lactating dairy cows. J. A. Voelker* and M. S. Allen, Michigan State University.

1625 Effects of NPN in alfalfa and red clover silages on production of lactating cows. JJ Olmos Colmenero*[1], AF Brito[1], GA Broderick, and SM Reynal, [1]University of Wisconsin-Madison, [2]US Dairy Forage Research Center.

Sheep Species

Presentation Times

Odd-Numbered Poster Boards: 9 AM to 11 AM

Even-Numbered Poster Boards: 11 AM to 1 PM

Abstract Number

1626 Assessment of gestational age in Chall ewes by ultrasonography. Sarang Soroori[1], Parviz Tajik[2], and Abbas Veshkini, [1]Ferdowsi University of Mashhad, Faculty of Veterinary Medicine,Mashhad,Tehran, [2]University of Tehran, Faculty of Veterinary Medicine, Tehran, Iran.

1627 The effects of offering grass or maize silages with mineral lick supplementation to pregnant ewes on ewe performance and IgG absorption in the lamb. T.F. Crosby*[1], J.V. O'Doherty[1], P. Nowakowski[2], P.J. Quinn[1], J.J. Callan[1], B. Flynn[1], D. Cunningham[1], P. Reilly[1], and D. Joyce[1], [1]University College Dublin, Faculty of Agriculture, Belfield, Dublin 4, IRELAND, [2]Agricultural University Wroclaw, Department of Sheep Breeding, Wroclaw, POLAND.

1628 Performance of St. Croix White and Dorper x St. Croix White lambs from birth to weaning in the tropics. R.W. Godfrey*, A.J. Weis, and R.E. Dodson, Agricultural Experiment Station, University of the Virgin Islands.

Women and Minority Issues in Animal Agriculture

Presentation Times

Odd-Numbered Poster Boards: 9 AM to 11 AM

Even-Numbered Poster Boards: 11 AM to 1 PM

Abstract Number

1629 Status and role of women in rural livestock production in central Punjab, Pakistan. A.U. Hyder, M. Abdullah*, and N. Khatoon, University of Agriculture, Faisalabad, Pakistan.

ADSA Student Affiliate Division

Original Research/Independent Study

Chair(s): L. Fox, Washington State University

Room: 303A

11:00 AM	1630	Effect of breed, parity, and stage of lactation on milk fat content of CLA in the dairy cow. J.A. Kelsey[1], B.A. Corl*[1], R.C. Collier[2], and D.E. Bauman[1], [1]Cornell University, Ithaca, NY, [2]University of Arizona, Tucson, AZ.
11:15 AM	1631	Nanofiltration of tryptic peptide mixtures in the presence of ß-lactoglobulin . J. Lemay*, S. F. Gauthier, and Y. Pouliot, Centre de recherche STELA, Universite Laval, Sainte-Foy, Quebec, Canada.
11:30 AM	1632	The effect of dietary zeolites on fecal ammonium concentrations. E. L. Williams*[1], F. Lundy[2], and G. A. Varga[1], [1]Pennsylvania State University, [2]Clemson University.
11:45 AM	1633	The effects of Echinacea on immune function of transitional calves. N. R. Gill*[1], C. Powell[2], S. T. Franklin[1], and K. I. Meek[1], [1]University of Kentucky, [2]Western Kentucky University.
12:00 PM		Lunch Break
1:00 PM	1634	Comparison of Holstein and Holstein-Jersey crossbred heifer calves for body weight, hip height, and average daily gain from birth to 56 days of age. R.M. Templeton*[1], J.G. Linn[1], A.J. Seykora[1], and B.J. Heins[1], [1]University of Minnesota.
1:15 PM	1635	Am Vs. Pm Harvest of Alfalfa Forage for Hay and Haylage. I. A. Norris*[1], K. Ballard[2], C. Cotanch[2], M. Carter[2], and E. Thomas[2], [1]Louisiana State University, Baton Rouge, LA, [2]W. H. Miner Agricultural Research Institute, Chazy, NY.
1:30 PM	1636	Stability of oil in water emulsions formed in presence of skim milk powder: effect of calcium salts and heat treatments. Deepa Mathew* and Phillip, S Tong, California Polytechnic State University, San Luis Obispo, CA.

Dairy Foods

Chair(s): L. Fox, Washington State University

Room: 303A

2:00 PM	1637	Methods of Inhibiting Bacteriophage Infections in Lactococcal Bacteria. M. L. Bush*[1], [1]University of Kentucky.
2:15 PM	1638	The organic cheese industry and where it is headed. Mandy McIsaac*, California Polytechnic State University, San Luis Obispo, CA.
2:30 PM	1639	What's in a name? A closer look at the Physicians Committee for Responsible Medicine. L.L. Connelly*[1], [1]Pennsylvania State University.
2:45 PM	1640	All milk, all the time: Milk vending machines. R. A. Cornman*[1], [1]Virginia Polytechnic Institute and State University.
3:00 PM	1641	Organic: Is This the Future?. R. Blades*[1], [1]Louisiana State University, Baton Rouge, LA.

Dairy Production

Chair(s): L. Fox, Washington State University

Room: 303A

3:45 PM	1642	Nutritional approaches to reduce phosphorus losses from dairy farms. Katie Peacock*[1], [1]Virginia Polytechnic Institute and State University, Blacksburg, VA.
4:00 PM	1643	Production of Volatile Fatty Acids and Rumen pH in Dairy Cattle. A.M. Reynolds*, California Polytechnic State University, San Luis Obispo.
4:15 PM	1644	Storks and Scientists. J.R. Swallow*[1], [1]Pennsylvania State University.
4:30 PM	1645	Feeding anionic rations to pre-fresh dairy cows. R Leuer*, [1]University of Minnesota.
4:45 PM	1646	Mastitis: Prevention is the Best Cure. I. F. Jackson III*[1], [1]University of Georgia.

Author Index

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