

Scientific Program

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2004 ADSA ASAS PSA Annual Meeting

Sunday, July 25, 2004 to Thursday, July 29, 2004

Saturday, July 24, 2004
DAIRY FOODS WORKSHOP

Dairy Product Evaluation
Traditional and Descriptive Techniques
Sponsor: California Dairy Research Foundation

Room: 225

Traditional Session

1:30 PM	Registration & Refreshments
2:00 PM	Welcome
2:10 PM	USDA Grading. Ms. Charlsia Fortner
2:40 PM	National Collegiate Judging Competition. Dr. Robert L. Bradley
3:10 PM	Break
3:25 PM	Practical Session - Cheddar. Dr. Robert L. Bradley
4:40 PM	Practical Session - Ice Cream. Dr. Robert T. Marshall
6:00 PM	Session End

Sunday, July 25, 2004
DAIRY FOODS WORKSHOP

Dairy Product Evaluation
Traditional and Descriptive Techniques
Sponsor: California Dairy Research Foundation

Room: 225

Descriptive Session

8:45 AM	Refreshments
9:00 AM	Opening Remarks
9:10 AM	Descriptive Analysis Techniques. Dr. MaryAnne Drake
9:55 AM	Interpretation & Reporting of Sensory Data. Dr. MaryAnne Drake
10:40 AM	Break
11:05 AM	Practical Session - Cheddar. Dr. MaryAnne Drake
12:30 PM	Session End

PSA Ancillary Scientists Symposia

Co-Chairs: Lee Cartwright, Texas A&M University and Robert Smith, USDA-CSREES

Room: 132

Agricultural Biosecurity: Emerging Issues in Homeland Security and Food Safety

Time	Abstract #	
8:00 AM		Introduction of the Deputy Secretary. Lee Cartwright, Texas A&M University
8:10 AM		Priority: Homeland Security. Jim Moseley, Deputy Secretary of Agriculture, USDA

Microbiology, Antibiotics, and the Poultry-Human Health Interface

9:00 AM		Emerging Zoonotic Disease. Dawn Norton, Centers for Disease Control and Prevention, Foodborne and Diarrheal Disease Division, Atlanta, GA
9:30 AM		Antibiotic Resistance in Poultry, Humans, and the Environment. Suresh Pillai, Texas A&M University, Poultry Science, College Station, TX
10:00 AM		Antibiotic Alternative: Dietary Additives, Competitive Exclusion and Bacteriophage. Billy Hargis, University of Arkansas, Poultry Science Department, Fayetteville, AR
10:30 AM		Break

Antibiotics, Prions, and Mycotoxins in Animal Feeding

11:00 AM	1	Antibiotic Use in Animals and the Impact of the Growth Promoter Ban in Europe. Ronald B. Phillips*; Animal Health Institute, Washington, DC
11:30 AM	2	Enzymatic Degradation of Prions and Prevention of Transmissible Spongiform Encephalopathies. Jason Shih*; Department of Poultry Science, North Carolina State University, Raleigh
12:00 PM	3	Mycotoxin Detoxification and Microorganisms in Feeds. G. Schatzmayr* ¹ , D. Schatzmayr ¹ , M. Täubel ¹ , S. Nitsch ¹ , A.P. Loibner ² , E.M. Binder ³ ; ¹ Biomin IAN GmbH, Industriestr. 21, 3130 Herzogenburg, Austria, ² IFA-Tulln, Department of Environmental Biotechnology, Konrad Lorenzstrasse, 3430 Tulln, Austria, ³ Erber AG, Industriestrasse 21, 3130 Herzogenburg, Austria
12:30 PM		Lunch

Global Trade: Disease and Epidemic Control

	4	Withdrawn by author
2:00 PM		Economics and Trade Impact of Animal Disease Outbreaks. Parr Rosson*; Agricultural Economics Department, Texas A&M University
2:30 PM	5	Avian Influenza, Vaccines and Control. David Swayne; USDA-ARS, Southeast Poultry Research Laboratory
3:00 PM		Systems Approach to Food Safety. Shelly McKee, Poultry Science Department, Auburn University, Auburn
3:30 PM		Break

Homeland Security and Poultry Biosecurity

4:00 PM		Animal Traceability and Microbial Detection Analysis. David Harry, Genomic Foundations, Nappa, CA
4:30 PM		Chicken Genome: Application to Food Safety and Genetic Resistance to Disease. Jerry Dodgson, Department of Microbiology and Molecular Genetics, Michigan State University, East Lansing
5:00 PM		Summation and Discussion. Muquarrab Qureshi, NPL, Animal Genetics, USDA-CSREES

Triennial Growth Symposium 2004

Applications of Genomics and Proteomics to Production Animal Development and Growth Research

Chair: Clifton Baile, University of Georgia

Sponsor: Elanco Animal Health

Room: 124

Time

- 8:30 AM History of the animal genomes-including bovine, porcine and chicken. Jerry Steiner, Monsanto Company
- 9:30 AM Applications of SNP's to animal production systems. Sue Denise, MetaMorphix Genomics
- 10:00 AM Break
- 10:30 AM Gene discovery associated with animal growth. Daniel Pomp, University of Nebraska
- 11:30 AM Applications of genomics to the beef industry. Mike Engler, Cactus Feedlots
- 12:30 PM Lunch
- 2:00 PM Applications of genomics to the hog industry. Graham Plastow, Sygen International
- 3:00 PM Applications of genomics to the broiler industry. Milton Boyle, Hubbard ISA/Merial
- 4:00 PM Break
- 4:15 PM A vision for animal genetics-livestock cloning and genomics for the animal industries. Steve Stice, University of Georgia
- 5:15 PM General Discussion

PSA Informal Nutrition Conference

Digestive Physiology, Metabolic Challenges and Nutritional Opportunities

“In Honor of our Great Academic Advisors and Life Mentors”

Chair: Mamduh Sifri, ADM Animal Health & Nutrition

Room: 131

Time

- 1:00 PM The Advisor and The Mentor – Their Long Term Impact on the Students. Mamduh Sifri, ADM Animal Health & Nutrition
- 1:15 PM Comparative Digestive Systems, Metabolic Challenges and Potential Opportunities – An Overview. Kirk C. Klasing, University of California, U.S.A.
- 2:00 PM Digestive, Functional and Adaptation of the Digestive Tract to Nutritional Changes. Zehava Uni, Hebrew University, Israel
- 2:25 PM Development of Defense Mechanisms in the Gastrointestinal Tract of the Chicken. David J. Sklan, Hebrew University, Israel
- 3:10 PM Digestive Physiology and Metabolic Characteristics Unique to Dogs and Cats. George C. Fahey, University of Illinois, U.S.A.
- 3:45 PM Comparative Gut Microflora, Metabolic Challenges and Potential Opportunities. Juha Apajalahti, Alimetrics, Helsinki, Finland
- 4:25 PM Discussions, Conclusions, Messages and Recommendations. Walter G. Bottje, University of Arkansas, U.S.A. and Wilhelm Guenter, University of Manitoba, Canada
- 5:00 PM Adjourn; Celebrate Those Who Guided Us During Our Journey

Opening Session

Sponsor: Zymetrics

Room: America's Ballroom

- 7:00 PM Welcome. Terry Etherton, ASAS President; Joseph O'Donnell, ADSA President, Anthony Pescatore, PSA President
- 7:05 PM A Brave New World for Global Meat and Dairy: The Rise of the Developing Countries. Dr. Christopher L. Delgado, Director of the Joint International Livestock Research Institute (ILRI)-International Food Policy Research Institute (IFPRI) Program on Livestock Market Opportunities, Washington, DC
- 8:25 PM Closing. Terry Etherton, ASAS President; Joseph O'Donnell, ADSA President, Anthony Pescatore, PSA President
- 8:30 PM Opening Reception

MONDAY, JULY 26, 2004

POSTER PRESENTATIONS

Room: Exhibit Hall 5

Presentation Time: 7:30 AM – 9:30 AM

Breeding and Genetics

Abstract

- M1 The impact of herd opportunity and milk recording periods in estimating lifetime net income. Eunsun Yook*, Ronald E. Pearson, Bennet G. Cassell; Virginia Tech, Blacksburg
- M2 Genotype by environment interactions in the association among milk yield, age and body weight at first calving in Holstein cows. Ricardo Ruiz-Sánchez¹, Hilda Castro-Gómez², Fausto Sánchez y GF¹, Héctor Castillo-Juarez*¹; ¹Universidad Autónoma Metropolitana, Unidad Xochimilco, ²Universidad Nacional Autónoma de México
- M3 Heritability of body weight at 130 days from hatching in the Pacific white shrimp (*Litopenaeus vannamei*) using an animal model. Hector Castillo-Juarez*; Universidad Autonoma Metropolitana, Unidad Xochimilco
- M4 Merit of obtaining genetic evaluations of milk yield for each parity on Holstein bulls. H. D. Norman, J. R. Wright*, R. L. Powell, P. M. VanRaden; Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD
- M5 Joint genetic evaluation of male and female fertility using longitudinal binary responses. Romdhane Rekaya, Travis Averill*; Department of Animal and Dairy Science, University of Georgia, Athens
- M6 Evaluation of net energy efficiency for lactation and economic performance as selection criteria in dairy cattle. Pouya Zamani*¹, Seied Reza Miraei Ashtiani¹, Abasali Naserian², Ali Nik Khah¹, Mohammad Moradi Shahrabak¹; ¹Department of Animal Science Faculty of Agriculture, University of Tehran, Karaj, Iran, ²Department of Animal Science Faculty of Agriculture, University of Ferdowsi, Mashhad, Iran
- M7 Estimates and relationships of growth curve parameters in N'Dama cattle. Osaro Mgbere^{1,2}, Ikhide Imumorin*³, O. Olutogun¹, A.R. Abdullah¹; ¹Dept of Animal Science, University of Ibadan, Ibadan, Nigeria, ²Dept. of Animal Science, Rivers State University of Science & Technology, ³Dept of Biology, Valdosta State University
- M8 Analysis of daughter pregnancy rates and estimated relative conception rates for a bimodal distribution. Heather N. Schlessner*¹, Roger D. Shanks¹, Sandra L. Rodriguez-Zas¹, John S. Clay², Paul M. VanRaden³, P. Jeffery Berger⁴, Mary H. Healey⁴; ¹University of Illinois Urbana-Champaign, ²Dairy Records Management Systems, ³Animal Improvement Programs Laboratory, ⁴Iowa State University, Ames
- M9 Genetic variation in residual energy intake and its association with body weight, milk yield, fat corrected milk yield and economic merit in dairy cattle. Pouya Zamani*¹, Seied Reza Miraei Ashtiani¹, Abasali Naserian², Mohammad Moradi Shahrabak¹, Ali Nik-Khah¹; ¹Department of Animal Science Faculty of Agriculture, University of Tehran, Karaj, Iran, ²Department of Animal Science Faculty of Agriculture, University of Ferdowsi, Mashhad, Iran
- M10 Designer pork studies with small-scale farmers targeting niche markets. Teo Barrios*¹, Charles Talbott¹, Todd See², Rick Pfortmiller³; ¹North Carolina Agricultural and Technical State University, Greensboro, ²North Carolina State University, Raleigh, ³National Swine Registry, West Lafayette, IN

- M11 Contribution of inbreeding and recessive defects to early embryo loss. P. M. VanRaden, R. H. Miller*; Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD
- M12 Relationships among measures of growth performance and plasma urea nitrogen (PUN) in barrows. J. Klindt*; USDA-ARS; U.S. Meat Animal Research Center, Clay Center, NE
- M13 Relationship between performance test traits and subsequent reproductive performance of Yorkshire females. Z. B. Johnson*¹, R. A. Nugent, III²; ¹University of Arkansas, Fayetteville, ²The Pork Group, Tyson Foods, Inc. Springdale, AR
- M14 Evaluation of the effects of heterosis on reproductive efficiency and milk yield in South Florida. Sergio I Madrid*, Timothy A. Olson, Albert de Vries, Carlos A. Risco, Peter J. Hansen; Department of Animal Sciences, University of Florida, Gainesville
- M15 Analysis of sow longevity in commercial herds using competing risks. B. R. Southey*¹, S. L. Rodriguez-Zas¹, R. V. Knox¹, J. F. Connor², J. F. Lowe², B. J. Roskamp²; ¹University of Illinois, Urbana, ²Carthage Veterinary Services Ltd., Carthage, IL
- M16 Estimation of correlation between maternal permanent environmental effects of related dams in beef cattle. H. Iwaisaki¹, S. Tsuruta*², I. Misztal², J. K. Bertrand²; ¹Niigata University, Niigata, Japan, ²University of Georgia, Athens
- M17 Effects of climate and photoperiod on feed intake of beef bulls during feedlot performance tests. G. T. Tabler, Jr.*¹, A. H. Brown, Jr., Z. B. Johnson, E. E. Gbur, Jr., I. L. Berry, D. W. Kellogg, K. C. Thompson; University of Arkansas, Fayetteville
- M18 Feed efficiency in the West Virginia Bull Test Evaluation Program. E. E. D. Felton*, J. E. Warren, Jr., W. R. Wagner, J. W. Yates; West Virginia University, Morgantown
- M19 Maternal and reproductive performance of crossbred cows mated to moderate or high weaning weight EPD sires. S.M. DeRouen*¹, F.A. Thrift²; ¹Louisiana State University Agricultural Center, Homer, ²University of Kentucky, Lexington
- M20 Selection for meat tenderness in Angus. L Praharani*, T.A. Olson, D.D. Johnson, R.L. West; University of Florida, Gainesville
- M21 Genetic parameters estimated with multi-trait and linear spline random regression models using Gelbvieh early growth data. H. Iwaisaki¹, S. Tsuruta*², I. Misztal², J. K. Bertrand²; ¹Niigata University, Niigata, Japan, ²University of Georgia, Athens
- M22 Estimated genetic parameters for growth, carcass, and tenderness traits of Brahman steers. Donald E. Franke*¹, Trent Smith¹, Joshua D. Domingue¹, Thomas D. Bidner¹, Joseph C. Paschal²; ¹LSU Agricultural Center, Baton Rouge, LA, ²Texas A&M University, Corpus Christi, ³University of Nebraska, Lincoln
- M23 The use of real time ultrasound to estimate variance components for growth and carcass traits in Nelore cattle. Cláudio U. Magnabosco*^{1,2}, Fabiano R. C. Araujo^{1,3}, Fernando Manicardi⁴, José Roberto Hofig Ramos⁵, Carina U. Faria², Raysildo B. Lôbo⁶, Luiz A.F. Bezerra⁶, Thomas R. Famula¹, Roberto D. Sainz¹; ¹University of California Davis, ²Embrapa Cerrados, Bolsista CNPq Brasilia, DF, Brasil, ³Aval Serviços Tecnológicos S/S Uberaba, MG, Brasil, ⁴Grupo OMB Pontes e Lacerda, MT, Brasil, ⁵Grupo HoRa Cornélio Procópio, PR, Brasil, ⁶Universidade de São Paulo Ribeirão Preto, SP, Brasil
- M24 Assessment of temperament at weaning in calves produced from diallel matings of Angus, Brahman, and Romosinuano. D. G. Riley*¹, C. C. Chase, Jr.¹, S. W. Coleman¹, R. D. Randel², T. A. Olson³; ¹USDA, ARS, Brooksville, FL, ²TAES, Overton, ³University of Florida, Gainesville
- M25 Estimates of adaptability and stayability for postweaning weight gain in crossbred beef cattle raised in five environments in Brazil. Júlio Cesar de Carvalho Balieiro*^{1,2}, João Bosco Gonçalves Barros², José Bento Sterman Ferraz¹, Joanir Pereira Eler¹, Edson de Souza Balieiro³, Luis Gustavo Girardi Figueiredo¹, Elisangela Chicaroni Mattos¹; ¹University of São Paulo, Av. Duque de Caxias Norte, 225. Pirassununga/SP-Brazil, ²University Center of Av. Dr. Octávio da Silva Bastos, s/n. S. João da Boa Vista/SP-Brasil, ³Federal Rural University of Rio de Janeiro, Rodovia BR-465, km 47. Seropédica/RJ-Brasil

PSA-Genetics

Abstract

- M26 Interaction genotype and protein level on feed efficiency of Japanese quail in dry tropic weather. J.J. Portillo*¹, R. Barajas¹, M.A. Carmona², F.G. Rios¹, G. Contreras¹; ¹FMVZ - Universidad Autónoma de Sinaloa (Mexico) Carr. Culiacan-Mazatlan km 3.5, ²FES Cuautitlan UNAM (Mexico) Cuautitlan Izcalli, Estado de México
- M27 Interaction genotype - protein level on egg quality of Japanese quail in dry tropic weather. J.J. Portillo*¹, R. Barajas¹, M.A. Carmona², F.G. Rios¹, G. Contreras¹, I.V. Ferrer¹; ¹FMVZ - Universidad Autónoma de Sinaloa (Mexico) Carr. Culiacán-Mazatlan km 3.5, ²FES Cuautitlan - UNAM (Mexico) Cuautitlan Izcalli, Estado de Mexico
- M28 Effect of genotype and protein level on hatchability of Japanese quail in dry tropic weather. J.J. Portillo*¹, R. Barajas¹, M.A. Carmona², F.G. Rios¹, G. Contreras¹, S. Aza¹; ¹FMVZ - Universidad Autónoma de Sinaloa (Mexico) Carr. Culiacan-Mazatlan km 3.5, ²FES Cuautitlan - UNAM (Mexico) Cuautitlan Izcalli, Estado de Mexico
- M29 Relationship between internal and external egg characteristics of Japanese quail. J.J. Portillo*, G. Contreras, F.G. Rios, I.V. Ferrer; FMVZ-Universidad Autónoma de Sinaloa (Mexico) Carr. Culiacan-Mazatlan km. 3.5
- M30 Interaction of Breed-by-Chitosan Supplementation on Growth and Feed Efficiency at Different Supplementing Ages in Broiler Chickens. Yoon O. Suk*¹, Hyung C. Sung²; ¹Dept. of Applied Animal Science, Sahmyook University 26-21 Kongneung Dong, Nohwon-Ku, Seoul, South Korea, ²EZ Life Science Co., Ltd., 335 Yangjae Dong, Seocho-Ku, Seoul, South Korea
- M31 Male and female fertility and hatchability in chickens: A longitudinal mixed model approach. R. L. Sapp*¹, R. Rekaya¹, I. Misztal¹, T. Wing²; ¹The University of Georgia Athens, GA, ²Cobb-Vantress, Inc. Siloam Springs, AR
- M32 Growth Parameters of Live Body Weight, Feather and Protein Weight of Four Commercial Laying-type pullet Strains. Rafael Neme¹, Nilva Sakomura*¹, Flavio Fialho², Elma Carrilho¹, Fabiana Santos¹; ¹Faculdade de Ciências Agrárias e Veterinárias-Universidade Estadual Paulista Jaboticabal-SP Brazil, ²EMBRAPA Bento Gonçalves - RS
- M33 A Comparison of Carcass Fat Variables in Different Meat- type Breeds of Chickens. Zhuye Niu*, Fuzhu Liu, Shaowei Zhai; College of Animal Science & Technology, Northwest Sci-Tech University of Agriculture & Forestry
- M34 Identification of virulence genes in Salmonella enteritidis required for survival in chicken infection. R.K. Gundelly*, Y.M. Kwon; University of Arkansas, Fayetteville
- M35 Specific gene cloning and sequencing in pectoral muscle of Korean native chicken. Sangsoo Sun*, Namoh Kim, Seok Kim, Daeseong Kim; Chonnam National University 300 Yongbong-dong, Buk-gu, Gwangju, 500-757, Korea
- M36 Chicken and quail microsatellite primers are not efficient markers for guinea fowl. S. N. Nahashon*, N. Adefope, A. Amenyenu, D. Wright; Institute of Agricultural and Environmental Research, Tennessee State University, Nashville
- M37 Withdrawn by author
- M38 Dioxin-induced changes in chicken macrophage (HD11) gene expression. N. Puebla-Osorio*¹, K.D. Ramos³, D. Abi-Ghanem¹, M.H. Falahatpishesh³, L.R. Berghman^{1,2}; ¹Department of Poultry Science, Texas A&M University, College Station, ²Department of Veterinary Pathobiology, Texas A&M University, College Station, ³Center for Genetics and Molecular Medicine, University of Louisville Health Sciences Center, Louisville, KY
- M39 The expression of genes related to egg production performance in the liver of Taiwanese country chickens. S. T. Ding*¹, Y. H. Ko¹, M. C. Huang², Y. P. Lee², W. T. K. Cheng¹; ¹Dept. of Animal Science, National Taiwan University, Taipei 106, Taiwan, ²Dept. of Animal Science, National Chung Hsiung University, Taichung, Taiwan
- M40 Withdrawn by author

PSA-Processing and Products

Abstract

- M41 Preparation and characteristics of spent hen meat enzymatic hydrolysate. Orn Sangthrapitikul, Y.C. Chen*, T.C. Chen; Poultry Science Department, Mississippi State University, Mississippi State
- M42 Spent hen meat enzymatic hydrolysate as a flavoring base. Orn Sangthrapitikul, Y.C. Chen*, T.C. Chen; Poultry Science Department, Mississippi State University, Mississippi State
- M43 *Listeria monocytogenes* prevalence and distribution within a poultry further processing plant over 12 months. Mark E. Berrang*¹, Richard J. Meinersmann¹, Joseph F. Frank², Douglas P. Smith¹; ¹USDA-ARS-Russell Research Center, Athens GA, ²Food Science and Technology, University of Georgia, Athens

- M44 Antimicrobial Susceptibility Patterns of *Salmonella* from Fresh Whole Chicken Carcasses. Scott R. Ladely*¹, Mark E. Berrang¹, Paula J. Fedorka-Cray¹, Mustafa Simmons², Daniel L. Fletcher³; ¹USDA-ARS-Russell Research Center, Athens, GA, ²Food Science and Technology, University of Georgia, Athens, ³Poultry Science, University of Georgia, Athens
- M45 Influence of irradiation and storage on the quality of ready-to-eat turkey breast rolls. Meijun Zhu*, Aubrey Mendonca, Eun Joo Lee, Dong Ahn; Iowa State University, Ames
- M46 Effects of extended storage on egg quality factors. D. R. Jones*, M. T. Musgrove; Russell Research Center, Poultry Processing and Meat Quality Research Unit, USDA-ARS, Athens, GA
- M47 Chemical analyses of commercial shell egg wash water collected from three different operations. J. K. Northcutt*, M. T. Musgrove, D. R. Jones; USDA, Agricultural Research Service, Russell Research Center, Athens, GA
- M48 Evaluation of carcasses obtained from broilers fed with ostrich oil and/or soybean oil as energy source. W Martinez, E Posadas, E Avila, M.P. Castañeda*; Universidad Nacional Autonoma de Mexico, Salvador Diaz Miron s/n, Col Zapotitlan, México D.F.
- M49 Effects of post-defeathering electrical stimulation on moisture retention characteristics of broiler carcasses and phosphate-marinated breast fillets. L. L. Young*¹, D. P. Smith¹, J. A. Cason¹, R. J. Buhr¹, J. M. Walker²; ¹USDA, Athens, GA, ²Stork-Gamco, Inc., Gainesville, GA

Meat Science and Muscle Biology

Abstract

- M50 DFD-like (Dark, Firm, Dry) Meat in a Broiler Commercial Plant. Juliane Schneider^{2,3}, Sandra H. I. Oda¹, Adriana L. Soares¹, Elza I. Ida*¹, Paulo D. Guarnieri², Rubison Olivo³, Massami Shimokomaki^{1,2}; ¹Department of Food and Drug Technology, Londrina State University, Londrina, PR, Brazil, ²Food Science Graduate Program, Faculty of Pharmaceutical Sciences, São Paulo University, São Paulo, SP, Brazil, ³Globalfood Advanced Food Technology Alberto Sampaio, São Paulo, S, Brazil
- M51 Biochemical and Ultrastructural Evaluation of PSE (Pale, Soft, Exudative) Broiler Breast Meat in a Commercial Plant. Massami Shimokomaki*^{1,2}, Adriana L. Soares¹, Paulo D. Guarnieri², Rubison Olivo³, Elza I. Ida¹, Rosa M. G. Macedo⁴, Juliane Schneider^{2,3}; ¹Department of Food and Drug Technology, Londrina State University, Londrina, PR, Brazil, ²Food Science Graduate Program, Faculty of Pharmaceutical Sciences, São Paulo University São Paulo, SP, Brazil, ³Globalfood Advanced Food Technology Alberto Sampaio, São Paulo, SP, Brazil, ⁴Maringa State University Maringa, PR, Brazil
- M52 Effect of feeding program and sex on productive performance and carcass quality of Iberian crossbred pigs. M. P. Serrano¹, D. G. Valencia¹, R. Lázaro*¹, M. Nieto², G. G. Mateos¹; ¹Universidad Politécnica de Madrid Ciudad Universitaria sn, ²Copese S.A. Conde de Sepúlveda 24
- M53 Effect of sex and slaughter weight on productive performance and carcass quality of Iberian crossbred pigs. M. P. Serrano¹, D. G. Valencia¹, R. Lázaro*¹, J. Viguera¹, M. Nieto², G. G. Mateos¹; ¹Universidad Politécnica de Madrid Ciudad Universitaria sn, ²Copese S.A. Conde de Sepúlveda, 24
- M54 Early postmortem pH influences proteolysis of cytoskeletal proteins during aging in porcine longissimus muscle. G. Bee*², S. M. Lonergan¹, E. Huff-Lonergan¹; ¹Iowa State University Ames, ²Swiss Federal Research Station for Animal Production and Dairy Products 1725 Posieux, Switzerland
- M55 Oxidation, ionic strength, and pH affect porcine skeletal muscle calpain and calpastatin activity. K.R. Maddock*, E. Huff-Lonergan, L.J. Rowe, S.M. Lonergan; Iowa State University, Ames
- M56 The use of creatine as a means of improving the belly/bacon quality of market barrows fed 4.5 g/ton Paylean®. C.A. Stahl*, M.S. Carlson, T.B. Schmidt, G. Rentfrow, E.K. Burger, E.P. Berg; University of Missouri-Columbia, Columbia
- M57 Physical parameters of lamb meat as affected by aging time. Jorge Zapata*; Universidade Federal do Ceará
- M58 Extracellular matrix (ECM) properties of lamb skeletal muscle as related to age and muscle. F. Filetti, G. Maiorano*, A. Ciarlariello, M. Gambacorta, A. Manchisi; University of Molise Campobasso, Italy
- M59 Carcass and meat quality in three varieties of rainbow trout (*Oncorhynchus mykiss*). Ana Luisa Renteria Monterrubio*¹, Jose Arturo Garcia Macias¹, Martin Espinosa²; ¹Universidad Autonoma de Chihuahua, Periferico Francisco R. Almada. Km 1, Chihuahua, Chihuahua, ²Asociacion de Productores de Trucha, Region de Madera, A. C.
- M60 Effects of sedated-harvest on channel catfish fillet color, pH, and drip-loss. Brian G. Bosworth*, Denise J. Gregory; Catfish Genetics Research Unit, USDA-ARS, Stoneville, MS

- M61 Effect of sexual condition and slaughter weight on carcass traits from buffaloes finished in feedlot. André Mendes Jorge^{*1}, Cristiana Andrighetto², Danilo Domingues Millen³, Michel Golfetto Calixto²; ¹UNESP-FMVZ-DPEA-Botucatu, ²UNESP-FMVZ-PGZOO-Botucatu, ³UNESP-FMVZ-DPEA-Botucatu
- M62 Quantitative carcass traits from buffaloes of three genetic groups finished in feedlot and slaughtered at different stages of maturity. André Mendes Jorge^{*1}, Cristiana Andrighetto², Danilo Domingues Millen³, Michel Golfetto Calixto²; ¹UNESP-FMVZ-DPEA-Botucatu, ²UNESP-FMVZ-PGZOO-Botucatu, ³UNESP-FMVZ-DPEA-Botucatu
- M63 Physical carcass composition and tissue relations from buffaloes of three genetic groups finished in feedlot and slaughtered at different stages of maturity. André Mendes Jorge^{*1}, Cristiana Andrighetto², Danilo Domingues Millen³, Michel Golfetto Calixto²; ¹UNESP-FMVZ-DPEA-Botucatu, ²UNESP-FMVZ-PGZOO-Botucatu, ³UNESP-FMVZ-DPEA-Botucatu
- M64 Chemical composition, meat quality and consumer acceptability in Mexican retail beef. E. J. Delgado¹, M. S. Rubio^{*1}, F. A. Iturbe², R. D. Mendez¹, L. Cassis³, R. Rosiles¹; ¹Facultad De Medicina Veterinaria Y Zootecnia, Universidad Nacional Autonoma De Mexico Circuito Exterior, Ciudad Universitaria, Mexico, ²Facultad De Quimica, Universidad Nacional Autonoma De Mexico Circuito Exterior, Mexico, ³Departamento Tecnologia Alimentos, Universidad La Salle Benjamin Franklin 47, Col. Condesa, Del. Cuauhtemoc
- M65 Effects of sodium lasalocid and electrolytes on carcass characteristics of young bulls from north-central Mexico, finished with a brewery grain-based ration. F Winston-Bennett, JJJ Chavez^{*}, R Bañuelos, S Mendez, CF Arechiga, F Echavarria; Universidad Autonoma de Zacatecas, Zacatecas, Mexico.
- M66 Hanging the beef carcass by the forequarter to improve tenderness of the *Longissimus dorsi*. Albino Luchiari-Filho^{*1}, Renato Prates Macedo², Angélica Simone Cravo Pereira¹, Saulo da Luz e Silva¹, Paulo Roberto Leme¹, Guilherme Ferrareze Feitoza¹; ¹Faculdade de Zootecnia e Engenharia de Alimentos - USP, Pirassununga, SP Brazil, ²Marfrig Brazilian Beef Via Dr. Shuhei Uetsuka, km 02, Promissão, SP, Brazil
- M67 Estimation of percentage of lean meat on rib loin by computer image analysis for carcass cross section of Wagyu cattle. Mio Hasegawa^{*1}, Keigo Kuchida¹, Satoshi Hidaka¹, Hironao Houkiyama², Toshifumi Sakai², Yusuke Yamamoto², Yukinobu Sato²; ¹Obihiro University of Agriculture and Veterinary Medicine Obihiro-shi Hokkaido 080-8555 Japan, ²Hokkaido Animal Research Center Shintoku-cho Hokkaido 081-0038 Japan
- M68 Development of new photography equipment for carcass cross section of Wagyu beef and its potential use in meat quality evaluation using digital images. Keigo Kuchida^{*1}, Takeshi Hori², Toshinori Honma², Michitaka Nami², Kenichiro Takahashi¹, Mio Hasegawa¹, Hironao Hokiayama³, Toshifumi Sakai³, Yusuke Yamamoto³; ¹Obihiro University of Agriculture and Veterinary Medicine Obihiro-shi Hokkaido 080-8555 Japan, ²Hokkaido Industrial Research Institute Sapporo-shi Hokkaido 060-0819 Japan, ³Hokkaido Animal Research Center Shintoku-cho Hokkaido 081-0038 Japan
- M69 Correlations among carcass traits taken by ultrasound and after slaughter in Mediterranean (*Bubalus bubalis*) bulls fed in feedlot. André Mendes Jorge^{*1}, Cristiana Andrighetto², Danilo Domingues Millen³, Michel Golfetto Calixto²; ¹UNESP-FMVZ-DPEA-Botucatu, ²UNESP-FMVZ-PGZOO-Botucatu, ³UNESP-FMVZ-DPEA-Botucatu
- M70 Effect of dietary vitamin E supplementation and storage time on physical characteristics of ten muscles from beef cattle. F. G. Rios^{*}, R. Cortina, G. Contreras, J.J. Portillo; FMVZ-Universidad Autonoma de Sinaloa, Mexico Carr. Culiacan-Mazatlan km. 3.5
- M71 Tenderness improvement in fresh and frozen/thawed beef strip loins treated with hydrodynamic pressure processing. Morse B. Solomon^{*}, Martha Liu, Jitu Patel, Ernie Paroczay, Janet Eastridge; USDA, ARS, FTSL
- M72 Recombinant hepatocyte growth factor (rHGF) over-expressed by C2C12 myoblasts is biologically active. Caiyun Zeng^{*1}, David E. Gerrard¹, Kevin H. Hannon², Alan L. Grant¹; ¹Department of Animal Sciences, Purdue University, West Lafayette, IN, ²Department of Basic Medical Sciences, Purdue University, West Lafayette, IN
- M73 Correlations and prediction equations for fatty acids and sensory characteristics of beef longissimus rib steaks from three forage rations and commercial USDA Choice and Select rib steaks. R. T. Baublits^{*1}, F. W. Pohlman¹, A. H. Brown, Jr.¹, Z. B. Johnson¹, D. C. Rule², C. M. Murrieta², D. O. Onks³, B. A. Sandelin¹, H. D. Loveday³, C. J. Richards³, R. B. Pugh³; ¹University of Arkansas, Fayetteville, ²University of Wyoming, Laramie, ³University of Tennessee, Knoxville
- M74 Characterization of Romosinuano breeding on palatability traits and retail shelf life of beef steaks. W. J. Horne^{*1}, J. C. Brooks¹, S. W. Coleman², W. A. Phillips³, D. G. Riley², C. C. Chase Jr.², M. F. Miller¹; ¹Department of Animal and Food Sciences, Texas Tech University, Lubbock, ²USDA, ARS, SubTropical Agricultural Research Station, Brooksville, FL, ³USDA, ARS, Grazinglands Research Laboratory, El Reno, OK
- M75 Comparison of beef tallow versus poultry fat in the finishing diets of steers on muscle and subcutaneous fatty acid profiles. Shanna Hutchison^{*1}, Elizabeth B. Kegley¹, Jason K. Apple¹, Troy J. Wistuba², Daniel C. Rule³; ¹University of Arkansas, Fayetteville, ²Morehead State University Morehead, KY, ³University of Wyoming, Laramie

- M76 Comparison of beef tallow versus poultry fat in the finishing diets of steers on beef quality during retail display. Shanna Hutchison*¹, Jason K. Apple¹, Elizabeth B. Kegley¹, Troy J. Wistuba²; ¹University of Arkansas, Fayetteville, ²Morehead State University, Morehead, KY
- M77 Glycolytic intermediates in muscle and adipose tissue of cattle fed different sources and amount of energy. R. D. Rhoades*, J. T. Vasconcelos, D. K. Lunt, J. E. Sawyer, K. Y. Chung, S. B. Smith; Department of Animal Science, Texas A&M University, College Station

Nonruminant Nutrition

Weanling Pig - Vitamin & Mineral

Abstract

- M78 Is vitamin B6 a modulator of the effect of supplementary tryptophan on tryptophan metabolism and growth responses in weanling pigs? J. Jacques Matte*¹, Nathalie LeFloc'h², Claire Relandeau³, Laurent Le Bellego³, Alain Giguère¹, Martin Lessard¹; ¹Agriculture and Agri-Food Canada, Lennoxville, QC, Canada, ²Institut National de la Recherche Agronomique, St-Gilles, France, ³Ajinomoto Eurolysine S.A.S., Paris, France
- M79 Vitamin C and β -carotene in weanling pig diets. Demian M. Fernandez*¹, Jose A. Cuaron²; ¹Universidad Nacional Autonoma de Mexico Mexico City, ²Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias Queretaro, MX
- M80 Ontogeny of mitochondrial carnitine palmitoyltransferase I in porcine liver and skeletal muscle. Pasha Lyvers Peffer*¹, Xi Lin¹, Lori Averette Gatlin¹, Jason Woodworth², Jack Odle¹; ¹North Carolina State University, Raleigh, ²Lonza, Inc., Fairlawn, NJ
- M81 Determination of true digestible calcium and phosphorus requirements in weaned pigs. Ming Fan*¹, Yingran Shen¹, Tania Archbold¹, Amanda Holt¹, Yulong Yin²; ¹University of Guelph, Guelph, ON, Canada, ²The Chinese Academy of Sciences, China
- M82 Diet buffer capacity and mineral sources alter growth and Salmonella prevalence in nursery pigs. Peter Bahnsen, Melissa E. Glenn, Thomas D. Crenshaw*; University of Wisconsin, Madison
- M83 Effect of supplementing zinc oxide and biotin with or without carbadox on nursery pig growth performance. H.D. Wilt*, M.S. Carlson; University of Missouri, Columbia
- M84 Impact of feeding herbal extracts and additional copper plus zinc on growth performance and immune function of newly weaned piglets. H. Namkung*, C. F. M. de Lange; Department of Animal and Poultry Science, University of Guelph, Guelph, ON, Canada
- M85 The role of high dietary zinc oxide in cholecystokinin and insulin-like growth factor I secretion and growth in weaned pigs. Defa Li*, Jingdong Yin; Ministry of Agriculture Feed Industry Center, China Agricultural University, Yuanmingyuan, Beijing

Nonruminant Nutrition

Weanling Pig - Energy & Protein

Abstract

- M86 The interaction between cereal source and lactose level on piglet growth performance post weaning. J.M. O'Connell*, J.J. Callan, J.V. O'Doherty; Department of Animal Science and Production, University College, Dublin, Ireland
- M87 Performance and nutrient digestibility of low tannin sorghum fed to pigs from 10 to 30 kg. Elias Tadeu Fialho*, Paulo Borges Rodrigues, Jose A. Freitas Lima, Hunaldo Oliveira Silva, Vladimir Oliveira; University Federal of Lavras - UFLA- Brazil
- M88 Effect of different sources and levels of lipids on the performance of pigs postweaning. Maria Emilia Pimenta², Jose Augusto Lima*¹, Elias Tadeu Fialho¹, Priscila Logato¹, Luiz David Murgas¹; ¹University Federal of Lavras - UFLA, Brazil, ²Universidade de Alfenas-UNIFENAS, Brazil
- M89 Piglets at weaning or three weeks post-weaning prefer rice to sorghum. David Solà-Oriol¹, Eugeni Roura*², David Torrallardona¹; ¹IRTA, Centre de Mas Bové Apartat 415, Reus, Spain, ²Lucta SA Montornés del Vallès, Barcelona, Spain

- M90 Enzyme supplementation of piglets fed diets containing barley, wheat, and corn. J. Sánchez¹, A. Fuentetaja², J. C. González¹, J. Peinado¹, M. I. Gracia^{*1}; ¹Imasde Agropecuaria, S.L. Spain, ²Copese, S.A. Spain
- M91 Technical feasibility of processed corn and soybeans in diets of piglets from 21 to 56 days of age. Patricia Azevedo Castelo Branco, Jose Augusto Lima, Elias Tadeu Fialho*, Priscila Vieira R. Logato, Rilke Tadeu Freitas; University Federal of Lavras - UFLA, Brazil
- M92 Efficacy of a vegetable-based peptide product as a replacement for plasma protein in nursery pig diets. E. A. Halbrook^{*1}, C. V. Maxwell¹, M. E. Davis¹, Z. B. Johnson¹, D. C. Brown¹, R. Dvorak², R. Musser³; ¹University of Arkansas, Fayetteville, ²Alltech Inc., Nicholasville, KY, ³Hubbard Feeds, Mankato, MN
- M93 Effect of reduced protein in weanling pig diets. Marcio Gilberto Zangeronimo, Elias Tadeu Fialho*, Jose A. Freitas Lima, Paulo Borges Rodrigues, Luis David solis Murgas; University Federal of Lavras-UFLA, Brazil
- M94 Effects of feeding rice protein concentrate on growth performance and ileal digestibility in early weaned pigs. Chae Byung-Jo*, Yun Jung-Ho, Yong Ji-Soon, Choi Jae-Yong, Kim Jae-Kyoung, Lohakare Jayant; Kangwon National University, Chunchon, South Korea.
- M95 Effect of RPC (Rice Protein Concentration) as a substitute for protein sources in weaning pigs. O. S. Kwon^{*1}, B. J. Min¹, K. S. Son¹, J. H. Cho¹, J. D. Kim², I. H. Kim¹, S. H. Ahn³, H. S. Ahn³; ¹Dankook University, Cheonan, Korea, ²CJ Feed Co. Ltd., Korea, ³EUNJIN International Co. Ltd., Korea
- M96 Influence of a soy protein hydrolysate on the productive performance of early weaned pigs under an enterotoxigenic *E. coli* (ETEC) colibacillosis or under a healthy status. Gabriele Ferrini¹, Elisabet Borda², Daniel Martinez-Puig^{*2}, Edgar Garcia-Manzanilla¹, Susana Martin-Orue¹, Jose Perez¹; ¹Universitat Autònoma de Barcelona Spain, ²BIOIBERICA Spain
- M97 Liquid diets containing vegetable proteins accelerate piglet growth above milk-protein-based diets. A. Ebert¹, A.S. Berman¹, R.H. Harrell², S.G. Cornelius¹, J. Odle^{*1}; ¹North Carolina State University, Raleigh, ²Milk Specialties Co., Dundee, IL
- M98 Interaction between threonine and avilamycin on piglet growth performance post weaning. J.M. O' Connell*, J.J. Callan, J.V. O' Doherty; Department of Animal Science and Production, University College, Dublin, Ireland
- M99 Developmental regulation of fructose and amino acid transporter gene expression in the small intestine of pigs. X. Xiao*, E. A. Wong, K. E. Webb, Jr.; Department of Animal and Poultry Sciences, Virginia Polytechnic Institute and State University, Blacksburg

Nonruminant Nutrition

Weanling Pigs - Additives

Abstract

- M100 Evaluation of organic acid blends and antibiotics for promoting growth of young pigs. Donald W. Giesting^{*1}, Murray J. Pettitt², Eduardo Beltranena^{2,3}; ¹Cargill Animal Nutrition, Minnetonka, MN, ²Prairie Swine Centre, Inc., Saskatoon, SK, Canada, ³Provincial Department of Agriculture-Alberta, Edmonton, AB, Canada
- M101 Interaction between lactose, avilamycin and inulin on piglet growth performance and nutrient digestibility post-weaning. K. M. Pierce^{*1}, J. J. Callan¹, P. McCarthy², J. V. O'Doherty¹; ¹University College, Dublin, Ireland, ²Volac International Ltd, UK
- M102 Effects of probiotic supplementation on gut histometry and fecal microflora in weaned pigs. Valentino Bontempo^{*1}, Alessia Di Giancamillo¹, Cinzia Domeneghini¹, Mauro Fava¹, Carla Bersani¹, Richard Paratte¹, Eric Chevaux², Vittorio Dell'orto¹, Giovanni Savoini¹; ¹Department of Veterinary Sciences and Technologies for Food Safety, University of Milan, Italy, ²lallemand Animal Nutrition, Blagnac, France
- M103 Antimicrobials, probiotics, prebiotics and herbal extracts as growth promoters on performance of weanling pigs. Carlos E. Utiyama*, Liliana L. Oetting, Pedro A. Giani, Urbano S. Ruiz, Valdomiro S. Miyada; Escola Superior de Agricultura "Luiz de Queiroz" da Universidade de São Paulo, Piracicaba-SP, Brazil
- M104 The effect of bacillus and active yeast complex supplementation on the performance, fecal bacillus counts and ammonia nitrogen concentrations in weaned pigs. B. J. Min^{*1}, O. S. Kwon¹, K. S. Son¹, J. H. Cho¹, W. B. Lee¹, J. H. Kim², B. C. Park³, I. H. Kim¹; ¹Dankook University, Korea, ²Agribands Purina Korea, Inc., Seoul, Korea, ³CTC Bio. Inc., Korea
- M105 Efficacy of addition of *B. licheniformis* and *B. subtilis* in pig diets from weaning to slaughter. M. I. Gracia^{*1}, S. Hansen², J. Sánchez¹, P. Medel¹; ¹Imasde Agropecuaria, S.L. Spain, ²Chr Hansen A/S Denmark

- M106 Isolation of *Bacillus* strains to inhibit pathogenic *E. coli* and enhance weanling pig performance. Dorrie S. Parrott*, Tom G. Rehberger; Agtech Products, Inc., Manhattan, KS
- M107 Effects of dietary herbal extracts (Animon Plus®) on growth performance and blood composition in nursery and growing pigs. K. S. Son*¹, O. S. Kwon¹, B. J. Min¹, W. B. Lee¹, J. H. Kim², J. W. Hong¹, I. H. Kim¹, H. S. Kim³; ¹Dankook University, Cheonan, Korea, ²Agribands Purina Korea, Inc. Seoul, Korea, ³Kumbo Trading Co., Korea
- M108 Efficacy of antimicrobials and herbal extracts as growth promoters of weanling pigs. Liliana L. Oetting*, Carlos E. Utiyama, Pedro A. Giani, Urbano S. Ruiz, Valdomiro S. Miyada; Escola Superior de Agricultura, Piracicaba-SP, Brazil
- M109 Effect of dietary melatonin on serum melatonin level and growth performance of weaned pigs. G. H. Lee, J. G. Kim*, K. Y. Whang; Korea University, Seoul, Korea
- M110 Botanical additives masked by a flavor do not affect feed intake, growth, or fecal consistency in weanling pigs. Eugeni Roura*¹, Ramon Fontanillas¹, Paul Bikker²; ¹Lucta SA Barcelona, Spain, ²Schothorst Feed Research, Lelystad, The Netherlands
- M111 Effect of bedding with mycotoxin contaminated straw and low levels of dietary mycotoxin on piglet performance. B. E. Strickler, P. Spring*; Swiss College of Agriculture, Zollikofen, Switzerland
- M112 Influence of diet on microbial community structure and activity in the intestinal tract of weanling pigs. Andrea Piva*¹, Luca Magnani¹, Gabriele Casadei¹, Pier Paolo Gatta¹, K.M. Selig², John A. Patterson²; ¹University of Bologna, Italy Via Tolara di Sopra, 50, Ozzano Emilia (BO), ²Department of Animal Sciences, Purdue University, West Lafayette, IN

Forages and Pastures

Abstract #

- M113 Nutritive quality of *Poa pratensis* in model grassland communities exposed to ground-level ozone. D. Dodson*¹, J. Bender², J. Lin¹, R. Muntifering¹; ¹Auburn University, Auburn, AL, ²Federal Agricultural Research Center, Braunschweig, Germany
- M114 Effect of increased cutting height of corn silage on nutritive value, milk yield and milk composition. D. Dominguez-Diaz*², L. D. Satter^{1,2}; ¹Dairy Forage Research Center, USDA-ARS, Madison, WI, ²Dairy Science Department, University of Wisconsin-Madison, Madison
- M115 Site and extent of digestion of diets containing brown midrib-3, low-cut, or high-cut corn silage. D. Dominguez-Diaz*², L. D. Satter^{1,2}; ¹Dairy Forage Research Center, USDA-ARS, Madison, WI, ²Dairy Science Department, University of Wisconsin-Madison, Madison
- M116 Nutritive quality of early-season *Trifolium* forage as influenced by nitrogen and ground-level ozone. K.E. Kittendorf*¹, B. Sanchez-Gimeno², J. Sanz², J. Lin¹, R.B. Muntifering¹; ¹Auburn University, Auburn, AL, ²Centro de Investigaciones Energeticas, Medioambientales y Tecnologicas, Madrid, Spain
- M117 Forage production and quality of triticale cultivars in the Tennessee Valley. M. Lema*¹, E. Cebert²; ¹Tennessee State University, Nashville, ²Alabama A & M University, Normal
- M118 Effects of a bacterial inoculant on fermentation, quality, degradability and aerobic stability of whole head grain sorghum ensiled at two stages of grain maturity. L.O. Abdelhadi*¹, J.M. Tricarico²; ¹Est. El Encuentro, Research and Extension in Ruminant Nutrition. Cnel. Brandsen, Argentina., ²Allech Biotechnology Inc., Nicholasville, KY.
- M119 Estimating degradable intake protein on producer farms in northern Arkansas. W. K. Coblenz*, J. E. Turner, R. K. Ogden, K. P. Coffey, F. W. Pohlman, A. H. Brown, M. B. Daniels, J. L. Gunsaulis, M. L. Thomas, J. B. Humphry; University of Arkansas, Fayetteville
- M120 Comparison of mechanically processed barley silage with regular barley silage on lactational performance of Holstein cows. Jong-Su Eun¹, Sung-Ho Hong*², Karen Beauchemin¹; ¹Agriculture and Agri-Food Canada, Lethbridge, AB, Canada, ²Sahmyook College Cheongnyangni, Seoul, Korea
- M121 Effect of forage diversity on intake and productivity of grazing lactating dairy cows over two grazing seasons. K J Soder*¹, M A Sanderson¹, J L Stack², L D Muller²; ¹USDA-ARS, Pasture Systems and Watershed Management Research Unit University Park, PA, ²The Pennsylvania State University, University Park
- M122 Nitrogen Characteristics and Nitrogen Degradation Kinetics of Crabgrass Harvested in Northern Arkansas. Robin K Ogden*, Wayne K Coblenz, Kenneth P Coffey, James E Turner, Dean A Scarbrough, John A Jennings, Micheal D Richardson; University of Arkansas AFLS, Fayetteville

- M123 Chemical composition and in vitro digestibility of three cultivars of Guinea grass (*Panicum maximum* Jacq) at three ages of cut under tropical dry forest conditions. Maria A Cuauero, Baldomero Gonzalez, Omar Araujo-Febres*, Juan Vergara; La Universidad del Zulia, Facultad de Agronomía Maracaibo, Venezuela
- M124 Effects of a bacterial inoculant on fermentation, quality, degradability and aerobic stability of whole-plant grain sorghum and corn silages. L.O. Abdelhadi*¹, J.M. Tricarico²; ¹Est. El Encuentro, Research and Extension in Ruminant Nutrition. Cnel. Brandsen, Argentina., ²Alltech Biotechnology Inc., Nicholasville, KY
- M125 Biomass yield and nutritive quality of eastern gamagrass (*Tripsacum dactyloides*) exposed to ground-level ozone. J. Lin*, J. Lewis, R. Muntifering, S. Ditchkoff, A. Chappelka; Auburn University Auburn, AL
- M126 Effect of type of concentrate on grazing behaviour of dairy cows. R.G. Pulido*, E. Felmer, A. Hinostroza, F. Wittwer; F. Cs. Veterinarias, Universidad Austral de Chile, Valdivia, Chile
- M127 The Effects of Xylanase Addition on the Fermentation of Distillers Wet Grains in Laboratory Silos. V. Akay*; Alltech, Inc., Nicholasville, KY
- M128 Herbage and animal performance responses to management intensity of continuously stocked bahiagrass pastures. R.L. Stewart, Jr.*¹, L.E. Sollenberger, J.C.B. Dubeux, Jr., J. M. B. Vendramini; University of Florida, Gainesville
- M129 Responses by steers compared under continuous and frontal grazing. H. Lippke, T. D. A. Forbes*, E. Rivera, P. G. Soderstrom, B. G. Warrington; Texas Agricultural Experiment Station, Uvalde, TX.
- M130 Kura Clover Spreading Ability with Grass Competition. Byongwan Kim*¹, Kenneth Albrecht²; ¹College of Animal Resources science, Kangwon National University 192-1, Hyoja2-Dong, Chunchon, Kangwon-Do, 200-701, South Korea, ²Department of Agronomy, University of Wisconsin-Madison, Madison
- M131 The Effects of Addition of Pectinase on the Levels of Soluble Sugars during Ensiling of Whole Sugar Beets in Laboratory Silos. V. Akay*, P. Karnezos; Alltech, Inc. Nicholasville, KY
- M132 Comparison of forage drying methods. T.W. White*, A.J. Phelps, H.G. Bateman, C.C. Williams; Louisiana State University Agricultural Center, Baton Rouge
- M133 Effect of winter stocker growth rate and finishing diet on beef longissimus fatty acid composition. Carolina Realini¹, Susan Duckett*¹, Jim Neel², Joe Fontenot³, William Clapham²; ¹University of Georgia Athens, GA, ²USDA-ARS Beaver, WV, ³Virginia Tech University, Blacksburg
- M134 Effect of winter stocker growth rate and finishing diet on beef rib composition, quality and palatability. Carolina Realini¹, Susan Duckett*¹, Jim Neel², Joe Fontenot³, William Clapham²; ¹University of Georgia Athens, GA, ²USDA-ARS Beaver, WV, ³Virginia Tech University, Blacksburg
- M135 Effect of winter period rate of gain on finishing growth rate, final weight and carcass parameters from pasture or feedlot finished cattle. J. P. S. Neel*¹, J. P. Fontenot², W. M. Clapham¹, S. K. Duckett³; ¹USDA-ARS, AFSRC Beaver, WV, ²Virginia Tech University, Blacksburg, ³The University of Georgia, Athens
- M136 Effects of γ -terpinene, terpinolene, α -copaene, and α -terpinene on consumption of alfalfa pellets by sheep. Rick E. Estell*¹, Ed L. Fredrickson¹, Dean M. Anderson¹, Kris M. Havstad¹, Marta D. Remmenga²; ¹USDA/ARS Jornada Experimental Range, ²New Mexico State University, Las Cruces
- M137 Forage quality differences between grass hay stored as dry large round bales or wet wrapped round bales. Edward B. Rayburn, William L. Shockey*, Rodney M. Wallbrown; West Virginia University, Morgantown
- M138 Assumption testing of the optimal sampling schedule of diet components. Branislav Cobanov*, Normand R. St-Pierre; The Ohio State University, Columbus
- M139 Effects of Source and Level of Two Legumes or Cotton Seed Meal on Intake and Digestibility of Coastal Bermudagrass (*Cynodon dactylon*) Hay Diets by Goats. Jamie L Foster*¹, William C Ellis², James P Muir¹, Jason Sawyer²; ¹Texas Agricultural Experiment Station, Stephenville, TX, ²Texas A&M University, College Station
- M140 Effect of corn silage chop length on lactation performance of dairy cows on a commercial farm – a case study. T. D. Nennich*¹, J. H. Harrison¹, D. L. Davidson¹, J. Werkhoven², A. Werkhoven²; ¹Washington State University Puyallup, ²Werkhoven Dairy, Monroe, WA
- M141 Peanut stover and bermudagrass hay for wethers on summer hardwood range in north central Texas. Catherine E Packard*^{1,2}, James P Muir¹, Rodger Wittie², Randy Harp²; ¹Texas Agriculture Experiment Station, Stephenville, TX, ²Tarleton State University, Central Texas
- M142 Forage intake, digestibility and gain by five beef breedtypes grazing rye-ryegrass-bermudagrass pasture and subsequent feedlot performance. T.D.A. Forbes*¹, F.M. Rouquette², R.D. Randel², J.J. Cleere³; ¹Texas Agricultural Experiment Station, Uvalde, ²Texas Agricultural Experiment Station, Overton, ³Texas Cooperative Extension, Overton

- M143 Soybean by-products for feeding grazing dairy cows. 1. Milk production and composition. R.F. Gregoret*¹, M.C. Gaggiotti¹, M.R. Gallardo¹, S.E. Valtorta², G.A. Conti¹, C. Arakaki³; ¹Experimental Station Rafaela INTA Ruta 34 km 227 Rafaela 2300 Santa Fe Argentina, ²National Research Council (CONICET) CC 22 Rafaela 2300 Santa Fe Argentina, ³CICV INTA CC 77 Castelar 1712 Buenos Aires Argentina
- M144 Soybean by-products for feeding grazing dairy cows. 2. Rumen fermentation. M.C. Gaggiotti*¹, C. Arakaki², M.R. Gallardo¹, R.F. Gregoret¹, S.E. Valtorta³, G.A. Conti¹, O. Quaino¹; ¹Experimental Station Rafaela INTA Ruta 34 km 227 Rafaela 2300 Santa Fe Argentina, ²CICV INTA CC 77 Castelar 1712 Buenos Aires Argentina, ³National Research Council (CONICET) CC 22 Rafaela 2300 Santa Fe Argentina
- M145 Evaluating the use of indigestible neutral detergent fiber to predict dry matter intake of cattle fed high forage diets. R. Driskill*, J.R. Russell, K. Bormann, W.J. Powers; Iowa State University, Ames
- M146 Visual Assessment versus Compressed Sward Heights as Predictors of Forage Biomass in Cool-Season Pastures. Ronaldo E Vibart*¹, Sharon L White-Bennett², James T Green², Steven P Washburn¹; ¹Department of Animal Science, North Carolina State University, Raleigh, ²Department of Crop Science, North Carolina State University, Raleigh
- M147 Effect of swine manure application on winter wheat tissue growth and nitrogen, phosphorus, and potassium content. D.M. Sholly*, M.C. Walsh, B.C. Joern, A.L. Sutton, B.T. Richert; Purdue University, West Lafayette
- M148 Effect of grass nonstructural carbohydrates on milk yield and composition and dry matter intake of dairy cattle. A. Buyserie*, P. French, T. Downing; Oregon State University, Corvallis
- M149 Number of experimental units required to detect differences in grazing time. D. H. Seman*¹, J. A. Stuedemann¹, L. W. Douglass²; ¹USDA-ARS, Watkinsville, GA, ²University of Maryland, College Park
- M150 Relationship of rate of appearance of vaccenic acid and pH during *in vitro* biohydrogenation of linolenic acid from alfalfa hay. C.V.D.M. Ribeiro*, M.L. Eastridge; The Ohio State University, Columbus
- M151 Comparison of biohydrogenation of fatty acids in lyophilized forage and air dried forage with sucrose additions. C.V.D.M. Ribeiro*, M.L. Eastridge; The Ohio State University, Columbus
- M152 Effects of level of protein supplementation on performance of crossbred calves grazing Tifton 85 bermudagrass. S. A. Woods*¹, F. M. Rouquette, Jr.², G. E. Carstens¹, T. D. A. Forbes³, W. C. Ellis¹; ¹Texas Agricultural Experiment Station, College Station, TX, ²Texas Agricultural Experiment Station, Overton, TX, ³Texas Agricultural Experiment Station, Uvalde, TX
- M153 Forage quality of perennial grass as influenced by stubble height. J.H. Cherney*, D.J.R. Cherney; Cornell University, Ithaca, NY
- M154 Evaluation of tall fescue, soybean hulls and ionophores *in vitro*. L.A. Briggs*, J.C. Waller, H.M. Blalock, C.J. Richards; The University of Tennessee, Knoxville
- M155 Effects of stocking method and rate on seasonal cow-calf performance and forage quality. W. E. Wyatt*¹, B. C. Venuto², J. M. Gillespie³, D. C. Blouin³; ¹Louisiana State University Agricultural Center, Jeanerette, ²Grazing Lands Research Laboratory, USDA, ARS, El Reno, OK, ³Louisiana State University Agricultural Center, Baton Rouge
- M156 Evaluation of ensiled sorghums with and without condensed tannins as feeds for ruminants. H. Carneiro*¹, P. B. Arcuri¹, J. A. Rodrigues², F. S. Sobrinho¹, S. S. Brum¹, M. Villaquiran³; ¹Embrapa Gado de Leite Juiz de Fora, MG, Brazil, ²Embrapa Milho e Sorgo Sete Lagoas, MG, Brazil, ³E (Kika) de la Garza American Institute for Goat Research, Langston University, Langston, OK

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- M157 Effect of increasing sodium bicarbonate proportion in high concentrate diets on ruminal fermentation in finishing beef heifers. L. González*, A. Ferret, S. Calsamiglia, X. Manteca; Universitat Autònoma de Barcelona Edifici V, Campus UAB, Bellaterra, Barcelona, Spain
- M158 Effects of sodium bicarbonate on ruminal pH and feed intake in feedlot cattle. L. Paton*¹, M.A.G. von Keyserlingk¹, K.A. Beauchemin², D.M. Veira³; ¹Animal Welfare Program, University of British Columbia, Vancouver, British Columbia, Canada, ²Agriculture and Agri-Food Canada, Lethbridge, AB, Canada, ³Agriculture and Agri-Food Canada, Kamloops, British Columbia, Canada

- M159 Effects of monensin and different dose levels of essential oils on feed intake, growth performance and feed efficiency of beef cattle. Benchaar Chaouki*^{1,2}, Charmley Ed³, Duynisveld John³; ¹Dairy and Swine R&D Centre, Agriculture and Agri-Food Canada, Lennoxville, QC, Canada, ²Nova Scotia Agricultural College, Truro, NS, Canada, ³Crop and Livestock Research Centre, Agriculture and Agri-Food Canada, Nappan, NS, Canada
- M160 Monensin or decoquinate in high concentrate diets fed to Santa Ines lambs . I. Susin*^{1,2}, C.Q. Mendes^{1,2}, A.V. Pires^{1,2}, I.U. Packer^{1,2}; ¹University of São Paulo, ²ESALQ
- M161 Effects of yeast culture in barley-based backgrounding and finishing diets for cattle on health, growth performance, and fecal *Escherichia coli* populations. Yuxi Wang*¹, Tim A. McAllister¹, Susan J. Bach¹, Darryl J. Gibb¹, Ilkyu Yoon²; ¹Agriculture and Agri-Food Canada Research Centre, Lethbridge, Canada, ²Diamond V Mills, Inc., Cedar Rapids, IA
- M162 Effects of alcohol-fermented feedstuff with live yeast on growth characteristics, serum metabolites, and meat compositions in Korean native bulls. Shin Jong Suh*, Park Byung Ki, Hong Byong Ju; Department of Animal Resources Science, Kangwon National University, Chunchon, Korea
- M163 Rate and extent of *in situ* DM disappearance of feedstuffs in cows fed different strains of yeast. Julio C. Silva*, L. Wayne Greene; Texas Agricultural Experiment Station, Amarillo, TX
- M164 Fermentable and Nutritional Characteristics of Fermented Feedstuffs Added Aspergillus oryzae and Saccharomyces cerevisiae. Park Byung Ki, Ra Chang Six, Shin Jong Suh*; Department of Animal Resources Science, Kangwon National University, Chunchon, Korea
- M165 Effects of chlortetracycline (CTC) and steroidal implant on growth and plasma growth hormone (GH) and thyroid hormone release after challenge with thyrotropin-releasing hormone (TRH) and GH-releasing hormone (GHRH) in beef steers. S.E. Kitts*¹, J.C. Matthews¹, G.L. Sipe¹, T.S. Rumsey², T.H. Elsasser², S. Kahl², R.L. Baldwin³, K.R. McLeod¹; ¹University of Kentucky, Lexington, KY, ²Growth Biology Laboratory, ARS, USDA, Beltsville, MD, ³Bovine Functional Genomics Laboratory, ARS, USDA, Beltsville, MD
- M166 Effects of salinomycin and virginiamycin on performance and carcass traits of feedlot steers. S.L. Silva¹, R. Almeida*², D. Schwahofer¹, P.R. Leme¹, D.P.D. Lanna³; ¹FZEA/USP Pirassununga, SP, Brazil, ²UFPR and PUCPR & LNCA-ESALQ/USP Piracicaba, SP, Brazil, ³LNCA-ESALQ/USP Piracicaba, SP, Brazil
- M167 Effects of semduramicin on performance and carcass traits of feedlot steers. R. Almeida*¹, S.L. Silva³, R.T.Y.B. Souza³, D.P.D. Lanna², P.R. Leme³; ¹UFPR and PUCPR & LNCA-ESALQ/USP Piracicaba, SP, Brazil, ²LNCA-ESALQ/USP Piracicaba, SP, Brazil, ³FZEA/USP Pirassununga, SP, Brazil
- M168 Chlortetracycline, but not Synovex-S, Differentially Affects Tissue Expression of High-Affinity Glutamate Transporters in Fattening Steers . Geri L. Sipe*, Susanna E. Kitts, Kyle R. McLeod, James C. Matthews; Department of Animal Sciences, University of Kentucky, Lexington
- M169 Influence of genotype and diet on steer performance. C.L. Ferrell*, E.D. Berry, H.C. Freetly, D.N. Miller; USDA-ARS; U.S. Meat Animal Research Center, Clay Center, NE
- M170 Zinc increases differentiation of bovine intramuscular adipocytes by suppressing nitric oxide production and increasing PPAR γ 2 gene expression. Young Sook Oh¹, Stephen B. Smith², Chang Bon Choi*¹; ¹Department of Animal Science, Yeungnam University, Gyeongsan, Korea, ²Department of Animal Science, Texas A & M University, College Station
- M171 Performance And Residual Feed Intake Differences Between Steers Housed In Individual Or Group Pens. Pedro V. Paulino*^{1,2}, Fernanda C. Castro¹, Ana C. Magnabosco^{1,3}, Roberto D. Sainz¹; ¹University of California, Davis, ²Universidade Federal de Vicosa, Vicosa, MG, Brasil, ³Universidade Catolica de Goias, Goiania, GO, Brasil
- M172 Effect of supplemental chromium on tissue chromium concentrations in cattle. Jerry W. Spears*¹, K. E. Lloyd¹, M. E. Tiffany¹, M. T. Socha²; ¹North Carolina State University, Raleigh, ²Zinpro Corp, Eden Prairie, MN
- M173 Magnesium sulfate affects water consumption and drinking behavior of beef cattle. A.S. Grout¹, D.M. Veira*², D.M. Weary¹, M.A.G. von Keyserlingk¹, D. Fraser¹; ¹Animal Welfare Program, University of British Columbia, Vancouver, British Columbia, Canada, ²Agriculture and Agri-Food Canada, Kamloops, British Columbia, Canada
- M174 Selenium concentration of colostrum and milk from beef cows receiving different forms of selenium supplementation. P. A. Davis*, L. R. McDowell, R. Van Alstyne, E. Y. Matsuda-Fugisaki, N. S. Wilkinson; Department of Animal Sciences, University of Florida, Gainesville
- M175 Effect of high-level copper supplementation on copper status and performance of beef heifers consuming molasses-based supplements. John D. Arthington*, Findlay M. Pate; University of Florida, Range Cattle Research and Education Center, Ona, FL
- M176 Supplemental phosphorus removal for finishing yearling Holstein steers. A. M. Brokman*¹, J. W. Lehmkuhler¹, D. J. Undersander¹; ¹University of Wisconsin-Madison, Madison, ²Agronomy, University of Wisconsin, Madison

- M177 Evaluation of machine milking and weigh-suckle-weigh technique for quantification of milk production at six or twelve hour udder-fill intervals. W. J. Sexten*, D. B. Faulkner, J. M. Dahlquist; University of Illinois, Urbana
- M178 Effect of esterase enzyme treatment on the in situ rumen degradability and soluble carbohydrate content of tropical grasses. N. A. Krueger*, A. T. Adesogan, D. B. Dean, W. K. Krueger; University of Florida, Gainesville
- M179 Effect of exogenous amylase and corn type on performance and carcass characteristics of finishing beef heifers. Susan M. Speight*¹, Katie C. Hanson¹, Juan Tricarico², Kyle R. McLeod¹, David L. Harmon; ¹University of Kentucky, Lexington, ²Alltech Biotechnology, Inc., Nicholasville, KY
- M180 Effect of an exogenous fibrolytic enzyme on intake and ruminal variables in lambs fed Guinea grass (*Panicum maximum* var. Mombasa) hay. J. H. Avellaneda-Cevallos¹, S. S. González*², J. M. Pinos-Rodríguez³, A. Hernández², R. Bárcena-Gama², M. Cobos², D. Hernández-Sánchez²; ¹Universidad Técnica Estatal de Quevedo UTEQ, Quevedo, Ecuador, ²Colegio de Postgraduados Montecillo, Estado de México, México, ³Universidad Autónoma de San Luis Potosí UASLP, Estado de San Luis Potosí, México
- M181 Evaluation of modified sodium silicate as a grain conditioner for corn and grain sorghum. C. R. Richardson*¹, K. F. Wilson¹, T. C. Bramble¹, J. H. Mikus¹, I. Cisneros²; ¹Texas Tech University, Lubbock, ²Concorde Technologies, Odessa, TX
- M182 Effects of replacing rice straw with wormwood (*Artemisia Montana* Pampan) silage in the diets of Korean Hanwoo steers on performance, carcass characteristics and muscle fatty acid profile. S. C. Kim*¹, J. H. Kim², J. H. Shin², A. T. Adesogan¹, Y. D. Ko²; ¹Department of Animal Science, University of Florida, Gainesville, ²Division of Applied Life Science, Gyeongsang National University, Jinju, Korea
- M183 Rumen digestibility of receiving rations for feedlot steers containing wheat midds and soybean hulls. Paul M. Walker*¹, Kyle E. Earing¹, Lindsey A. Mathews¹, Jennifer E. Ringler²; ¹Illinois State University, Normal, ²University of Kentucky, Lexington
- M184 Effect of vitamin E and method of administration on performance and meat color of beef cattle. Iván García*¹, Ramiro Alderete¹, Alma Alarcón¹, Carlos Rodríguez¹, Juan Ortega¹, José Pedraza², Omar Medina²; ¹Facultad de Zootecnia, Universidad Autónoma de Chihuahua Periferico Fco. R. Almada km. 1.5 C.P. 31031. Chihuahua, Chih. México, ²Facultad de Química, Universidad Nacional Autónoma de México Cd. Universitaria, Del. Coyoacan, C.P. 04510. Distrito Federal, México.
- M185 Effect of monensin on milk production, composition and body condition score of Murrah buffalo cows in early lactation. André Mendes Jorge*¹, Cristiana Andrighetto²; ¹UNESP-FMVZ-DPEA-Botucatu, ²UNESP-FMVZ-PGZOO-Botucatu
- M186 The effect of Acid Buf in dairy cow diets on production response and rumen parameters. Christian W Cruywagen*¹, J Pieter Swiegers², Stephen J Taylor³, Ewie Coetzee⁴; ¹Department of Animal Sciences, University of Stellenbosch, Stellenbosch, South Africa, ²Bokomo Feeds, Malmesbury, South Africa, ³Celtic Sea Minerals, Carrigaline, Co. Cork, Ireland, ⁴Formufeed, Villiersdorp, South Africa
- M187 Effect of malate supplementation on rumen fermentation and milk production in postpartum cows. Maria Devant¹, Alex Bach*^{1,2}; ¹IRTA-Unitat de Remugants, Barcelona, Spain, ²ICREA, Barcelona, Spain
- M188 The effect of an inoculant containing *Lactobacillus buchneri* 40788 on fermentation and aerobic stability of corn silage at two packing densities. Marcos Antoniali¹, Oscar C.M. Queiroz², Renato J. Schmidt*³, Limin Kung, Jr³; ¹Universidade Estadual Paulista Jaboticabal, SP, Brazil, ²Universidade de Sao Paulo, Piracicaba, SP, Brazil, ³University of Delaware, Newark
- M189 Effect of feeding *Aspergillus oryzae* fermentation culture to lactating dairy cows on milk yield, composition, and rumen fermentation. Tetsunari Sato*, Toru Takano, Kazuma Murata; ZENNOH National Federation of Agricultural Co-operative Associations 1708-2 Tsukuriya Tsukuba Ibaraki, Japan
- M190 Effect of live yeast *Saccharomyces cerevisiae* on milk production, quality and health status of Saanen dairy goats. R. Paratte*¹, A. Stella¹, G. Cigalino¹, G. Soncini¹, L. Valnegri¹, E. Chevaux², G. Savoini¹, V. Dell'Orto¹; ¹Dept. of Vet. Sci. Tech. Food Safety, University of Milan via Celoria, 10 Milano-Italy, ²Lallemand SA rue de Briquetiers, 19 Blagnac Cedex-France
- M191 Dose response of a direct-fed microbial on milk yield, milk components, body weight, and days to first ovulation in primi- and multiparous Holstein cows. D. R. Stein*¹, D. T. Allen¹, K. W. Gates¹, T. G. Rehberger², K. J. Mertz², D. A. Jones¹, L. J. Spicer¹; ¹Oklahoma State University, Stillwater, ²Agtech Products, Inc., Waukesha, WI
- M192 Effect of Forage to Concentrate Ratio on B-Vitamins in Different Ruminal Fractions. D. E. Santschi*¹, J. Chiquette², R. Berthiaume², R. Martineau³, J. J. Matte², A. F. Mustafa¹, C. L. Girard²; ¹McGill University Ste-Anne-de-Bellevue, QC, Canada, ²Dairy and Swine R&D Centre, Lennoxville, QC, Canada, ³Universite Laval Quebec, QC, Canada
- M193 A statistical evaluation of early- or mid-lactation dairy cow responses to dietary sodium bicarbonate. W. Hu*, M. R. Murphy; University of Illinois, Urbana

- M194 Fate of Supplemental B-Vitamins in the Gastrointestinal Tract of Dairy Cows. D. E. Santschi^{*1}, R. Berthiaume², J. J. Matte², A. F. Mustafa¹, C. L. Girard²; ¹McGill University Ste-Anne-de-Bellevue, QC, Canada, ²Dairy and Swine R&D Centre, Lennoxville, QC, Canada
- M195 Ruminant degradability of nitrogen, phosphorus, and potassium from dairy feedstuffs. A. N. Hristov^{*1}, A. Melgar¹, A. E. Foley¹, R. Kincaid²; ¹Department of Animal and Veterinary Science, University of Idaho Moscow, ²Department of Animal Sciences, Washington State University Pullman
- M196 Effects of a fibrolytic enzyme formulation on forages, co-products, and byproducts fermented in vitro. K.F. Wilson^{*1}, G.V. Pollard², C.R. Richardson³; ¹Animal Feed Technologies Greeley, CO, ²Texas State University, San Marcos, ³Texas Tech University, Lubbock
- M197 Effects of fibrolytic enzymes and fat supplementation on fiber digestibility, nitrogen metabolism and fermentation profile in continuous culture system. Amine Bouattour, Lorena Castillejos, Ramon Casals, Sergio Calsamiglia*, Elena Albanell; Universitat Autònoma de Barcelona
- M198 Effects of fibrolytic enzymes on in vitro ruminal degradation and gas production of alfalfa hay. Jong-Su Eun^{*1}, Sung-Ho Hong², Karen Beauchemin¹, Michael Bauer³; ¹Agriculture and Agri-Food Canada, Lethbridge, AB, Canada, ²Sahmyook College, Cheongnyangni, Seoul, Korea, ³Syngenta Biotechnology Inc., Research Triangle Park, NC
- M199 Ranges of optimal cellulase activity of commercial fibrolytic enzyme preparations used in ruminant diets. Eliel González*, Elena Albanell, Gerardo Caja, Ramón Casals; Grup de Recerca en Remugants, Departament de Ciència Animal i dels Aliments, Universitat Autònoma de Barcelona, Bellaterra, Spain
- M200 Effects of a supplemental amylase enzyme preparation on lactational performance in commercial dairy herds. 1. Whole herd responses. G. A. Harrison*, J. M. Tricarico; Alltech Biotechnology, Inc., Nicholasville, KY
- M201 Effect of a supplemental amylase enzyme preparation on lactational performance in commercial dairy herds. 2. Individual cow responses. G. A. Harrison*, J. M. Tricarico; Alltech Biotechnology, Inc., Nicholasville, KY
- M202 Effect of increased residual water-soluble carbohydrate concentration in ryegrass silage on intake, milk production, and N excretion in dairy cows. J. M. Moorby*, W. J. Fisher, R. T. Evans; Institute of Grassland and Environmental Research, Aberystwyth, UK
- M203 An evaluation of FuzZPelletTM whole cottonseed product on milk production in post-peak Holstein cows. Porter, P. A., N. L. Scott, Land O'Lakes, Inc. and R. B. Harding, Buckeye Technology, Memphis, TN. Paul A. Porter^{*1}, Naomi L. Scott¹, R. Bruce Harding²; ¹Land O'Lakes Inc, Gray Summit, MO, ²Buckeye Technology, Memphis, TN
- M204 Effect of feeding red clover or ryegrass silage to dry dairy cows on milk productivity in the next lactation. J. M. Moorby^{*1}, P. H. Robinson², W. J. Fisher¹, D. W. R. Davies¹; ¹Institute of Grassland and Environmental Research, Aberystwyth, UK, ²UCCE, Dept. of Animal Science, University of California, Davis
- M205 Coffee Hulls in Diets of Dairy Cows: Nitrogenous Compounds Balance. Alexandre Lima de Souza^{*1}, Rasmô Garcia², Luciano Cabral¹, Fernando Salgado Bernardino², Joanis Tilemahos Zervoudakis¹, Fernanda Cipriano Rocha², Rilene Ferreira Diniz Valadares²; ¹Universidade Federal de Mato Grosso DZER/FAMEV/UFMT, ²Universidade Federal de Viçosa DZO/UFV
- M206 Treated extruded soybean meal as a source of fat and protein for dairy cows. A. L. Ure^{*1}, T. R. Dhiman¹, M. D. Stern², K. C. Olson¹; ¹Utah State University, Logan, UT, ²University of Minnesota, St. Paul
- M207 Forage quality of legume hays fed to dairy cows in the tropics. Teodoro M. Ruiz*, Mario Rosario-López; University of Puerto Rico, Mayaguez, PR
- M208 Lactational response of Holstein dairy cows to grinding and heat processing of cottonseed. A. R. Foroughi*, R. Valizadeh, A. A. Naserian, M. Danesh; Ferdowsi University of Mashhad
- M209 Factors affecting the concentration of hydrogen sulfide in the rumen gas of dairy cows. RJ Dewhurst*, LJ Harris, RT Evans; Institute of Grassland and Environmental Research, Aberystwyth, UK
- M210 Sorting by dairy cows fed a dry diet in a tie-stall or free-stall barn. C Leonardi*, L Armentano; University of Wisconsin, Madison
- M211 Utilization of rejected milk in dairy farms by ensiling with rice hulls for animal feeding. Maritere Crespo*, Angel A. Custodio, Abner A. Rodríguez; University of Puerto Rico, Mayaguez, PR
- M212 Effect of different whole cottonseed concentrations on some hematologic data in dairy cattle. F. Sefika Hatipoglu^{*1}, Mehmet S. Gulay¹, Fatma Karakas Oguz², Numan Oguz²; ¹Department of Physiology, Burdur Veterinary Faculty, Akdeniz University, ²Department of Animal Nutrition, Burdur Veterinary Faculty, Akdeniz University
- M213 Effects of conservation of timothy on nitrogen metabolism in lactating dairy cows. R. Martineau^{*1}, H. Lapierre², D.R. Ouellet², D. Pellerin¹, R. Berthiaume²; ¹Université Laval, Québec, Canada, ²Dairy and Swine R&D Centre, Agriculture and Agri-Food Canada, Lennoxville, Québec, Canada

- M214 Fermentation characteristics of ensiling wet corn distillers grains in combination with wet beet pulp. K. F. Kalscheur*, A. D. Garcia, A. R. Hippen, D. J. Schingoethe; South Dakota State University, Brookings.
- M215 Effect of two forms of lauric acid on ruminal protozoa and fermentation pattern in dairy cows. Antonio P. Faciola*^{1,2}, Glen A. Broderick¹, Alexander N. Hristov³, Maria I. Leão²; ¹U. S. Dairy Forage Research Center, Madison, WI, ²Universidade Federal de Viçosa MG, Brazil, ³University of Idaho, Moscow
- M216 Effects of forage source on the response of milk fatty acid composition to soybean and marine algal oil supplementation in ewes. C. K. Reynolds*¹, S. C. Loerch¹, G. D. Lowe¹, D. D. Clevenger¹, P. A. Tirabasso¹, V. L. Cannon¹, J. R. Abril²; ¹The Ohio State University, Wooster, ²Martek Biosciences, Boulder, CO
- M217 Use of liquid whey, urea and molasses as additives to ensiled wheat straw. F.T. Sleiman*, N.J. Rebeiz, M.G. Uwayjan, M.T. Farran, R.A. Zurayk, E.K. Barbour, S.K. Hamadeh; American University of Beirut
- M218 Undegradable intake protein content and digestibility of brome, birdsfoot trefoil, and heat-treated alfalfa samples. H.L. Haugen, S.K. Ivan*, T.J. Klopfenstein; University of Nebraska, Lincoln
- M219 Preliminary report on dry matter degradability of Cassia tora. Juan A Vergara-Lopez*, Rover E Maldonado; Instituto Nacional de Investigaciones Agrícolas (INIA) municipio Catatumbo, estado Zulia, Venezuela
- M220 Roundup ready® alfalfa is compositionally equivalent to conventional alfalfa. Melinda McCann*¹, Glennon Rogan¹, Sharie Fitzpatrick²; ¹Monsanto Company, St. Louis, MO, ²Forage Genetics International, West Salem, WI
- M221 Digestibility of *Streptomyces* solubles and effects of its inclusion in diets of lactating dairy cows. M. R. Murphy, M. A. Shah, W. Hu*, A. C. Norman, C. J. Laesch; University of Illinois, Urbana
- M222 Effect of replacing concentrates with wormwood on nitrogen balance and ruminal fermentation characteristics in sheep. Y. D. Ko*¹, J. H. Kim¹, M. D. Lee¹, A. T. Adesogan², S. C. Kim²; ¹Division of Applied Life Science, Gyeongsang National University, Jinju, Korea, ²Department of Animal Sciences, University of Florida, Gainesville
- M223 Effects of nonstructural carbohydrate and protein sources on performance, ruminal fermentation, total tract digestibility and feeding behavior in growing calves. A. Rotger, A. Ferret, S. Calsamiglia*, X. Manteca; Universitat Autònoma de Barcelona Edifici V, Campus UAB, Bellaterra 08193, Barcelona, Spain

Rabbit Species

Abstract

- M224 Effects of dietary mannan oligosaccharide in comparison to oxytetracyclin on cecal fermentation and performance of rabbits. A.P. Fonseca¹, L. Falcão¹, P. Spring*², A. Kocher³; ¹Universidade Técnica de Lisboa Instituto Superior de Agronomia, Lisboa, Portugal, ²Swiss College of Agriculture, Zollikofen, Switzerland, ³Alltech Biotechnology Center, Dunboyne, Co. Meath, Ireland

Production, Management and the Environment Systems, Economics, and Miscellaneous

Abstract

- M225 Minimum Dry Period Length to Maximize Performance. Melvin T. Kuhn*, Jana L. Hutchison, H. Duane Norman; Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD
- M226 Effect of photoperiod on milk production in lactating dairy cows. M. J. VanBaale*¹, D. V. Armstrong¹, R. M. Mattingly², J. B. Fiscalini²; ¹The University of Arizona, Tucson, ²Fiscalini Dairy Farm, Modesto, CA
- M227 Reasons and timing of cows leaving dairy herds in Florida and Georgia. B. L. Butler*, A. de Vries; Department of Animal Sciences, University of Florida, Gainesville
- M228 Effect of automatic milking systems on milk yield in Italian conditions. Marisanna Speroni, Giacomo Pirlo*, Susanna Lolli; Animal Production Research Institute via Porcellasco, Cremona, Italy
- M229 Relationship between international body condition scoring systems. JR Roche*¹, PG Dillon², CR Stockdale³, L Baumgard⁴, K Macdonald¹, M VanBaale⁴; ¹Dexcel, Hamilton, New Zealand, ²Teagasc Moorepark, Fermoy, Co. Cork, Ireland, ³Primary Industries Research Victoria, Kyabram, Victoria, Australia, ⁴The University of Arizona, Tucson
- M230 Evaluation of alternative body measurements for growing heifers. Daniel M. Lefebvre*, Bruno Gosselin, René Lacroix; PATLQ - Quebec DHI Ste-Anne-de-Bellevue, QC, Canada

- M231 Effect of bedding materials and modified rubber free-stall bases on stall usage by lactating dairy cows. R. Panivivat*¹, E. B. Kegley¹, D. W. Kellogg¹, J. A. Pennington², Z. B. Johnson¹; ¹Department of Animal Science, University of Arkansas, Fayetteville, ²University of Arkansas Cooperative Extension Service, Little Rock AR
- M232 Use of ambient and physiological markers to predict production changes in dairy cows resulting from acute heat challenge. J.D. Sampson*, D.E. Spiers, J.N. Spain, R.P. Rhoads, M. Ellersieck; University of Missouri, Columbia
- M233 Investigating effects of heat stress on milk production and composition of Iranian Holstein dairy cattle. Abasali Naserian*, Behnam Saremi, Farhad Karavan; Animal Science Department, Ferdowsi University of Mashhad
- M234 Effects of different bone preparation methods (fresh, dry, and fat-free dry) on bone parameters and the correlations between bone-breaking strength and the other bone parameters. W.K. Kim*¹, L.M. Donalson¹, P. Herrera¹, C.L. Woodward¹, L.F. Kubena², D.J. Nisbet², S.C. Ricke¹; ¹Texas A & M University, College Station, ²USDA-ARS, Southern Plains Agricultural Research Center, College Station, TX
- M235 Interrelationships of traits measured on male Angora goats during a central performance test. Faron A. Pfeiffer*, Christopher J. Lupton, Daniel F. Waldron; Texas Agricultural Experiment Station, Texas A&M University System, San Angelo
- M236 Factors affecting performance and carcass characteristics of beef cattle: a meta-analysis. Malcolm J. McPhee*, Jim W. Oltjen, Tom R. Famula, Robert D. Sainz; Department of Animal Science, University of California, Davis
- M237 Cow and calf performance in a management system including twinning and early weaning. R. Wasson*¹, J. E. Larson², D. R. Brown¹, A. DiCostanzo², J. D. Arthington³, G. C. Lamb¹; ¹North Central Research and Outreach Center, University of Minnesota, Grand Rapids, ²Department of Animal Science, University of Minnesota, St. Paul, ³Range Cattle Research and Education Center, University of Florida, Ona
- M238 Acute phase protein response to weaning and transport in calves produced by matings of Romosinuano, Angus, and Brahman. J. D. Arthington*¹, D. G. Riley², C. C. Chase, Jr.², W. A. Phillips³, S. W. Coleman²; ¹Univ. of Florida, Gainesville, ²USDA, ARS, Brooksville, FL, ³USDA, ARS, El Reno, OK
- M239 Effects of fasting and handling stress of market pigs on plasma concentrations of stress-associated enzymes and carcass quality. D.H. Kim*, J.T. Seo, D.M. Ha, C.Y. Lee; Regional Animal Industry Research Center, Jinju National University, 150 Chilamdong, Jinju, Korea
- M240 Economic evaluation of gestation crates versus loose-housing systems for gestating sows. Mike Ellis, Matthew E. Kocher*, Gary D. Schnitkey; University of Illinois, Urbana

Horse Species

Abstract

- M241 Handling method influences equine urinary calcium and nitrogen. Cara I. O'Connor*, Brian D. Nielsen, Marti Mayack; Michigan State University, East Lansing
- M242 The Effects of FEB-200 on Serum Progesterone and Cortisol Levels of Pregnant Mares in Early Gestation Grazing on Endophyte-Infected Tall Fescue Pastures. V. Akay*¹, R. Stepp², P. Karnezos¹; ¹Alltech, Inc., Nicholasville, KY, ²Southern States Cooperative, Inc., Richmond, VA.
- M243 The effect of MOS supplementation on immune response of mares and their foals. Kelly R. Spearman*, Edgar A. Ott; University of Florida, Gainesville
- M244 Influence of extender and processing method on fertility and motility of cold stored stallion semen. C. L. Dekat*, G. W. Webb, K. E. Harrison; Southwest Missouri State University, Springfield
- M245 Affect of pyruvate and cholesterol on post thaw motility of frozen stallion spermatozoa. K. E. Harrison*, G. W. Webb, C. L. Dekat; Southwest Missouri State University, Springfield
- M246 Influence of season and cooling device during commercial shipment of stallion semen. G. W. Webb*¹, M. J. Arns², M. A. Harris², C. L. Dekat¹; ¹Southwest Missouri State University, Springfield, ²University of Arizona, Tucson,
- M247 Massage as a recovery method in exercising horses. C.A. Shea Porr*, K. Bennett-Wimbush; Ohio State University, Wooster
- M248 Comparisons of Behavioral Testing on Morgan Horses at Different Training Levels. K.M. Holt, M.C. Nicodemus*; Animal & Dairy Sciences, Mississippi State University, Mississippi State

Physiology and Endocrinology

Female Reproduction

Abstract

- M249 Residual feed intake (RFI) and serum concentrations of insulin in developing Brangus heifers from sires with differing EPDs for growth and scrotal circumference. K.L. Shirley^{*1}, M.G. Thomas¹, D.H. Keisler², D.M. Hallford¹, D.M. Montrose¹, G.A. Silver¹, M.D. Garcia¹; ¹New Mexico State University, Las Cruces, ²University of Missouri, Columbia
- M250 Inhibition of development of bovine embryos by gossypol – timing of inhibitory effects and possible involvement of apoptosis. Joel Hernández-Cerón¹, Frank D. Jousan^{*2}, Paolete Soto², Peter J. Hansen²; ¹Universidad Nacional Autónoma de México México, México, ²University of Florida, Gainesville
- M251 Distinct steroidal regulation of mRNAs for aromatase and gonadotropin receptors in bovine granulosa cells. W. X. Luo^{*}, M. C. Wiltbank; University of Wisconsin-Madison, Madison
- M252 Expression of genes encoding steroidogenic enzymes and in vitro steroidogenesis by dominant bovine follicles during the 1st follicular wave. KE Valdez^{*1}, SP Cuneo², PJ Gorden³, AM Turzillo^{4,5}; ¹Physiological Sciences, University of Arizona, Tucson, ²Department of Veterinary Science and Microbiology, University of Arizona, Tucson, ³Dairy Veterinary Services, Chandler, AZ, ⁴Department of Physiology, University of Arizona, Tucson, ⁵Department of Animal Sciences, University of Arizona, Tucson
- M253 Effects of dietary supplemental fat on reproductive performance and body composition in pre-puberal beef heifers. Alecsandro R. Dos Santos^{*1}, Scott T. Willard², O. J. Sharpe³, Rhonda C. Vann¹; ¹Brown Loam Experiment Station, Raymond, MS, ²Mississippi State University, Mississippi State, ³Sharpe Farm, Rolling Fork, MS
- M254 Lipid transport in the developing bovine follicle: mRNA expression for selective uptake receptors increases and for endocytosis receptors decreases. Nurit Argov^{*1}, Uzi Moallem², David Sklan¹; ¹Hebrew University, Rehovot, Israel, ²ARO, Bet Dagan, Israel
- M255 The expression and localisation of angiogenic growth factors in the porcine corpus luteum. Robert S Robinson^{*}, Amanda J Hammond, George E Mann, Morag G Hunter; Division of Animal Physiology, University of Nottingham, Sutton Bonington Campus, Loughborough, Leics, UK
- M256 Factors associated with multiple ovulation in lactating dairy cows. H. Lopez^{*1}, D.C. Caraviello¹, L.D. Satter^{1,2}, M.C. Wiltbank¹; ¹Dairy Science Department, University of Wisconsin, ²US Dairy Forage Research Center, USDA-ARS, Madison
- M257 What regulates ovine placental steroidogenesis? C Weems^{*}, Y Weems, C Yin; University of Hawaii, Honolulu
- M258 Evaluation of an SNP in steroidogenic acute regulatory (STAR) protein for reproductive traits in swine. Jong G. Kim^{*}, Jeffrey L. Vallet, Ronald K. Christenson, Gary A. Rohrer, Danny J. Nonneman; USDA, ARS, U.S. Meat Animal Research Center, Clay Center, NE
- M259 Ontogeny of uterine gene expression in the prepuberal pig. R. Les Richardson^{*1}, Gary J. Hausman¹, Romdhane Rekaya², Laura Lee-Rutherford¹, Robert R. Kraeling¹, C. Richard Barb¹; ¹USDA-ARS, Athens, GA, ²University of Georgia, Athens
- M260 Observed frequency of monozygotic twinning in lactating Holstein cows. Noelia Silva Del Rio^{*}, Brian W. Kirkpatrick, Paul M. Fricke; University of Wisconsin - Madison, Madison
- M261 Ontogeny of ovarian gene expression in the prepuberal pig. R. Les Richardson¹, C. Richard Barb¹, Romdhane Rekaya², Laura Lee-Rutherford¹, Robert R. Kraeling¹, Gary J. Hausman^{*1}; ¹USDA-ARS, Athens, GA, ²University of Georgia, Athens
- M262 Ovarian activity of dairy cows fed two amounts of phosphorus. S. K. Tallam^{*}, A. D. Ealy, L. C. Griel, Jr., K. A. Bryan, Z. Wu; Pennsylvania State University, University Park
- M263 Association between plasma urea nitrogen levels and reproductive fluid urea nitrogen and ammonia concentrations in lactating dairy cows. Douglas S Hammon^{*1}, G Reed Holyoak², Tilak R Dhiman¹; ¹Utah State University, Logan, ²Oklahoma State University, Stillwater
- M264 Gonadotropin secretion and ovarian activity in non-pregnant mares treated continuously with GnRH during the anovulatory season. Stephanie Morton^{*1,2}, Dorota Zieba^{1,2}, Gary L. Williams^{1,2}; ¹Texas A&M University Agricultural Research Station, Beeville, TX, ²Texas A&M University, College Station
- M265 Effect of genetic strain, feed allowance, and parity on interval to first ovulation and the first estrous cycle in pasture-managed dairy cows. J.P. Meyer^{*1}, G.A. Verkerk², P.J. Gore², K.A. Macdonald², C.W. Holmes³, M.C. Lucy¹; ¹University of Missouri, Columbia, ²Dexcel Ltd., Hamilton, New Zealand, ³Massey University, Palmerston North, New Zealand

- M266 Effect of ovulation rate on development of the ovine corpus luteum. S. E. Echternkamp*, R. A. Cushman, R. K. Christenson; USDA, ARS US Meat Animal Research Center, Clay Center, NE
- M267 A comparison of the anti-luteolytic activities of recombinant ovine IFN-tau and alpha in sheep. M.P. Green*¹, L.D. Spate¹, J.A. Bixby¹, A.D. Ealy², R.M. Roberts¹; ¹Dept. of Animal Science, University of Missouri, Columbia, ²Dept. of Dairy & Animal Science, Pennsylvania State University, University Park
- M268 Effects of monensin supplementation peripartum in metabolic and reproductive parameters in anestrous postpartum Nellore cows. MC Matos*¹, DF Biluca², JLM Vasconcelos²; ¹FCAV-UNESP Jaboticabal, SP, Brazil, ²FMVZ-UNESP Botucatu, SP, Brazil
- M269 Progesterone intravaginal device and/or calf removal on anestrous Angus/crossbred cows during a 60-day breeding season. JLM Vasconcelos*, GC Perez, RM Santos, ATN Silva, ABB Maciel; FMVZ-UNESP Botucatu, SP, Brazil
- M270 Effect of subluteal concentrations of progesterone on an estradiol cypionate induced LH surge in lactating Holstein cows. T.B. Hatler *, D.L. Ray, S.H. Hayes, W.J. Silvia; Department of Animal Science, University of Kentucky, Lexington
- M271 Effect of subluteal concentrations of progesterone on follicular phase events in lactating Holstein cows. T.B. Hatler*, D.L. Ray, S.H. Hayes, W.J. Silvia; Department of Animal Sciences, University of Kentucky, Lexington

PSA-Environment and Management

Abstract #

- M272 Comparative Study of Body Characteristics of Broiler Chickens from Different Rearing Systems . Amber O. Best*, Willie L. Willis, Celestine Murray; Department of Animal Sciences, North Carolina A&T State University, Greensboro
- M273 ***Campylobacter Jejuni*** Assessment in Organic vs. Conventional Reared Broiler Chickens. LaReese T. Donaldson*, Willie L. Willis, Celestine Murray; Department of Animal Sciences, North Carolina A&T State University, Greensboro
- M274 Withdrawn by author
- M275 Effect of molting on in vitro tissue invasion by ***Salmonella enteritidis***. Randle W. Moore*, Peter S. Holt; United States Department of Agriculture, Agricultural Research Service, Southeast Poultry Research Laboratory, Athens, GA
- M276 Influence of experimental chlorate product (ECP) in drinking water on environment of the gastrointestinal tract and ***Salmonella enteritidis*** (SE) in laying hens during an induced molt. L. F. Kubena*¹, J. L. McReynolds¹, J. A. Byrd¹, R. C. Anderson¹, S. C. Ricke², D. J. Nisbet¹; ¹USDA-ARS, SPARC, Food & Feed Safety Research Unit, College Station, TX, ²Department of Poultry Science, Texas A & M University, College Station
- M277 Impact of the laying hen cycle and molting on the prevalence and populations of ***Salmonella***. X. Li*, J.B. Payne, F.B.O. Santos, K.E. Anderson, B.W. Sheldon; Department of Poultry Science, North Carolina State University, Raleigh
- M278 Late Post-molt Egg Production in Laying Hens Molted with Different Rations of Alfalfa and Layer Ration. L.M. Donalson*¹, W.K. Kim¹, C.L. Woodward¹, P. Herrera¹, L.F. Kubena², D.J. Nisbet², S.C. Ricke¹; ¹Department of Poultry Science, Texas A&M University, College Station, ²USDA Agricultural Research Service, College Station, TX
- M279 Evaluating bone and eggshell parameters of molted hens at the end of 2nd laying cycle compared to non-molted hens. W.K. Kim*¹, L.M. Donalson¹, P. Herrera¹, C.L. Woodward¹, L.F. Kubena², D.J. Nisbet², S.C. Ricke¹; ¹Texas A & M University, College Station, ²USDA-ARS, Southern Plains Agricultural Research Center, College Station, TX
- M280 Reduction of ***Salmonella typhimurium*** (ST) Yeast Agglutination and Intestinal Colonization in Broilers by Galactose or Mannose Liberated from Guar Gum. J. T. Lee*, S. E. Tichy, C. A. Bailey, A. L. Cartwright, D. J. Caldwell; Texas A&M Univeristy System
- M281 Attachment of ***Salmonella*** and ***Campylobacter*** spp., to Chicken Spermatozoa viewed by Scanning Electron Microscopy. Nelson A. Cox¹, J. Stan Bailey¹, Douglas E. Cosby*¹, R. Jeff Buhr¹, L. Jason Richardson¹, Jeanna L. Wilson², Dianna V. Bourassa², W.L. Steffans³, Mary B. Ard³; ¹U. S. Department of Agriculture, Russell Research Center, Athens, GA, ²Department of Poultry Science, University of Georgia, Athens, ³Department of Veterinary Pathology, University of Georgia, Athens
- M282 Efficacy of Sal CURB® ASF liquid antimicrobial against various *Salmonella* species in a meat and bone meal matrix. Meredith L. Burke*, Jeff K. Murphy, Vincent J.H. Sewalt; Kemin Americas, Inc., Des Moines, IA

- M283 Effect of Storage Time on *Campylobacter Jejuni* Isolation and Drug Sensitivity in Broiler Wings. Willie L. Willis*, Kamisha Smith, Celestine Murray; Department of Animal Sciences, North Carolina A&T State University, Greensboro
- M284 Effect of Immustim® and Protimax® on *Campylobacter jejuni* and *Salmonella typhimurium* Populations in Broilers. J. Spruill*, R. Plunske, J. Grimes, P. Ferket, B. Sheldon; North Carolina State University, Raleigh
- M285 Acidified Sodium Chlorite application in the drinking water to control *Salmonella* colonization in market age broilers. P. Mohyla*¹, S.F. Bilgili¹, D.E. Conner¹, C.C. Warf², G.K. Kemp²; ¹Auburn University, Auburn, ²Alcide Corporation, Redmond, WA
- M286 Changes in intestinal microbiota and ileal susceptibility to pathogen attachment in broilers subjected to 24 hr heat stress. K.B. Selig*, J.A. Patterson; Purdue University, West Lafayette, IN
- M287 Case Study: The effect of drinking water treated with KEM SAN™ brand liquid acidifier on the livability of breeder candidates. J.K. Murphy*¹, P.A. Welch², V.J.H. Sewalt¹; ¹Kemin Americas, Inc., Des Moines, IA, ²Nutritional Services Consulting, LLC, Laurel, MS
- M288 Comparison of antibiotic resistance frequency of *Salmonella Typhimurium* growth in glucose-limited continuous culture at slow and fast dilution rates. N. Karabasil¹, S. Bulajic¹, W. K. Kim*², K. D. Dunkley², T. R. Callaway³, T. L. Poole³, S. C. Ricke², R. C. Anderson³, D. J. Nisbet³; ¹University of Belgrade, Belgrade, Serbia-Montenegro, ²Texas A & M University, College Station, ³USDA-ARS, FFSRU, College Station, TX
- M289 The Influence of a Fructooligosaccharide (FOS) Prebiotic with Feed Substrates on *in vitro* *Salmonella typhimurium* growth of Laying Hen Cecal Bacteria. L.M. Donalson*¹, W.K. Kim¹, P. Herrera¹, C.L. Woodward¹, L.F. Kubena², D.J. Nisbet², S.C. Ricke¹; ¹Department of Poultry Science, Texas A&M University, College Station, ²USDA-ARS, College Station, TX
- M290 Comparison of *Aspergillus* Meal or Inulin Prebiotics as Substrates for *Salmonella* or Lactobacilli *in vitro*. G.M. Nava*¹, V. Davila², L. Newberry¹, G. Tellez¹, A.M. Donoghue³, B.M. Hargis¹; ¹University of Arkansas Center of Excellence for Poultry Science, University of Arkansas, Fayetteville, ²Universidad Nacional Autonoma de Mexico CEIEPA, FMVZ-UNAM, Mexico City, ³PPPSRU/ARS/USDA, Fayetteville, AR
- M291 Antibiotic, prebiotic and probiotic programs for *Salmonella* sp. reduction in chicks, pullets, hens and their eggs. Alison St. John*¹, Brenda Love², Daniel Shaw², Paul Patterson¹; ¹Department of Poultry Science, The Pennsylvania State University, University Park, ²Department of Veterinary Science, The Pennsylvania State University, University Park
- M292 Evaluation of alternative host bacteria as vehicles for oral administration of bacteriophages. L.R. Bielke*, S.E. Higgins, K.L. Guenther, G.I. Tellez, B.M. Hargis; University of Arkansas, Fayetteville
- M293 Effects of nitrocompounds and feedstuffs on *in vitro* methane production in chicken cecal contents. S. Saengkerdsub*¹, W. K. Kim¹, T. R. Callaway², R. C. Anderson², D. J. Nisbet², S. C. Ricke¹; ¹Texas A & M University, College Station, ²USDA, Agricultural Research Service, Southern Plains Agricultural Research Center, College Station, TX
- M294 Incidence of *Clostridium perfringens* in yolk follicles of broiler breeder hens. G R Siragusa*¹, N A Cox¹, J S Bailey¹, L J Richardson¹, R J Buhr¹, K L Hiatt¹, D E Cosby¹, J L Wilson², D V Bourassa²; ¹USDA-ARS, Russell Research Center, ²Department of Poultry Science, University of Georgia, Athens
- M295 Response of broilers to graded levels of sodium chlorite and citric acid in water. P. Mohyla*¹, S.F. Bilgili¹, C.C. Warf², G.K. Kemp²; ¹Auburn University, Auburn, AL, ²Alcide Corporation, Redmond, WA
- M296 Effect of high flow rate nipple drinkers on the performance of 21 d old male broiler chicks. W. B. Roush*¹, B. D. Lott², S. L. Branton¹; ¹USDA-ARS Poultry Research Unit, Mississippi State, MS, ²Poultry Science Department, Mississippi State, Mississippi State
- M297 Turkey strain effects on commercial turkey tom and hen performance. J. L. Grimes*¹, A. N. Crouch², P. R. Ferket¹, A. G. Gernat¹, J. L. Godwin¹, R. Neely¹; ¹Dept of Poultry Science, N. C. State University, College of Agriculture & Life Sciences, Raleigh, ²B.U.T.A, Lewisburg, WV
- M298 The effect of vitamin C supplementation to breeder hens and light during incubation on embryonic development and hatchability. Talat El-Sheikh*¹, Nabil Makled², Abdalla El-Gammal²; ¹T.M. El-Sheikh Faculty of Agriculture, South Valley University, Sohag, Egypt, ²M.N. Makled Faculty of Agriculture, Assiut University, Assiut, Egypt, ³A.M. El-Gammal Faculty of Agriculture, Assiut University, Assiut, Egypt
- M299 Evaluation of different means of feeding corticosterone to broilers to elicit a stress response. W. S. Virden*¹, C. D. Zumwalt¹, J. P. Thaxton¹, S. L. Branton², M. T. Kidd¹; ¹Mississippi State University, Mississippi State, ²United States Department of Agriculture

- M300 The impact of egg weight on hatchability, chick weight, chick length, and chick weight to length ratios. Josh J. Lawrence*, Ashley D. Gehring, April D. Kanderka, Gaylene M. Fasenko, Frank E. Robinson; Department of AFNS, University of Alberta, Edmonton, AB, Canada
- M301 Detection of early changes in fertile eggs during incubation using a hyperspectral imaging system. Douglas P. Smith*¹, Joseph M. Mauldin², Kurt C. Lawrence¹, Bosoon Park¹, Gerald W. Heitschmidt³; ¹USDA, ARS, Russell Research Center, Athens, GA, ²Department of Poultry Science, University of Georgia, Athens, ³Biological and Agricultural Engineering, University of Georgia, Athens
- M302 Broiler Litter Sampling Procedures. Armando S. Tasistro, Casey W. Ritz*, David E. Kissel; University of Georgia, Athens
- M303 Effects of organic acid on control of bacteria growth in drinking water for broilers. G.M. Pesti*¹, R.I. Bakalli¹, P.F. Vendrell², H.-Y. Chen³; ¹Department of Poultry Science, University of Georgia Athens, GA, ²Agricultural and Environmental Services Laboratories, University of Georgia, Athens, ³Kemira Oyj Helsinki, Finland

PSA-Extension/Instruction

Abstract

- M304 Development of a Quality Control Laboratory Design Project for Poultry Science Undergraduate Students Enrolled in an Advanced Food Microbiology Course. R.S Hardin*, M.M. Kunding, C.L Woodward, L.M Donalson, J.L Golbach, S.C Ricke; Department of Poultry Science, Texas A&M University, College Station
- M305 Student understanding of molecular genetics concepts. Bonnie S. Walters*, Tim J. Buttles; University of Wisconsin, River Falls
- M306 What does the poultry industry want when recruiting undergraduates? - an ongoing perspective survey to evaluate the importance of certain employable skills to the poultry industry. K.M. Downs*¹, J.E. Mehlhorn², J.B. Hess³, J.L. Wilson⁴; ¹Middle Tennessee State University, Murfreesboro, ²The University of Tennessee at Martin, Martin, ³Auburn University, Auburn, AL ⁴The University of Georgia, Athens

Milk Protein and Enzymes: Dairy Foods

Abstract

- M307 Exploring the structure and dynamics of labeled β -lactoglobulin using high field NMR spectroscopy. Patrick J B Edwards¹, Geoffrey B Jameson¹, Gillian E Norris², Trevor S Loo², K A N S Ariyaratne¹, Dusan Uhrin³, Paul N Barlow³, Lawrence K Creamer*⁴; ¹Institute of Fundamental Sciences Massey University, Palmerston North, ²Institute of Molecular Biosciences Massey University, Palmerston North, New Zealand, ³Edinburgh Protein Interaction Centre University of Edinburgh, Edinburgh, Scotland, ⁴Fonterra Research Centre Palmerston North, New Zealand
- M308 Water distribution in cheese and cheese models: Application of NMR techniques, including the inverse 2D-LaPlace transform. Antje Gottwald¹, Penny L Hubbard¹, Paul T Callaghan¹, Philip J Watkinson², Lawrence K Creamer*²; ¹School of Chemical and Physical Sciences, Victoria University of Wellington, New Zealand, ²Fonterra Research Centre, Palmerston North, New Zealand
- M309 Effects of genetic modification, pressure, and heat on the binding of various probes to β -lactoglobulin. Hasmukh A Patel^{1,2}, Therese Considine^{1,3}, Skelte G Anema^{3,2}, Harjinder Singh³, Lawrence K Creamer*¹; ¹Fonterra Research Centre, Palmerston North, New Zealand, ²Institute of Nutrition, Food and Human Health, Massey University, Palmerston North, New Zealand, ³Riddet Centre, Massey University, Palmerston North, New Zealand

MONDAY, JULY 26, 2004
SYMPOSIA AND ORAL SESSIONS

Combined Animal, Dairy and Poultry Extension Workshop

Chair: Theresia Lavergne, Louisiana State University

Room: 222

Time Abstract #

Introduction

9:30 AM Welcome. David Baker, Assistant Dean, University of Missouri
9:35 AM 6 Washington Update. R. Reynnells; National Program Leader, Animal Production Systems, USDA-CSREES

Environmental Session

9:45 AM 7 Confined Animal Feeding Operation (CAFO) regulations impact and record keeping requirements for livestock operations. G. E. Erickson*, R. Koelsch, C. Shapiro, C. Wortmann; University of Nebraska, Lincoln
10:05 AM 8 Waste management alternatives: composting, methane production and other options. Lewis E. Carr; University of Maryland
10:25 AM 9 Air quality, PM2.5, and related concerns. Frank M. Mitloehner*; University of California, Davis
10:55 AM 10 Water quality concerns—are they real? What needs to be done? Teena G. Gunter; Oklahoma Department of Agriculture, Food, and Forestry
11:15 AM 11 Urban Encroachment and How Extension Can Assist Farmers. Kathy S. Kremer; Wartburg College, Waverly, IA
11:35 AM 12 Assimilation vs. accumulation of macro- and micro-nutrients in soils: relations to livestock feeding operations. N. Andy Cole*, Robert C. Schwartz, Rick W. Todd; USDA-ARS-Conservation and Production Research Lab, Bushland, TX
11:55 AM Lunch

SYMPOSIUM

Growth and Development

ASAS-Emerging Roles of Gut Peptides in the Regulation of Appetite and Metabolism

Chair: Douglas Burrin, USDA-ARS Children's Nutrition Research Center,

Baylor College of Medicine

Sponsors: EAAP, Elanco Animal Health, Monsanto Company, and USDA-NRI

Room: 131

Time Abstract #

9:30 AM Introduction, Doug Burrin
9:35 AM Ghrelin - the "Hunger Hormone" or Just Another Gut Peptide? Matthias Tschoep, M.D. - University of Cincinnati
10:05 AM 13 Role of PYY in Appetite Regulation during Obesity. CW le Roux*¹, S Shurey², RP Vincent¹, MA Ghatei¹, SR Bloom¹; ¹Department of Metabolic Medicine, Imperial College London Hammersmith Hospital, London, UK, ²Experimental Surgery, Imperial College London Northwick Park Hospital, London, UK

10:35 AM	14	Proglucagon: A gene with diverse metabolic functions. Douglas Burrin*; USDA/ARS Children's Nutrition Research Center, Baylor College of Medicine, Houston, TX
11:05 AM	15	Gut peptides and feed intake regulation in lactating dairy cows. C. K. Reynolds* ¹ , J. A. Benson ² ; ¹ The Ohio State University, Wooster, ² The University of Reading, Reading, UK
11:35 AM		Discussion

SYMPOSIUM

PSA Antibiotics In Animal Feeds

Are There Viable Alternatives?

Chair: Frank Jones, University of Arkansas and Steven Ricke, Texas A&M University

Sponsors: Encore Technologies, LLC, Phibro and Southern Poultry Science Society

Room: 276

Time	Abstract #	
9:30 AM		Introduction, Frank Jones and Steven Ricke
9:35 AM		The biological basis for antibiotic effects in animals. Julia Dibner, Novus International, St. Charles, MO
10:00 AM		Identification and monitoring of microbial antibiotic resistance dissemination in animal production. Dr. Robin Bywater- Bywater Consultancy, Shropshire, UK.
10:25 AM	16	Novel preharvest strategies involving the use of inorganic and nitro-based compounds to prevent colonization of food producing animals by foodborne pathoge. R.C. Anderson*, Y.S. Jung, J.A. Byrd, K.J. Genovese, T.R. Callaway, T.S. Edrington, R.B. Harvey, D.J. Nisbet; USDA-ARS, Food & Feed Safety Research Unit, College Station, TX
10:50 AM	17	Alternative to Antibiotics – Utilization of bacteriophage to prevent foodborne pathogens. William E. Huff*, Gerry R. Huff, Narayan C. Rath, Janice M. Balog, Annie M. Donoghue; USDA/ARS/PPPSRU Poultry Science Center, University of Arkansas, Fayetteville
11:15 AM	18	Antibodies: an alternative for antibiotics?. Luc R. Berghman* ¹ , Suryakant D. Waghela ² ; ¹ Departments of Poultry Science and Veterinary Pathobiology, Texas A&M University, College Station, ² Department of Veterinary Pathobiology, Texas A&M University, College Station
11:40 AM	19	Alternatives to Antibiotic Use - Natural food and feed amendments. S.C. Ricke*, M.M. Kunderinger; Texas A&M University, College Station
12:05 PM		Discussion

Animal Behavior & Well Being I

Chair: Drew Vermeire, Nouriche Nutrition Ltd.

Room: 225

Time	Abstract #	
9:30 AM	20	Effects of photoperiod on the immune function of multiparous gestating sows. S. R. Niekamp*, M. A. Sutherland, G. E. Dahl, T. L. Auchtung, J. L. Salak-Johnson; Department of Animal Sciences, University of Illinois, Urbana
9:45 AM	21	Effects of photoperiod on immune function in 7 and 21 day old piglets. S. R. Niekamp*, M. A. Sutherland, G. E. Dahl, J. L. Salak-Johnson; Department of Animal Sciences, University of Illinois, Urbana
10:00 AM	22	Farrowing performance and injury in a group housing system for gestating sows. Monica J. Séguin*, Tina M. Widowski, Dave Barney; Department of Animal and Poultry Science, University of Guelph, Guelph, ON, Canada
10:15 AM	23	Application of guar hull by-product as a full-fed molting supplement. C. Zhang*, A. L. Cartwright, J. B. Carey, C. A. Bailey; Department of Poultry Science, Texas A&M University, College Station

- 10:30 AM 24 A comparison of the behavior of broiler chickens raised on two different bedding types. Sara J. Shields*, Joseph P. Garner, Joy A. Mench; University of California, Davis
- 10:45 AM 25 Incidence of bone breakage in three strains of end-of-lay hens. K. L. Budgell¹, F. G. Silversides^{*2,3}; ¹Nova Scotia Agricultural College, Truro, NS, Canada, ²Crops and Livestock Research Centre, Charlottetown, Prince Edward Island, Canada, ³Pacific Agri-Food Research Centre, Agassiz, British Columbia, Canada

Breeding and Genetics

Genetics Methodology 1

Chair: Rob Tempelman, Michigan State University

Room: 221

- | Time | Abstract # | |
|----------|------------|--|
| 9:30 AM | 26 | Unexpected estimates of variance components with a true model containing genetic competition effects. L. Dale Van Vleck ^{*1} , Joseph P. Cassady ² ; ¹ USDA-ARS, Roman L. Hruska U.S. Meat Animal Research Center, University of Nebraska, Lincoln, ² North Carolina State University, Garner |
| 9:45 AM | 27 | An animal model with autoregressive covariance structures among residual and genetic effects for genetic evaluation of Holstein cows with test day records. Rami M. Sawalha ^{*1} , Jeffrey F. Keown ¹ , Stephen D. Kachman ² , L. Dale Van Vleck ³ ; ¹ University of Nebraska, Lincoln, ² Department of Statistics, University of Nebraska, Lincoln, ³ USDA, ARS, Roman L. Hruska U.S. Meat Animal Research Center, Lincoln, NE |
| 10:00 AM | 28 | Detection of different shapes of lactation curve in cattle by standard mathematical models. N.P.P. Macciotta ^{*1} , D. Vicario ² , C. Di Mauro ¹ , A. Cappio Borlino ¹ ; ¹ Dipartimento di Scienze Zootecniche Via De Nicola 9, 07100 Sassari, Italia, ² ANAPRI Via Nieveo 19, 33100 Udine, Italia. |
| 10:15 AM | 29 | Impact on calving ease evaluations of excluding herds with abnormal distribution of scores. C. P. Van Tassell, G. R. Wiggans, L. L. M. Thornton [*] ; Animal Improvement Programs Laboratory, Agricultural Research Service, USDA Beltsville, MD |
| 10:30 AM | 30 | Effects of heteroscedasticity on sires' predicted transmitting ability in grazing and confinement herds. A. G. Fahey [*] , M. M. Schutz, D. L. Lofgren, A. P. Schinckel, T. S. Stewart; Purdue University, West Lafayette, IN |
| 10:45 AM | 31 | Effects of heteroscedasticity on the heritability and genetic correlations of production traits in grazing and confinement herds. A. G. Fahey [*] , M. M. Schutz, D. L. Lofgren, T. S. Stewart, A. P. Schinckel; Purdue University, West Lafayette, IN |
| 11:00 AM | 32 | Segregation analysis of milk flow in Swiss dairy cattle by Bayesian approach. H. Ilahi, H.N. Kadarmideen [*] ; Statistical Animal Genetics Group, Institute of Animal Science, Swiss Federal Institute of Technology (ETH) Zurich ETH Zentrum (UNS), CH-8092 Zurich, Switzerland |
| 11:15 AM | 33 | Prediction of longevity breeding values for U.S. Holstein sires using survival analysis methodology. Daniel Z. Caraviello [*] , Kent A. Weigel, Daniel Gianola; University of Wisconsin, Madison |

Breeding and Genetics
Genetics of Dairy Health Traits

Chair: Dr. H. Duane Norman, USDA, ARS, AIPL

Room: 223

Time	Abstract #	
9:30 AM	34	Potential for inclusion of health data in international genetic programs. Paul D. Miller*; University of Wisconsin, Madison
9:45 AM	35	Genetic basis and risk factors of infectious and noninfectious diseases in US Holsteins. I. Estimation of genetic parameters for single diseases and general health. Gamal Abdel-Azim* ¹ , Albert E. Freeman ² , M. E. Kehrli ³ , S. C. Kelm ⁴ , J. L. Burton ⁵ , A. L. Kuck ¹ , S. Schnell ¹ ; ¹ Cooperative Resources International, Shawano, WI, ² Dept of Animal Science, Iowa State University, Ames, ³ National Animal Disease Center-USDA-ARS, Ames, IA, ⁴ Animal & Food Science Department, University of Wisconsin, River Falls, ⁵ Department of Animal Science, Michigan State University, East Lansing
10:00 AM	36	Multivariate genetic parameters for health, reproduction, body condition score, and conformation traits in Swiss Holsteins. H.N. Kadarmideen*; Statistical Animal Genetics Group, Institute of Animal Science, Swiss Federal Institute of Technology (ETH) Zurich ETH Zentrum (UNS), CH-8092 Zurich, Switzerland
10:15 AM	37	Estimation of genetic parameters for health traits in large commercial herds using data recorded in on-farm herd management software programs. Nate R Zwald*, Kent A Weigel; University of Wisconsin, Madison
10:30 AM	38	Health parameters in F1 Jersey x Holstein, backcross (Jersey x Holstein) x Holstein, and pure Holstein calves. Christian Maltecca*, Kent Weigel; Department of Dairy Science, University of Wisconsin, Madison
10:45 AM	39	Application of a finite mixture model to somatic cell scores of Italian goats. P Boettcher* ¹ , D Gianola ² , G Pisoni ³ , C Vimercati ³ , M Rinaldi ³ , P Moroni ³ ; ¹ IBBA-CNR, Segrate, Italy, ² University of Wisconsin, Madison, ³ University of Milan, Milan, Italy
11:00 AM	40	Test day model evaluation for production traits and somatic cells score for the Italian Holstein. Fabiola Canavesi*, Stefano Biffani, Filippo Biscarini; ANAFI Via Bergamo 292, 26100, Cremona, Italy
11:15 AM	41	Crossbreds of Normande-Holstein, Montbeliarde-Holstein, and Scandinavian-Holstein compared to pure Holsteins for production and SCS during the first 150 days of first lactation. B.J. Heins, L.B. Hansen*, A.J. Seykora; University of Minnesota, St. Paul
11:30 AM	42	Accuracy and stability of national and international somatic cell score evaluations. R. L. Powell*, A. H. Sanders, H. D. Norman; Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD
11:45 AM	43	Genetic component of heat stress. S. Oseni, I. Misztal*, S. Tsuruta, R. Rekaya; The University of Georgia, Athens
12:00 PM	44	Use of peeling and reverse peeling to estimate the power to map a recessive disease gene. Liviu R. Totir*, Rohan L. Fernando, James M. Reecy; Iowa State University, Ames

Dairy Foods

Chemistry

Chair: Lloyd Metzger, University of Minnesota

Room: 260

Time	Abstract #	
9:30 AM	45	Utilization of front face fluorescence spectroscopy for rapid analysis of process cheese functionality. Shivananda K. Garimella Purna*, Lisa A. Prow, Lloyd E. Metzger; University of Minnesota, St. Paul
9:45 AM	46	Modified milk vs. producer milk samples for calibrating infrared (IR) milk analyzers: Which gives the best validation performance? K. E. Kaylegian* ¹ , D. M. Barbano ^{1,2} ; ¹ Dept. of Food Science, Cornell University, Ithaca, NY, ² Northeast Dairy Foods Research Center, Ithaca NY

10:00 AM	47	Rapid impedance method to detect adulterated milk. Douglas L. Marshall*, Gianna M. Duran; Food Science and Technology Dept, Mississippi State University, Mississippi State
10:15 AM	48	Characterization of Flavor and Flavor Compounds in Dried Whey Protein Concentrates and Isolates. Mary Carunchia Whetstine*, MaryAnne Drake, Adam Croissant; North Carolina State University, Raleigh
10:30 AM	49	Effect of fat type and fat globule surface coating on the volatile fatty acid profile of yogurt. David W Everett* ¹ , Julia Crownshaw ¹ , Agnès Ginestet ² , Rana Wierda ¹ , Michelle Leus ¹ , Jean-Pierre Dufour ¹ ; ¹ University of Otago, Dunedin, New Zealand, ² Ecole nationale superieur de biologie appliquée à la nutrition et l'alimentation, Dijon, France
10:45 AM	50	The influence of non-fat dry milk characteristics on yogurt functionality. Adrian Pollard*, Lloyd E Metzger; Department of Food Science and Nutrition, University of Minnesota, St Paul
11:00 AM	51	Characteristics of κ -casein stabilized emulsions treated with rennet. Ron Richter, Gerung Anita*, Gabriela Perez-Hernandez, Ben Davis; Texas A&M University, College Station

Forages and Pastures

Management of Tall Fescue Forage

Chair: Ken Coffey, University of Arkansas

Room: 124

Time	Abstract #	
9:30 AM	52	Performance of beef heifers grazing stockpiled endophyte-infected, endophyte-free or non-toxic endophyte-infected fescue. E.J. Oliphant*, M.H. Poore, J.T. Green, M.E. Hockett; North Carolina State University, Raleigh
9:45 AM	53	Calving rate and production responses of long-term exposure to endophyte-infected tall fescue. J. M. Burke*, D. K. Brauer, M. L. Looper; USDA, ARS, Booneville, AR
10:00 AM	54	In situ digestibility of tall fescue fertilized with different swine manure treatments and harvested on four dates. J. L. Reynolds ¹ , R. K. Ogen ¹ , K. P. Coffey* ¹ , W. K. Coblenz ¹ , C. V. Maxwell ¹ , K. VanDevender ² ; ¹ University of Arkansas, Fayetteville, ² Cooperative Extension Service, Little Rock, AR
10:15 AM	55	Selenium concentration of fescue and bahiagrasses after applying a selenium fertilizer. G. Valle, L.R. McDowell*, D.L. Wright, N.S. Wilkinson; University of Florida, Gainesville
10:30 AM	56	Rumen parameters of cattle grazing tall fescue pastures differing in endophyte status. A.M. Corrigan*, J.C. Waller, A.M. Saxton, L.C. Miller, C.J. Richards; The University of Tennessee, Knoxville
10:45 AM	57	Use of novel endophyte-infected tall fescue for cow-calf production in Arkansas. J. M. Burke*, D. K. Brauer, M. L. Looper; USDA, ARS, Booneville, AR
11:00 AM	58	Using orchardgrass and endophyte-free fescue versus endophyte-infected fescue overseeded on bermudagrass for cow herds: four-year summary of cattle performance. W. K. Coblenz*, K. P. Coffey, D. A. Scarbrough, T. F. Smith, D. S. Hubbell, III, K. F. Harrison, B. C. McGinley, J. E. Turner, J. B. Humphry; University of Arkansas, Fayetteville
11:15 AM	59	Using orchardgrass and endophyte-free fescue versus endophyte-infected fescue overseeded on bermudagrass for cow herds: four-year summary of forage characteristics. W. K. Coblenz*, K. P. Coffey, D. A. Scarbrough, T. F. Smith, K. F. Harrison, D. S. Hubbell, III, B. C. McGinley, J. E. Turner, J. B. Humphry; University of Arkansas, Fayetteville

Graduate Student Competition

ADSA Dairy Foods

Chair: Phillip S. Tong, California Polytechnic State University

Room: 125/126

Time	Abstract #	
9:30 AM	60	Influence of Pre-exposure of <i>Mycobacterium avium</i> sub sp paratuberculosis to Different Environments on Invasion of Bovine Epithelial Cells in in vitro Cell Culture System. D.A. Patel ^{*1} , L. Meunier-Goddik ¹ , L. Bermudez ² ; ¹ Food Science and Technology, Oregon State University, ² Department of Biomedical Sciences, Oregon State University, Corvallis
9:45 AM	61	Elucidation of the role of chymosin-mediated proteolysis in texture development during Cheddar cheese ripening. J. A. O'Mahony ^{*1,2} , J. A. Lucey ² , P. L. H. McSweeney ¹ ; ¹ Department of Food and Nutritional Sciences, University College, Cork, Ireland, ² Department of Food Science, University of Wisconsin, Madison
10:00 AM	62	Compositional factors associated with calcium lactate crystal formation in naturally smoked Cheddar cheese. P. Rajbhandari [*] , P.S. Kindstedt; University of Vermont, Burlington
10:15 AM	63	Influence of calcium, phosphorus, residual lactose, and salt-to-moisture ratio on cheese quality: pH changes during ripening. P. Upreti [*] , P. S. Lehtola, L. E. Metzger; Department of Food Science and Nutrition, MN-SD Dairy Food Research Center, University of Minnesota, St. Paul
10:30 AM	64	Effect of starter inoculation rates and incubation temperatures on physical properties of yogurt. Won-Jae Lee [*] , John A. Lucey; Department of Food Science, University of Wisconsin, Madison

Graduate Student Competition

National ADSA Production

Chair: Mark McGuire, University of Idaho

Room: 127

Time	Abstract #	
9:30 AM	65	Cloning the genomic sequence and proximal promoter of bovine pyruvate carboxylase. Sarah M. Rodriguez [*] , Christopher A. Bidwell, Shawn S. Donkin; Purdue University, West Lafayette, IN
9:45 AM	66	Relationship between antibiotic susceptibility of mastitis pathogens and treatment outcomes. Fernanda Hoe F. Hoe [*] , Pamela P. Ruegg; University of Wisconsin, Madison
10:00 AM	67	Effect of selection for milk yield on hepatic prolactin receptor (PRLR) mRNA in Holstein cows. M. Carriquiry [*] , S. H. Wu, W. J. Weber, H. Chester-Jones, L. B. Hansen, B. A. Crooker; University of Minnesota, St. Paul
10:15 AM	68	Exposure to short day photoperiod enhances mammary growth during the dry period of dairy cows. E. H. Wall ^{*1} , T. L. Auchtung ² , G. E. Dahl ² , T. B. McFadden ¹ ; ¹ University of Vermont, Burlington, ² University of Illinois, Urbana
10:30 AM	69	Nutrient status influences the effect of conjugated linoleic acid on milk synthesis. M. J. de Veth ^{*1} , E. Castaneda-Gutierrez ¹ , D. A. Dwyer ¹ , A. M. Pfeiffer ² , D. E. Putnam ³ , D. E. Bauman ¹ ; ¹ Cornell University, Ithaca, NY, ² BASF-AG, Offenbach, Germany, ³ Balchem Encapsulates, New Hampton, NY
10:45 AM	70	Effect of transition diet on metabolism of Holstein cows in the periparturient period. J Guo [*] , R Peters, E Russek-Cohen, R Kohn; University of Maryland, College Park
11:00 AM	71	The Effect of Copper Supplementation and Breed on Milk Fatty Acid Profile. Jennifer Sumner ^{*1} , Patrick French ² ; ¹ Washington State University, Pullman, ² Oregon State University, Corvallis
11:15 AM	72	Evaluation of the ability of dietary fish oil to maintain elevated conjugated linoleic acid (CLA) in milk from dairy cows through five months of lactation. Megan T. Sands [*] , Sharon T. Franklin, James A. Jackson, Lisa J. Driedger, Kimberly I. Meek; University of Kentucky, Lexington

- 11:30 AM 73 Effects of dietary CLA on production parameters in pasture-fed transition dairy cows. J.K. Kay^{*1,2}, J.R. Roche^{2,3}, L.H. Baumgard^{1,3}; ¹University of Arizona, Tucson, ²Dexcel, New Zealand
- 11:45 AM 74 Effect of Feeding Ca Salts of Palm Oil (PO) or of a Blend of Linoleic and Monoenoic Trans Fatty Acids (LTFA) on Lactation and Health of Holstein Cows. S.O. Juchem^{*1}, R.L.A. Cerri¹, M. Villasenor¹, K.N. Galvao¹, R.G.S. Bruno¹, H.M. Rutigliano¹, A.C. Coscioni¹, E.J. DePeters¹, W.W. Thatcher², D. Luchini³, J.E.P. Santos¹; ¹University of California, Davis, ²University of Florida, Gainesville, ³Bioproducts, Inc., Fairlawn, OH

Horse Species

Chair: Paul D. Siciliano, Colorado State University

Room: 261/262

- | Time | Abstract # | |
|----------|------------|--|
| 9:30 AM | 75 | Insulin resistance in growing Thoroughbreds is affected by diet. K. Treiber ^{*1} , R. Boston ² , D. Kronfeld ¹ , R. Hoffman ¹ , W. Staniar ¹ , P. Harris ³ ; ¹ Department of Animal and Poultry Sciences, Virginia Polytechnic Institute and State University, Blacksburg, ² Department of Clinical Studies, New Bolton Center, Kennett Square, PA, ³ Equine Studies Group, WALTHAM Centre for Pet Nutrition, Melton-Mowbray, UK |
| 9:45 AM | 76 | Somatotropic axis in growing Thoroughbreds is affected by diet. K. Treiber ^{*1} , W. Staniar ¹ , D. Kronfeld ¹ , R. Boston ² , P. Harris ³ ; ¹ Department of Animal and Poultry Sciences, Virginia Polytechnic Institute and State University, Blacksburg, ² Department of Clinical Studies, New Bolton Center, Kennett Square, PA, ³ Equine Studies Group, WALTHAM Centre for Pet Nutrition, Melton-Mowbray, UK |
| 10:00 AM | 77 | Environmental factors and nutrient composition of pasture in northern Virginia. Tania A. Cubitt [*] , W. Burton Staniar, David S. Kronfeld; Department of Animal and Poultry Science, Virginia Polytechnic Institute and State University, Blacksburg |
| 10:15 AM | 78 | The Effects of Age, Breed, Gender and Use on Gastric Ulceration in the Horse. Kelly Chameroy [*] , Jenifer Nadeau, Sandra Bushmich, James Dinger, Thomas Hoagland; University of Connecticut, Storrs |
| 10:30 AM | 79 | Evaluation of feeding bee pollen to horses in training. K. K. Turner [*] , B. D. Nielsen, C. I. O'Connor, J. L. Burton; Michigan State University, East Lansing |
| 10:45 AM | 80 | Potassium supplementation affects plasma [K+] during an 80 km endurance exercise test on the treadmill. T.M. Hess ^{*1} , K. Treiber ¹ , D.S. Kronfeld ¹ , J.N. Waldron ² , C.A. Williams ¹ , M. S. Freire ² , A.M.G.B. Silva ¹ , L.S. Gay ¹ , D.A. Ward ¹ , P.A. Harris ³ ; ¹ Virginia Polytechnic Institute and State University, Blacksburg, ² Rectortown Equine Center, Rectortown, VA, ³ Equine Studies Group, Waltham Centre for Pet Nutrition, Melton-Mowbray, UK |

Milk Protein and Enzymes

Chair: Lloyd Metzger, University of Minnesota

Room: 260

- | Time | Abstract # | |
|----------|------------|--|
| 11:15 AM | 81 | Composition of the air interface in ice cream as affected by protein and emulsifier content. Z. Zhang [*] , D. Goff; Department of Food Science, University of Guelph, Guelph, ON, Canada |
| 11:30 AM | 82 | Evidence that the major novel disulfide bond in heated cow's milk is between β -lactoglobulin Cys160 and κ -casein Cys88. Edwin K Lowe ¹ , Skelte G Anema ^{1,2} , Michael J Boland ¹ , Rafael Jiménez-Flores ³ , Lawrence K Creamer ^{*1} ; ¹ Fonterra Research Centre, Palmerston North, New Zealand, ² Riddet Centre, Massey University, Palmerston North, New Zealand, ³ Dairy Products Technology Center, California Polytechnic State University, San Luis Obispo |
| 11:45 AM | 83 | Application of novel gel electrophoresis to analyze native, heat-, and pressure-treated milk protein systems. Hasmukh A Patel ^{1,2} , Harjinder Singh ³ , Lawrence K Creamer ^{*1} ; ¹ Fonterra Research Centre, Palmerston North, New Zealand, ² Institute of Nutrition, Food and Human Health, Massey University, Palmerston North, New Zealand, ³ Riddet Centre, Massey University, Palmerston North, New Zealand |

12:00 PM 84 Effects of genetic modification, pressure, and heat on the binding of various probes to β -lactoglobulin. K A N S Ariyaratne¹, Geoffrey B Jameson¹, Trevor S Loo², Gillian E Norris², Hasmukh A Patel^{4,3}, Therese Considine^{4,5}, Harjinder Singh⁵, Lawrence K Creamer⁴, Rafael Jiménez-Flores⁶; ¹Institute of Fundamental Sciences, Massey University, Palmerston North, New Zealand, ²Institute of Molecular Biosciences, Massey University, Palmerston North, New Zealand, ³Institute of Nutrition, Food and Human Health, Massey University, Palmerston North, New Zealand, ⁴Fonterra Research Centre, Palmerston North, New Zealand, ⁵Riddet Centre, Massey University, Palmerston North, New Zealand, ⁶Dairy Products Technology Center, California Polytechnic State University, San Luis Obispo

Nonruminant Nutrition

Finishing Pigs - Additives & Energy

Co-Chairs: Ruurd Zijlstra, Prairie Swine Centre, Inc and Brendan Lynch, Moorepark Research Centre

Room: 275

Time	Abstract #	
9:30 AM	85	Effect of L-lysine•HCl addition in late finishing gilts fed ractopamine HCl (Paylean®). B.W. Ratliff* ¹ , A.M. Gaines ¹ , P. Srichana ¹ , G.L. Allee ¹ , J.L. Usry ² ; ¹ University of Missouri, Columbia, ² Ajinomoto Heartland LLC, Chicago, IL
9:45 AM	86	Threonine to lysine ratio in ractopamine treated pigs. Demian M. Fernandez* ¹ , Noe Rosas ² , Arlette I. Soria ¹ , Jose A. Cuaron ³ ; ¹ Universidad Nacional Autonoma de Mexico Mexico City, MX, ² Patronato de Apoyo a la Investigación y Experimentacion Pecuaria en Mexico A.C. Queretaro, MX, ³ Instituto Nacional de Investigaciones Forestales Agricolas y Pecuarias Queretaro, MX
10:00 AM	87	Effects of increasing total sulfur amino acid:Lys on performance and carcass characteristics of gilts fed a ractopamine step-up program. A Yager*, L Wilson, K Saddoris, L Peddireddi, R Hinson, M Walsh, D Sholly, B Richert, A Schinckel, J Radcliffe; Purdue University, West Lafayette, IN
10:15 AM	88	Efficacy of SUPROIL® as a growth promotant for grow-finish pigs. R.C. Thaler* ¹ , B.D. Rops ¹ , B.T. Christopherson ² , E. Cerchiari ³ ; ¹ South Dakota State University Brookings, ² SODA Feed Ingredients LLC, Brookings, SD, ³ SODA Feed ingredients Ltd., IRL
10:30 AM	89	Effect of wheat sample, particle size and xylanase on energy digestibility of wheat fed to grower pigs. R.T. Zijlstra* ¹ , T.N. Nortey ^{1,2} , D. Overend ³ , R. Hawkes ^{1,2} , M.D. Drew ² , J. Fledderus ⁴ , J.F. Patience ¹ , P.H. Simmins ³ ; ¹ Prairie Swine Centre Inc., Saskatoon, SK, Canada, ² University of Saskatchewan, Saskatoon, SK, Canada, ³ Ridley Inc. Mankato, MN, ⁴ De Schothorst, Lelystad, The Netherlands, ⁵ Danisco Animal Nutrition, Marlborough, UK
10:45 AM	90	Hydration properties of different cereal grains before and after enzymatic digestion as affected by thermal treatment and grinding. Montserrat Anguita, Eva Creus*, J.Francisco Perez; Universitat Autonoma de Barcelona, Bellaterra, Spain
11:00 AM	91	Response of growing and finishing pigs to dietary energy concentration. John F. Patience* ¹ , A. Denise Beaulieu ¹ , Ruurd T. Zijlstra ¹ , Noel H. Williams ² ; ¹ Prairie Swine Centre Inc. Saskatoon, SK, Canada, ² PIC USA, Inc., Franklin, KY
	92	Withdrawn by author
	93	Withdrawn by author
11:15 AM	94	Palm oil and hydrogenated fat as alternative oil sources for fattening pig diets. P. Medel* ¹ , J.I. Fernández ² , J. Peinado ¹ , J.C. González ¹ , C. López-Bote ⁴ ; ¹ Imasde Agropecuaria, S.L. Spain, ² Norel, S.A. Spain, ³ Universidad Complutense de Madrid, Spain

Physiology and Endocrinology

Factors Affecting Embryonic and Fetal Mortality

Chair: Pete Hansen, University of Florida

Room: 220

Time	Abstract #	
9:30 AM	95	Effect of elevated systemic concentrations of ammonia and urea on amino acid concentrations in oviduct fluid in cattle. D.A. Kenny ^{*1} , P.G. Humpherson ³ , D.G. Morris ² , H.J. Leese ³ , M.G. Diskin ² , J.M. Sreenan ² ; ¹ Department of Animal Science and Production, Faculty of Agriculture and Food Science, University College, Dublin, Ireland, ² Teagasc Research Centre, Athenry, Co. Galway, Ireland, ³ Department of Biology, University of York, York, UK.
9:45 AM	96	Initial characterization of abortigenic activity associated with mare reproductive loss syndrome. K. J. McDowell ^{*1} , N. M. Williams ¹ , J. M. Donahue ¹ , M. D. Lindemann ¹ , K. E. Newman ² , B. A. Webb ¹ ; ¹ University of Kentucky, Lexington, ² Venture Laboratories, Lexington, KY
10:00 AM	97	Developmental Competence of Oocytes Fertilized <i>In Vitro</i> with Semen from Bulls Grazing Tall Fescue Pastures. G. M. Schuenemann ^{*1} , J. L. Edwards ¹ , J. L. Lawrence ¹ , R. R. Payton ¹ , F. N. Scenna ¹ , J. C. Waller ¹ , J. W. Oliver ² , F. N. Schrick ¹ ; ¹ Department of Animal Science, University of Tennessee, Knoxville ² Department of Comparative Medicine, University of Tennessee, Knoxville
10:15 AM	98	The association between early luteal phase concentrations of progesterone and embryo survival in heifers and dairy cows. Michael G Diskin ^{*1} , Andrew J.H. Stronge ^{1,2} , Dermot G. Morris ¹ , David A. Kenny ² , Joseph M. Sreenan ¹ ; ¹ Teagasc Athenry, Co. Galway, Ireland, ² University College, Dublin, Ireland
10:30 AM	99	Effect of ovulatory follicle size on pregnancy rates and fetal mortality in beef heifers. G.A. Perry ^{*1,2} , M.F. Smith ³ , A.J. Roberts ¹ , M.D. MacNeil ¹ , T.W. Geary ¹ ; ¹ USDA-ARS Miles City, MT, ² Department of Animal & Range Science, South Dakota State University, Brookings, ³ Department of Animal Science, University of Missouri, Columbia
10:45 AM	100	Follicular phase events and the postovulatory progesterone rise in dairy cows. George Mann [*] , Gareth Starbuck; University of Nottingham School of Biosciences, Sutton Bonington Campus, Loughborough, UK
11:00 AM	101	Effect of hCG on d 5 of the Estrous Cycle on Luteal Function and Pregnancy Rates (PR) in Lactating Cows Receiving Embryos from Gossypol Fed Donor Heifers. K.N. Galvao [*] , A.C. Coscioni, S.O. Juchem, M. Villasenor, J.E.P. Santos; University of California, Davis
11:15 AM	102	Influence of duration of proestrus on circulating estradiol, the LH surge and luteal function in cattle. G.A. Bridges [*] , M.L. Mussard, C.L. Gasser, D.E. Grum, M.L. Day; The Ohio State University, Columbus
11:30 AM	103	Factors influencing fetal loss in dairy cattle. F.D. Jousan [*] , M. Drost, P.J. Hansen; University of Florida, Gainesville
11:45 AM	104	Effect of a CIDR insert and flunixin meglumine administered at the time of embryo transfer on pregnancy rate and resynchronization of estrus in beef cattle. S. H. Purcell ^{*1} , W. E. Beal ¹ , K. R. Gray ² ; ¹ Virginia Polytechnic Institute and State University, Blacksburg, ² Cross Country Genetics North, Westmoreland, KS

PSA-Environment and Management

Enteric Bacteria

Chair: Michael T. Musgrove, USDA-ARS, Russell Research Center

Room: 265/266

Time	Abstract #	
9:30 AM	105	Utilization of an experimental chlorate product in reduction of necrotic enteritis in broiler chickens. J.L. McReynolds* ¹ , J.A. Byrd ¹ , R.C. Anderson ¹ , T.S. Edrington ¹ , T.L. Poole ¹ , R.W. Moore ² , L.F. Kubena ¹ , D.J. Nisbet ¹ ; ¹ USDA-ARS, Southern Plains Agriculture Research Center, College Station, TX, ² USDA-ARS, Russell Research Center, Athens, GA
9:45 AM	106	The Use of Biodegradable Pellets for the Control of <i>Salmonella</i> in Broilers During Feed Withdrawal. J.A. Byrd* ¹ , L.H. Stanker ² , J.L. McReynolds ¹ , D.J. Nisbet ¹ ; ¹ USDA-ARS, Food & Feed Safety Research Unit, College Station, TX, ² USDA-ARS, Foodborne Contaminants Research Unit, Albany, CA
10:00 AM	107	Apparent absence of horizontal transmission of <i>Campylobacter</i> among caged broiler breeder roosters. R. J. Buhr* ¹ , N. A. Cox ¹ , J. S. Bailey ¹ , J. L. Wilson ² , L. J. Richardson ^{1,2} , D. E. Cosby ¹ , D. V. Bourassa ^{1,2} ; ¹ USDA-ARS Russell Research Center, Athens, GA, ² University of Georgia, Athens
10:15 AM	108	Effects of Aspergillus meal prebiotic on gut development and ascites mortality. F. Solis* ¹ , J. M. Balog ² , G. Tellez ¹ , S. Higgins ¹ , A. Torrez ¹ , A. M. Donoghue ² , N. B. Anthony ¹ ; ¹ University of Arkansas, Fayetteville, ² USDA/ARS/PP&PSR, Fayetteville, AR
10:30 AM	109	<i>Salmonella</i> and Lactobacilli Growth in a Simulated Crop Model Using Chicken or Turkey Feeds. A.D. Wolfenden* ¹ , S.N. Henderson ¹ , R.L. Jarquin ¹ , G.M. Nava ¹ , L.R. Bielke ¹ , J.L. Vicente ¹ , G.I. Tellez ¹ , D.J. Donoghue ¹ , A.M. Donoghue ² , B.M. Hargis ¹ ; ¹ University of Arkansas, Fayetteville, ² PPPSRU, ARS, USDA, Fayetteville, AR
10:45 AM	110	Effect of Dietary Administration of <i>Aspergillus</i> Meal on Broiler Chick Performance with Low Protein Diets. A. Torres-Rodriguez* ¹ , C.D. Sartor ¹ , S.E. Higgins ¹ , A.D. Wolfenden ¹ , L.R. Bielke ¹ , C.M. Pixley ¹ , A.M. Donoghue ² , G. Tellez ¹ , B.M. Hargis ¹ ; ¹ University of Arkansas, Fayetteville, ² PPPSRU, USDA-ARS, Fayetteville, AR
11:00 AM	111	Evaluation of an Organic Acid Mixture to Reduce <i>Salmonella enteritidis</i> in the Chicken Crop. R.L. Jarquin* ¹ , A.D. Wolfenden ¹ , G.M. Nava ¹ , J.L. Vicente ¹ , C. D. Sartor ¹ , A.M. Donoghue ² , B.M. Hargis ¹ ; ¹ University of Arkansas Center of Excellence for Poultry Science, University of Arkansas, Fayetteville, ² PPPSRU, ARS, USDA, Fayetteville, AR
11:15 AM	112	Cell Yield and Genetic Reponse in <i>Salmonella Typhimurium</i> in a Continuous Culture During Shifts in pH. K.D. Dunkley* ¹ , M.M. Kunderinger ¹ , C.S. Dunkley ¹ , T.R. Callaway ² , R.C. Anderson ² , D.J. Nisbet ² , S.C. Ricke ¹ ; ¹ Texas A&M University, College Station, ² USDA-ARS, College Station, TX
11:30 AM	113	Isolation and prevalence of <i>Campylobacter</i> in the reproductive tracts and semen of commercial turkeys. K. Cole* ¹ , J. S. Holliman ¹ , P. J. Blore ¹ , A. M. Donoghue ² , D. J. Donoghue ¹ ; ¹ Department of Poultry Science, University of Arkansas, Fayetteville, ² Poultry Production and Product Safety Research Unit, ARS, USDA, Fayetteville, AR
11:45 AM	114	Evaluation of the effect of fish meal supplementation on <i>Salmonella enteritidis</i> growth in chick starter <i>in vitro</i> . S.N. Henderson* ¹ , A.D. Wolfenden ¹ , R.L. Jarquin ¹ , G.M. Nava ¹ , J.A. Byrd ² , B.M. Hargis ¹ ; ¹ University of Arkansas, Fayetteville, ² USDA-ARS-SPARC, College Station, TX

PSA-Nutrition

Amino Acids and Vitamin/Mineral Nutrition I

Chair: Sally Noll, University of Minnesota

Room: 274

Time	Abstract #	
9:30 AM	115	Evaluation of guar by-products in high production laying hen diets. C. Zhang*, A. L. Cartwright, J. B. Carey, C. A. Bailey; Department of Poultry Science, Texas A&M University, College Station
9:45 AM	116	Effect of dietary nutrient density, feed form, and lighting on the growth performance of broiler chickens. K.E. Brickett*, H.L. Classen; University of Saskatchewan, Saskatoon, SK, Canada

10:00 AM	117	Satellite cell mitotic activity of broilers receiving lysine deficient diets. Simone Pophal ^{1,2} , Paul Mozdziak ² , Sérgio Vieira ¹ ; ¹ Universidade Federal do Rio Grande do Sul, ² North Carolina State University, Raleigh
10:15 AM	118	Synthetic methionine and feed restriction effects on performance and meat quality of organically-reared broiler chickens during fall months. Nancy P. Buchanan*, Amy S. Parsons, Nicole J. Baker, Joseph S. Moritz; West Virginia University, Morgantown
10:30 AM	119	Synthetic methionine and feed restriction effects on performance and meat quality of organically reared broiler chickens in the summer months. Amy S. Parsons*, Nicole J. Baker, Joseph S. Moritz; West Virginia University, Morgantown
10:45 AM	120	Effect of dietary copper source on broiler chicken performance and immune responses. Vanessa J. Arias*, Elizabeth A. Koutsos; Animal Science Department, California Polytechnic State University, San Luis Obispo
11:00 AM	121	Effects of copper source and concentration on phytate phosphorus hydrolysis by Phytase in vitro. Y Pang*, T Applegate; Dept of Animal Science, Purdue University, West Lafayette, IN
11:15 AM	122	Evaluation of 25-hydroxycholecalciferol as a cholecalciferol substitute for broiler breeders. Anel Atencio*, Hardy M. Edwards, Gene M. Pesti; Department of Poultry Science, University of Georgia, Athens
11:30 AM	123	Decreasing the time required for the auxotroph <i>Lactobacillus rhamnosus</i> assay by adaptation to microtiter plates. J. L. Golbach*, C. L. Woodward, V. I. Chalova, S. C. Ricke; Texas A&M University, College Station

PSA-Pathology

Chair: J. Allen Byrd, USDA-ARS

Room: 264

Time	Abstract #	
9:30 AM	124	Effect of anticoccidial medication upon broilers infected with eimeria species during the starter or grower phase of production. P. M. Matsler ^{*1} , H. D. Chapman ¹ , M. W. Lavorgna ² ; ¹ Department of Poultry Science, University of Arkansas, Fayetteville, ² Alpharma
9:45 AM	125	Evaluation of an exogenous enzyme (Avizyme [®]) as feed additive to enhance immunity against Eimeria spp and replace antibiotics and ionophores in broiler diets. Jacqueline Parker ^{*1} , Sergio Clemente-Hernandez ¹ , Janett Remus ² , Ernest Pierson ² , Beatrice Clack ¹ , Edgar O. Oviedo-Rondón ¹ ; ¹ Stephen F. Austin State University, Nacogdoches, TX, ² DANISCO Animal Nutrition, St. Louis, MO
10:00 AM	126	Enhancement of homologous vaccination to <i>Eimeria acervulina</i> via CpG-ODNs. Keith Ameiss ^{*1} , John El Attrache ¹ , Adriana Barri ¹ , Audrey McElroy ² , David Caldwell ¹ ; ¹ Department of Poultry Science, Texas A&M University, College Station ² Department of Animal and Poultry Sciences, Virginia Tech, Blacksburg
10:15 AM	127	Egg characteristics of commercial egg laying hens between 20 and 58 weeks of age when inoculated with the S6-strain of <i>Mycoplasma gallisepticum</i> at 10, 22, or 45 weeks of age. E.Y. Basenko ¹ , S.W. Park ^{*1} , E.D. Peebles ¹ , S.L. Branton ² , D.V. Maurice ³ , S.K. Whitmarsh ¹ , P.D. Gerard ⁴ ; ¹ Department of Poultry Science, Mississippi State University, Mississippi State, ² USDA-ARS, SCPRL, Mississippi State, MS, ³ Animal and Veterinary Sciences Department, Clemson University, Clemson, SC, ⁴ Experimental Statistics Unit, Mississippi State University, Mississippi State
10:30 AM	128	Reduction of <i>Salmonella enteritidis</i> Infection by Therapeutic Administration of <i>Lactobacillus</i> Probiotic Culture. G.M. Nava ^{*1} , C.M. Pixley ¹ , R.L. Jarquin ¹ , C.D. Sartor ¹ , J.L. Vicente ¹ , G. Tellez ¹ , A.M. Donoghue ² , B.M Hargis ¹ ; ¹ Center of Excellence for Poultry Science, University of Arkansas, Fayetteville, ² PPPSRU, ARS, USDA, Fayetteville, AR
10:45 AM	129	Experimental induction of tibial dyschondroplasia in chickens using a short regimen of feeding with thiram. Narayan Rath*, William Huff, Janice Balog, Geraldine Huff; USDA, ARS Poultry Science Center, University of Arkansas, Fayetteville
11:00 AM	130	<i>Salmonella typhimurium</i> Felix-O1 and P22 bacteriophage host range and viability under gastrointestinal conditions. P. Herrera*, E. M. Kozhina, S. C. Ricke; Texas A&M University, College Station

- 11:15 AM 131 Rapid detection of infectious bursal disease virus using one-step RT-PCR in clinical samples in Pakistan. M. Atif Zahoor^{*1}, Iftikhar Hussain¹, M. Khalid Mansoor¹, Saima Masood¹, Qaiser Mehmood Khan²; ¹aculty of Veterinary Science, University of Agriculture, Faisalabad, Pakistan, ²NIBGE, Faisalabad, Pakistan
- 11:30 AM 132 Very virulent strains of infectious bursal disease virus in Pakistan. M. Atif Zahoor^{*1}, Iftikhar Hussain¹, M. Khalid Mansoor¹, Saima Masood¹, Qaiser Mehmood Khan²; ¹Faculty of Veterinary Science, University of Agriculture, Faisalabad, Pakistan, ²NIBGE, Faisalabad, Pakistan
- 11:45 AM 133 RT-PCR based diagnosis of infectious bursal disease virus in Pakistan. M. Atif Zahoor^{*1}, Iftikhar Hussain¹, M. Khalid Mansoor¹, Saima Masood¹, Qaiser Mehmood Khan²; ¹Faculty of Veterinary Science, University of Agriculture, Faisalabad, Pakistan, ²NIBGE, Faisalabad, Pakistan

PSA-Physiology

Poultry Digestion and Metabolism

Chair: E. David Peebles, Mississippi State University

Room: 267

- | Time | Abstract # | |
|----------|------------|--|
| 9:30 AM | 134 | Compromised liver mitochondrial function and complex activity in low feed efficient broilers associated with higher oxidative stress and differential expression of proteins within a single male line. M. Iqbal ^{*1} , N. R. Pumford ¹ , Z. X. Tang ¹ , K. Lassiter ¹ , W. Bottje ¹ , T. Wing ² , M. Cooper ² ; ¹ University of Arkansas, Fayetteville, ² Cobb-Vantress, Inc., Siloam Springs, AR |
| 9:45 AM | 135 | Membrane potential and hydrogen peroxide production in duodenal mitochondria in broilers with low and high feed efficiency. C. Ojano-Dirain ^{*1} , N. Tinsley ¹ , M. Iqbal ¹ , T. Wing ² , M. Cooper ² , W. Bottje ¹ ; ¹ Center of Excellence for Poultry Science, University of Arkansas, Fayetteville, ² Cobb Vantress Inc., Siloam Springs, AR |
| 10:00 AM | 136 | Evidence of protein oxidation in mitochondrial respiratory complexes in broilers with low and high feed efficiency. J. P. Higgins ^{*1} , N. R. Pumford ¹ , M. Iqbal ¹ , T. Wing ¹ , M. Cooper ¹ , W. G. Bottje ¹ ; ¹ Department of Poultry Science, University of Arkansas, Fayetteville, ² Cobb-Vantress, Inc., Siloam Springs, AR |
| 10:15 AM | 137 | Dietary phytates may noncompetitively inhibit intestinal mucosa phytase in broiler chicks. E. M. Onyango ^{*1} , E. K. Asem ² , J. S. Sands ³ , O. Adeola ¹ ; ¹ Department of Animal Sciences, Purdue University, West Lafayette, IN, ² Basic Medical Sciences, Purdue University, West Lafayette, IN, ³ Danisco Animal Nutrition, Marlborough, Wiltshire, U.K. |
| 10:30 AM | 138 | Absorption of 2-hydroxy-4(methylthio) butanoic acid (HMTBA) (5-50mM) is equal to or greater than d,l-methionine (DLM) uptake in chicken intestinal slices. J. D. Richards [*] , C. Atwell, J. J. Dibner; Novus International, Inc., St. Louis, MO |
| 10:45 AM | 139 | Isolation and partial characterization of pancreatic alpha-amylase in turkey. Eric Blair [*] , Jeffere Firman, Shuqun Zhang; University of Missouri, Columbia |
| 11:00 AM | 140 | Unique responses of pancreatic phospholipid metabolism of broiler hens in response to increased plasma glucose and lipid concentrations. Shuen-Ei Chen ^{*1} , Rosemary L. Walzem ¹ , John P. McMurtry ² ; ¹ Department of Poultry Science, Texas A&M University, College Station, ² ARS Growth Biology Laboratory, Beltsville, MD |
| 11:15 AM | 141 | Efficacy of injected gluconeogenic supplementation on the performance of broilers from young breeders. E. D. Peebles ^{*1} , W.D. Berry ² , R.W. Keirs ³ , L.W. Bennett ³ , P.D. Gerard ⁴ ; ¹ Department of Poultry Science, Mississippi State University, Mississippi State, ² Department of Poultry Science, Auburn University, Auburn, AL, ³ College of Veterinary Medicine, Mississippi State University, Mississippi State, ⁴ Experimental Statistics Unit, Mississippi State University, Mississippi State |

PSA-Processing and Products

Meat Quality

Chair: Shelly R. McKee, Auburn University

Room: 263

Time	Abstract #	
9:30 AM	142	Carcass Scratches and Growth Rate of Microwave Toe-treated Broiler Chickens. Baoyan Wang* ¹ , Janice L. MacIsaac ² , Bruce M. Rathgeber ¹ ; ¹ Nova Scotia Agricultural College, NS, Canada, ² Atlantic Poultry Research Institute, Truro, NS, Canada
9:45 AM	143	Effect of Lighting and Handling Technique on Breast Fillet Dimensions and Meat Quality. Nida A. McKee* ¹ , Roger J. Lien ² , Joseph B. Hess ² , Sacit F. Bilgili ² , Shelly R. McKee ² ; ¹ Department of Nutrition and Food Science, Auburn University, Auburn, AL, ² Department of Poultry Science, Auburn University Auburn, AL
10:00 AM	144	Meat quality evaluation of minimally aged broiler breast fillets from five commercial genetic strains. John M Mehaffey* ¹ , Jason L Emmert ¹ , Jean-Francois C Meullenet ¹ , Shelly R McKee ² , Casey M Owens ¹ ; ¹ Department of Poultry Science, University of Arkansas, Fayetteville, ² Department of Poultry Science, Auburn University, Auburn, AL
10:15 AM	145	Comparison of Sensory Qualities of Poultry Meat from Alternative Slow-Growing Breeds and a Commercial Breed Grown with or without Outdoor Access. A. C. Fanatico*, P. B. Pillai, L. C. Cavitt, J. F. Meullenet, J. L. Emmert, C.M. Owens; University of Arkansas, Fayetteville
10:30 AM	146	The Effect of Blood Removal, Oxidation and Shelf-life in Broiler Meat. Christine Z. Alvarado* ¹ , Sean F. O'Keefe ² , Mark P. Richards ³ ; ¹ Texas Tech University, Lubbock, ² Virginia Polytechnic and State University, Blacksburg, ³ University of Wisconsin, Madison
10:45 AM	147	Dietary Supplementation of Functional Ingredients Improves Quality of Irradiated Raw Turkey Breast. Haijie Yan*, Kichang Nam, Eun Joo Lee, Byungrok Min, Kwang Soon Park, Hesham Ismail, Dong Uk Ahn; Iowa State University, Ames
11:00 AM	148	Na ⁺ Migration and Quality Parameters in Turkey Fillets using Different Marination Techniques. Christine Z. Alvarado* ¹ , Henjing Wang ² ; ¹ Texas Tech University, Lubbock, ² Virginia Polytechnic and State University, Blacksburg
11:15 AM	149	Utilizing Marination and Vacuum Tumbling Techniques to Optimize Tenderness of Breast Fillets Deboned Early Post-Mortem. Laura J. Bauermeister*, Shelly R. McKee; Department of Poultry Science, Auburn University, Auburn, AL
11:30 AM	150	The correlation of razor blade shear, Allo-Kramer shear, Warner-Bratzler shear, and sensory tests to changes in tenderness of broiler breast fillets. L. Cain Cavitt* ¹ , Rui Xiong ² , Jean-Francois C. Meullenet ² , Casey M Owens ¹ ; ¹ Department of Poultry Science, University of Arkansas, Fayetteville, ² Department of Food Science, University of Arkansas, Fayetteville
11:45 AM	151	Functional Analysis of Turkey Breast Muscle. M. S. Updike* ¹ , M. Lilburn ² , G. Kaletunc ¹ , H. Zerby ¹ , M. Wick ¹ ; ¹ The Ohio State University, Columbus, ² The Ohio State University, Wooster

Ruminant Nutrition

Beef - Energy and Nitrogen

Chair: Jeffrey Carter, North Florida Research and Education Center

Room: 130

Time	Abstract #	
9:30 AM	152	Blood ketone levels of young postpartum range cows increased after supplementation ceased. R. L. Endecott*, C. M. Black, K. A. Notah, M. K. Petersen; New Mexico State University, Las Cruces
9:45 AM	153	Effect of step-up program during grain adaptation on ruminal pH and fermentation in feedlot cattle. D.W. Bevans* ^{1,2} , K.S. Schwartzkopf-Genswein ¹ , T.A. McAllister ¹ , K.A. Beauchemin ¹ , J.J. McKinnon ² ; ¹ Agriculture and Agri-Food Canada Research Centre, Lethbridge, AB, Canada, ² University of Saskatchewan, Saskatoon, SK, Canada

10:00 AM	154	A comparison of whole animal energy expenditure by Angus, Holstein, and Wagyu heifers. K.A. Ross ¹ , C.T. Gaskins ¹ , J.J. Michal ¹ , D.H. Keisler ² , K.A. Johnson* ¹ ; ¹ Washington State University Pullman, ² University of Missouri, Columbia
10:15 AM	155	Effects of intravenous infusions of acetate, propionate, lactate, or glucose on lipogenic enzyme activity in bovine adipose tissue. J.D. Arseneau*, M.E. Spurlock, J.R. Townsend, L.A. Horstman, R.P. Lemenager; Purdue University, West Lafayette, IN
10:30 AM	156	Effects of energy supply on methionine utilization by growing steers. G. F. Schroeder*, E. C. Titgemeyer, M. S. Awawdeh, D. P. Gnad; Kansas State University, Manhattan
10:45 AM	157	Evaluation of soybean hulls and protein sources of varying degradability on steer performance in feedlot receiving diets. Chad J. Mueller*, Robbi H. Pritchard, Donald L. Boggs; South Dakota State University, Brookings
11:00 AM	158	Effect of dietary crude and degradable protein concentration on feedlot performance, estimated nutrient excretion, and carcass characteristics. T. J. Biggs* ¹ , M. S. Brown ^{1,2} , L. W. Greene ^{2,1} , E. M. Cochran ¹ , E. A. Lauterbach ¹ , J. R. Cortese ¹ ; ¹ West Texas A&M University, Canyon, ² Texas Agricultural Experiment Station, Amarillo
11:15 AM	159	Oscillating protein concentrations of finishing beef cattle diets improves nitrogen retention by improving nitrogen digestibility. S. L. Archibeque* ¹ , H. C. Freetly ¹ , N. A. Cole ² , C. L. Ferrell ¹ ; ¹ USDA-ARS; U.S. Meat Animal Research Center, Clay Center, NE, ² USDA-ARS; Conservation and Production Research Laboratory, Bushland, TX
11:30 AM	160	Prediction of ammonia release coupled to ammonia consumption. Erin Venable*, Kenneth Ladyman, Monty Kerley; University of Missouri, Columbia
11:45 AM	161	Evaluation of RUP amino acid levels on lean tissue growth and carcass composition of beef steers fed a roughage-free diet. A.L. Mueller*, W.H. Kolath, J.W. Golden, M.S. Kerley; University of Missouri, Columbia

Ruminant Nutrition

Dairy - Minerals

Chair: Beth Kegley, University of Arkansas

Room: 132

Time	Abstract #	
9:30 AM	162	Impact of minerals in water on ruminant production. J. G. Linn*, M. L. Raeth-Knight; University of Minnesota, St. Paul
10:00 AM	163	Quality Water for Dairy Operations. Karen Mancl*; Ohio State University, Columbus
10:30 AM	164	Effects of inorganic and organic (4-Plex [®]) trace mineral supplementation on milk production and reproduction. JD Ferguson* ¹ , D Tomlinson ² , M Socha ² ; ¹ University of Pennsylvania, Kennett Square, ² Zinpro Corporation, Eden Prairie, MN
10:45 AM	165	Effects of inorganic and organic (4-Plex [®]) trace mineral supplementation on claw lesions. JD Ferguson* ¹ , D Tomlinson ² , M Socha ² ; ¹ University of Pennsylvania, Kennett Square, ² Zinpro Corporation, Eden Prairie, MN
11:00 AM	166	Effect of exogenous phytase on phosphorus digestibility in dairy cows and calves. D. Garikipati, R. Kincaid*; Washington State University, Pullman
11:15 AM	167	Tissue selenium content and whole-blood glutathione peroxidase activity of lactating cows are increased by two organic forms of dietary selenium. M. R. Waldron* ¹ , T. L. Ward ² , M. T. Socha ² , T. R. Overton ¹ ; ¹ Cornell University, Ithaca, NY, ² Zinpro Corporation, Eden Prairie, MN
11:30 AM	168	Effects of molasses- versus corn-based supplements on the accumulation of selenium. John D. Arthington*, Findlay M. Pate; Range Cattle Research and Education Center, University of Florida, Ona
11:45 AM	169	Manganese for lactating and dry dairy cows. William P Weiss* ¹ , Mike T. Socha ² ; ¹ Ohio State University, Wooster, ² Zinpro Corporation, Eden Prairie MN
12:00 PM	170	Effect of glutamine supplementation on immune responsiveness and milk production in dairy cattle. L. Doepel* ¹ , N. Gagnon ¹ , M. Lessard ¹ , G.E. Lobley ² , J.F. Bernier ³ , H. Lapiere ¹ ; ¹ AAC Dairy and Swine R & D Center, Lennoxville, QC, Canada, ² Rowett Research Institute, Aberdeen, UK, ³ Université Laval, QC, Canada

SYMPOSIUM

Breeding and Genetics

Genetics of Efficient Feed Utilization

Chair: Mike MacNeil, USDA, ARS, LARRL

Sponsors: Pfizer Animal Health and PIC International Group

Room: 223

Time	Abstract #	
1:00 PM	171	Mechanisms regulating feed intake: role of appetite-regulating peptides. M.G. Thomas*, K.L. Shirley; New Mexico State University, Las Cruces
1:30 PM	172	Genetic variation in feed utilization: selection responses in mice. Merlyn K. Nielsen*; University of Nebraska, Lincoln
2:00 PM	173	Genetic evaluation of efficient feed utilization in beef cattle. D. H. Crews, Jr.*; Agriculture and Agri-Food Canada Research Centre, Lethbridge, AB, Canada
2:30 PM		Break
3:00 PM		Genetics and genomics of residual feed intake. S. S. Moore, J. D. Nkrumah, B. Murdoch, and C. Li, University of Alberta, Edmonton, AB, Canada
3:30 PM	174	Realities of measuring feed intake on individual pigs to genetically improve feed efficiency. David S. Casey* ¹ , Pieter W. Knap ² ; ¹ Pig Improvement Company, Franklin, KY, ² Pig Improvement Company, Germany
3:45 PM	175	Methods of editing errors in data from electronic swine feeders impact heritability estimates of average daily feed intake. David S. Casey*, Lizhen Wang; Pig Improvement Company, Franklin, KY

SYMPOSIUM

Combined Animal, Dairy and Poultry Extension Workshop

Room: 222

Time	Abstract #	
		<i>Biosecurity Session</i>
		Chair: Marcia Endres, University of Minnesota
1:15 PM	176	Development of Model Biosecurity Programs. John Shutske*; Biosystems and Agricultural Engineering Department, University of Minnesota, St. Paul
1:35 PM	177	Catastrophic Composting: Is it safe and effective? J. M. DeRouchey*, J. P. Harner, J. P. Murphy; Kansas State University, Manhattan
1:55 PM	178	What are extension's roles in the early detection of agro-terrorism events? Robert M. Smith*; USDA, CSREES, Washington, DC
		<i>International Session</i>
		Chair: Rhonda Van, Mississippi State University
2:15 PM		OIE International Standards on Animal Welfare, EU Country Regulations, and their Impact on USA Trade and Regulations. Chester Gipson*, Alex B. Thiermann; USDA/APHIS, Washington, DC.
2:35 PM	179	Use of antibiotics and alternatives in the animal industries: What is Extension's Role? Ronald B. Phillips*; Animal Health Institute, Washington, DC

2:55 PM	180	Country of origin labeling: update and path forward. John D. Lawrence*; Iowa State University, Ames
3:15 PM	181	Opportunities for extension professionals in international education. J. P. Blake*; Auburn University, Auburn, AL
3:35 PM		Break

Extension Realities

Chair: Angelica Chapa, Mississippi State University

4:00 PM	182	Cultural Issues in Processing Plants and on Farms. Wesley V. Jamison*; Dordt College, Sioux Center, IA
4:20 PM		How Should Extension Support Natural/Organic/Niche Markets? Jacquie Jacob, Department of Animal Science, University of Minnesota, St. Paul.
4:40 PM	183	Extension's Role in Conflict Resolution and Consumer Education. Michael M. Schutz*, Janet S. Ayres; Purdue University West Lafayette, IN

SYMPOSIUM

Dairy Foods

Perspectives on Raw Milk Cheeses

Chair: Lisbeth Goddik, Oregon State University

Room: 260

Time	Abstract #	
1:00 PM	184	Survival of <i>Escherichia coli</i> in Cheddar and Colby cheese. David R. Henning*; South Dakota State University, Brookings
1:30 PM	185	Use of Heat-Treated Cheesemilk to Make High Quality Cheddar Cheese. Bill Luth*; Tillamook County Creamery Assn., Tillamook, OR
2:00 PM	186	Approaches to ensuring the safety of raw milk cheeses. Catherine Donnelly*; Department of Nutrition and Food Science, The University of Vermont, Burlington
2:30 PM		Break
3:00 PM	187	Survival of a Five Strain Cocktail of <i>Escherichia coli</i> O157:H7 during Thermalization and the 60 Day Aging Period of Hard Cheese Made from Unpasteurized Milk. Joseph Schlessler*; Food and Drug Administration, Summit-Argo, IL
3:30 PM	188	An integrated approach to the safety of raw milk cheeses. P.S. Kindstedt*; University of Vermont, Burlington

SYMPOSIUM

Extension Education

Applied Reproductive Management

Chair: Michael Schutz, Purdue University

Sponsor: Pfizer Animal Health

Room: 225

Time	Abstract #	
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Swine Topics

1:00 PM		Introduction. Michael Schutz, Purdue University, West Lafayette, IN
1:10 PM		Using Regumate to control estrus in swine. Duane Davis, Kansas State University

1:30 PM		The use of GnRH to control and induce ovulation. Rob Knox, University of Illinois, Urbana
1:50 PM		Vaginal insert to control estrus in swine. Billy Day, University of Missouri, Columbia
2:10 PM		Break
2:25 PM		What do we still need to know about swine AI? Wayne Singleton, Purdue University, West Lafayette, IN
2:45 PM		How new technologies can be used to enhance swine production. Mark Wilson, Minitube, Inc.
3:05 PM		Discussion

Beef and Dairy Cattle Topics

3:25 PM		Synchronization of beef and dairy cows with CIDR protocols. Cliff Lamb, University of Minnesota, St. Paul
3:45 PM	189	Using melengestrol acetate (MGA)-based protocols to synchronize estrus prior to fixed-time artificial insemination in postpartum beef cows. D.J. Patterson*, F.N. Kojima, M.F. Smith; University of Missouri, Columbia
4:05 PM		Break
4:20 PM		Synchronization of beef and dairy cows with GnRH/PGF protocols. Darrel Kesler, University of Illinois, Urbana
4:40 PM		How do we communicate rapidly occurring advancement to producers? Speaker Panel

SYMPOSIUM

Horse Species

Equine Carbohydrate Associated Disorders

Chair: Paul Siciliano, Colorado State University

Room: 261/262

Time

1:00 PM		Gastric Ulcers. Frank M. Andrews; The University of Tennessee, Knoxville
1:45 PM		Insulin Resistant Syndromes. David S. Kronfeld; Virginia Polytechnic Institute and State University, Blacksburg
2:30 PM		Break
2:45 PM		Equine Laminitis. Christopher Pollitt; The University of Queensland
3:30 PM		Polysaccharide Storage Myopathy. Raymond J. Geor; University of Guelph
4:15 PM		Relationship between caloric intake and longevity. Brian Larson; Nestle Purina Pet Care Co.
5:00 PM		Update on Revision of the NRC Nutrient Requirements of Horses. Laurie Lawrence; University of Kentucky, Chair of the NRC Nutrient Requirements of Horses Committee

SYMPOSIUM

Physiology and Endocrinology

Functional Genomics and its Relevance in Animal Biology: Reproduction

Chair: Sherrill Echternkamp, USDA, Agricultural Research Service
and Pete Hansen, University of Florida

Sponsors: Elanco Animal Health, Monsanto Company, and Pfizer Animal Health

Room: 221

Time	
1:00 PM	Welcome and Acknowledgements. Gary Williams
1:05 PM	Beyond expression: adding meaning to microarray data. John Quackenbush, Institute for Genomic Research, Rockville, MD
1:45 PM	Question and Answer Session
2:00 PM	Swine and bovine genomics research with a focus on female reproduction. Randall Prather, University of Missouri, Columbia
2:30 PM	Question and Answer Session
2:45 PM	Break
3:15 PM	Genomic regulation of ovarian follicular development. Dr. Jock Findlay, Prince Henry's Institute of Medical Research, Clayton, Victoria, Australia
3:45 PM	Question and Answer Session
4:00 PM	The balance between viability and apoptosis in granulosa cells as a determinant of ovarian follicle survival. Dr. Alan Johnson, Notre Dame University, South Bend, IN
4:30 PM	Question and Answer Session

SYMPOSIUM

PSA Air Emissions and Poultry Production

Chair: Rosalina Angel, University of Maryland

Sponsors: Adisseo USA, Inc., Ajinomoto Heartland LLC, Alpharma and Jones-Hamilton, Co.

Room: 131

Time	Abstract #	
1:00 AM	190	Air Emissions in Poultry Production: Current Challenges and Future Directions. R. Angel ^{*1} , W. Powers ² , T.J. Applegate ³ ; ¹ University of Maryland, College Park, ² Iowa State University, Ames, ³ Purdue University, West Lafayette, IN
1:15 PM		Methods for Measuring Ammonia. R. Gates, University of Kentucky, Lexington
1:45 PM	191	Air Emissions from Layer Houses. Albert J. Heber*, Teng Lim, Jiqin Ni; Purdue University, West Lafayette, IN
2:15 PM	192	Ammonia emissions from broiler houses. A.J. Pescatore*, K.D. Casey, R.S. Gates; University of Kentucky, Lexington
2:45 PM		Break
3:00 PM	193	Dietary Strategies to Lower Nitrogen Load in Poultry. David J Burnham*; Ajinomoto Heartland LLC, Chicago, IL
3:30 PM	194	Management Strategies to Reduce Air Emissions: Emphasis Ammonia. Paul H. Patterson*; Department of Poultry Science, The Pennsylvania State University, University Park
4:00 PM	195	Emissions, Regulations and Impact in the EU and The Netherlands. Hilko Ellen*; Applied Research of Animal Sciences Group of Wageningen, Lelystad, The Netherlands
4:30 PM		Conclusions and Discussion. R. Angel, University of Maryland, College Park

Food Safety

Food Safety in Animal Production

Chair: Todd Callaway, USDA

Room: 276

Time	Abstract #	
1:00 PM	196	A USDA Multi-Agency Project: Collaboration in Animal Health, Food Safety & Epidemiology (CAHFSE). R.R. Kraeling ^{*1} , E.J. Bush ² , D.A Dargatz ² , N.E. Wineland ² , S. Ladely ¹ , P.J. Fedorka-Cray ¹ ; ¹ ARS, USDA, Athens, GA, ² APHIS-VS, USDA, Fort Collins, CO
1:15 PM	197	Monitoring the Safety of Edible Poultry Tissues: Antibiotic Residue Concentrations Can Vary Between Different Muscle Tissues. I. Reyes-Herrera ^{*1} , M.J. Schneider ² , K. Cole ¹ , P.J. Blore ¹ , D.J. Donoghue ¹ ; ¹ Department of Poultry Science, University of Arkansas, Fayetteville, ² USDA/ARS/ERRC, Wyndmoor, PA
1:30 PM	198	Survival of <i>Salmonella</i> species following sodium hypochlorite treatment during commercial broiler processing. Rita M. Lipscomb [*] , Lloyd T. Walker, William L. Hurllock, Leonard L. Williams, Martha Verghese; Department of Food and Animal Sciences, Alabama A&M University, Normal
1:45 PM	199	Herd-level factors associated with cow and calf <i>Salmonella</i> shedding in a multi-state study of 129 dairy farms. CP Fossler ^{*1} , SJ Wells ¹ , JB Kaneene ² , PL Ruegg ³ , LD Warnick ⁴ , JB Bender ¹ , LE Eberly ¹ , SM Godden ¹ , LW Halbert ² ; ¹ University of Minnesota, St. Paul, ² Michigan State University, East Lansing, ³ University of Wisconsin, Madison, ⁴ Cornell University, Ithaca, NY
2:00 PM	200	Investigation of cattle feedlot management practices to reduce <i>Escherichia coli</i> O157. J. R. Ransom [*] , K. E. Belk, J. A. Scanga, J. N. Sofos, G. C. Smith; Colorado State University, Fort Collins
2:15 PM	201	Colicin E1, N and A treatment inhibits growth of <i>Escherichia coli</i> O157:H7 strains in vitro. Todd R. Callaway ^{*1} , Chad H. Stahl ² , Tom S. Edrington ¹ , Ken J. Genovese ¹ , Leslie M. Lincoln ² , Robin C. Anderson ¹ , Roger B. Harvey ¹ , David J. Nisbet ¹ ; ¹ USDA/ARS, Food and Feed Safety Research Unit, College Station, TX, ² Dept. Animal Science, Iowa State University, Ames
2:30 PM	202	Effects of lactic acid treatments on microbiological, chemical, and sensory properties of stored fresh beef trimmings. Sara E. Rose [*] , Keith E. Belk, John N. Sofos, John A. Scanga, Kim L. Hossner, Gary C. Smith; Department of Animal Sciences, Colorado State University, Fort Collins
2:45 PM	203	Influence of aflatoxin B1 on milk production and health in dairy sheep. G Battacone ¹ , M Palomba ² , M Pascale ³ , A Mazzette ¹ , G Pulina ^{*1} ; ¹ Dipartimento di Scienze Zootecniche, University of Sassari, Italy via Enrico de Nicola 9, 07100 Sassari, Italy, ² Dipartimento Farmaco Chimico Tossicologico, University of Sassari, Italy via Muroni, 07100 Sassari, Italy, ³ CNR Istituto di Scienze delle Produzioni Alimentari, Bari, Italy via le Einaudi 51, 70125 Bari, Italy

Graduate Student Competition

ADSA-ASAS Northeast Section

Chair: Thomas G. Hartsock, University of Maryland

Room: 125/126

Time	Abstract #	
1:00 PM	204	Fractional removal of amino acids by the small intestines and whole gastrointestinal tract of sheep remains constant across levels of protein supply. Samer W. El-Kadi [*] , Nishanth E. Sunny, Masahito Oba, Sandra L. Owens, Brian J. Bequette; University of Maryland, College Park
1:15 PM	205	Regulation of urea recycling to the gastrointestinal tract and ammonia metabolism in ruminants. Nishanth E Sunny [*] , Lucille H Hanus, Samer W El-Kadi, Sandra L Owens, Brian J Bequette; University of Maryland, College Park
1:30 PM	206	Urea supplementation increased rumen function in lactating dairy cows fed a corn silage based diet deficient in rumen-degradable feed protein (RDP). Sarah E. Ferguson [*] , Ryan S. Ordway, Nancy L. Whitehouse, Paul J. Kononoff, Charles G. Schwab; University of New Hampshire, Durham

1:45 PM	207	Mechanisms of transport of vitamins into colostrum: A potential role of megalin and low density lipoprotein receptor. D.G. Martinez* ¹ , G.E. Dahl ² , T.B. McFadden ¹ ; ¹ University of Vermont Burlington, ² University of Illinois, Urbana
2:00 PM	208	Quantifying the effect of dietary sodium bicarbonate on ruminal pH. N Singh*, R. A Kohn; University of Maryland, College Park
2:15 PM	209	Trans-10, trans-12 conjugated linoleic acid (CLA) reduces the Δ^9 -desaturase index without affecting milk fat yield in lactating dairy cows. J. W. Perfield II* ¹ , P. Delmonte ² , A. L. Lock ¹ , M. P. Yurawecz ² , D. E. Bauman ¹ ; ¹ Cornell University, Ithaca, NY, ² Center for Food Safety and Applied Nutrition, College Park, MD
2:30 PM	210	Altering dry matter intake affects the nutritional efficiency of dairy heifers. G.I. Zanton*, A.J. Heinrichs; The Pennsylvania State University, University Park
2:45 PM	211	The effect of essential plant oils on milk production and composition from lactating dairy cows and on silage fermentation and aerobic stability of corn silage. Renato J. Schmidt* ¹ , Daryl H. Kleinschmit ¹ , Jill M. Ladd ¹ , Jill E. Lynch ¹ , Limin Kung, Jr. ¹ , Peter G. Williams ² , Riccardo Losa ³ ; ¹ University of Delaware, Newark, ² Akzo Nobel LLC, Davis, CA, ³ CRINA S.A., Switzerland
3:00 PM	212	The effects of <i>Lactobacillus buchneri</i> 40788 and damage to the corn ear on the fermentation, aerobic stability, and production of mycotoxins in corn silage. Rachel S. Teller*, Renato J. Schmidt, Limin Kung, Jr.; University of Delaware, Newark

Graduate Student Competition

National ADSA Production

Chair: Mark McGuire, University of Idaho

Room: 127

Time	Abstract #	
1:00 PM	213	Effects of providing supplemental methionine (Met) in the form of Smartamine™ M or 2-hydroxy-4-methylthio butanoic acid isopropyl ester (HMBi) to parturient and early lactation dairy cows on feed intake and lactational performance. Ryan S. Ordway* ¹ , Nancy L. Whitehouse ¹ , Amy M. McLaughlin ¹ , Charles G. Schwab ¹ , Brian K. Sloan ² ; ¹ University of New Hampshire, Durham, ² Adisseo USA, Inc., Alpharetta, GA
1:15 PM	214	Comparison of Holstein, Brown Swiss and Jersey cows for age at first calving and first calving interval. T.B. Garcia-Peniche* ¹ , B.G. Cassell ¹ , I. Misztal ² , R.E. Pearson ¹ ; ¹ Virginia Polytechnic Institute and State University, Blacksburg, ² University of Georgia, Athens
1:30 PM	215	One-time oral nucleotides enhance immune function of newborn beef calves. C.E. Oliver* ¹ , F. Philippe ² , G. Gaillard ² , R.B. Danielson ¹ , W.L. Keller ¹ , C. Rupprecht ³ , M.L. Bauer ¹ , C.S. Park ¹ ; ¹ North Dakota State University, Fargo, ² Ecole Supérieure D'Agriculture, D'Angers, France, ³ Rabies Laboratory, Centers for Disease Control and Prevention Atlanta, GA
1:45 PM	216	Insulin sensitivity in lactating dairy cows and neonatal calves: Comparison of the minimal model and the hyperinsulinemic euglycemic clamp. C.C. Stanley* ¹ , C.C. Williams ¹ , H.G. Bateman, II ¹ , D.T. Gantt ¹ , J.C. Roberts ¹ , P.T. Richardel ¹ , J.C. Lovejoy ² , E. Ravussin ³ ; ¹ LSU AgCenter, Baton Rouge, LA, ² Bastyr University, Kenmore, WA, ³ Pennington Biomedical Research Center, Baton Rouge, LA
2:00 PM	217	Effects of colostrum feeding time and sex on serum leptin and fatty acid metabolism in newborn Holstein calves. L.J. Driedger*, J.A. Jackson, K. Meek, S.T. Franklin; University of Kentucky, Lexington

Graduate Student Competition

Southern Branch ADSA

Chair: Brinton A. Hopkins, North Carolina State University

Room: 127

Time	Abstract #	
2:15 PM	218	Effect of length of cut and degree of kernel processing of corn silage on production characteristics of lactating Holstein cows. K. M. Cooke*, J. K. Bernard; The University of Georgia, Tifton
2:30 PM	219	Evaluating the effectiveness of decreasing the dosage of GnRH for ovulation synchronization and timed AI in dairy cows. L. E. McKee*, W. M. Graves, J. D. Clark; The University of Georgia, Athens

Lactation Biology

Physiology

Chair: Joanne Knapp, University of Vermont

Room: 220

Time	Abstract #	
1:00 PM	220	Use of serial analysis of gene expression (SAGE) for gene transcript profiling in lactating bovine mammary gland. E.E. Connor*, A.V. Capuco, T.S. Sonstegard; USDA-ARS, Bovine Functional Genomics Laboratory, Beltsville, MD
1:15 PM	221	Differential effects of ovarian hormones on epithelial proliferation in the porcine mammary gland. A.S. Barndollar*, J.M. Scudder, J.F. Trott, R.C. Hovey; University of Vermont, Burlington
1:30 PM	222	Effects of continuous milking and bST on mammary cell proliferation, milk yield and composition in primiparous cows. E.L. Annen*, A.C. Fitzgerald, P.C. Gentry, R.J. Collier; University of Arizona, Tucson
1:45 PM	223	Effects of continuous milking and prostaglandin E ₂ on milk yield and composition. E.L. Annen* ¹ , C.M. Stiening ¹ , M.E. Dwyer ¹ , B.A. Crooker ² , A.C. Fitzgerald ¹ , R.J. Collier ¹ ; ¹ University of Arizona, Tucson, ² University of Minnesota, St. Paul
2:00 PM	224	Influence of Leptin Single Nucleotide Polymorphism on Lactation Curve Traits for lactating dairy cows. H.W. Soita*, D.A. Christensen, F.C. Buchanan, T.L. Heck, J.J. McKinnon; University of Saskatchewan, Saskatoon, SK, Canada
2:15 PM	225	Identifying positive effectors of milk protein synthesis: amino acids and glucose. C.A. Toerien*, D.R. Trout, J.P. Cant; University of Guelph, Guelph, ON, Canada
2:30 PM	226	Cloning and expression of bovine glucose transporter GLUT8. Feng-Qi Zhao*, Peter Miller, Emma H. Wall, Yu-Cai Zheng, Bing Dong, Tom McFadden; Lactation and Mammary Gland Biology Group, Department of Animal Science, University of Vermont, Burlington
2:45 PM		Break
3:15 PM	227	Effects of a shorter duration of photoperiod treatment during the dry period on cellular immune function in dairy cattle. T. L. Auchtung*, E. D. Reid, D. E. Morin, G. E. Dahl; University of Illinois, Urbana
3:30 PM	228	Comparison of gene expression changes in the two subunits of bovine IgG1 receptor during colostrogenesis. D.G. Martinez*, R. Thomason, T.B. McFadden; University of Vermont, Burlington
3:45 PM	229	Changes in expression of vitamin receptors in bovine mammary gland during hormone induced colostrogenesis. D.G. Martinez*, R. Thomason, T.B. McFadden; University of Vermont, Burlington

Meat Science and Muscle Biology

Chair: Elisabeth Huff-Lonergan, Iowa State University

Room: 124

Time	Abstract #	
1:00 PM	230	Conjugated linoleic acid (CLA) concentrations in beef tissues from cattle finished on pasture initially with limited grain. R.N. Sonon Jr.* ¹ , D.C. Beitz ¹ , A.H. Trenkle ¹ , J.R. Russell ¹ , R. Rosmann ² ; ¹ Iowa State University, Ames, ² Rosmann's Family Farms
1:15 PM	231	Effects of two supplementation levels of linseed combined with CLA or tallow on meat quality traits and fatty acid profile of adipose tissue and longissimus muscle in pigs. Giuseppe Bee*, Steve Jacot, George Guex, Willy Herzog; Swiss Federal Research Station for Animal Production and Dairy Products 1725 Posieux, Switzerland
1:30 PM	232	Consumer acceptance of beef from steers finished on ryegrass forage or a high-concentrate diet. Chris R. Kerth*, Kirk W. Braden, Ryan B. Cox, Jeremiah Alexander; Department of Animal Sciences, Auburn University, Auburn, AL
1:45 PM	233	Mechanisms of Beef Carcass Tenderness. R. Johnson*, J. Sawdy, J. M. Reddish, M. S. Updike, M. Wick; The Ohio State University, Columbus
2:00 PM	234	Effects of ractopamine and dietary fat source on performance and carcass characteristics of growing-finishing swine. Jason K. Apple* ¹ , Bryan R. Kutz ¹ , Charles V. Maxwell ¹ , M. Ellen Davis ¹ , Lilly K. Rakes ¹ , Zelpha B. Johnson ¹ , Todd A. Armstrong ² ; ¹ University of Arkansas, Fayetteville, ² Elanco Animal Health, A Division of Eli Lilly and Company, Greenfield, IN
2:15 PM	235	Effects of ractopamine and dietary fat source on quality characteristics of fresh pork bellies. Jason K. Apple* ¹ , Bryan R. Kutz ¹ , Charles V. Maxwell ¹ , M. Ellen Davis ¹ , Lilly K. Rakes ¹ , Zelpha B. Johnson ¹ , Todd A. Armstrong ² ; ¹ University of Arkansas, Fayetteville, ² Elanco Animal Health, A Division of Eli Lilly and Company, Greenfield, IN
2:30 PM	236	Effect of slaughter weight on pork quality of castrated females. J. Peinado* ¹ , D. García ² , F. Baucells ¹ , G.G. Mateos ³ , P. Medel ¹ ; ¹ Imasde Agropecuaria Madrid, Spain, ² Estación Tecnológica De La Carne De Guijuelo Salamanca, Spain, ³ Universidad Politécnica De Madrid Madrid, Spain
2:45 PM		Break
3:15 PM	237	Strategies based on gender and slaughter weight to modify carcass quality for cured product industry. J. Peinado* ¹ , A. Fuentetaja ² , J. Sánchez ¹ , G.G. Mateos ³ , P. Medel ¹ ; ¹ Imasde Agropecuaria Madrid, Spain, ² COPESE Segovia, Spain, ³ Universidad Politécnica De Madrid Madrid, Spain
3:30 PM	238	Evaluating the Fatty Acid Distribution of Bratwurst in Retail Products and of Fat in Fertiliium Treated Sows. Lindsey Gordon*, Abby Cox, Allan Schinckel, Mickey Latour; Purdue University West Lafayette, IN
3:45 PM	239	Fascicular structure as a quantitative trait for bovine and ovine skeletal muscles. Gregory S. Harper* ¹ , Mark E. McKay ¹ , Michael Taylor ² , Toni Reverter-Gomez ³ , Peter G. Allingham ² , Robert Seymour ³ ; ¹ Cattle and Beef Quality Cooperative Research Centre, Armidale, Australia, ² Australian Sheep Industry Cooperative Research Centre, Armidale, Australia, ³ CSIRO Livestock Industries, St Lucia, Australia
4:00 PM	240	Growth characterization of <i>callipyge</i> myoblasts. J. N. Fleming*, S. P. Jackson, J. R. Blanton, Jr.; Texas Tech University, Lubbock
4:15 PM	241	Integration of myostatin-null alleles in leptin db/db mice does not alter body composition. A. C. Dilger*, A. L. Grant, M. E. Spurlock, D. E. Gerrard; Purdue University, West Lafayette, IN

Nonruminant Nutrition

Weanling Pig Nutrition and Health

Co-Chairs: Sung Woo Kim, Texas Tech University and Paul Matzat, Elanco Animal Health

Room: 275

Time	Abstract #	
1:00 PM	242	Potassium source and level influence performance day 21 – 42 post-weaning. B. V. Lawrence*, J. D. Hahn, S. A. Hansen; Hubbard Feeds Inc., Mankato, MN
1:15 PM	243	Inorganic anions (Animate® concentrate) stimulate growth in nursery pigs fed diets without antibiotics regardless of diet buffering capacity. T. D. Crenshaw* ¹ , D. E. Axe ² ; ¹ University of Wisconsin, Madison, ² IMC, Lake Forest, IL
1:30 PM	244	Effects of diet acidification and buffering capacity on weanling pig growth. M Walsh*, D Sholly, K Saddoris, R Hinson, A Yager, A Sutton, S Radcliffe, B Harmon, B Richert; Purdue University, West Lafayette, IN
1:45 PM	245	Effects of diet and water acidification on weanling pig growth and microbial shedding. M Walsh* ¹ , D Sholly ¹ , K Saddoris ¹ , R Hinson ¹ , A Sutton ¹ , S Radcliffe ¹ , B Harmon ¹ , R Odgaard ² , J Murphy ² , B Richert ¹ ; ¹ Purdue University, West Lafayette, IN, ² Kemin Americas, Inc., Des Moines, IA
2:00 PM	246	Effects of diet acidification and antibiotics on weanling pig growth and microbial shedding. M. Walsh*, D. Sholly, K. Saddoris, R. Hinson, A. Yager, A. Sutton, S. Radcliffe, B. Harmon, B. Richert; Purdue University, West Lafayette, IN
2:15 PM	247	Use of d-aminolevulinic acid in swine diet: effects on growth performance, behavioral characteristics and hematological/immune statuses in nursery pigs. R. D. Mateo*, F. Ji, S. W. Kim; Texas Tech University, Lubbock
2:30 PM	248	The effect of dietary protein on growth performance and fecal consistency of 9 to 24 kg pigs following an enteric challenge with K88 E. coli. D. C. Kendall* ¹ , R. W. Fent ¹ , S. X. Fu ¹ , J. L. Usry ² , J. A. Carroll ³ , G. L. Allee ¹ ; ¹ University of Missouri-Columbia, ² Ajinimoto Heartland LLC, Chicago, IL, ³ ARS-USDA Animal Physiology Research Unit, Columbia, MO
2:45 PM		Break
3:15 PM	249	The effect of lactose and inulin on intestinal morphology, microbiology and volatile fatty acids of the weanling pig. K.M. Pierce* ¹ , J.J. Callan ¹ , P.O. Brophy ¹ , P. McCarthy ² , T. Sweeney ¹ , E. Fitzpatrick ¹ , C. Byrne ¹ , S. Ni Cheallaigh ¹ , J.V. O'Doherty ¹ ; ¹ University College, Dublin University, Dublin, Ireland, ² Volac International Ltd.
3:30 PM	250	Effects of lactic acid and lactose on the digestive tract of nursery pigs. M.F. Palacios*, E.A. Flickinger, C.M. Grieshop, C.T. Collier, J.E. Pettigrew; University of Illinois, Urbana
3:45 PM	251	Effects of lactic acid on growth performance of nursery pigs. M.F. Palacios*, K.T. Soltwedel, G.R. Hollis, J.E. Pettigrew; University of Illinois, Urbana
4:00 PM	252	Comparison of the effect of direct-fed microbials and antibiotic supplementation on the growth response of weanling pigs. M. S. Dirain* ¹ , M. E. Davis ¹ , D.C. Brown ¹ , C.V. Maxwell ¹ , Z.B. Johnson ¹ , T. Rehberger ² ; ¹ Department of Animal Science, University of Arkansas, Fayetteville, ² Agtech Products Inc., Waukesha, WI
4:15 PM	253	Efficacy of mannan oligosaccharides supplementation of both sows and piglet diets on the performance of weaned piglets. M. I. Gracia* ¹ , J. Morales ² , J. Pickard ³ , J. Sánchez ¹ , F. Baucells ¹ ; ¹ Imasde Agropecuaria, S.L. Spain, ² PigChamp Pro Europa Spain, ³ Alltech Inc., Ireland
4:30 PM	254	Impact of spray-dried plasma with or without antimicrobials on nursery pig performance. P. Srichana* ¹ , A.M. Gaines ¹ , B.W. Ratliff ¹ , G.L. Allee ¹ , J.D. Crenshaw ² , J.M. Campbell ² , J.D. Quigley ² , L.E. Russell ² ; ¹ University of Missouri, Columbia, ² APC Inc., Ankeny, IA
4:45 PM	255	Effect of flaxseed fractions and sub-therapeutic antibiotic inclusion on microbial ecology in small intestine of growing pigs. L.F. Smith* ¹ , R.T. Zijlstra ² , M.D. Drew ¹ , A.G. Van Kessel ¹ ; ¹ Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK, Canada, ² Prairie Swine Centre Inc., Saskatoon, SK, Canada
5:00 PM	794	Supplementation of sow diets with a mixture of carvacrol, cinnamaldehyde and capsicum; effects on sow performance and piglet gut morphology. Sian Ilsley* ¹ , Helen Miller ¹ , Christopher Kamel ² ; ¹ University of Leeds, Leeds, UK, ² AXISS France SAS, Bellegarde-sur-Valserine, France.

Production, Management and the Environment

Health and Miscellaneous

Chair: Dan N. Waldner, Oklahoma State University

Room: 224

Time	Abstract #	
1:00 PM	256	The Use of Statistical Process Control Capability Indices to Estimate Subclinical Mastitis Prevalence and New Infection Rates. Joanna Lukas ^{*1} , M. L. Kinsel ² , J. K. Reneau ¹ ; ¹ University of Minnesota, St Paul, ² Agricultural Information Management, Ellensburg, WA
1:15 PM	257	Evaluation of the DHI Hot List as a Tool to Reduce Bulk Tank Somatic Cell Counts. Jessica E Belsito [*] , Albert de Vries, Roger P Natzke; Department of Animal Sciences, University of Florida, Gainesville
1:30 PM	258	Evaluation of the Association between Bulk Tank Somatic Cell Count and Management Practices on U.S. Dairy Operations; Results from the NAHMS Dairy 2002 study. J. E. Lombard ^{1,2} , R. P. Dinsmore ² , J. R. Wenz ^{*2} , C. Tapp ² ; ¹ USDA:APHIS:VS; Centers for Epidemiology and Animal Health, Fort Collins, CO, ² Integrated Livestock Management, Colorado State University, Fort Collins
1:45 PM	259	Comparison of paired milk and serum ELISA for diagnosis of Johne's disease in dairy cattle. J. E. Lombard ^{*1,2} , T. Byrem ³ , B. J. McCluskey ¹ ; ¹ USDA:APHIS:VS, Centers for Epidemiology and Animal Health, Fort Collins, CO, ² Integrated Livestock Management, Colorado State University, Fort Collins, ³ Antel Biosystems, Inc., Lansing, MI
2:00 PM	260	Financial costs of Johne's disease on U. S. dairy operations. Jason E. Lombard ^{*1,2} , Brian J. McCluskey ¹ , Stephen L. Ott ¹ , Franklyn B. Garry ² ; ¹ USDA:APHIS:VS; Centers for Epidemiology and Animal Health, Fort Collins, CO, ² Integrated Livestock Management, Colorado State University, Fort Collins
2:15 PM	261	Financial Drivers of Profitability in Dairy Businesses. Bradley J. Hilty [*] , Lisa A. Holden, Jeffrey Hyde; Pennsylvania State University, University Park
2:30 PM	262	Economic and environmental feasibility of a continuous four-year lactation model. David L. Zartman ^{*1} , C. Al Rotz ² , Ken L. Crandall ³ ; ¹ Ohio State University, Columbus, ² USDA-ARS, University Park, PA, ³ DHI Computing Services, Inc., Provo, UT
2:45 PM	263	Tracing pigs by using conventional and electronic identification devices. D. Babot ^{1,2} , M. Hernández-Jover ^{*3} , G. Caja ³ , C. Santamarina ² , J.J. Ghirardi ³ ; ¹ Àrea de Producció Animal, Centre UdL-IRTA Lleida, Spain, ² Departament de Producció Animal, UdL, Lleida, Spain, ³ Universitat Autònoma de Barcelona, Bellaterra, Spain
3:00 PM	264	Initial and terminal implant strategy for heavy weaned Canadian calves. K. S. Eng ^{*1} , R. Bectel ² , D. P. Hutcheson ³ ; ¹ Eng, Inc. San Antonio, TX, ² Advance Agricultural Testing Baden, ON, Canada, ³ Animal-Agricultural Consulting, Inc., Amarillo, TX

PSA-Environment and Management

Breeder and Incubation

Chair: Brian D. Fairchild, University of Georgia

Room: 265/266

Time	Abstract #	
1:00 PM	265	Heavy tom strains fed low calcium and phosphorus diets supplemented with phytase 1. Growth performance and carcass yield. R. Michael Hulet [*] , Paul H. Patterson, Terri L. Cravener; Department of Poultry Science, The Pennsylvania State University, University Park
1:15 PM	266	Heavy tom strains fed low calcium and phosphorus diets supplemented with phytase 2. Impact on litter total P, soluble P and bone integrity. P. H. Patterson ^{*1} , R. M. Hulet ¹ , T. L. Cravener ¹ , P. Y. Hester ² , P. J. Kleinman ³ , A. N. Sharpley ³ ; ¹ Department of Poultry Science, The Pennsylvania State University, University Park, ² Department of Animal Sciences, Purdue University, West Lafayette, IN, ³ USDA-ARS, University Park, PA

1:30 PM	267	Examining if the hole created by egg injection improves late embryonic survival. Bryanna L. Kumpula*, Gaylene M. Fasenko; Department of AFNS, University of Alberta, Edmonton, AB, Canada
1:45 PM	268	Effect of hatch pull time, protein and methionine on bobwhite quail performance. J. P. Blake*, J. B. Hess, W. D. Berry; Auburn University, Auburn, AL
2:00 PM	269	Influence of light intensity and handling on live and processing performance of male broilers. R.J. Lien*, J.B. Hess, S.R. McKee, B.A. McCrear, S.F. Bilgili; Auburn University, Auburn, AL
2:15 PM	270	Impact of genotype, growth profile and photostimulation age on the reproductive efficiency of female broiler breeders. R. A. Renema* ¹ , M. J. Zuidhof ² , F. E. Robinson ¹ ; ¹ University of Alberta Edmonton, AB, Canada, ² Alberta Agriculture, Food and Rural Development, Edmonton, AB, Canada
2:30 PM	271	Relationship of physical traits at hatch with growth traits to 14-d of age in male chicks of selected parent stock and pure line products. F. E. Robinson* ¹ , N. J. Wolanski ¹ , R. A. Renema ¹ , G. M. Fasenko ¹ , V. L. Carney ² , B. Fancher ² ; ¹ University of Alberta, Edmonton, AB, Canada, ² Aviagen, Huntsville, AL
2:45 PM		Break
3:15 PM	272	Growth Potential and Carcass Characteristics of Eight Strains of Broiler Breeder Stocks. Melanie E. Rustad* ¹ , Frank E. Robinson ¹ , Robert A. Renema ¹ , Martin J. Zuidhof ² , Valerie L. Carney ³ ; ¹ University of Alberta Edmonton, AB, Canada, ² Alberta Agriculture Food and Rural Development, Edmonton, AB, Canada, ³ Aviagen, Huntsville, AL
3:30 PM	273	The effects of supplemental enzyme (AVIZYME 1502) and phytase (PHYZYME) on phosphorus nutrition in broiler breeders. M.S. Lilburn* ¹ , A. Mitchell ² , E.E.M. Pierson ³ ; ¹ Ohio State University, Wooster, ² Growth Biology Lab, USDA, Beltsville, MD, ³ Danisco Animal Nutrition, St. Louis, MO
3:45 PM	274	Detection of <i>Campylobacter</i> and <i>Salmonella</i> in the mature and immature ovarian follicles of late-life broiler breeder hens. N A Cox ¹ , J S Bailey ¹ , L J Richardson* ¹ , R J Buhr ¹ , K L Hiatt ¹ , D E Cosby ¹ , J L Wilson ² , G R Siragusa ¹ , D V Bourassa ² , M T Musgrove ¹ ; ¹ USDA-ARS, Russell Research Center, Athens, GA, ² Department of Poultry Science, University of Georgia, Athens
4:00 PM	275	The Effect of Daily Photoperiod on Growth of Commercial Broilers. 1. Body Weight and Breast Yield. M.S. Lilburn*; Ohio State University, Wooster
4:15 PM	276	The Effect of Daily Photoperiod on Growth of Commercial Broilers. 2. Feeding Behaviour. K. Huffman*, M.S. Lilburn; Ohio State University, Wooster
4:30 PM	277	The Effect of Daily Photoperiod on Growth of Commercial Broilers. 3. Skeletal development. M.S. Lilburn* ¹ , A. Mitchell ² ; ¹ Ohio State University, Wooster, ² Growth Biology Lab, USDA, Beltsville, MD
4:45 PM	278	Spatial Disparity of Ammonia Flux within a Broiler House at One and 21 Days of Age. Dana M. Miles* ¹ , Phillip R. Owens ¹ , Dennis E. Rowe ¹ , Scott L. Branton ² ; ¹ USDA-ARS, Waste Management and Forage Research Unit, Mississippi State, MS, ² USDA-ARS, Poultry Research Unit, Mississippi State, MS

PSA-Immunology

Chair: Luc Berghman, Texas A&M University

Room: 267

Time	Abstract #	
1:00 PM	279	<i>Salmonella</i> vaccination programs in broiler breeders. I. Humoral and Mucosal Immune Response. Ariel Rolon* ¹ , J. Stan Bailey ² , Peter S. Holt ² , Charles L. Hofacre ³ , Jeanna L. Wilson ¹ , Douglas E. Cosby ² , L. Jason Richardson ² , Nelson A. Cox ² ; ¹ Department of Poultry Science, University of Georgia, Athens, ² U. S. Department of Agriculture Russell Research Center, Athens, GA, ³ Department of Avian Medicine, University of Georgia, Athens
1:15 PM	280	<i>Salmonella</i> Vaccination Programs in Broiler Breeders. II. Resistance to Challenge under a Multiple Marker Strain Model. A. Rolon* ¹ , J. S. Bailey ² , P. S. Holt ² , C. L. Hofacre ³ , J. L. Wilson ² , D. E. Cosby ² , L. J. Richardson ² , N. A. Cox ² ; ¹ Department of Poultry Science, University of Georgia, Athens, ² U. S. Department of Agriculture, Russell Research Center, Athens, GA, ³ Department of Avian Medicine, University of Georgia, Athens

1:30 PM	281	Construction and evaluation of recombinant <i>Salmonella</i> vaccine expressing <i>Eimeria</i> sporozoite and merozoite antigen. Vjollca Konjufca*, Soo-Young Wanda, Roy Curtiss III; Washington University, Saint Louis, MO
1:45 PM	282	Rous sarcoma growth in lines congenic for major histocompatibility (B) complex recombinants. Elizabeth S. Schulten ¹ , W. Elwood Briles ² , Robert L. Taylor, Jr.* ¹ ; ¹ University of New Hampshire, Durham, ² Northern Illinois University, DeKalb
2:00 PM	283	Demonstration of Carboxypeptidase E protein and mRNA in the diffuse neuroendocrine system of the chicken thymus. Xiaodong Zhang* ² , James J. Zhu ¹ , Luc R. Berghman ¹ ; ¹ Departments of Poultry Science and Veterinary Pathobiology, Texas A&M University, College Station, ² Department of Poultry Science, Texas A&M University, College Station
2:15 PM	284	Cationic amino acid transport (CAT) expression in immune tissue and the effect of lysine on lymphocyte function. Brooke Humphrey*, Kirk Klasing; Department of Animal Science, University of California, Davis
2:30 PM	285	Effect of Testosterone and Lead on T cell Maturation in the Developing Thymus. I. Hussain*, M. Piepenbrink, R. Dietert; Department of Microbiology and Immunology, College of Veterinary Medicine, Cornell University, Ithaca, NY
2:45 PM	286	Immunocompetence measurements of frizzle and normally feathered genotypes issued from different maternal lines of chicken. M.M. Fathi, S.A. El-Safty*, A. Galal; Poultry Prod. Dept, Faculty of Agric., Ain Shams University

PSA-Nutrition

Feed Additives and Phytase

Chair: David Ledoux, University of Missouri

Room: 274

Time	Abstract #	
1:00 PM	287	In vitro and in vivo evaluation of simultaneous supplementation of a-galactosidase and citric acid on nutrient release, digestibility and growth performance of broiler chicks. T. Ao* ¹ , A. H. Cantor ¹ , A. J. Pescatore ¹ , M. J. Ford ¹ , J. L. Pierce ² ; ¹ Department of Animal Sciences, University of Kentucky, Lexington, ² Alltech Biotechnology Center, Nicholasville, KY
1:15 PM	288	Effect of virginiamycin in diets with adequate or reduced dietary calcium or available phosphorus for 0 to 18 d-old broilers. T. O'Connor-Dennie*, L. L. Southern; LSU Ag Center, Department of Animal Sciences, Louisiana State University, Baton Rouge
1:30 PM	289	Intestinal bacterial populations in broiler chickens fed on high protein diets with and without added guar gum. J.P. Dahiya*, D.C. Wilkie, A.G. Van Kessel, B. Laarveld, M.D. Drew; University of Saskatchewan, Saskatoon, SK, Canada
1:45 PM	290	Organic acids improve phytate phosphorus utilization in chicks fed a corn-soybean meal diet. K. A. Rafacz* ¹ , C. M. Parsons ¹ , R. A. Jungk ² ; ¹ University of Illinois, Urbana, ² PMP Fermentations Products Inc., Peoria, IL
2:00 PM	291	Phytase and 1 α -OH cholecalciferol (1 α -OH D ₃) supplementation to broilers during the starting and growing/finishing phases. J.P. Driver*, G.M. Pesti, R.I. Bakalli, H.M. Edwards, Jr.; Poultry Science Department, The University of Georgia, Athens
2:15 PM	292	Efficacy of an <i>Escherichia coli</i> Phytase on Growth Performance, Nutrient Utilization and Bone Characteristics in Broiler Chicks. E. M. Onyango* ¹ , M. R. Bedford ² , O. Adeola ¹ ; ¹ Department of Animal Sciences, Purdue University, West Lafayette, IN, ² Zymetrics Inc., Marlborough, Wiltshire, UK
2:30 PM	293	Dietary Phytates Increase Endogenous Losses in Ducks and Chickens. E. M. Onyango* ¹ , E. K. Asem ² , J. S. Sands ³ , O. Adeola ¹ ; ¹ Department of Animal Sciences, Purdue University, West Lafayette, IN, ² Basic Medical Sciences, Purdue University, West Lafayette, IN, ³ Danisco Animal Nutrition, Marlborough, Wiltshire, UK

2:45 PM		Break
3:15 PM	294	The effect of phytase on performance of broilers fed high and low phytate phosphorus diets. Megharaja Manangi*, Craig Coon; Department of Poultry Science, University of Arkansas, Fayetteville
3:30 PM	295	Effects of various phytase concentrations in diets with low-phytate corn on broiler chick performance and metabolizable energy. Nicole J. Baker*, Amy S. Parsons, Nancy P. Buchanan, Joseph S. Moritz; West Virginia University, Morgantown
3:45 PM	296	Performance and phosphorus excretion of chicks fed conventional or low-phytate corn-soybean meal diets without or with phytase. E. G. Xavier, G. L. Cromwell*, M. D. Lindemann; University of Kentucky, Lexington
4:00 PM	297	Effects of dietary organic acid and phytase supplementation on performance and calcium and phosphorus utilization in laying hens. Mustafa Sari, Ahmet G. Onol, Mehmet Daskiran*, Ozcan Cengiz; Faculty of Veterinary Medicine, Adnan Menderes University, Aydin, Turkey
4:15 PM	298	Effect of a thermo-tolerant phytase on performance and bone ash in broilers fed variable levels of dietary nutrients. Craig W Wyatt* ¹ , Michael R Bedford ¹ , Terri Parr ² , Steve Davis ² ; ¹ Zymetrics Inc., Golden Valley, MN, ² Colorado Quality Research, Wellington, CO
4:30 PM	299	The influence of an <i>E.coli</i> derived phytase on performance of turkeys fed phosphorus deficient diets. Michael R Bedford*, Craig L Wyatt; Zymetrics Inc., Golden Valley, MN
4:45 PM	300	Efficacy of Phyzyme® XP phytase in broiler diets containing different levels of calcium and non-phytate phosphorus: performance, bone ash and mineral retention. D.R. Ledoux* ¹ , J.N. Broomhead ¹ , J.S. Sands ² ; ¹ University of Missouri, Columbia, ² Danisco Animal Nutrition, Marlborough, Wiltshire, UK

PSA-Physiology

Poultry Reproductive Physiology

Chair: J. Paul Thaxton, Mississippi State University

Room: 264

Time	Abstract #	
1:00 PM	301	Effect of heat stress on production, reproduction hormone levels, acid-base status, and liver expression of heat shock protein-70 observed in three varieties of laying hens. Danilo J Franco*, Lyle Robeson, Mary M Beck; Animal Sciences, University of Nebraska, Lincoln
1:15 PM	302	Melengestrol acetate (MGA) as an alternative method to induce molting in hens. J.M. Koch* ¹ , J.S. Moritz ¹ , D.C. Lay Jr. ² , M.E. Wilson ¹ ; ¹ WVU, WV, ² USDA-LBRU, IN
1:30 PM	303	Incidence of bone breakage of processed White Leghorn hens monitored for skeletal integrity during the second cycle of egg laying. Helenice Mazzuco* ^{1,2} , Patricia Y. Hester ¹ ; ¹ Purdue University, West Lafayette, IN, ² CNPQ, Brasilia-DF, Brazil, ³ EMBRAPA, Concordia-SC, Brazil
1:45 PM	304	Impact of supplemental L-carnitine in broiler breeder diets on subsequent egg hatchability and progeny embryogenesis. J.P. Tanksley* ¹ , E.D. Peebles ¹ , M.T. Kidd ¹ , C.D. McDaniel ¹ , S.K. Whitmarsh ¹ , H.M. Parker ¹ , P.D. Gerard ² ; ¹ Department of Poultry Science, Mississippi State University, Mississippi State, ² Experimental Statistics Unit, Mississippi State University, Mississippi State
2:00 PM	305	Chicken sperm motility and metabolism are altered immediately by semen dilution. H. M. Parker*, C. D. McDaniel; Mississippi State University, Mississippi State
2:15 PM	306	Expression of the mRNA for zona pellucida proteins 1 and 3 in two genetic lines of turkey hens that differ in fertility. A. P. Benson* ¹ , A. J. Davis ¹ , B. D. Fairchild ¹ , V. L. Christensen ² ; ¹ University of Georgia, Athens, ² North Carolina State University, Raleigh
2:30 PM	307	Follicular development and expression of the mRNA for the inhibin/activin subunits in two genetic lines of turkey hens that differ in total egg production. J. B. Hoffman* ¹ , A. P. Benson ¹ , A. J. Davis ¹ , B. D. Fairchild ¹ , V. L. Christensen ² ; ¹ University of Georgia, Athens, ² North Carolina State University, Raleigh
2:45 PM		Break

3:15 PM	308	Progesterone injections induce a polycystic ovarian follicle syndrome (PCOF) in young turkey hens . Wayne L. Bacon*, Han-Ken Liu; Department of Animal Sciences, The Ohio State University, Wooster
3:30 PM	309	Programming of photorefractoriness: The turkey breeder hen is not like a tree sparrow. John A. Proudman* ¹ , Tom D. Siopes ² ; ¹ USDA, ARS, Biotechnology & Germplasm Laboratory, Beltsville, MD, ² Department of Poultry Science, North Carolina State University, Raleigh
3:45 PM	310	Photoperiod effects on spontaneous ovarian adenocarcinoma in the domestic turkey breeder hen. Christopher B. Moore, Thomas D. Siopes*; College of Agriculture & Life Sciences, Department of Poultry Science, North Carolina State University, Raleigh
4:00 PM	311	The distribution and change in the number of gonadotropin-releasing hormone neurons in chicks following an increase in photoperiod plus administration of sulfamethazine. Wayne J. Kuenzel*, Christopher D. Golden; University of Arkansas, Fayetteville
4:15 PM	312	Changes in eggshell of Japanese quail during embryogenesis. Sandra Westmoreland* ¹ , Patricia Hester ² , Tina Halupnik ¹ ; ¹ Department of Biology, The University of Texas at Arlington, ² Department of Animal Science, Purdue University, West Lafayette, IN

PSA-Processing and Products

Microbiology & Egg Quality

Chair: Mark Berrang, USDA-ARS

Room: 263

Time	Abstract #	
1:00 PM	313	Bacterial Load of the Crop of Turkeys Offered a Feed Supplement During Preslaughter Feed Withdrawal. Bruce M. Rathgeber* ¹ , Margaret E. MacKenzie ¹ , Janice L. MacIsaac ² ; ¹ Nova Scotia Agricultural College, NS, Canada, ² Atlantic Poultry Research Institute
1:15 PM	314	Effect of a commercial inside-outside bird washer (IOBW) on <i>Campylobacter</i> , <i>Salmonella</i> , <i>E. coli</i> , and aerobic plate counts (APC) of uncontaminated, contaminated, and cross-contaminated broiler carcasses. Douglas P. Smith*, Julie K. Northcutt, Michael T. Musgrove; USDA, ARS, Russell Research Center, Athens, GA
1:30 PM	315	Effects of spray washing with various chlorine levels and water temperatures on skin color and microbiology of broiler carcasses. J. K. Northcutt*, D. P. Smith, M. T. Musgrove, K. D. Ingram, A. Hinton, Jr.; USDA, Agricultural Research Service, Russell Research Center, Athens, GA
1:45 PM	316	Enrichment pH impact on salmonellae recovery from TSP-treated broiler carcasses. D. V. Bourassa* ^{1,2} , R. J. Buhr ² , D. L. Fletcher ¹ , M. E. Berrang ² , J. A. Cason ² ; ¹ University of Georgia, Athens, ² USDA-ARS Russell Research Center, Athens, GA
2:00 PM	317	Recovery of bacteria from broiler carcasses rinsed 0 or 24 hours after chilling. John A. Cason*, Mark E. Berrang, Doug P. Smith; USDA-ARS, Russell Research Center, Athens, GA
2:15 PM	318	Comparison of Plate Media for Direct Enumeration of <i>Campylobacter</i> spp. from Carcasses Rinses. Kenneth S. Macklin*, Robert S. Miller, Omar A. Oyarzabal; Department of Poultry Science, Auburn University, Auburn, AL
2:30 PM	319	Transfer of <i>Salmonella</i> and <i>Campylobacter</i> from stainless steel to a ready-to-eat food. Christina M Moore ¹ , Brian W Sheldon* ² , Lee-Ann Jaykus ¹ ; ¹ Department of Poultry Science, North Carolina State University, Raleigh ² Department of Food Science, North Carolina State University, Raleigh
2:45 PM		Break
3:15 PM	320	Effect of Packaging and Electron Beam Irradiation on Poultry Safety and Quality During Extended Storage. Trina M. Preder*, Sarah J. Lewis, Adriana Velasquez, Shelly R. McKee; Auburn University, Auburn, AL
3:30 PM	321	The relationships among measures of albumen height, pH, and whipping volume. F. G. Silversides* ^{1,2} , K. L. Budgell ³ ; ¹ Pacific Agri-Food Research Centre, Agassiz, British Columbia, Canada, ² Crops and Livestock Research Centre, ³ Nova Scotia Agricultural College

3:45 PM	322	National Egg Temperature Survey: 3. Transport. K. E. Anderson ^{*1} , P. H. Patterson ² , K. W. Koelkebeck ³ , M. J. Darre ⁴ , J. B. Carey ⁵ , D. U. Ahn ⁶ , R. A. Ernst ⁷ , D. R. Kuney ⁸ , D. R. Jones ⁹ ; ¹ North Carolina State University, Raleigh, ² Pennsylvania State University, University Park, ³ University of Illinois, Urbana, ⁴ University of Connecticut, Storrs, ⁵ Texas A&M University, College Station, ⁶ Iowa State University, Ames, ⁷ University of California, Davis, ⁸ University of California, Riverside, ⁹ USDA-ARS Athens, GA
4:00 PM	323	Impact of Commercial Processing on the Microbiological Safety and Quality of Shell Eggs. M.T. Musgrove ^{*1,2} , D.R. Jones ¹ , J.K. Northcutt ¹ , M. A. Harrison ² , N. A. Cox ¹ ; ¹ USDA-ARS, ² University of Georgia, Athens
4:15 PM	324	Identification of <i>Enterobacteriaceae</i> and Related Organisms from Rinses of Eggs Collected during Processing in Commercial Shell Egg Processing Plants in the Southeastern United States. M.T. Musgrove ^{*1,2} , D.R. Jones ¹ , J.K. Northcutt ¹ , N.A. Cox ¹ , M.A. Harrison ² ; ¹ USDA-ARS, ² University of Georgia, Athens
4:30 PM	325	Specific activity and stability of β -n-acetylglucosaminidase and lysozyme in extracted egg shell membranes as influenced by layer breed and storage variables. Gene J. Ahlborn [*] , Brian W. Sheldon; North Carolina State University, Raleigh
4:45 PM	326	The effect of layer age, storage and strain of hen on egg quality during summer season under Sohag conditions. Talat El-Sheikh [*] ; Faculty of Agriculture, South Valley University, Sohag, Egypt

Ruminant Nutrition

Beef – Feedstuffs

Chair: Bret Hess, University of Wyoming

Room: 130

Time	Abstract #	
1:00 PM	327	Effect of pasteurization of potato slurry in corn or barley finishing diets for beef cattle. J.I. Szasz ^{*1} , C.W. Hunt ¹ , O.A. Turgeon ² , P.A. Szasz ¹ ; ¹ University of Idaho, Moscow, ID, ² Koers-Turgeon Consulting Service, Inc., Amarillo, TX
1:15 PM	328	Replacing corn or barley with potato processing by-product in beef finishing diets improves feed conversion efficiency and alters carcass fat distribution. J. Duynisveld ^{*1} , E. Charmley ¹ , I. Mandell ² , J. Aalhus ³ ; ¹ Agriculture and Agri-Food Canada Nappan, NS, Canada, ² University of Guelph, Guelph, ON, Canada, ³ Agriculture and Agri-Food Canada, Lacombe, AB, Canada
1:30 PM	329	Corn milling byproducts and alfalfa levels in cattle finishing diets. Pablo L Loza [*] , Kyle J Vander Pol, Galen E Erickson, Rick A Stock, Terry J Klopfenstein; University of Nebraska, Lincoln
1:45 PM	330	Effect of corn bran and steep inclusion in finishing diets on performance and nitrogen balance of open dirt feedlots. K. M. Sayer [*] , G.E. Erickson, T.J. Klopfenstein, C.N. Macken, K.J. Vander Pol; University of Nebraska, Lincoln
2:00 PM	331	Timing of flax supplementation for finishing cattle. Elissa J. Good [*] , James S. Drouillard, Tim J. Kessen, Erik R. Loe, Michael J. Sulpizio, Matthew A. Greenquist, Sean P. Montgomery, Justin J. Sindt, Brandon E. Depenbusch, Kathy A. Hachmeister; Kansas State University, Manhattan
2:15 PM	332	Effects of forage level and corn processing method in beef finishing diets containing wet corn gluten feed on finishing steer performance. Pablo L Loza [*] , Kyle J Vander Pol, Galen E Erickson, Rick A Stock, Terry J Klopfenstein; University of Nebraska, Lincoln
2:30 PM	333	Using a dynamic ruminant model to understand the differences in performance of cattle fed rations based on barley and/or a potato processing-by-product. B.N. Nagorcka ^{*1} , E. Charmley ² , J. Duynisveld ² ; ¹ CSIRO Livestock Industries, Canberra, Australia, ² Crops and Livestock Research Centre Agriculture and Agri-Food Canada
2:45 PM		Break
3:15 PM	334	Digestion of pasture in response to fumarate in continuous culture. E.S. Kolver ¹ , P.W. Aspin ¹ , G.N. Jarvis ² , K.M. Elborough ² , J.R. Roche ^{*1} ; ¹ Dexcel Ltd., Hamilton, New Zealand, ² ViaLactia Biosciences (NZ) Ltd., Auckland, New Zealand

3:30 PM	335	Effect of gossypol from cottonseed meal consumption on performance of fallow does (<i>Dama dama</i>). Steven Mapel*, Don Neuendorff, Andy Lewis, Ronald Randel; Texas A&M University Texas Agricultural Experiment Station, Overton, TX
3:45 PM	336	Soybean hulls for finishing meat goats. M.H. Poore*, J.A. Moore, A.T. Maye; North Carolina State University, Raleigh

Ruminant Nutrition

Dairy - Protein & Amino Acids

Chair: Tim Klusmeyer, Monsanto Co.

Room: 132

Time	Abstract #	
1:00 PM	337	Effects of parity and levels of protein on production response and n-balance in holsteins. S.A. Flis*, M.A. Wattiaux; University of Wisconsin, Madison
1:15 PM	338	Site of digestion in dairy cows fed different sources and amounts of crude protein. I. R. Ipharraguerre* ¹ , J. H. Clark ¹ , D. E. Freeman ² ; ¹ Department of Animal Sciences, University of Illinois Urbana, ² Department of Veterinary Clinical Medicine, University of Illinois, Urbana
1:30 PM	339	Performance of lactating dairy cows fed different sources and amounts of crude protein. I. R. Ipharraguerre*, J. H. Clark; Department of Animal Sciences, University of Illinois, Urbana
1:45 PM	340	Effects of different protein supplements on nitrogen utilization in dairy cows. I. Lactation performance and ruminal metabolism. Andre F. Brito* ¹ , Glen A. Broderick ² ; ¹ University of Wisconsin, Madison, ² US Dairy Forage Research Center, Madison, WI
2:00 PM	341	Effects of different protein supplements on nitrogen utilization in dairy cows. II. Digesta flow and bacterial protein synthesis. Andre F. Brito* ¹ , Glen A. Broderick ² ; ¹ University of Wisconsin, Madison, ² US Dairy Forage Research Center, Madison, WI
2:15 PM	342	Evaluation of prediction equations for estimating urinary output of nitrogen in lactating dairy cows. T. D. Nennich* ¹ , J. H. Harrison ¹ , D. Meyer ² , W. Weiss ³ , N. R. St-Pierre ⁴ , R. L. Kincaid ⁵ , M. Wattiaux ⁶ , D. L. Davidson ¹ ; ¹ Washington State University, Puyallup, ² University of California, Davis, ³ The Ohio State University, Wooster, ⁴ The Ohio State University, Columbus, ⁵ Washington State University, Pullman, ⁶ University of Wisconsin, Madison
2:30 PM	343	Meta analysis of the influence of different sources of methionine on the milk protein content of dairy cows. T. Guyot ¹ , J.C. Robert* ² , D. Sauvant ¹ ; ¹ INA Paris, Grignon, Paris, ² Adisseo 42 Avenue Aristide Briand - 92160 Antony
2:45 PM		Break
3:15 PM	344	Use of changes in plasma sulfur amino acid concentrations to compare the ability of methionine (Met) products to provide absorbable Met to lactating dairy cows fed a Met-adequate diet. Bryony J. Olley ¹ , Ryan S. Ordway* ¹ , Nancy L. Whitehouse ¹ , Charles G. Schwab ¹ ; ¹ University of New Hampshire, Durham, ² Adisseo USA, Inc., Alpharetta, GA
3:30 PM	345	A simplified <i>in vitro</i> incubation medium with the potential to evaluate amino acid degradation in ruminants. Fergus L Mould*, Rebecca Morgan, Kirsty Kliem; Department of Agriculture, The University of Reading
3:45 PM	346	Ruminal degradation of amino acids assessed using a complement <i>in vitro</i> technique. Fergus L Mould*, Kirsty Kliem, Rebecca Morgan; Department of Agriculture, The University of Reading

TUESDAY, JULY 27, 2004

POSTER PRESENTATIONS

Room: Exhibit Hall 5

Presentation Time: 7:30 AM – 9:30 AM

Contemporary and Emerging Issues

Abstract

- T1 Effect of inulin on the microflora of an ABT-type fermented milk during refrigerated storage. László Varga*, Beáta Gyenis, Noémi Molnár, Jeno Szigeti; Institute of Food Science, Faculty of Agricultural and Food Sciences, University of West Hungary, Mosonmagyaróvár, Hungary
- T2 Evaluation of methods for detection of *Escherichia coli* O157:H7 in milk and occurrence of *Escherichia coli* O157:H7 in ex-farm raw milks in Hungary. Attila Hucker¹, Ilona Mike-Schummel¹, László Varga*², András Unger¹; ¹Hungarian Dairy Research Institute, Mosonmagyaróvár, Hungary, ²Department of Dairy Science, Institute of Food Science, Faculty of Agricultural and Food Sciences, University of West Hungary, Mosonmagyaróvár, Hungary
- T3 Use of powdered microalgae to stimulate acid production and growth of *Lactobacillus plantarum* and *Enterococcus faecium* in milk. Beáta Gyenis, László Varga*, Jeno Szigeti, Noémi Molnár; Institute of Food Science, Faculty of Agricultural and Food Sciences, University of West Hungary, Mosonmagyaróvár, Hungary
- T4 Do dairy producers market and manage dairy cows to improve beef quality? P.R. Tozer, G. A. Varga, D. Kniffen*, W. R. Henning; Pennsylvania State University, University Park
- T5 Effect of using aqueous extracts of Neem (*Azadirachta indica* A. Juss) seeds and leaves on oocyst count in calves. S Pietrosemoli*, R Olavez; La Universidad del Zulia, Maracaibo, Venezuela
- T6 Neem's (*Azadirachta indica* A. Juss) leaves as feeding substrate for vermicomposting earthworm (*Eisenia andrei*). J Hernández^{1,2}, S Pietrosemoli^{1,2}, R Palma², C Tang*², C Perozo², R Romero²; ¹La Universidad del Zulia, Maracaibo, Venezuela, ²Proyecto, Venezuela
- T7 Development and reproduction of *Eisenia andrei* using mixtures of cattle manure and Neem's (*Azadirachta indica* A. Juss.) leaves. J Hernández^{1,2}, S Pietrosemoli*^{1,2}, C Contreras², R Palma², A Faria^{1,2}; ¹La Universidad del Zulia, Maracaibo, Venezuela., ²Proyecto, Venezuela
- T8 Acquisition and persistence of a high level macrolide resistant *Veillonella* sp. without selection pressure. Toni Poole*, Jack McReynolds, Todd Callaway, David Nisbet; USDA, ARS, College Station, TX
- T9 Predation survival in rumen protozoa enhances *Salmonella* virulence. Mark A Rasmussen, Sharon L Franklin*, Steve A Carlson; National Animal Disease Center, ARS, USDA, Ames, IA
- T10 More than grass: Organizing the emerging grass-fed beef market. Lauren Gwin*; University of California, Berkeley
- T11 Meat carcass inspection using fluorescence of dietary porphyrins. Mark A Rasmussen*¹, Thomas A Casey¹, Jacob W Petrich²; ¹National Animal Disease Center, ARS, USDA, Ames, IA, ²Iowa State University, Ames

PSA-Nutrition

Abstract

- T12 Consequence of meeting non-phytin phosphorus (nPP) requirements with or without feed additives on broiler performance, litter P concentration and processing losses. A. S. Dhandu*¹, R. Angel¹, W. W. Saylor²; ¹Department of Animal and Avian Sciences, University of Maryland, College Park, ²Department of Animal and Food Sciences, University of Delaware, Newark
- T13 The use of low-phytate soybean meal to reduce phosphorus excretion from poult raised to 18 days of age. J. L. Godwin*, J. L. Grimes, A. G. Gernat, M. J. Wineland; North Carolina State University, Raleigh
- T14 Phytase Activity and Phytate Hydrolysis Along the Digestive Tract of Broiler Chicks: A Comparative Study of Two Phytase Sources. E. M. Onyango*¹, M. R. Bedford², O. Adeola¹; ¹Department of Animal Sciences, Purdue University, West Lafayette, IN, ²Zymetrics Inc., Marlborough, Wiltshire, UK
- T15 Requirement of Methionine of Broilers during Finishing Period. F. Liu*, Z. Niu, S. Zhai; College of Science & Technology, Northwest Sci-Tech University of Agriculture & Forestry, Yangling, China

- T16 Impact of Methionine Source and Excess Choline or Betaine on Growth Performance of Broilers During the Starter Period. P.B. Pillai^{*1}, A.C. Fanatico¹, J.C. Townsend¹, K.W. Beers², J.L. Emmert¹; ¹University of Arkansas Fayetteville, ²Safe Foods Corporation, Rogers, AR
- T17 The effect of dietary factors on induction of fatty liver-hemorrhagic syndrome and its diagnosis methods with use of serum and liver parameters in laying hens. Morteza Yousefi^{*1}, Mahmoud Shivazad², Iraj Sohrabi Haghdoost³; ¹Science & Research Campus, Islamic Azad University, Tehran, Iran, ²Department of Animal and Poultry Science, University of Tehran, Karaj, Iran, ³Department of Pathobiology, Islamic Azad University, Science & Research Campus, Tehran, Iran
- T18 The effect of dietary treatments flaxseed, yeast, soy fatty acid on fatty liver-hemorrhagic syndrome in laying hens. Morteza Yousefi^{*1,3}, Mahmoud Shivazad², Iraj Sohrabi Haghdoost³; ¹Department of Animal and Poultry Science, Islamic Azad University of Saveh, Saveh, Iran, ²Department of Animal and Poultry Science, University of Tehran, Karaj, Iran, ³Department of Pathobiology, Islamic Azad University, Science & Research Campus, Tehran, Iran
- T19 Efficiency of Folate Deposition in Eggs Throughout the Production Cycle of Hyline W98 and W36 Laying Hens. K. Hebert, J.D. House, and W. Guenter; Department of Animal Science, University of Manitoba, Winnipeg, MB, Canada
- T20 Effects of supplemental dietary Vitamin E and selenium from two sources of egg production and vitelline membrane strength in laying hens. David Monsalve*, Glenn Froning, Mary Beck, Sheila E. Scheideler; University of Nebraska, Lincoln
- T21 Performance of broilers fed diets containing 2-hydroxy-4-methylthiobutanic acid at different inclusion rates. A. B. Batal¹, J. L. Emmert², P. B. Pillai², B. L. Lumpkins^{*1}, M. E. Blair³; ¹University of Georgia, Athens, ²University of Arkansas, Fayetteville, ³Adisseo, Alpharetta, GA
- T22 The Effects of Dietary Herbal Extracts for Broiler Chickens. Michelle R Lewis^{*1}, S Paul Rose¹, Alexander M Mackenzie¹, Jenny Smith²; ¹National Institute of Poultry Husbandry, Harper Adams University College, UK, ²Braes Feed Ingredients Limited, UK
- T23 Effects of Organogermanium on Performance and Immune Response in Broilers. Zhuye Niu*, Xuan Liang, Fuzhu Liu, Ming Xie, Yongsheng Wang; College of Animal Science & Technology, Northwest Sci-Tech University of Agriculture & Forestry, Yangling, China
- T24 Justifying Effects of Grain Particle Size on Broiler Performance and Carcass Quality. Amy S. Parsons*, Joseph S. Moritz; West Virginia University, Morgantown
- T25 Effects of Pelleting Protein Concentrate Pellets on Feed Mill Throughput and Electrical Efficiency. P.M. Clark*, K.C. Behnke; Kansas State University, Manhattan
- T26 Effects Of Feeding Blends Of Grains Naturally-Contaminated With Fusarium Mycotoxins On Performance And Metabolism Of Turkeys. Shankar R Chowdhury*, Trevor K Smith; University of Guelph, Guelph, ON, Canada
- T27 Effect of Avizyme[®] 1502 on increasing protein and energy retention when feeding to Bovar White Pullets. Catalina Troche^{*1}, Xiaolun Sun¹, Curtis Novak¹, Janet Remus²; ¹Virginia Tech, Blacksburg, ²Danisco Animal Nutrition
- T28 Fermenting sludge from a broiler processing plant: Effect of different levels of cane molasses. Rebeka Sanabria León*, Suzika Pagán Riestra, Abner A. Rodríguez, Héctor Santiago, Melvin Pagán; University of Puerto Rico, Mayagüez, PR
- T29 The amino acid ideal pattern for Pekin ducks during early growing period. Y. Wang*, Z. Niu, F. Liu; Northwest Sci-Tech University of Agriculture & Forestry, Yangling, China
- T30 Transgenic Chickens Expressing Beta-Galactosidase Hydrolyze Lactose In The Intestine. Simone Pophal^{*1,2}, Paul Mozdziak¹, Suparek Borwornpinyo¹, James Petite¹; ¹North Carolina State University, Raleigh, ²Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil

Nonruminant Nutrition

Grow/Finish - Energy & Protein

Abstract

- T31 Advantages of formulating diets based on net energy on pig performance, carcass characteristics and production economics. Meike Rademacher^{*1}, Luise Hagemann²; ¹Degussa AG, Hanau, Germany, ²State Office for Consumer Protection and Agriculture of Brandenburg, Teltow, Germany

- T32 The effects of dietary oil inclusion and oil source on apparent digestibility, fecal volatile fatty acid concentration and manure ammonia emission. A.G.B. Leek¹, V.E. Beattie², O' Doherty J.V.*¹; ¹Department of Animal Science and Production, University College Dublin, Dublin, Ireland, ²Devenish Nutrition Ltd., Belfast, North Ireland
- T33 Influence of lipid source in diets on the performance, meat quality and lipid profile for finishing pigs. Raimundo Vicente de Sousa¹, Elias Tadeu Fialho*¹, Jose Augusto Freitas Lima¹, Priscila Vieira Rosa Logato¹, Jaqueline I. Alvarez Leite²; ¹University Federal of Lavras - UFLA, Brazil, ²University Federal of Minas Gerais-UFGM, Brazil
- T34 Utilization of pearl millet in substitution for corn in diets for growing pigs - metabolism assay and performance. Elias Tadeu Fialho*, Marcelo da Silveira M. Pinheiro, Jose A. Freitas Lima, Paulo Borges Rodrigues, Rilke Tadeu Fonseca de Freitas; University Federal of Lavras - UFLA, Brazil
- T35 Energy, protein, and amino acid digestibility in different sources of rice bran for growing pigs. C. Kaufmann¹, W. Sauer¹, M. Cervantes*², M. Rademacher³, J. He¹; ¹University of Alberta, Edmonton, AB, Canada, ²Universidad Autónoma de Baja California, Mexicali, México, ³Degussa-Huls AG Hanau-Wolfgang, Germany
- T36 Comparison of growing swine performance when fed diets containing cull chickpeas in substitution of soybean meal and corn. J.F. Obregon, J.M. Uriarte*, R. Barajas, H.R. Guemez; FMVZ-Universidad Autonoma de Sinaloa, Culiacan-Mazatlan, Mexico
- T37 Effect of the substitution of soybean meal and corn for cull chickpeas in the diet on growth performance and carcass traits of finishing pigs. J. F. Obregon, H.R. Guemez*, F.G. Ríos, R. Barajas, J.M. Uriarte; FMVZ-Universidad Autonoma de Sinaloa, Culiacan-Mazatlan, Mexico
- T38 Effect of diets formulated based on ileal lysine digestibility and alternative feeds for finishing pigs - metabolism and performance assay. Marcus Leonardo F. Silva, Elias Tadeu Fialho*, Jose A. Freitas Lima, Raimundo Vicente de Sousa, Luis David S. Murgas; University Federal of Lavras - UFLA, Brazil
- T39 Energy and protein values of some Brazilian feedstuffs for pigs as determined by metabolism assay. Elias Tadeu Fialho*, Zuleide Alves S. Santos, Jose A. Freitas Lima, Rilke Tadeu De Freitas, Antonio G. Bertechini; University of Lavras-UFLA, Brazil
- T40 Comparison of a diet containing food waste with a corn/soybean diet fed to swine. Julie Jones, Michael L. Westendorf*, James E. Wohlt; Rutgers, The State University of New Jersey, New Brunswick
- T41 Evaluation of protein dispersibility index as an indicator for soybean meal protein quality in growing pigs: II. Feeding trial. H. S. Lee*¹, J. G. Kim², Y. W. Shin², Y. H. Park², K. Y. Whang²; ¹American Soybean Association, Seoul, Korea, ²Korea University, Seoul, Korea
- T42 Evaluation of protein dispersibility index as an indicator for soybean meal protein quality in growing pigs: I. Metabolic study. H. S. Lee*¹, Y. W. Shin², J. G. Kim², Y. H. Park², K. Y. Whang²; ¹American Soybean Association, Seoul, Korea, ²Korea University, Seoul, Korea
- T43 Effects of altering bed depth in the desolventizer/toaster used in soybean meal preparation on nutrient digestibility by ileally cannulated pigs and cecectomized roosters. Lynda Pope*, Kari Bruce, Lisa Karr-Lilienthal, Christine Grieshop, Neal Merchen, Carl Parsons, George Fahey; University of Illinois, Urbana
- T44 Utilization of sunflower meal in diets of finishing pigs - performance and digestibility. Douglas de Carvalho Carellos, Jose A. Freitas Lima, Elias Tadeu Fialho*, Rilke T. Fonseca Freitas, Eduardo Pinto Filgueiras; University Federal of Lavras- UFLA, Brazil
- T45 Effect of dry skim milk on fecal bacterial populations and *Salmonella* shedding in growing-finishing swine. J. E. Wells*, J. T. Yen, D. N. Miller; USDA-ARS; U.S. Meat Animal Research Center, Clay Center, NE
- T46 Metabolizable energy value of meat and bone meal for pigs. Sunday A. Adedokun*, Olayiwola Adeola; Department of Animal Sciences, Purdue University, West Lafayette, IN

Nonruminant Nutrition

Grow/Finish - Minerals & Additives

Abstract #

- T47 Response of pigs to dietary phytase and calcium-to-phosphorus ratio. J. A. Jendza*¹, R. N. Dilger¹, M. R. Bedford², O. Adeola¹; ¹Animal Sciences, Purdue University, West Lafayette, IN, ²Zymetrics, Beckhampton, Wiltshire, UK
- T48 Growth performance and meat quality changes from trace mineral manipulation of finishing pig diets. B. V. Lawrence*, D. Overend, S. A. Hansen, J. D. Hahn, J. Hedges; Hubbard Feeds Inc., Mankato, MN

- T49 Performance of pigs fed grain sorghum-based diets supplemented with phytase. J. Yáñez¹, M. Cervantes*¹, M. A. Barrera¹, W. Sauer², N. Torrentera¹; ¹Universidad Autónoma de Baja California, Mexicali, México, ²University of Alberta, Edmonton, AB, Canada
- T50 Paylean® did not compromise bone traits of finishing pigs fed diets formulated with phytase. C. E. Pardo*, J. N. Trower, D. K. Schneider, T. D. Crenshaw; University of Wisconsin, Madison
- T51 Utilization of phytase in diets of growing pigs - ileal AA digestibility, performance and mineral excretion. Hunaldo Oliveira Silva, Elias Tadeu Fialho*, Jose A. Freitas Lima, Luis D. Solis Murgas, Rilke T. Fonseca de Freitas; University Federal of Lavras - UFLA, Brazil
- T52 Use of betaine and conjugated linoleic acid as growth promotants in growing *Iberian* pigs. Ignacio Fernandez-Figares*¹, Manuel Lachica¹, Rosa Nieto¹, Elena Gonzalez Sanchez², Jose Fernando Aguilera¹; ¹Consejo Superior De Investigaciones Cientificas, ²Universidad de Extremadura, Spain
- T53 Effects of dietary levels of tylosin on digestive and post-absorptive utilization of dietary nutrients in growing pigs. Kristjan K. Bregendahl*¹, Xiaojian X. Yang¹, Yingran Shen¹, Gordon Vessie², Raddy Bagg², Todd C. Rideout¹, Tania Archbold¹, Paul Dick², Ming Z. Fan¹; ¹University of Guelph, Guelph, ON, Canada, ²Elanco Animal Health Guelph, ON, Canada
- T54 Effects of dietary antibiotics on growth performance in pigs. J. W. Hong*¹, O. S. Kwon¹, B. J. Min¹, W. B. Lee¹, K. S. Son¹, J. H. Kim², B. C. Park³, I. H. Kim¹; ¹Dankook University, Cheonan, Korea, ²Agribands Purina Korea, Seoul, Korea, ³CTC Bio Inc., Seoul, Korea
- T55 Effect of dietary natural herb extract (Biomate®) supplementation on growth performance, IGF-1 and carcass characteristics in growing-finishing pigs. O. S. Kwon*¹, B. J. Min¹, W. B. Lee¹, K. S. Son¹, J. H. Cho¹, J. H. Kim², I. H. Kim¹, J. C. Ra³; ¹Dankook University, Cheonan, Korea, ²Agribands Purina Korea, Inc., Seoul, Korea, ³RNL Life Science Ltd., Korea
- T56 Different isoflavone contents in soy-based diets are without influence on growth performance and carcass quality in pigs. Gerda Kuhn¹, Klaus Ender*¹, Ulf Hennig¹, Claudia Kalbe¹, Stephan Moors², Gisela H. Degen², Charlotte Rehfeldt¹; ¹Research Institute for the Biology of Farm Animals, Dummerstorf, Germany, ²University of Dortmund, Germany
- T57 Effect of supplementation with natural tranquilizers in the diet of the pigs on the behavior of the animals and the technological quality of loin meat. M. Font i Furnols*, N. Panella, E. Fàbrega, A. Velarde, M.A. Oliver, J. Soler, M. Gil; Institute for Food and Agricultural Research and Technology, Monells, Spain

Swine Species

Abstract

- T58 Additional heat behind farrowing sows to reduce the number of stillborn piglets. Y. Gao, H. Y. Zhang, B. Szkotnicki, R. R. Hacker*; University of Guelph, Guelph, ON, Canada
- T59 Addition of heat at birth and supplementation of energy and IgG products on improving survivability in neonatal pigs. Y. Gao, H. Y. Zhang, B. Szkotnicki, R. R. Hacker*; University of Guelph, Guelph, ON, Canada
- T60 Effects of stocking rate and feeder space on pig performance in a wean-to-finish system. J. M. DeDecker*¹, M. Ellis¹, B. F. Wolter², B. A. Peterson¹; ¹University of Illinois, Urbana, ²The Maschhoffs, Inc., Carlyle, IL

Animal Health

Abstract

- T61 Dose-Dependent Cytokine Expression in Lipopolysaccharide Activated Bovine Alveolar Macrophages. J. A. Mills*, J. E. Campanicki, R. M. Dyer; Dept. of Animal and Food Sciences, University of Delaware, Newark
- T62 Cytokine and Growth Factor Expression is Regionally Distributed in Holstein Claws. J. A. Mills*, R. J. Grant, R. M. Dyer; Dept. of Animal and Food Sciences, University of Delaware, Newark
- T63 Extracellular pH alters the innate immune response by enhancing phagocytosis and decreasing reactive oxygen species production. Douglas C Donovan*¹, Adrian J Reber¹, Robert Parks¹, Lane O Ely², David J Hurley¹; ¹College of Veterinary Medicine, University of Georgia, Athens, ²Department of Animal and Dairy Science, University of Georgia, Athens

- T64 Elevation of tumor necrosis factor- α and α_1 -acid glycoprotein in lambs with consolidation of lung tissue. J. A. Daniel*¹, T. H. Elsasser², W. Epperson¹; ¹South Dakota State University, Brookings, ²USDA-ARS Beltsville, MD
- T65 Failure to down regulate tumor necrosis factor- α (TNF- α) responses to repeated endotoxin (LPS) challenge in subpopulations of cattle constitutes a pathophysiologically relevant marker of risk for increased morbidity to disease. T.H. Elsasser*, S. Kahl; USDA, Agricultural Research Service, Beltsville, MD
- T66 Exogenous testosterone (T) modulates tumor necrosis factor- α (TNF- α) and acute phase proteins (APP) responses to repeated endotoxin (LPS) challenge in steers. S. Kahl*, T. H. Elsasser; USDA, Agricultural Research Service, Beltsville, MD
- T67 Concomitant dual wavelength fluorescence evaluation of inducible nitric oxide synthase (iNOS) and cytokine responses to endotoxin (LPS) stimulation of bovine peripheral blood mononuclear cells (PBMC). Congjun Li*, Don Carbough, Stas Kahl, Ted Elsasser; Animal and Natural Resources Institute, Beltsville, MD
- T68 The effects of anti-inflammatory agents on expression of cyclooxygenase-2 by bovine neutrophils. N Cunningham*, P Matterson, M Worku; North Carolina Agricultural and Technical State University, Greensboro
- T69 Extracts of shitake mushrooms modulate receptors for immunoglobulins on bovine neutrophils. K. Gyenai*, M. Worku, O. Ishekhumen, P. Matterson; North Carolina Agricultural and Technical State University, Greensboro
- T70 Expression of 5'-lipoxygenase on bovine blood neutrophils. T Harris*¹, M Worku¹, P Matterson¹, D Fargo²; ¹North Carolina Agricultural and Technical State University, Greensboro, ²Center for BioInformatics, University of North Carolina, Chapel Hill
- T71 Ergovaline transport across human gastrointestinal cells (Caco-2). Nancy W. Shappell*, David J. Smith; USDA-ARS Biosciences Research Laboratory, Fargo, ND
- T72 Assessment of Tasco™ and YCWP on ergovaline toxicity in Caco-2 cells. Nancy W. Shappell*, Lloyd O. Billey; USDA-ARS Biosciences Research Laboratory, Fargo, ND
- T73 Effects of an oral rehydration solution with added bovine serum proteins on small intestinal absorptive capacity. S. I. Kehoe*¹, J. D. Quigley, III², H. D. Tyler¹; ¹Iowa State University, Ames, ²American Protein Corporation, Ames, IA
- T74 Effects of small intestinal absorption in calves treated with an oral rehydration solution supplemented with fat-soluble vitamins. S. I. Kehoe*¹, H. D. Tyler¹, M. L. O'Brien², K. J. Touchette², J. A. Coalson²; ¹Iowa State University, Ames, ²Merrick's, Inc., Middleton, WI
- T75 Effectiveness of ground endophyte-infected tall fescue seed in production of fescue toxicosis in cattle. L. E. Wax*, D. E. Spiers, G. E. Rottinghaus, T. J. Evans; University of Missouri, Columbia
- T76 Effect of Eprinex® on subsequent 90-day production in Virginia Holstein herds. K. L. Rossini*¹, M. L. McGilliard¹, R. H. Nutt²; ¹Virginia Tech, Blacksburg, ²Valley Feed Co., Staunton, VA
- T77 Frequencies of calving-related diseases of Holstein dairy cows injected with low doses of bovine somatotropin during the transition period. Marcio Liboni*, Mary J. Hayen, Mehmet S. Gulay, Tomas I. Belloso, Henry H. Head; Department of Animal Sciences, University of Florida, Gainesville
- T78 The effect of Johne's disease on culling and milk production in nine Ontario dairy herds. Steven H Hendrick*¹, Todd F Duffield¹, David F Kelton¹, Ken E Leslie¹, Kerry D Lissemore¹, Marie Archambault²; ¹Ontario Veterinary College, University of Guelph, Guelph, ON, Canada, ²Animal Health Laboratory, University of Guelph, Guelph, ON, Canada
- T79 ***Escherichia coli* and *Staphylococcus aureus* Elicit Differential Innate Immune Responses Following Intramammary Infection.** Douglas Bannerman*¹, Max Paape¹, Jai-Wei Lee², Xin Zhao², Jayne Hope³, Pascal Rainard⁴; ¹Bovine Functional Genomics Laboratory, USDA-Agricultural Research Service, Beltsville, MD, ²Department of Animal Science, McGill University Ste-Anne-de-Bellevue, QC, Canada, ³Institute for Animal Health, Berkshire, UK, ⁴Institut National de la Recherche Agronomique, Nouzilly, France
- T80 Ultrasonographic characteristics of the uterus of Holstein cows with late endometritis. Jocelyn K Haskell*¹, Douglas S Hammon², Gilbert R Holyoak³; ¹Department of Forest, Range and Wildlife, Utah State University, Logan, ²Department of Animal, Dairy and Veterinary Sciences, Utah State University, Logan, ³Department of Clinical Sciences, College of Veterinary Medicine, Oklahoma State University, Stillwater
- T81 Antimicrobial Susceptibility Of Coagulase-Negative Staphylococci Isolated From Hands Of Urban Children, Farm Workers, and Dairy Cow Teat Skin. M. Pol*, C.M. Hulland, P.L. Ruegg; University of Wisconsin, Madison
- T82 Heel erosion in dairy cattle. L. G. Baird*¹, L. C. Pinheiro Machado Filho², M. A. G. von Keyserlingk¹, D. M. Weary¹, K. A. Beauchemin³; ¹Animal Welfare Program, University of British Columbia, Vancouver, BC, Canada, ²Universidade Federal de Santa Catarina, Brazil, ³Agriculture and Agri-Food Canada, Lethbridge, AB, Canada

PSA-Pathology

Abstract

- T83 Identification of a c-reactive protein gene in cardiomyopathic turkeys; a possible genetic marker for turkey cardiomyopathy. Alexandria E. Hauser*, Michelle M. Corley; Department of Agricultural Sciences, Tuskegee University, Tuskegee, AL
- T84 Identification and analysis of an apolipoprotein- A gene in cardiomyopathic turkeys. Tarina A. Dugger*, Michelle M. Corley; Department of Agricultural Sciences, Tuskegee University, Tuskegee, AL
- T85 Isolation and characterization of an anti-Salmonella phage collection for use as antibacterial agents. Elena Kozhina*, Paul Herrera, Steven Ricke; Texas A&M University, College Station
- T86 Pathology of listeriosis resulting from respiratory infection of turkey poults with *Listeria monocytogenes* Scott A. G.R. Huff*¹, W.E. Huff¹, J.N. Beasley², M.G. Johnson², R. Nannapaneni², J.M. Balog¹, N.C. Rath¹; ¹USDA/ARS/PPPSRU, Fayetteville, AR, ²University of Arkansas, Fayetteville
- T87 Aspirin and Selenium Influence on Bordetellosis in Turkey Poults. Ashley M. Tyner*, F. W. Edens, Geraldine H. Luginbuhl; College of Agriculture & Life Sciences, Dept. of Poultry Science, North Carolina State University, Raleigh
- T88 Silymarin PHYTOSOME against AFB₁ in broilers: effects on serum biochemistry. Dorian Tedesco*¹, Sara Galletti¹, Licia Ravarotto², Marco Tameni¹, Stephanie Steidler¹, Paolo Morazzoni³; ¹Department of Veterinary Sciences and Technologies for Food Safety, Milan, Italy, ²Istituto Zooprofilattico Sperimentale delle Venezie Via dell'Università, Legnaro, Italy, ³Indena S.p.A., Milan, Italy
- T89 Supplemental dietary 1,4-diaminobutane (putrescine) on growth and development of small intestine in broiler chicks challenge with *E. acervulina*. Francisco A Santoyo¹, Trevor K Smith*², John R Barta²; ¹Universidad Autonoma de Nuevo Leon, Monterrey, Mexico, ²University of Guelph, Guelph, ON, Canada

PSA-Immunology

Abstract

- T90 Development of an antigen specific indirect ELISA for *Eimeria* using recombinant antigen EASZ240 from *Eimeria acervulina*. Keith Ameiss*¹, Mark Jenkins², Harry Danforth², Adriana Barri¹, David Caldwell¹; ¹Department of Poultry Science, Texas A&M University, College Station, ²USDA/ARS, Beltsville, MD
- T91 Dietary Lutein and fat interact to modify macrophage nitric oxide production in chicks hatched from carotenoid depleted eggs. R. K. Selvaraj*, K. C. Klasing; Department of Animal Sciences, University of California, Davis
- T92 Construction of a naïve chicken antibody library using phage display. Daad Abi-Ghanem*¹, Suryakant D. Waghela^{1,2}, Luc R. Berghman²; ¹Department of Poultry Science, Texas A&M University, College Station, ²Department of Veterinary Pathobiology, Texas A&M University, College Station
- T93 Cellular Uptake of the Triamylide Tulathromycin By Bovine and Porcine Phagocytic Cells In Vitro. Todd W. Siegel¹, Daniel L. Earley², Clark D. Smothers³, Fangshi Sun¹, Anthony P. Ricketts*¹; ¹Pfizer Inc., Groton, CT, ²Pfizer Inc., Terre Haute, IN, ³Pfizer Inc., Kalamazoo, MI
- T94 Valine needs for immune responses in male broilers from day 21 to 42. S. A. Thornton*¹, G. T. Pharr¹, A. Corzo¹, S. L. Branton², M. T. Kidd¹; ¹Mississippi State University, Mississippi State, ²United States Department of Agriculture
- T95 Anti-rbosCD14 monoclonal antibodies (mAb) inhibits in vitro production of tumor necrosis factor- α (TNF- α) by bovine monocytes following stimulation with LPS. E. J. Sohn*¹, M. J. Paape², R. R. Peters¹, D. D. Bannerman²; ¹Department of Animal and Avian Sciences, University of Maryland, College Park, ²Bovine Functional Genomic Laboratory, USDA-ARS, Beltsville, MD

Companion Animals

Abstract

- T96 Serum and urine indice comparisons between llamas and alpacas fed three forages. M. Sharp*, C. Horey, T.F. Robinson, B.L. Roeder; Brigham Young University, Provo, UT
- T97 Affect of water deprivation on plasma and urine analytes of alpacas. A. Peterson*, J.A. Anderson, T.F. Robinson, B.L. Roeder; Brigham Young University, Provo, UT
- T98 Affect of water deprivation on plasma and urine analytes of llamas. J.A. Anderson*, A. Petersen, T.F. Robinson, B.L. Roeder; Brigham Young University, Provo, UT

PSA-Physiology

Abstract

- T99 Differential expression of mitochondrial and extra-mitochondrial proteins in heart of low and high feed efficient broilers within a single male line. N. Tinsely^{*1}, M. Iqbal¹, N. R. Pumford¹, K. Lassiter¹, C. Ojano-Dirain¹, J. P. Higgins¹, W. Bottje¹, T. Wing², M. Cooper²; ¹Department of Poultry Science, University of Arkansas, Fayetteville, ²Cobb-Vantress, Inc., Siloam Springs, AR
- T100 Differential expression of mitochondrial and extra-mitochondrial proteins in lymphocytes of low and high feed efficient broilers within a single male line. K. Lassiter^{*1}, M. Iqbal¹, N. R. Pumford¹, C. Ojano-Dirain¹, N. Tinsley¹, W. Bottje¹, T. Wing², M. Cooper²; ¹Department of Poultry Science, University of Arkansas, Fayetteville, ²Cobb-Vantress, Inc., Siloam Springs, AR
- T101 Steady-state levels of mitochondrial phosphoproteins in broilers with and without pulmonary hypertension syndrome. Cindy R. Cisar^{*1}, Janice M. Balog¹, Jackson O. Lay Jr.², Nicholas B. Anthony³, Ann M. Donoghue¹; ¹Poultry Production & Product Safety, ARS, USDA, Fayetteville, AR, ²Department of Chemistry and Biochemistry, University of Arkansas, Fayetteville, ³Department of Poultry Science, University of Arkansas, Fayetteville
- T102 Aorta pulse wave velocity is reduced by intravenous injections of L-arginine in female, but not male, white leghorn chickens. Ciro A. Ruiz-Feria^{*1}, Hiroko Nishimura²; ¹McGill University, Ste. Anne de Bellevue, QC, Canada, ²University of Tennessee, Memphis
- T103 Pulmonary and systemic hemodynamic responses to prostacyclin in broilers. R. F. Wideman^{*}, M. E. Chapman; University of Arkansas, Fayetteville
- T104 Pulmonary hypertensive responses of broilers to lipopolysaccharide: evaluation of source and dose, and impact of pre-existing pulmonary hypertension and cellulose micro-particle selection. M. E. Chapman^{*}, W. Wang, R. F. Wideman; University of Arkansas, Fayetteville
- T105 Effect of selection of sires and dams for growth or egg production on embryonic cardiac physiology. V. L. Christensen^{*}, D. T. Ort, J. L. Grimes, M. J. Wineland; Dept. of Poultry Science, North Carolina State University, Raleigh
- T106 Effect of excess dietary vitamin D supplementation as a management adjustment to reduce the effect of heat stress on three varieties of laying hens. Danilo J Franco^{*}, Lyle Robeson, Mary M Beck; University of Nebraska, Lincoln
- T107 Heat stress suppresses 3 β -hydroxysteroid dehydrogenase activity differentially by strain in granulosa cells of laying hens. Hiroko Taira^{*}, Mary M. Beck; Department of Animal Science, University of Nebraska, Lincoln
- T108 Duration of follicular development increases with advancing duration of the reproductive period in broiler breeder hens. Han-Ken Liu^{*}, Wayne L. Bacon; The Ohio State University, Wooster
- T109 Bone characteristics of laying hens as a function of age, diet and strain. Jill Wardell^{*}, Nicole Heywood, Mary M. Beck; Department of Animal Science, University of Nebraska, Lincoln
- T110 Yolk-related gene transcription by estrogen in the liver of Japanese quail. Ahmed M. Hanafy^{1,2}, Tomohiro Sasanami¹, Makoto Mori^{*1}; ¹Shizuoka University, Shizuoka, Japan, ²United Graduate School of Agricultural Science, Gifu University, Gifu, Japan
- T111 Identification of endocrine phenotypes of chicken pituitary cells expressing the vasotocin VT2 receptor subtype. Alexander Jurkevich^{*1}, Luc R. Berghman², Lawrence E. Cornett³, Wayne J. Kuenzel¹; ¹Department of Poultry Science, University of Arkansas, Fayetteville, ²Poultry Science Department, Texas A&M University, College Station, ³University of Arkansas for Medical Sciences, Little Rock
- T112 Characterization and expression of the avian ghrelin gene. M. Richards^{*}, S. Poch, J. McMurtry; USDA, ARS, Growth Biology Laboratory, Beltsville, MD
- T113 The effect of dosimetric levels of dietary L-carnitine on semen traits of White Leghorns. Wei Zhai^{*1}, S. L. Neuman², C. D. McDaniel³, M. A. Latour¹, P. Y. Hester¹; ¹Purdue University, West Lafayette, IN, ²Astra Zeneca, Raleigh, NC, ³Mississippi State University, Mississippi State
- T114 Time course of thyroid hormone replacement and lipogenic enzyme gene expression in broilers. R. W. Rosebrough^{*}, B. A. Russell, S. M. Poch, M. P. Richards; Growth Biology Laboratory, ARS, USDA, Beltsville, MD
- T115 Evaluation of oils and polyethylene glycol as vehicles in a nine-day chick embryo xenobiotic assay. M. E. Persia^{*}, T. Carro, W. W. Saylor; University of Delaware, Newark
- T116 Bone density measurements in broiler chickens. Alva Mitchell^{*1}, Roselina Angel²; ¹USDA-ARS, ²University of Maryland, College Park

- T117 Differentiation of chicken adipocytes in vitro. Rosana M. Morales^{*1}, Mary S. Mayes², Ted W. Huiatt², Colin G. Scanes^{1,2}; ¹Program in Toxicology, Iowa State University, Ames, ²Department of Animal Science, Iowa State University, Ames
- T118 Enhancing enterocyte enzymatic function by prebiotic feed supplementation. V. Davila¹, A. Diaz², A. Lopez-Mungia³, M.P. Castaneda¹, G.M. Nava^{*1,4}; ¹CEIEPA, FMVZ-UNAM, Mexico City, Mexico ²Departamento de Nutricion Animal, FMVZ-UNAM, Mexico City, Mexico, ³Instituto De Biotecnologia-UNAM, Mexico., ⁴Department of Poultry Science, University of Arkansas, Fayetteville
- T119 Developmental changes of plasma insulin, glucagon, IGF-I, IGF-II, thyroid hormones, and glucose concentration in chick embryo. J. Lu^{*1}, J.P. McMurtry², C.N. Coon¹; ¹Department of Poultry Science, University of Arkansas, Fayetteville, ²USDA-ARS Growth Biology Laboratory, USDA-ARS, Beltsville, MD
- T120 Developmental changes of hepatic enzyme activities involved in methionine metabolism for chick embryo. J. Lu^{*}, C.N. Coon; Department of Poultry Science, University of Arkansas, Fayetteville

Physiology and Endocrinology

Nutrition, Growth and Stress

Abstract

- T121 Effects of injecting transition cows with low doses of bovine somatotropin (bST) on milk yield, IGF-¹, glucose and hepatic gene expression of gluconeogenic enzymes. Marcio Liboni^{*}, Mehmet S. Gulay, Lokenga Badinga, Mary J. Hayen, Tomas I. Belloso, Charles J. Wilcox, Henry H. Head; Department of Animal Sciences, University of Florida, Gainesville
- T122 Effect of insulin and growth hormone administration to mature miniature Brahman cattle on circulating concentrations of metabolic hormones and metabolites. C. C. Chase, Jr.^{*1}, D. G. Riley¹, T. H. Elsasser², L. J. Spicer³, M. C. Lucy⁴, S. W. Coleman¹, T. A. Olson⁵; ¹USDA, ARS, Brooksville, FL, ²USDA, ARS, Beltsville, MD, ³Oklahoma State University, Stillwater, ⁴University of Missouri, Columbia, ⁵University of Florida, Gainesville
- T123 Influence of low doses of bovine somatotropin (bST) on plasma NEFA, and β -Hydroxybutyrate, hepatic lipid metabolism and gene expression of Holstein transition cows. Marcio Liboni^{*}, Mary J. Hayen, Mehmet S. Gulay, Lokenga Badinga, Tomas I. Belloso, Henry H. Head; Department of Animal Sciences, University of Florida, Gainesville
- T124 Muscle and liver IGF-I mRNA expression and plasma IGF-I levels in channel catfish administered rbGH over time. Brian Peterson^{*}, Geoffrey Waldbieser, Lelania Bilodeau; USDA/ARS Catfish Genetics Research Unit, Thad Cochran National Warmwater Aquaculture Center, Stoneville, MS
- T125 Cloning, expression and functional analysis of the porcine prolactin receptor. J.F. Trott, N.R. Farley, R.C. Hovey^{*}; University of Vermont, Burlington
- T126 Fluctuation of plasma ghrelin and growth hormone in fed and fasted cattle. A. E. Wertz^{*1}, T. J. Knight², A. Kreuder², M. Bohan², D.C. Beitz², A. Trenkle²; ¹South Dakota State University, Brookings, ²Iowa State University, Ames
- T127 Plasma hormones and expression of growth hormone receptor (GHR) 1A and IGF-I mRNA in hepatic tissue of feed-restricted peri-parturient dairy cows. R. P. Radcliff^{*1}, B. L. McCormack¹, B. A. Crooker², M. C. Lucy¹; ¹University of Missouri, Columbia, ²University of Minnesota, St. Paul
- T128 Effect of naloxone, an opioid antagonist, on serum calcium concentrations immediately after parturition in multiparous Holstein cows. F. Frago¹, Amin Ahmadzadeh^{*1}, R. Manzo¹, M. A. McGurie¹, J. C. Dalton²; ¹University of Idaho, Moscow, ²Research and Extension Center, University of Idaho, Caldwell
- T129 Effects of short-term fasting on channel catfish growth and nycthemeral concentrations of plasma GH, IGF-I, and cortisol. Brian C. Small^{*}; USDA/ARS Catfish Genetics Research Unit, Thad Cochran National Warmwater Aquaculture Center, Stoneville, MS
- T130 Microarray analysis of gene expression in ovarian dominant follicles (DF) following heat stress (HS). S.J. Kolath^{*1}, P.M. Coussens², S.S. Sipkovsky², S.J. Wilson¹, D.E. Spiers¹, J.N. Spain¹, M.C. Lucy¹; ¹University of Missouri, Columbia, ²Michigan State University, East Lansing
- T131 Effects of conjugated linoleic acid on culture of adipose tissue explants of growing pigs. A.A.F.B.V. José, M.A.S. Gama, D.P.D. Lanna^{*}; LNCA-ESALQ-USP SP, Brazil
- T132 Somatotropic axis components following administration of exogenous bovine somatotropin to neonatal beef calves having an IGF-I promoter polymorphism. Elizabeth F. Jones^{*}, Kristen E. Govoni, Thomas A. Hoagland, Gary W. Kazmer, Steven A. Zinn; Department of Animal Science, University of Connecticut, Storrs

- T133 Microarray analysis of hepatic gene expression from dry-off through early lactation in dairy cows fed at two intakes during the dry period. J. J. Loor*, N. A. Janovick, H. M. Dann, R. E. Everts, S. L. Rodriguez-Zas, H. A. Lewin, J. K. Drackley; University of Illinois, Urbana
- T134 Mammary and hepatic gene expression analysis in periparturient dairy cows using a bovine cDNA microarray. J. J. Loor*, H. M. Dann, R. E. Everts, S. L. Rodriguez-Zas, H. A. Lewin, J. K. Drackley; University of Illinois, Urbana
- T135 Adipose, mammary, and hepatic gene expression profiling in lactating dairy cows using a bovine cDNA microarray. J. J. Loor*, N. A. Janovick, R. E. Everts, S. L. Rodriguez-Zas, H. A. Lewin, J. K. Drackley; University of Illinois, Urbana
- T136 Gene expression profiles in liver of dairy cows in response to feed restriction using a bovine cDNA microarray. J. J. Loor*, D. B. Carlson, R. E. Everts, S. L. Rodriguez-Zas, H. A. Lewin, J. K. Drackley; University of Illinois, Urbana
- T137 Accuracy and precision of commercially available glucometers for use in dairy cattle. C.C. Williams*, A.M. Ponson, C.C. Stanley, H.G. Bateman, II, P.T. Richardel, D.T. Gantt; LSU AgCenter, Baton Rouge, LA
- T138 Effects of bovine somatotropin (bST), pregnancy and a diet enriched in omega-3 fatty acids on the uterine GH/IGF system in lactating dairy cows. T.R. Bilby*¹, F. Michel¹, T. Jenkins², C.R. Staples¹, W.W. Thatcher¹; ¹University of Florida, Gainesville, ²Clemson University, Clemson, SC
- T139 Unique effects of ovarian steroid hormones on parenchymal morphology in the mammary glands of swine. J.M. Scudder*, A.S. Barndoll, J.F. Trott, R.C. Hovey; University of Vermont, Burlington
- T140 Effects of bovine somatotropin (bST), pregnancy and a diet enriched in omega-3 fatty acids on reproduction in lactating dairy cows. T.R. Bilby*¹, A. Sozzi¹, M. Lopez¹, F. Silvestre¹, A. Ealy², C.R. Staples¹, W.W. Thatcher¹; ¹University of Florida, Gainesville, ²The Pennsylvania State University, University Park
- T141 Effects of ambient temperature and solar radiation on skin evaporative water loss in dairy cattle. B.C. Pollard*, M.E. Dwyer, A.C. Fitzgerald, P.C. Gentry, D.A. Henderson, R.J. Collier; University of Arizona, Tucson
- T142 Effect of Growth Hormone on the Expression of Liver-Enriched Transcription Factors in the Bovine Liver. Satyanarayana Eleswarapu*, Honglin Jiang; Department of Animal and Poultry Sciences, Virginia Tech, Blacksburg
- T143 Liver expression of growth hormone receptor 1A mRNA is decreased in dairy cows but not in beef cows at parturition. Honglin Jiang*¹, Matthew C. Lucy², Brian A. Crooker³, William E. Beal¹; ¹Department of Animal and Poultry Sciences, Virginia Tech, Blacksburg, ²Department of Animal Sciences, University of Missouri, Columbia, ³Department of Animal Science, University of Minnesota, St. Paul
- T144 A miniature condition in Brahman cattle is associated with a single nucleotide mutation within the growth hormone gene. B.L. McCormack¹, C. Agca¹, C.C. Chase, Jr.², T.A. Olson³, T.H. Elsasser⁴, A.C. Hammond⁵, T.H. Welsh, Jr.*⁶, M.C. Lucy¹; ¹University of Missouri, Columbia, ²USDA, ARS, Brooksville, FL, ³University of Florida, Gainesville, ⁴USDA, ARS, Beltsville, MD, ⁵USDA, ARS, Athens, GA, ⁶Texas A&M University, College Station

ASAS Growth and Development

Abstract #

- T145 Effect of gender and feeding program on productive performance and carcass quality of heavy pigs. J. Peinado*¹, M. Nieto², J.C. González¹, G.G. Mateos³, P. Medel¹; ¹Imasde Agropecuaria, Madrid, Spain, ²Copese, Segovia, Spain, ³Universidad Politecnica de Madrid, Madrid, Spain
- T146 Effect of protein from placental bovine tissue on puberty and growth mice. F.A. Nunez¹, J.A. Garcia-Macias¹, J.A. Lopez², F.G. Rios*²; ¹Facultad de Zootecnia - Universidad Autonoma de Chihuahua, Periferico F. R. Almada Mexico, ²FMVZ - Universidad Autonoma de Sinaloa, Culiacan - Mazatlan, Mexico
- T147 Maternal undernutrition changes angiotensin type 1 and 2 receptors in ovine fetal heart. Hyung-Chul Han*¹, Kathleen J Austin¹, Stephen P Ford¹, Peter W Nathanielsz², Thomas R Hansen¹; ¹University of Wyoming, Laramie, ²New York University, New York
- T148 Microarray analysis of gene expression during ovarian development in swine. Cansu Agca*¹, Kristin M. Whitworth¹, Jin-Geol Kim¹, Clifton N. Murphy¹, August Rieke¹, Gordon K. Springer¹, Lawrence J. Forrester¹, Jonathan A. Green¹, Nagappan Mathialagan², Randall S. Prather¹, Matthew C. Lucy¹; ¹University of Missouri, Columbia, ²Monsanto Company, St. Louis, MO
- T149 Hormonal regulation of leptin receptor expression in primary cultures of porcine hepatocytes. Thomas J. Caperna*, Amy E. Shannon, Stephen M. Poch, Wesley M. Garrett, Mark P. Richards; USDA, Agricultural Research Service
- T150 Regulation of Leptin and Leptin Receptor Expression in Porcine Subcutaneous Adipose Tissue. T.G. Ramsay*, M.P. Richards; USDA-ARS, Beltsville, MD

- T151 Secreted and signaling genes and proteins in fetal and neonatal pig adipose tissue and stromal-vascular cells. G. J. Hausman*¹, S. P. Poulos¹, L. R. Richardson¹, R. Barb¹, T. Andacht², R. Mynatt³, H. Pecot³, D. Crandall⁴, A. Hreha⁴; ¹USDA-ARS, Athens, GA, ²University of Georgia, Athens, ³Pennington Biomedical Research Center, Baton Rouge, LA, ⁴Wyeth Research Labs, Philadelphia, PA
- T152 IGF-I mRNA Levels in Bovine Satellite Cell Cultures: Effects of Fusion and Anabolic Steroid Treatment. E Kamanga-Sollo*, M.S. Pampusch, G. Xi, M.E. White, M.R. Hathaway, W.R. Dayton; Department of Animal Science, University of Minnesota, St. Paul
- T153 Production of recombinant porcine IGF-binding protein-5 (IGFBP-5) and its effect on proliferation of porcine embryonic myoblast cultures (PEMC) and L6 cells and on differentiation of L6 cells in the presence and absence of IGF-I. M Pampusch, G Xi, E Kamanga-Sollo, M White*, M Hathaway, W Dayton; Animal Growth and Development Laboratory, Department of Animal Science, University of Minnesota, St. Paul
- T154 Effect of recombinant porcine IGFBP-3 on IGF-I and Long-R3-IGF-I-stimulated proliferation and differentiation of L6 myogenic cells. G. Xi*, E. I. Kamanga-Sollo, M. S. Pampusch, M. E. White, M. R. Hathaway, W. R. Dayton; Department of Animal Science, University of Minnesota, St. Paul
- T155 Molecular cloning of untranslated regions of the porcine acid-labile subunit (pALS) gene and detection of pALS gene expression in hepatic and non-hepatic tissues. C Y Lee*, E J Jin, I A Kim; RAIRC, Jinju National University, Jinju, Korea
- T156 Circulating levels of growth factors are influenced by physiological status in the horse. Frances C. Buonomo*¹, Diana L. Grohs¹, Debra S. Ruffin², James L. Sartin²; ¹Monsanto Company, St. Louis, MO, ²School of Veterinary Medicine, Auburn University, Auburn, AL
- T157 Effects of Insulin, Leucine, and Glucose on Translation Rates in Primary Porcine Satellite Cells. B.A. Creamer*, J.M. Scheffler, S.J. Jones; University of Nebraska, Lincoln
- T158 Development of a microarray-based ELISA for the assessment of SR-associated calcium regulatory proteins in skeletal muscle. J. S. Schulz*, S.J. Jones, M. Zeece; University of Nebraska, Lincoln
- T159 Hormonal and metabolic responses to human handling in crossbred steers. Katsuji K. Uetake*¹, Toshie T. Ishiwata¹, Naoshige N. Abe², Yusuke Y. Eguchi¹, Toshio T. Tanaka¹; ¹School of Veterinary Medicine, Azabu University, Sagamihara, Japan, ²Faculty of Agriculture, Tamagawa University, Machida, Japan
- T160 Skeletal development and productive performance of Italian Merino lambs as related to age. G. Maiorano*, F. Filetti, A. Ciarlariello, G. Gambacorta, A. Manchisi; University of Molise, Campobasso, Italy
- T161 Regulation of myostatin (MSTN) and MyoD expression with acute inflammatory challenge in the channel catfish (*Ictalurus punctatus*). T. E. Weber*, D. J. Gregory, B. G. Bosworth; USDA/ARS, Stoneville, MS
- T162 Expression of the anti-apoptotic gene Bcl-2 during skeletal muscle development in normal and Low Score Normal chickens. Cynthia S. Coy*, Sandra G. Velleman; The Ohio State University, Wooster
- T163 Proteins were Differentially Expressed in the Plasma from High and Low Feed Efficient Broilers. N. Pumford*¹, M. Iqbal¹, W. Bottje¹, J. Lay³, T. Wing², M. Cooper²; ¹Center of Excellence for Poultry Science, University of Arkansas, Fayetteville, ²Cobb-Vantress, Inc., Siloam Springs, AR, ³Statewide Mass Spectrometry Facility, University of Arkansas, Fayetteville

Lactation Biology

Physiology

Abstract

- T164 Effects of Low Doses of bST during Transition Period on Milk Component Percentages and Yields and Milk Production of Holstein Cows. Mehmet S. Gulay*¹, Marcio Liboni², Alfredo Garcia³, M. Joyce Hayden², Tomas Belloso², Herbert H. Head²; ¹Department of Physiology, Akdeniz University, Burdur Veterinary Faculty, Burdur, Turkey, ²Department of Animal Sciences, University of Florida, Gainesville, ³Facultad de Veterinaria, Universidad del Zulia, Maracaibo, Venezuela
- T165 Response of milk yield and reproduction to bovine somatotropin (bST) in low and high producing Holstein cows. S. A. Mosley*¹, M. A. McGuire¹, W. Stouder², M. F. McGrath³, J. L. Vicini³, S. C. Denham³; ¹University of Idaho, Moscow, ²Stouder Holsteins, Wendell, ID, ³Monsanto Co., Chesterfield, MO
- T166 Lactation persistence is enhanced in transgenic mice overexpressing des(1-3)hIGF-I in the mammary gland. Darryl L. Hadsell*^{1,2}, Daniel T. Torres^{1,2}, Jessie George^{1,2}, Gregory S. Shelton^{1,2}, Marta L. Fiorotto^{1,2}; ¹USDA/ARS Childrens Nutrition Research Center, Houston TX, ²Baylor College of Medicine, Houston TX

- T167 IGF-I and TGF- α activate different upstream signaling molecules in bovine mammary epithelial cells. Kelly A. Hogan², Usha Sivaprasad¹, Gwenaelle Desury^{*1}, Wendie S. Cohick¹; ¹Department of Animal Sciences, Rutgers, The State University of New Jersey, New Brunswick, ²Rutgers, The State University of New Jersey and The University of Medicine and Dentistry of New Jersey, Joint Graduate Program in Toxicology, Piscataway
- T168 Expression of prolactin receptor, STAT5a, STAT5b and whey acidic protein in mammary tissue of lactating Large White and 50% Meishan sows. M.F. Palin, C. Farmer*; Agriculture and Agri-Food Canada, Dairy and Swine R & D Centre, Lennoxville, QC, Canada
- T169 Expression of prolactin receptor (PRL-R) mRNA in somatic cells of bovine milk. K. J. Hohmann*, T. L. Auchtung, G. E. Dahl; University of Illinois, Urbana
- T170 Mammary cytokine gene expression during lactation. Colin G Prosser*, Craig S Smith, Alison J Hodgkinson, Vicki C Farr, Elizabeth A Carpenter; AgResearch, Hamilton, New Zealand
- T171 Effect of stage of lactation and parity on mammary gland gene expression. Nancy Miller^{*1}, Louis Delbecchi², Denis Petitclerc², Brian G. Talbot¹, Pierre Lacasse²; ¹Université de Sherbrooke, QC, Canada, ²Dairy and Swine R&D Centre, Lennoxville, QC, Canada
- T172 Long days do not alter mammary growth in prepubertal heifers. E.E. Connor^{*1}, A.G. Rius², T.L. Auchtung², D.L. Wood¹, P.E. Kendall², G.E. Dahl², A.V. Capuco¹; ¹USDA-ARS, Bovine Functional Genomics Laboratory Beltsville, MD USA, ²Department of Animal Sciences, University of Illinois, Urbana
- T173 Short term effects of different milking intervals on cisternal and alveolar milk in dairy sheep. V. Castillo*, X. Such, G. Caja, E. Albanell, R. Casals; Universitat Autònoma de Barcelona, Bellaterra, Spain
- T174 The use of ¹³C labeled fatty acids to study milk fat synthesis in dairy cows. Erin E Mosley*, Mark A McGuire; University of Idaho, Moscow
- T175 Duration of starvation required to decrease milk production in the high-producing dairy cow. C.A. Toerien*, J.P. Cant; University of Guelph, Guelph, ON, Canada
- T176 Lactational response to annual or biannual kidding in dairy goats. A.A.K. Salama*, G. Caja, X. Such, R. Casals, E. Albanell; Universitat Autònoma de Barcelona, Bellaterra, Spain

Ruminant Nutrition

Abstract

- T177 Feed intake, nutrient digestibility and nitrogen retention in beef steers fed a total mixed ration supplemented with monensin or different doses of essential oils. Benchaar Chaouki^{*1,2}, Charmley Ed³, Duynisveld John³; ¹Dairy and Swine R&D Centre, Agriculture and Agri-Food Canada, Lennoxville, QC, Canada, ²Nova Scotia Agricultural College, Truro, NS, Canada, ³Crop and Livestock Research Centre, Agriculture and Agri-Food Canada Nappan, NS, Canada
- T178 Effects of phase feeding of protein on performance, blood urea N, manure N:P ratio, and carcass characteristics of feedlot cattle. J. T. Vasconcelos^{*1}, L. W. Greene¹, N. A. Cole², F. T. McCollum, III¹; ¹Agricultural Research and Extension Center, Texas A&M University, Amarillo, ²USDA-ARS, Bushland, TX
- T179 Influence of Sodium Caseinate Infusion on Voluntary Feed Intake and Digestive Function in Steer Calves Fed a Sudangrass-Based Growing Diet. E. G. Alvarez^{*1}, R. A. Zinn²; ¹Universidad Autónoma de Baja California, Mexicali, Mexico, ²University of California, Davis
- T180 Ruminal ammonia load improves nitrogen retention of growing steers when leucine is limiting. M. S. Awawdeh*, E. C. Titgemeyer, K. C. McCuiston, D. P. Gnad; Kansas State University, Manhattan
- T181 Effect of fall protein supplementation with a self-fed liquid supplement on performance of beef cows grazing tallgrass-prairie range. D. A. Llewellyn^{*1}, B. T. Gray¹, T. T. Marston¹, C. A. Bandyk²; ¹Kansas State University, Manhattan, ²Quality Liquid Feeds, Inc., Dodgeville, WI
- T182 Amino acids degradation of rumen incubated feeds. Marcelo Q. Manella^{1,2}, Celso Boin², Guilherme F. Alleoni¹, João J. A. A. Demarchi¹, Luis O. Tedeschi^{*3}; ¹Instituto de Zootecnia Heitor, Nova Odessa, Brazil, ²Esalq-Usp Av. Pádua Dias, Piracicaba, Brazil, ³Cornell University, Ithaca, NY
- T183 Feedlot cattle responses to reduced levels of degradable protein. Jeffrey W. Lehmkuhler*, Steve C. Arp, Daniel M. Schaefer; Department of Animal Sciences, University of Wisconsin, Madison
- T184 Responses of serum glucose, insulin, glucagon, and fatty acids to ruminal propionate and abomasal carbohydrates in Korean cattle. S. C. Lee¹, J. S. Eun², Y. K. Kim³, J. P. Cant⁴, Y. H. Moon^{*5}; ¹National Livestock Research Institute, Suwon, Kyonggi, Korea, ²Samyang Feed Company, Suwon, Kyonggi, Korea, ³Chungnam National University, Taejon, Chung Nam, Korea, ⁴University of Guelph, Guelph, ON, Canada, ⁵RAIRC, Jinju National University, Jinju, Gyeong Nam, Korea

- T185 Hepatic mitochondrial efficiency of Angus and Wagyu heifers. J.J. Michal¹, J.J. Ramsey², K.A. Ross¹, D.E. Johnson³, K.A. Johnson*¹; ¹Washington State University, Pullman, ²University of California, Davis, ³Colorado State University, Fort Collins
- T186 Barley- versus protein supplemented corn-based diets for feedlot cattle evaluated using the NRC and CNCPS beef models. K. A. Beauchemin, K. M. Koenig*; Agriculture and Agri-Food Canada, Research Centre, Lethbridge, AB Canada
- T187 Ruminant mucosa and epidermis morphology of calves infused with lactate, propionate or butyrate. Suelly F. Costa, Marcos N. Pereira*, Leandra Q. Melo, Leonardo A.L. Muzzi, Márcio L. Chaves; Universidade Federal de Lavras, Lavras, Brazil
- T188 Evaluation of quality, quantity and timing of colostrum feeding on immunoglobulin G1 absorption in jersey calves. E. C. Johnson, D. K. Kendall, E. H. Jaster*; California Polytechnic State University, San Luis Obispo
- T189 Effect of time of milk replacer delivery on feed intake of calves during weaning. S. I. Kehoe*, M. L. Moody, A. J. Heinrichs; Pennsylvania State University, University Park
- T190 Effects of dietary protein level and fish meal on growth and hormonal status of weaned dairy calves. P.T. Richardel*, C.C. Williams, H.G. Bateman, II, C.F. Hutchison, C.C. Stanley, Y.H. Chung, T.W. White, L.R. Gentry, D.L. Thompson, Jr., D.T. Gantt; LSU AgCenter, Baton Rouge, LA
- T191 Components of growth in Holstein heifers reared from early life on two levels of energy intake. M.J. Meyer*, D.A. Ross, D.E. Shaw, M.E. Van Amburgh; Cornell University, Ithaca, NY
- T192 Urinary phosphorus and allantoin as parameters for rumen development in veal calves. A. M. van Vuuren*, N. Stockhofe, W.J.J. Gerrits, B.J. Suarez, C.G. van Reenen; Animal Sciences Group, Wageningen, Lelystad, The Netherlands
- T193 Relationship of serum metabolites and insulin to beef marbling score in Korean cattle. J. S. Eun¹, S. C. Lee², Y. K. Kim³, Y. H. Moon*⁴; ¹Samyang Feed Company Suwon, Kyonggi, Korea, ²National Livestock Research Institute, Suwon, Kyonggi, Korea, ³Chungnam National University, Taejon, Chung Nam, Korea, ⁴RAIRC, Jinju National University, Jinju, Korea
- T194 Using A DNA marbling marker, expected progeny differences, ultrasound, and live evaluation to predict carcass composition of early-weaned Simmental steers. C.B. Rincker*, N.A. Pyatt, L.L. Berger, D.B. Faulkner; University of Illinois, Urbana
- T195 Fermentation characteristics and fatty acid biohydrogenation in continuous cultures of mixed ruminal microorganisms fed diets containing poultry products and nutrients reclaimed from the process water of processing plants. Thomas C. Jenkins*¹, Charles J. Sniffen²; ¹Clemson University, Clemson, SC, ²Holderness, NH
- T196 Effects of amino nitrogen on fermentation parameters by mixed ruminal microbes in batch and semi-continuous cultures when energy or nitrogen was limiting. H. Kajikawa*¹, A. Kawamura², K. Tajima¹, M. Mitsumori¹, A. Takenaka¹; ¹National Institute of Livestock and Grassland Science, Tsukuba, Ibaraki, Japan, ²Tsukuba University, Tsukuba, Ibaraki, Japan
- T197 Rumen microbial degradation of amino acids from fish meal and blood meal in continuous culture. Silvia Gargallo, Sergio Calsamiglia*, Alfred Ferret; Universitat Autònoma de Barcelona, Bellaterra, Spain
- T198 Effects of time at suboptimal pH on rumen bacterial fermentation in a dual flow continuous culture system. Montserrat Cerrato, Sergio Calsamiglia*, Alfred Ferret; Universitat Autònoma de Barcelona, Bellaterra, Spain
- T199 Effect of particle size on adhesion of *Ruminococcus albus* and *Ruminococcus flavefaciens* to plant cell walls in vitro. Qingxiang Meng*, Wei Gao; China Agricultural University, Beijing, China
- T200 Effects of a blend of essential oils and the type of diet on rumen microbial fermentation and nutrient flow from a continuous culture system. Lorena Castillejos¹, Sergio Calsamiglia*¹, Alfred Ferret¹, Riccardo Losa²; ¹Universitat Autònoma de Barcelona, Bellaterra, Spain, ²AKZONOBEL/CRINA SA, Gland, Switzerland
- T201 Effects of different doses of plant extracts on rumen microbial fermentation. Marta Busquet¹, Sergio Calsamiglia*¹, Alfred Ferret¹, Christopher Kamel²; ¹Universitat Autònoma de Barcelona, Bellaterra, Spain, ²University of Leeds, UK
- T202 Ionized calcium requirements of cellulolytic ruminal bacteria for growth and cellulose degradation. Maria Sol Morales*, Burk A. Dehority; OARDC, The Ohio State University, Wooster
- T203 Empirical relationships between ruminal pH and volatile fatty acid concentrations. Maria Devant¹, Alex Bach*^{1,2}, José Antonio García³; ¹IRTA-Unitat de Remugants, Barcelona, Spain, ²ICREA, Barcelona, Spain, ³IRTA-Unitat de Química Alimentària, Girona, Spain

- T204 An empirical analysis of ruminal microbial efficiency. Emilio Ungerfeld*, Steven Rust; Michigan State University, East Lansing
- T205 **In Vitro** Synthesis of Isopropanol from Acetone by Mixed Rumen Microbes. Lauraine H. Rivier*, Michael L. Bruss; University of California, Davis
- T206 Site of digestion in dairy cows fed different soy-protein supplements. I. R. Ipharraguerre¹, J. H. Clark¹, D. E. Freeman²; ¹Department of Animal Sciences, University of Illinois, Urbana, ²Department of Veterinary Clinical Medicine, University of Illinois, Urbana
- T207 Utilization of the mobile bag technique to determine intestinal digestibility of feedstuffs. S. K. Ivan*, H. L. Haugen, T. J. Klopfenstein; University of Nebraska, Lincoln
- T208 Effects of dietary sodium bicarbonate on ruminal and total tract digestibility of diet and diet components in dairy cows. C. S. Mooney*, M. S. Allen; Michigan State University, East Lansing
- T209 Ruminal Characteristics and Rate, Site, and Extent of Digestion of Dairy Diets Supplemented with Canola Fed to Holstein Steers. S. E. Bedgar^{*1}, J. W. Schroeder¹, M. W. Chichlowski², M. L. Bauer¹, S. A. Soto-Navarro¹; ¹North Dakota State University, Fargo, ²North Carolina State University, Raleigh
- T210 Effect of a saponin-based surfactant on the processing characteristics and in vitro ruminal fermentation of barley grain. Yuxi Wang*, Tim A. McAllister; Agriculture and Agri-Food Canada Research Centre, Lethbridge, AB, Canada
- T211 Development of an in vitro technique to determine intestinal digestion of protein supplements by a Daisy II incubator. Silvia Gargallo, Sergio Calsamiglia*, Alfred Ferret; Universitat Autònoma de Barcelona, Bellaterra, Spain
- T212 The in vitro digestibility, gas production and fermentation characteristics of *Mucuna pruriens*, and soybean meal treated with or without L-Dopa. A.T. Adesogan*, S.K. Chikagwa-Malunga, M.B. Salawu, S.C. Kim; Department of Animal Sciences, University of Florida, Gainesville
- T213 Estimated Dry Matter, Crude Protein and Neutral Detergent Fiber Degradation of Some Feeds by In Situ Technique. Luciano Cabral^{*1}, Sebastião Valadares Filho², Joanis Zervoudakis¹, Alexandre Souza¹, Edenio Detmann³; ¹Universidade Federal de Mato Grosso Av. Fernando Corrêa da Costa, DZER-FAMEV/UFMT, Cuiabá-MT, Brazil, ²Universidade Federal de Viçosa Av. P.H. Rolfs, Viçosa - MG, Brazil, ³Universidade Estadual do Norte Fluminense CCTA, Campos Dos Goytacazes, Brazil
- T214 Effect of freeze drying versus oven drying on dry matter and starch digestibility of corn mutants with Oh43 inbred line background harvested at four growth stages. D. Ngonyamo-Majee¹, R. D. Shaver¹, D. Sapienza^{*2}, J. G. Coors³, J. G. Lauer³, C. Venhaus²; ¹Dairy Science Dept., University of Wisconsin, Madison, ²Pioneer Hi-Bred Int'l Inc. Johnston, IA, ³Agronomy Dept., University of Wisconsin, Madison
- T215 Effect of kernel vitreousness on ruminal and total tract dry matter digestibility of diverse corn germplasm sources. D. Ngonyamo-Majee¹, R. D. Shaver^{*1}, J. G. Coors², D. Sapienza³, J. G. Lauer², C. Venhaus³; ¹Dairy Science Dept., University of Wisconsin, Madison, ²Agronomy Dept., University of Wisconsin, Madison, ³Pioneer Hi-Bred Int'l Inc., Johnston, IA
- T216 Fines in steam-flaked corn samples disrupt the relationship between flake density and gelatinized starch content. D.R. Brown^{*1}, M.K. Meilahn²; ¹Agland, Inc., Eaton, CO, ²Weld Laboratories, Inc., Greeley, CO
- T217 Effect of dietary forage source and crude protein level on in vitro microbial protein synthesis and ruminal fermentation. J. J. Olmos Colmenero^{*1}, Glen A. Broderick²; ¹University of Wisconsin, Madison, ²U.S. Dairy Forage Research Center, Madison, WI
- T218 Forage mixtures to increase N-use efficiency by lactating dairy cows. RJ Dewhurst*, LJ Harris, RT Evans; Institute of Grassland and Environmental Research, Aberystwyth, UK
- T219 Impact of rumen protected lysine and methionine sources on yield of milk and milk components: a statistical survey of published literature. Lyle M. Rode^{*1}, Mercedes Vazquez-Anon²; ¹Sage Biosciences Inc., Lethbridge, AB, Canada, ²Novus International, Inc., Saint Charles, MO
- T220 Effects of DL-Methionine and Lysine HCl on fermentation In Vitro. T. W. Braud*, H. G. Bateman, II, C. C. Williams, D. T. Gantt; LSU AgCenter, Baton Rouge, LA
- T221 Determination of undegradability and ruminal effects of HMB, HMBI, and DL-MET in lactating cows. S. Noftsker*, N. R. St-Pierre, J. L. Firkins; The Ohio State University, Columbus
- T222 Intravenous histidine infusion affects milk composition in lactating dairy cows. Y. H. Moon^{*2}, P. H. Luimes¹, L. E. Wright³, C. A. Toerien¹, J. P. Cant¹; ¹University of Guelph, Guelph, ON, Canada, ²RAIRC, Jinju National University, Jinju, Korea, ³Elora Dairy Research Centre, Ariss, ON, Canada

- T223 Use of Milk Ammonia Nitrogen as an Indicator of Rumen Protein Degradation in Dairy Cows. A. B. Peterson*, R. A. Kohn; Department of Animal and Avian Sciences, University of Maryland, College Park
- T224 Ruminant degradability and intestinal digestibility of treated soybean meal products. Sylvia I. Borucki Castro^{*1}, Helene Lapiere², Leroy E. Phillip¹, Phillip W. Jardon³, Robert Berthiaume²; ¹Animal Science, McGill University, Ste-Anne-de-Bellevue, QC, Canada, ²Dairy and Swine Research and Development Centre - Agriculture and Agri-Food Canada, Lennoxville, QC, Canada, ³West Central Soy, Ralston, IA
- T225 Effects of ruminally-protected L-carnitine intake on plasma L-carnitine, glucose, urea, and ammonia in sheep undergoing an ammonia challenge. Dillon K. Walker^{*1}, Barry D. Lambert^{1,2}, Harold B. Rathburn³, Jason C. Woodworth⁴; ¹Department of Animal Science, Tarleton State University, Stephenville, TX, ²Texas Agriculture Experiment Station, Stephenville, TX, ³Department of Biology, Tarleton State University, Stephenville, TX, ⁴Lonza Inc., Fairlawn, NJ
- T226 Influence of slow-release urea on nitrogen flux in steers. C. C. Taylor^{*1}, S. E. Kitts¹, N. B. Kristensen¹, K. R. McLeod¹, D. E. Axe², D. L. Harmon¹; ¹University of Kentucky, Lexington, ²IMC Feed Ingredients, Lake Forrest, IL
- T227 Utilization of ammonia-N by ruminal epithelial and duodenal mucosal cells isolated from growing sheep. M. Oba^{*1}, R. L. Baldwin, VI², S. L. Owens¹, B. J. Bequette¹; ¹Department of Animal and Avian Sciences, University of Maryland, College Park, ²Bovine Functional Genomics Laboratory, Animal and Natural Resources Institute, USDA-ARS, Beltsville, MD
- T228 An improved analytical method for the determination of urea recycling parameters. Juan C Marini*; University of Illinois, Urbana
- T229 Use of Synchrotron-Based FTIR Microspectroscopy to Reveal Chemical Features of Feather Protein Secondary Structure and Its Relation to Protein Value. P. Yu^{*1}, J. J. McKinnon¹, C. R. Christensen^{2,3}, D. A. Christensen¹; ¹College of Agriculture, University of Saskatchewan, Saskatoon, SK, Canada, ²Canadian Light Source, Saskatoon, SK, Canada, ³Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, SK, Canada
- T230 Basolateral transport of neutral amino acids in enterocytes is mediated via Systems A, ASC, L, asc, and y^{+L}. Joanne Knapp*; University of Vermont, Burlington
- T231 Investigation of the site of absorption and metabolism of HMBi and HMB in sheep. P. Noziere¹, C. Richard², B. Graulet², D. Durand¹, D. Remond¹, J.C. Robert^{*2}; ¹INRA URH, Clermont-Ferrand Theix, France, ²ADISSEO France, Briand, Antony, France
- T232 Relationship between body weight, loin *Longissimus dorsi* and backfat measurements, and body condition score in dry and lactating Holstein-Friesian dairy cows. G. Jaurena, J. M. Moorby*, W. J. Fisher, D. W. R. Davies; Institute of Grassland and Environmental Research, Aberystwyth, UK
- T233 Predicting Feed Protein Flow to the Duodenum of Lactating Dairy Cows. H. G. Bateman, II^{*1}, J. H. Clark², M. R. Murphy²; ¹LSU AgCenter, Baton Rouge, LA, ²University of Illinois, Urbana
- T234 Prepro-ghrelin mRNA in the digestive tract of undernourished pregnant ewes. Hyung-Chul Han*, Kathleen J Austin, Bret W Hess, Stephen P Ford, Thomas R Hansen; Department of Animal Science, University of Wyoming, Laramie
- T235 Effects of forage proportion in the diet on digestibility and portal nutrient flux in sheep fed to maintenance level. G. F. Mouro, A. F. Branco*, S. M. Coneglian, T. F. Minella, L. P. Rigolon, L. M. Zeoula, F. J. Maia; Universidade Estadual de Maringa, Parana, Brasil
- T236 Effects of carbohydrate source and monensin in high oil diets on nitrogen balance, digestibility and portal nutrient flux in sheep. G. F. Mouro, A. F. Branco*, F. J. Maia, T. F. Minella, L. M. Zeoula, S. M. Coneglian; Universidade Estadual de Maringa, Parana, Brasil
- T237 Two techniques to determine the ruminal clearance rate of volatile fatty acids. João C. Resende Júnior¹, Marcos N. Pereira^{*1}, Huug Boer², Seerp Tamminga²; ¹Universidade Federal de Lavras, Lavras, Brazil, ²Wageningen Universiteit Wageningen, The Netherlands
- T238 Prediction of milking cows performance and use of the equations for estimating nutritional requirements in Brazil. R.P. Lana^{*1,2}, J.A. Freitas¹, A.C. Queiroz^{1,2}; ¹Universidade Federal de Viçosa, Viçosa, MG, Brazil, ²CNPq Brasília, DF, Brazil
- T239 Efficiency of use of concentrate ration on weight gain and milk production by cattle under tropical pasture and intensive conditions in Brazil. R.P. Lana^{*1,2}; ¹Universidade Federal de Viçosa, Viçosa, MG, Brazil, ²CNPq Brasília, DF, Brazil
- T240 Ruminant parameters and plasma metabolites of Holstein dairy cows fed processed cottonseed. A.R Foroughi*, A. A. Naserian, R. Valizadeh, M. Danesh Mesgaran; Ferdowsi University of Mashhad, Iran

- T241 NutriDense® corn grain and corn silage for dairy cows. Brandon C. Benefield*, Ignacio R. Ipharraguerre, Maximo Liñeiro, Jimmy H. Clark; University of Illinois, Urbana
- T242 Effect of level of dietary crude protein on ruminal digestion and bacterial NAN flow in lactating dairy cows. J. J. Olmos Colmenero*¹, Glen A. Broderick²; ¹University of Wisconsin, Madison, ²U.S. Dairy Forage Research Center, Madison, WI
- T243 Effect of species and breed within species on forage intake and growth in hair sheep lambs and meat goat kids offered alfalfa and grass hay diets with a corn-based supplement. Stephan Wildeus¹, Kenneth E. Turner*², Joni R. Collins¹; ¹Virginia State University, Petersburg, ²USDA, ARS, AFSRC, Beaver, WV
- T244 Productive performance of Holstein cows in early and very early lactations when injected with bovine somatotropin. M.A. Tarazon*¹, J.T. Huber², A. C. Calderon³, H.G. Garcia³; ¹Universidad de Sonora, Sonora, México, ²University of Arizona, Tucson, ³Universidad Autónoma de Baja California, Mexicali, Mexico
- T245 Effect of type of concentrate on milk production and composition of dairy cows. R.G. Pulido*¹, P. Aguilera¹, R. Daetz¹, F. Wittwer¹, P. Orellana²; ¹Fac. Cs. Veterinarias, Universidad Austral de Chile, Valdivia, Chile, ²Dept. Nutrición, F. Med. Veterinaria, Universidad de Concepción

Sheep Species

Abstract #

- T246 Effect of substitution of alfalfa hay with sun dried pig excreta on performance of sheep feed growing diets. A. Estrada-Angulo*, C.H. Ramos, R. Barajas, J.F. Obregon; FMVZ-Universidad Autonoma de Sinaloa, Culiacán-Mazatlan, Mexico
- T247 Effect of substitution of sorghum grain for escobero sorghum grain (sorghum bicolor, var. Technicum, Jav.) on apparent digestibility of diets for sheep. A. Estrada-Angulo*, R. Barajas, J.F. Obregon, R.E. Lopez, J.C. Robles; FMVZ-Universidad Autonoma de Sinaloa, Culiacan-Mazatlan, Mexico
- T248 Effect of substitution of sorghum grain with escobero sorghum grain (Sorghum bicolor, var. Technicum, Jav.) on growth performance of finishing sheep. A. Estrada-Angulo*, R. Barajas, J.F. Obregon, F.J. Gallardo; FMVZ-Universidad Autonoma de Sinaloa, Culiacan-Mazatlan, Mexico
- T249 Effect of substitution of alfalfa hay with Clitoria hay (Clitoria ternatea L.) on performance of sheep feed finishing diets. A. Estrada-Angulo*, A.B. Perez-Fernandez, J.F. Obregon, R. Barajas, E.A. Velazquez; FMVZ-Universidad Autonoma de Sinaloa, Culiacan-Mazatlan, Mexico
- T250 Effect of supplementation of meat meals from different non ruminant species on growth performance response in finishing sheep. A.B. Perez-Fernandez, A. Estrada-Angulo*, R. Barajas, J. F. Obregón; FMVZ-Universidad Autónoma de Sinaloa, Culiacan-Mazatlan, Mexico
- T251 Comparative effect of tallow and dark poultry fat on apparent digestibility of diets for sheep. A. Estrada-Angulo*, J.C. Robles, J.F. Obregon, R. Barajas; FMVZ-Universidad Autonoma de Sinaloa, Culiacan-Mazatlan, Mexico
- T252 Digestibility of fermented bagasse fed to Suffolk ewes. Rajeev R. Pradhan*¹, Etsuko E. Shirakabe¹, Takamasa T. Nishioka¹, Keshab K. Batajoo²; ¹School of Agriculture, Kyushu Tokai University, Kumamoto, Japan, ²Chubu Feed Co. Ltd., Nagoya, Japan
- T253 Chemical diet composition and metabolizable protein intake by grazing sheep. A.S. Juarez-Reyes*, J. Arzola-Nevarez, G. Nevarez-Carrasco, R. Montoya-Escalante, M.A. Cerrillo-Soto; Universidad Juarez del Estado de Durango, Mexico
- T254 Effect of chromium methionine supplementation on growth performance and carcass traits of hair sheep. F. Juarez*, R. Barajas, M.A. Espino, J.F. Obregon, F.G. Ríos; FMVZ-Universidad Autonoma de Sinaloa, Culiacan-Mazatlan, Mexico
- T255 Effect of chromium methionine supplementation on serum concentration of triglycerides and cholesterol of fattening sheep. F. Juarez*, M.A. Espino, R. Barajas; FMVZ-Universidad Autonoma de Sinaloa, Culiacán-Mazatlan, Mexico
- T256 Effect of substitution of canola meal with overcooked sesame meal on growth performance of hair sheep. J.F. Obregon*, A. Estrada-Angulo, R. Barajas; FMVZ-Universidad Autónoma de Sinaloa, Culiacan-Mazatlan, Mexico
- T257 Ruminal degradation of dry matter of raw cull chop suey beans (Vigna radiata L., Wilzeck) in sheep. J.F. Obregon*, J.C. Robles, R. Barajas, A. Estrada-Angulo, M. Valdez; FMVZ-Universidad Autonoma de Sinaloa, Culiacan-Mazatlan, Mexico
- T258 Ruminant degradation of dry matter of overcooked sesame meal using nylon bag technique in sheep. J.F. Obregon*, H. Castro, R. Barajas, A. Estrada-Angulo, G. Telles, Y. Peraza; FMVZ-Universidad Autonoma de Sinaloa, Culiacan-Mazatlan, Mexico

- T259 Genetic resistance to *Eimeria* infections in Merinoland sheep and relationships among oocyst count, *E. ovinoidalis* antibody level and live weight. Matthias Gauly^{*1}, Jörg Reeg², Christian Bauer³, Horst Brandt², Christina Mertens⁴, Horst Zahner³, Georg Erhardt²; ¹Institute of Animal Breeding and Genetics, University of Göttingen, Göttingen, Germany, ²Department of Animal Breeding and Genetics, University of Giessen, Giessen, Germany, ³Institute of Parasitology, University of Giessen, Giessen, Germany, ⁴Intervet Innovation GmbH Zur Propstei, Schwabenheim, Germany
- T260 Phenotypic correlations between body measurements and production performance of six sheep breeds at north-central México: exploratory trial. MA Gallegos-Acevedo, N Nieves-Herrera, CF Arechiga, JI Aguilera, MA Castillo-Pecina, MA Lopez-Carlos*; Universidad Autonoma de Zacatecas, Zacatecas, Mexico.
- T261 Effect of breed type, finishing treatment, and dietary supplements on carcass characteristics and tenderness in hair sheep. Michael Fisher¹, Susan Duckett^{*1}, Stephan Wildeus²; ¹The University of Georgia Athens, GA, ²Virginia State University, Petersburg
- T262 Characterizing exfoliative vaginal cytology (ECV) in ewes from 60 d of age through parturition. G Solis, JI Aguilera, RM Rincon, R Bañuelos, CF Arechiga*; Universidad Autonoma de Zacatecas, Zacatecas, Mexico.
- T263 Sexual behavior and interaction of hair rams as an auxiliary aid for estrus detection in bovine females. CF Arechiga ^{*1}, MG Magallanes¹, N Nazarala¹, RM Rincon¹, JA Piña¹, MA Lopez¹, J Valencia²; ¹Universidad Autonoma de Zacatecas, Zacatecas, Mexico, ²Universidad Nacional Autonoma de Mexico, Mexico

Extension Education

Abstract

- T264 Financial performance of dairies in Florida and Georgia in 2002. A. deVries¹, R. Giesy¹, L. O. Ely^{*2}, A. deAraujo¹, A. Andreasen¹, B. Broaddus¹, S. Eubanks¹, D. Mayo¹, P. Miller¹, T. Seawright¹, C. Vann¹; ¹University of Florida Gainesville, ²University of Georgia, Athens
- T265 Factors affecting death losses in DHI holstein herds. L. O. Ely*, J. W. Smith; University of Georgia, Athens
- T266 SoutheastDairyExtension.org - An Internet-Based Dairy Website for Southeast US and Beyond. G. W. Rogers*, E. L. Tipton, K. M. Hill, J. B. Cooper; The University of Tennessee, Knoxville
- T267 Association between bulk tank milk urea nitrogen and DHI production variables in California dairy herds. Gerald E. Higginbotham^{*1}, William R. VerBoort², Jose E. P. Santos³; ¹University of California Cooperative Extension Fresno/Madera Counties, CA, ²California DHIA Fresno, CA, ³School of Veterinary Medicine, University of California, Davis, Tulare

Teaching/Undergraduate and Graduate Education

Abstract

- T268 Comparison of evaluation methods for placement in a freshman equitation course. Dr. Karen Bennett-Wimbush*, Dr. Shea Porr; Ohio State University, Agricultural Technical Institute, Wooster
- T269 Integrating Leadership, Communications, and Service Learning Education to Prepare Future Leaders in the Animal Sciences. D.R. Brink*, L.D. Moody, B.S. VanDeWalle; University of Nebraska, Lincoln

Dairy Foods

Chemistry

Abstract

- T270 Storage stability of lutein in cheddar cheese. Sonja T Jones*, Kai J Aryana, Jack N Losso; Louisiana State University, Baton Rouge
- T271 Physical properties of \hat{e} -casein stabilized emulsions. Ron Richter, Paphapit Ungkuraphinunt*, Anita Gerung, Gabriela Perez-Hernandez; Texas A&M University, College Station
- T272 Probiotic, fiber fortified, fat free plain yogurt. Kayanush J. Aryana*; Louisiana State University Agricultural Center, Baton Rouge
- T273 Fat free plain set yogurts fortified with minerals. Kamalesh Achanta^{*1}, Kayanush J. Aryana², Charles Boeneke²; ¹Louisiana State University, Baton Rouge, ²Louisiana State University Agricultural Center, Baton Rouge

- T274 Effect of emulsifying salts on texture of pasteurized process Cheddar cheese. N. Shirashoji^{*1,2}, J. J. Jaeggi², J. A. Lucey²; ¹Food Research & Development Laboratory, Morinaga Milk Industry Co., Japan, ²University of Wisconsin, Madison
- T275 Probiotic, fat free, no sugar added ice cream. Matthew Summers^{*1}, Kayanush J. Aryana¹; ¹Louisiana State University Agricultural Center, Baton Rouge, ²Louisiana State University Agricultural Center, Baton Rouge
- T276 Effect of insoluble calcium phosphate on cheese functionality. J. Choi^{*1}, D.S. Horne², M.E. Johnson¹, J.A. Lucey¹; ¹University of Wisconsin, Madison, ²Charis Food Research, Scotland
- T277 Texture and microstructure of full fat and low fat Cheddar cheeses fortified with chitosan. Kayanush J. Aryana^{*1}, Mary C. Beck²; ¹Louisiana State University Agricultural Center, Baton Rouge, ²Louisiana State University, Baton Rouge
- T278 Quantification of volatile flavor compounds in fresh and different off-flavor lowfat milks. Logan L Francis¹, Delores H Chambers², Ike J Jeon¹, Karen A Schmidt^{*1}; ¹Dept. of Animal Sciences, Kansas State University, Manhattan, ²Dept. of Human Nutrition, Kansas State University, Manhattan
- T279 Serving temperature effects on milk flavor, milk aftertaste, and volatile compound quantification in nonfat and whole milk. Logan L Francis¹, Seon Hee Kong², Delores H Chambers², Ike J Jeon¹, Karen A Schmidt^{*1}; ¹Dept. of Animal Sciences, Kansas State University, Manhattan, ²Dept. of Human Nutrition, Kansas State University, Manhattan
- T280 Evaluation of pH stability in different types of heat-treated fluid and manufactured milk products during refrigerated storage. Catherine O. Maduko^{*1}, Rob Shewfelt¹, Joseph Frank¹, Young W. Park²; ¹Department of Food Science and Technology, University of Georgia, Athens, ²Fort Valley State University Agricultural Research Station, Fort Valley, GA
- T281 Use of long-chain polyphosphates for shelf-life extension of processed cheese spreads. László Varga^{*}, Szilveszter Orbán; Department of Dairy Science, Institute of Food Science, Faculty of Agricultural and Food Sciences, University of West Hungary, Mosonmagyaróvár, Hungary
- T282 Seasonal Variations in Chemical Composition of Water Buffalo Milk. Frank Lee^{*1}, Jackie Page², Sumagala Gokavi¹, Mingrui Guo¹; ¹University of Vermont, Burlington, ²Page & Pedersen International, Ltd., Hopkinton, MA
- T283 Relationship between cholesterol and fat contents of commercial dairy products. Árpád Kovács¹, László Varga^{*2}, Rita Dulicsek¹, Jenő Szigeti², Zoltán Herpai²; ¹PharmaFood Inc., Hungary, ²Institute of Food Science, Faculty of Agricultural and Food Sciences, University of West Hungary, Mosonmagyaróvár, Hungary
- T284 Development of technology for manufacturing lactose-free fermented milks. Jenő Szigeti, Ádám Krász, László Varga^{*}; Institute of Food Science, Faculty of Agricultural and Food Sciences, University of West Hungary, Mosonmagyaróvár, Hungary
- T285 Rheological and light scattering properties of cottage cheese-type gels made under different gelation rates. Manuel Castillo^{*1,2}, John A. Lucey¹, Fred A. Payne²; ¹Department of Food Science, University of Wisconsin, Madison, ²Department of Biosystems and Agricultural Engineering, University of Kentucky, Lexington
- T286 Influence of natural cheese characteristics on process cheese functionality: Unmelted and melted properties. A. C. Biswas^{*1}, R. Kapoor², P. Upreti², L. Metzger², K. Muthukumarappan¹; ¹Department of Ag. & Bio. Engr., South Dakota State University, Brookings, ²Department of Food Science and Nutrition, University of Minnesota, St. Paul
- T287 Effect of aging on the proteolytic and rheological properties of Mennonite-style cheeses from Chihuahua, Mexico. D. L. Van Hekken^{*1}, M. H. Tunick¹, P. M. Tomasula¹, F. J. Molina-Corral², A. A. Gardea²; ¹USDA, ARS, ERRC, Wyndmoor, PA, ²CIAD, Cuauhtemoc, Chihuahua, Mexico
- T288 Influence of natural cheese characteristics on process cheese functionality: Dynamic viscoelastic properties. A. C. Biswas^{*1}, R. Kapoor², P. Upreti², L. Metzger², K. Muthukumarappan¹; ¹Dept. of Agricultural & Biosystems Engr., South Dakota State University, Brookings, ²Department of Food Science & Nutrition, University of Minnesota, St. Paul
- T289 Quantitative evaluation of light-oxidized off-flavors in reduced fat milk using sensory evaluation and the electronic nose. H.-Y. Chung^{*1}, J. A. Partridge², B. R. Harte¹; ¹School of Packaging, Michigan State University, East Lansing, ²Food Science and Human Nutrition, Michigan State University, East Lansing
- T290 Effect of pre-storage and sterilization on physico-chemical properties of goat milk during storage. A. C. Biswas^{*1}, A. K. Bandyopadhyay², P. K. Ghatak², K. Muthukumarappan¹; ¹Dept. of Agricultural & Biosystems Engr., South Dakota State University, Brookings, ²Dept. of Dairy Chemistry, Faculty of Dairy Technology, West Bengal University of Animal & Fishery Sciences, Kolkata, India
- T291 Development of Cheddar cheese for lowering blood cholesterol by phytosterol ester. H. S. Kwak^{*}, H. J. Ahn, S. J. Lee, J. Ahn; Sejong University, Seoul, Korea

- T292 Crosslinking of beta-cyclodextrin and the optimizing of cholesterol removal in milk by using the crosslinkage. S. H. Kim*, E. M. Han, J. Ahn, H. S. Kwak; Sejong University, Seoul, Korea
- T293 Simple Immobilization of beta-cyclodextrin to remove cholesterol in milk and recycling. H. S. Kwak*, S. H. Kim, J. H. Kim, H. J. Choi, J. Kang; Sejong University, Seoul, Korea
- T294 Effects of microencapsulated chitoooligosaccharide addition on cholesterol-reduced milk. H. J. Choi*, J. Ahn, J. H. Hwang, H. S. Kwak; Sejong University, Seoul, Korea
- T295 Functional properties of cholesterol-removed whipping cream treated by beta-cyclodextrin. S. Y. Shim, J. Ahn, H. S. Kwak*; Sejong University, Seoul, Korea
- T296 Development of functional properties of water buffalo milk yogurt beverage. Jason R. Huck, Frank L. Lee, Mingruo Guo*; University of Vermont, Burlington
- T297 Effect of cheddaring temperature on moisture retention, rheological properties and proteolysis in model cheese systems. Philip J Watkinson, Christina J Coker, Craig C Dodds, Sally Hewson, Barbara Kuhn-Sherlock, Nicky J White, Lawrence K Creamer*; Fonterra Research Centre, Fonterra Co-operative Group Limited, Palmerston North, New Zealand
- T298 Effects of Fat Content on Physico-chemical and Sensory Properties of Buffalo Milk Dahi (Yogurt). Nirav Pandya*¹, Suresh Kanawjia¹, Rajiv Dave²; ¹Dairy Technology Department, National Dairy Research Institute, Karnal, India, ²Dairy Science Department, South Dakota State University, Brookings
- T299 Understanding the role of proteolysis in reduced calcium Mozzarella cheese. P. R. Thakur*, R. I. Dave; Dairy Science Department, South Dakota State University, Brookings
- T300 Milk from cows fed potato by-products indistinguishable from whole milk. M. L. Nelson*, M. J. Costello, M. F. Morrison, S. Clark; Washington State University, Pullman
- T301 Microstructure of pasteurized Process cheese manufactured from vacuum condensed and ultrafiltered milk. Vikram V. Mistry*, Ashraf N. Hassan; South Dakota State University, MN-SD Dairy Foods Research Center, Dairy Science Department, Brookings
- T302 Flavor and Stability of Pasteurized Milk with Elevated Levels of Conjugated Linoleic Acid and Vaccenic Acid. Joanna M. Lynch¹, Adam L. Lock², Debra A. Dwyer², Reihaneh Norbaksh³, David M. Barbano*¹, Dale E. Bauman²; ¹Northeast Dairy Foods Research Center, Department of Food Science, Cornell University, Ithaca NY, ²Department of Animal Science, Cornell University, Ithaca, NY, ³Institute of Standards and Industrial Research, Mashhad, Iran
- T303 Evaluation of long term frozen-storage effect on chemical changes in soft and semi-hard goat milk cheeses. J. H. Lee*, Y. W. Park, B. L. Gadiyaram; Fort Valley State University, Fort Valley, GA
- T304 Feasibility Study of Forming a California Cheese Aging Cooperative. B. A. Reed*; University of California Cooperative Extension, Orland
- T305 Release of Antioxidants from Biodegradable Films into Dry Milk Products and Food Simulating Liquids. Marleen van Aardt¹, Susan E Duncan*¹, Joseph E Marcy¹, Timothy E Long², Sean F O'Keefe¹, Susan R Sims³; ¹Food Science and Technology, Virginia Tech, Blacksburg, ²Chemistry, Virginia Tech, Blacksburg, ³Eastman Chemical Company, Kingsport, TN

TUESDAY, JULY 27, 2004
SYMPOSIUMS AND ORAL SESSIONS

SYMPOSIUM

ADSA Foundation Scholar Award Lecture – Dairy Foods

Chair: Lisa A. Holden, Pennsylvania State University

Sponsor: ADSA Foundation

Room: 260

Time

9:30 AM The Role of Chemical Partitioning In Cheese Flavor Research. Scott Rankin, University of Wisconsin, Madison

SYMPOSIUM

Bioethics

Ethics and the Cost of Food: What is the impact of lessening food prices on citizens, producers, animals and the environment?

Chair: W. Ray Stricklin, University of Maryland

Sponsors: EAAP, Humane Society of the United States and WCC-204

Room: 132

Time

Abstract #

9:30 AM		Introduction to the Bioethics Symposium. W. Ray Stricklin, Department of Animal and Avian Sciences, University of Maryland, College Park
9:35 AM	347	Cheap food and feeding the world sustainably. John Hodges*; European Association of Animal Production, Mittersill, Austria
10:00 AM	348	Considerations of the relationship between food prices and animal welfare. Michael C. Appleby*; The Humane Society of the United States, Washington, DC
10:20 AM	349	Interrelationships of animal agriculture, the environment and rural communities. Maynard G. Hogberg* ¹ , Frederick L. Kirschenmann ² , Steven L. Fales ³ , Mark S. Honeyman ¹ , John A. Miranowski ⁴ ; ¹ Department of Animal Science, Iowa State University, Ames, ² Leopold Center for Sustainable Agriculture, Iowa State University, Ames, ³ Department of Agronomy, Iowa State University, Ames, ⁴ Department of Economics, Iowa State University, Ames
10:40 AM	350	Ethics and low-priced meat, milk and eggs: too much of a good thing? R. Jeffrey Burkhardt*; Food and Resource Economics Department, University of Florida, Gainesville
11:00 AM		Speaker panel question and answer session with discussion on Ethics and the Costs of Animal-based Food Production

SYMPOSIUM

Lactation Biology/Growth & Development

Molecular Mechanisms Governing Mammary Development

Chair: Lance Baumgard, University of Arizona

Sponsors: Monsanto Company, Pfizer Animal Health and USDA-NRI

Room: 130

Time	Abstract #	
9:30 AM		Introduction, Lance Baumgard, University of Arizona
9:35 AM	351	Emerging Genomic Technologies for Studying Mammary Development and Mammary Cancer. Dale Porter* ^{1,2} , Kornelia Polyak ^{1,2} ; ¹ Dana-Farber Cancer Institute, Boston, MA, ² Harvard Medical School, Boston, MA
10:20 AM	352	Hormonal regulation of mammary growth, morphogenesis, and breast cancer. R.C. Hovey*, J.F. Trott; University of Vermont, Burlington
11:05 AM	353	Developmental and nutritional regulation of steroid receptor mRNA expression and epithelial cell proliferation in the prepubertal bovine mammary gland. M.J. Meyer* ¹ , A.V. Capuco ² , A. Hummel ² , E.E. Connor ² , Y.R. Boisclair ¹ , M.E. Van Amburgh ¹ ; ¹ Cornell University, Ithaca, NY, ² USDA-ARS, Beltsville, MD
11:20 AM	354	Estrogen and progesterone response networks in the mouse mammary gland. D. Joseph Jerry*, Shaolei Lu, Amy L. Roberts, Karen A. Dunphy; Department of Veterinary & Animal Sciences, University of Massachusetts-Amherst

SYMPOSIUM

Ruminant Nutrition

Science of Ruminant Nitrogen Metabolism and Its Application to Feeding Cows

Chair: John Vicini, Monsanto Co.

Sponsors: Arm & Hammer Animal Nutrition Group, Land O'Lakes/Purina and West Central Soy

Room: 131

Time	Abstract #	
9:30 AM		Nitrogen Metabolism in the Rumen. Marshall D. Stern ¹ , Alex Bach ² , Sergio Calsamiglia ² , ¹ University of Minnesota, St. Paul; ² ICREA-IRTA, Bellaterra, Spain; ³ Universitat Autònoma de Barcelona, Bellaterra, Spain
10:00 AM	355	What is the true supply of amino acids? H. Lapierre* ¹ , D. Pacheco ¹ , R. Berthiaume ¹ , D.R. Ouellet ¹ , C.G. Schwab ² , G. Holtrop ³ , G.E. Lobley ³ ; ¹ Lennoxville Research Centre, AAFC Lennoxville, QC, Canada, ² University of New Hampshire Durham, ³ BIOSS, Rowett Research Institute Aberdeen, UK
10:30 AM	356	Impacts of the source and amount of crude protein on the intestinal supply of nitrogen fractions and performance of lactating dairy cows. J. H. Clark*, I. R. Ipharraguerre; Department of Animal Sciences, University of Illinois, Urbana
11:00 AM	357	Nitrogen Supply to the Lower Gut and Its Relationship to Animal Performance in Beef Cattle. T.J. Klopfenstein*, G.E. Erickson; University of Nebraska, Lincoln
11:30 AM	358	Mathematical models used to determine ruminant protein requirements and availabilities. R. A. Kohn* ¹ , M. D. Hanigan ² ; ¹ University of Maryland, College Park, ² Land O'Lakes/Farmland Feeds, LLC, St. Louis, MO

SYMPOSIUM

Swine Species

Improving Sow Productivity: Recent Developments in Gilt and Lactation Management

Chair: Tom Rathje, Danbred North America

Sponsors: Danbred North America, EAAP, Land O'Lakes/Purina,
Newsham Genetics and PIC International Group

Room: 264

Time	Abstract #	
9:30 AM		Effects of age at first mating in gilts. Flemming Thorup, DVM, The National Committee for Pig Production, Copenhagen, Denmark
10:10 AM	359	Increasing weaning age improves pig performance and profitability in a multi-site production system. R.G. Main*, S.S. Dritz, M.D. Tokach, R.D. Goodband, J.L. Nelssen; Kansas State University, Manhattan
10:50 AM	360	Behavior of sows during lactation. John McGlone*; Texas Tech University, Pork Industry Institute, Lubbock
11:30 AM	361	Field experience with gilt age and lactation length. Larry V Himmelberg*; Danbred North America, Seward, NE

Breeding and Genetics

Genetics Methodology II

Chair: Dr. Dorian Garrick, Colorado State University

Room: 220

Time	Abstract #	
9:30 AM	362	Pedigree 2.0: A software tool for the graphing and analysis of large complex pedigrees. John R. Garbe*, Yang Da; Department of Animal Science, University of Minnesota, St. Paul
9:45 AM	363	Multiple-breed genetic inference using a heavy-tailed structural model for heterogeneous residual variances. F.F. Cardoso, G.J.M. Rosa, R.J. Tempelman*; Michigan State University, East Lansing
10:00 AM	364	Genetic evaluation of male fertility using a threshold model with emphasis on accurate estimation of conception rate. Gamal Abel-Azim* ¹ , Steve Schnell ¹ , Glen Gelbert ¹ , Herb Rycroft ² ; ¹ Genex Cooperative, Inc., Shawano, WI, ² Cooperative Resources International, Shawano, WI
10:15 AM	365	Application of a random regression model to gene expression profiling. S. L. Rodriguez-Zas*, J. J. Looor, J. K. Drackley, H. A. Lewin; University of Illinois, Urbana
10:30 AM	366	Evaluation of three statistical methods for QTL analysis. Jie Xu*, John R. Garbe, Nicole R. London, Yongcai Mao, Yang Da; Department of Animal Science, University of Minnesota, St. Paul
10:45 AM	367	Relationship between the choice of a random regression model and the possible shapes of the resulting variance function. Stephen D. Kachman*; Department of Statistics, University of Nebraska, Lincoln
11:00 AM	368	Weighting of information when predicting breeding values using the standard or marker-based inverse of the numerator relationship matrix. A. Maiwashe*, D. J. Garrick, R. M. Enns; Department of Animal Sciences, Colorado State University, Fort Collins
11:15 AM	369	A practical longitudinal model for evaluating growth in Gelbvieh cattle. K.R. Robbins*, I. Misztal, J.K. Bertrand, A. Legarra, S. Tsuruta; University of Georgia, Athens

Companion Animals

Chair: George C. Fahey, Jr., University of Illinois

Room: 127

Time	Abstract #	
9:30 AM	370	Effect of breed and size of dog on body composition. Carolyn J Cupp, DVM, MS*, Gail Czarnecki-Maulden, PhD; Nestle Purina Research, St. Louis, MO
9:45 AM	371	Influence of age on flatulence in dogs. C Apanavicius* ¹ , G Czarnecki-Maulden ² ; ¹ University of Illinois, Urbana, ² Nestle Purina Research, St. Joseph, MO
10:00 AM	372	Management of canine food intake to reduce obesity. D Mattsson*, L Deffenbaugh; Kemin Nutrisurance, Inc., Des Moines, IA
10:15 AM	373	Meeting the challenge of stabilizing weight management petfood diets. Lynn B. Deffenbaugh*; Kemin Nutrisurance, Inc., Des Moines, IA
10:30 AM	374	Diet and Age Affect Canine Small Intestinal and Colonic Gut Morphology. Kristy N. Kuzmuk*, Kelly S. Swanson, Lawrence B. Schook, George C. Fahey, Jr.; University of Illinois, Urbana
10:45 AM	375	Evaluation of Glycylsarcosine and Cefadroxil as Substrates for Non-invasive Determination of Canine Small Intestine PepT1 Capacity and Demonstration That Maximal Cefadroxil Absorption Occurs When Consumed 4 h After Meal Ingestion. Brian M. Zanghi* ¹ , Geri L. Sipe ¹ , Gary M. Davenport ² , James C. Matthews ¹ ; ¹ Department of Animal Science, University of Kentucky, Lexington, ² The IAMS Company, Lewisburg
11:00 AM	376	Digestibility of dry dog kibble containing spray dried animal plasma. C. J. Hammer, J. D. Quigley, J. C. Campbell, J. D. Crenshaw*, L. E. Russell; APC, Inc. Ankeny, IA
11:15 AM	377	Chemical composition, bioavailability, palatability, and digestibility of alternative protein sources for dogs. Jolene M Dust* ¹ , Christine M Grieshop ¹ , Carl M Parsons ¹ , Neal R Merchen ¹ , Jim D Quigley, III ² , George C Fahey, Jr ¹ ; ¹ University of Illinois, Urbana, ² American Protein Corp. Inc., Ankeny, IA
11:30 AM	378	Evaluation of preference and acceptability of 2-hydroxy-4 methylthio butanoic acid (HMTBA) and dl-methionine (DLM) by canine and feline animals. M Vazquez-Anon* ¹ , L R Prewitt ² ; ¹ Novus International, Inc, St. Louis, MO, ² Prewitt Global Consulting Services, Balwin, MO
11:45 AM	379	Beneficial effects of mannan oligosaccharide on diet component digestibility and fermentation characteristics in the dog. L.C. Kappel ¹ , Y. Zhang ¹ , Y. Marcum ¹ , W.H. Taylor ¹ , W.G. Henk ¹ , P. Jowett ¹ , C. Hedlund ¹ , K.E. Newman ² , H-P. Healy ³ , A. Kocher* ³ ; ¹ Louisiana State University, School of Veterinary Medicine, Baton Rouge, LA, ² Venture Laboratories, Lexington, KY, ³ Alltech Inc., Nicholasville, KY
12:00 PM	380	Effect of Bioplex organic trace minerals on copper, manganese, and zinc status. of the canine. L.C. Kappel ¹ , J.F. Williams ¹ , G.R. Pettifer ¹ , H-P. Healy* ² , A. Kocher ² ; ¹ Louisiana State University, School of Veterinary Medicine, Baton Rouge, LA, ² Alltech, Inc., Nickolasville, KY

Extension Education

Dairy Science

Co-Chairs: Richard Norell, University of Idaho and Jodie Pennington, University of Arkansas

Room: 263

Time	Abstract #	
9:30 AM	381	Impact of conducting a dairy herdsman shortcourse in California. Gerald E. Higginbotham* ¹ , John H. Kirk ² , Carol C. Collar ⁵ , Alejandro R. Castillo ⁶ , Steven L. Berry ³ , Barbara A. Reed ⁷ , Jon D. Robison ⁴ ; ¹ University of California Cooperative Extension, Fresno/Madera Counties, ² Veterinary Medicine Extension, UC Davis, ³ Department of Animal Science, UC Davis, ⁴ California State University-Fresno, ⁵ University of California Cooperative Extension, Kings County, ⁶ University of California Cooperative Extension, Merced County, ⁷ University of California Cooperative Extension, Glenn County

9:45 AM	382	Assessing the occupational profiles of senior- and middle-level dairy managers. R. Stup*, L. Holden, J. Hyde; Pennsylvania State University, University Park
10:00 AM	383	The evolution of an extension education website—Dairy beef: Maximizing quality and profits. J.C. Dalton* ¹ , D.A. Moore ² , J. Kirk ² , M. Poe ² , H. Sullivan ³ ; ¹ University of Idaho, Caldwell, ² University of California, Davis, ³ New Mexico State University, Las Cruces
10:15 AM	384	BusinesSense: teaching dairy producers best management practices in business and information management. Bradley J. Hilty*, Lisa A. Holden; Pennsylvania State University, University Park
10:30 AM	385	Minnesota 4-H Gopher Dairy Camp: A Youth Learning Experience. B.J. Heins*, L.B. Hansen, A.J. Seykora; University of Minnesota, St. Paul
10:45 AM	386	Western integrated nutrition and nutrient management education (WIN ² ME) for the nutrition and nutrient management professional. J H Harrison* ¹ , L M VanWieringen ¹ , R L Kincaid ¹ , A Hristov ² , R Sheffield ² , M Gamroth ³ , P French ³ , T Downing ³ ; ¹ Washington State University, Puyallup, ² University of Idaho, Moscow, ³ Oregon State University, Corvallis
11:00 AM	387	Use of a Dairy Whole Farm Phosphorus Balance Education Tool (Dairy WFPBET) to teach dairy producers and their advisers nutrient management concepts at the whole-farm level. Joe H Harrison* ¹ , Tamilee Nennich ¹ , Al Rotz ² ; ¹ Washington State University, Puyallup, ² USDA/ARS, University Park, PA
11:15 AM	388	The feeding of dietary phosphorus on dairy farms in the Lake Champlain Basin. K.W. Cotanch* ¹ , C.S. Ballard ¹ , W.C. Emerich ¹ , C.J. Sniffen ² , E.D. Thomas ¹ ; ¹ W.H. Miner Agricultural Research Institute, Chazy, NY, ² Fencrest LLC, Holderness, NH

Forages and Pastures

Forages in Dairy Production

Chair: John Fike, Virginia Tech

Room: 221

Time	Abstract #	
9:30 AM	389	Grazing behavior of late lactating dairy cows under continuous stocking. Hassan Z. H. Taweel*, Bart M. Tas, Jan Dijkstra, Seerp Tamminga; Wageningen University, Department of Animal Sciences, Animal Nutrition Group, Wageningen, The Netherlands
9:45 AM	390	Modeling pasture-based split-calving dairy systems using a whole farm model. P.C. Beukes* ¹ , B.S. Thorrold ¹ , M.E. Wastney ¹ , C.C. Palliser ¹ , J.A.S. Lancaster ¹ , C.F. Folkers ¹ , G.L. Levy ¹ , M. Neal ^{2,1} , M.J. Auld ³ ; ¹ Dexcel Ltd. Hamilton, New Zealand, ² University of Sydney, Australia, ³ Department of Primary Industries, Ellinbank, Australia
10:00 AM	391	Effects of feeding legume silage with differing tannin levels on lactating dairy cattle. U.C. Hymes-Fecht*, G.A. Broderick, R.E. Muck, J.D. Graber; U.S Dairy Forage Research Center, West Madison, WI
10:15 AM	392	Protective coatings for the edible covering. of bunker silos. Larry L. Berger*, Jason R. Sewell; University of Illinois, Urbana
10:30 AM	393	Effect of corn cutting height on digestibility and nutrient composition of silage-only and dual-purpose corn hybrids. K.W. Cotanch* ¹ , E.D. Thomas ¹ , H.M. Wolford ¹ , C.S. Ballard ¹ , R.J. Grant ¹ , P. Mandebvu ¹ , M. Suekawa ² , T. Sato ² , Y. Yabuuchi ² ; ¹ W.H. Miner Agricultural Research Institute, Chazy, NY, ² Zen-Noh National Federation of Agricultural Co-operative Associations, Tokyo, Japan
10:45 AM	394	Effect of Harvest Date and Brown Midrib gene on In Situ Disappearance of Sorghum x Sudangrass Hybrids. Paul A. Beck* ¹ , J. Mike Phillips ¹ , Shanna Hutchison ² , Tiago Losi ³ , C. Brandon Stewart ¹ , Patrick K. Capps ¹ , Stacey A. Gunter ¹ ; ¹ University of Arkansas, Southwest Research & Extension Center, Hope, AR, ² Dept. of Animal Science, University of Arkansas, Fayetteville, ³ Universidade Estadual Paulista – Faculdade de Medicina Veterinaria e Zootecnia, Botucatu, SP, Brasil
11:00 AM	395	Effect of genotype and maturity on ensiling characteristics and chemical composition of millet forage. F. Hassanat*, A. Mustafa, P. Seguin; McGill University, Ste-Anne-De-Bellevue, QC, Canada

- 11:15 AM 396 Effect of Inoculation on Ensiling Characteristics and Chemical composition of Regular and Brown Midrib Millet. F. Hassanat*, A. Mustafa, P. Seguin; McGill University, Ste-Anne-De-Bellevue, QC, Canada
- 11:30 AM 397 Lignin concentration of whole plants and stems of Bt corn hybrids. H. G. Jung*^{1,2}, C. C. Sheaffer²; ¹USDA - Agricultural Research Service, ²University of Minnesota

Growth and Development

ASAS Growth and Development I

Chair: James Sartin, Auburn University, College of Veterinary Medicine

Room: 222

- | Time | Abstract # | |
|----------|------------|---|
| 9:30 AM | 398 | Muscle fiber characteristics are important in the relationship between birth weight and carcass quality in pigs. C. Rehfeldt*, G. Kuhn, I. Fiedler, K. Ender; Dept Muscle Biology and Growth, Research Institute for the Biology of Farm Animals, Dummerstorf, Germany |
| 9:45 AM | 399 | Nutrition of Wagyu- and Piedmontese-sired fetuses alters newborn <i>longissimus</i> muscle cellular characteristics. Paul L Greenwood* ^{1,2} , Helen Hearnshaw ^{1,4} , Gareth Kelly ^{1,3} , David W Hennessy ^{1,4} ; ¹ CRC for Cattle and Beef Quality Armidale NSW Australia, ² NSW Agriculture Armidale NSW Australia, ³ University of New England Armidale NSW Australia, ⁴ NSW Agriculture Grafton NSW Australia |
| 10:00 AM | 400 | High energetic costs of stereotyped behaviour in preruminant calves. J.J.G.C. van den Borne*, S.J.F.M. van der Heijden, H. Oorsprong, E.A.M. Bokkers, J.E. Bolhuis, W.J.J. Gerrits; Animal Sciences Group, Wageningen University and Research Centre, Wageningen, The Netherlands |
| 10:15 AM | 401 | Relationships between serum constituents at weaning and subsequent carcass characteristics of beef calves. J. May ¹ , M. Looper ² , C. Golden ¹ , M. Nihsen ¹ , K. May ³ , C. Rosenkrans Jr.* ¹ ; ¹ University of Arkansas, Department of Animal Science, Fayetteville, ² USDA-ARS Dale Bumpers Small Farms Research Center, Booneville, AR, ³ Caldwell Farms Rosebud, AR |
| 10:30 AM | 402 | Physiological indicators of growth are influenced by supplementation and steroid implantation in steers. M. L. Looper* ¹ , C. F. Rosenkrans, Jr. ² , R. Flores ² , G. E. Aiken ³ , S. E. Duke ⁴ ; ¹ USDA-ARS, Dale Bumpers Small Farms Research Centre, Booneville, AR, ² University of Arkansas, Fayetteville, ³ USDA-ARS, Forage-Animal Production Research Unit, Lexington, KY, ⁴ USDA-SPA, College Station, TX |
| 10:45 AM | 403 | A Mechanistic Nutrition Model to Evaluate Beef Cow Efficiency. Luis Orlando Tedeschi* ¹ , Danny G. Fox ¹ , Michael J. Baker ¹ , Keith L. Long ² ; ¹ Cornell University, Ithaca, NY ³ , ² Bell Ranch Solano, NM |

Nonruminant Nutrition

Minerals

Co-Chairs: Gary Fitzner, Land O'Lakes and Mike Azain, University of Georgia

Room: 276

- | Time | Abstract # | |
|----------|------------|---|
| 9:30 AM | 404 | Mineral and chromium supplementation to diets of finishing pigs. B. V. Lawrence*, D. Overend, S. A. Hansen, J. D. Hahn, J. Hedges; Hubbard Feeds Inc, Mankato, MN |
| 9:45 AM | 405 | Performance effects of potassium and chloride levels in swine finisher diets. B. V. Lawrence*, J. D. Hahn, S. A. Hansen; Hubbard Feeds Inc, Mankato, MN |
| 10:00 AM | 406 | Comparisons of inorganic and organic trace mineral supplementation for grow-finish swine. J. L. Burkett* ¹ , K. J. Stalder ¹ , C. R. Schwab ¹ , T. J. Baas ¹ , D. W. Newcom ¹ , J. L. Pierce ² , W. J. Powers ¹ , J. W. Mabry ¹ ; ¹ Dept. of Animal Science, Iowa State University, Ames, ² Alltech Inc., Nicholasville, KY |

10:15 AM	407	The effects of high phytase levels on nutrient digestibility, growth performance and bone characteristics in growing pigs. M. J. Azain ¹ , M. R. Bedford ² ; ¹ Univ. of Georgia, Athens, ² Zymetrics, Golden Valley, MN
10:30 AM	408	Shifting the pH profile of <i>Aspergillus niger</i> PhyA phytase improves its efficacy in pig diets. S.U. Rice, T.G. Ko, T.W. Kim, K.R. Roneker, X.G. Lei*; Cornell University, Department of Animal Science, Ithaca, NY
10:45 AM	409	Phosphorus excretion of pigs fed conventional or low-phytate corn-soybean meal diets without or with phytase. E. G. Xavier, L. A. Pettey, G. L. Cromwell*, M. D. Lindemann; University of Kentucky, Lexington
11:00 AM	410	Estimation of Ca and P retention in bone, fat-free soft tissue, and other whole body and carcass components in growing-finishing pigs from 18 to 109 kg. L. A. Pettey*, G. L. Cromwell, M. D. Lindemann; University of Kentucky, Lexington
11:15 AM	411	Endogenous excretion of phosphorus and calcium in growing pigs fed two varieties of soybean meal. R. N. Dilger*, O. Adeola; Purdue University, West Lafayette, IN
11:30 AM	412	A novel procedure for measuring endogenous phosphorus losses and true phosphorus digestibility by growing pigs. G. I. Petersen*, H. H. Stein; South Dakota State University, Brookings
11:45 AM	413	Evaluation of the bioavailability of phosphorus in distiller's dried grains with solubles (DDGS) when fed to pigs. R.W. Fent ¹ , T.S. Torrance ² , B.W. Ratliff ¹ , S.X. Fu ¹ , G.L. Allee ¹ , D.M. Webel ² , J.D. Spencer ² ; ¹ University of Missouri, Columbia, ² United Feeds, Inc., Sheridan, IN

Physiology and Endocrinology

Strategies for Appointment Breeding of Beef and Dairy Cattle

Chair: Ray Nebel, Virginia Tech

Room: 223

Time	Abstract #	
9:30 AM	414	Comparison of EAZI-BREED CIDR inserts with melengestrol acetate in progestin-based protocols to synchronize estrus in beef cows. D.J. Schafer*, J.F. Bader, D.C. Busch, F.N. Kojima, M.R. Ellersieck, M.C. Lucy, M.F. Smith, D.J. Patterson; University of Missouri, Animal Science Research Center, Columbia
9:45 AM	415	Substituting EAZI-BREED CIDR inserts (CIDR) for melengestrol acetate (MGA) in the MGA Select protocol in beef heifers. F. N. Kojima ¹ , J. F. Bader ¹ , J. E. Stegner ¹ , D. J. Schafer ¹ , J. C. Clement ² , R. L. Eakins ¹ , M. F. Smith ¹ , D. J. Patterson ¹ ; ¹ University of Missouri, Columbia, ² Cow Calf Research and Consulting, Mandan, ND
10:00 AM	416	MGA and CIDR based timed AI protocols in postpartum beef cows. D Kreider*, N Post, R Rorie, T Lester, E French; University of Arkansas, Fayetteville
10:15 AM	417	Effect of timing of insemination and estrous synchronization method on AI pregnancy rates in beef heifers. B. R. Dorsey*, J. B. Hall, W. D. Whittier, W. S. Swecker; Virginia Polytechnic Institute and State University, Blacksburg
10:30 AM	418	Factorial analysis of timed AI (TAI) protocols for synchronization of first and second insemination in dairy cattle. J.P. Meyer*, R.P. Radcliff, M.L. Rhoads, J.F. Bader, C.N. Murphy, M.C. Lucy; University of Missouri, Columbia
10:45 AM	419	Effects of CIDR Inserts on First Service Pregnancy Rates of Lactating Dairy Cows Submitted to a Presynch Program and on Re-Synchronization of Second Service in Mexico. Frederico Moreira*, Rogelio Flores, Joseph Boucher, John Chenault; Pfizer Animal Health
11:00 AM	420	Resynchronization of ovulation in Holsteins after not pregnant diagnosis. J. S. Stevenson*, S. M. Tiffany; Kansas State University, Dept. of Animal Sciences
11:15 AM	421	Variations in the Ovsynch protocol after presynchronization of estrous cycles alter pregnancy rates in lactating dairy cows. M.A. Portaluppi*, J.S. Stevenson; Kansas State University, Department of Animal Sciences

- 11:30 AM 422 The effect of deep intrauterine placement of semen on conception rate in dairy cows. M.G. Diskin^{*1}, J.R. Pursley², D. A. Kenny³, J.F. Mee⁴, J.M. Sreenan¹; ¹Teagasc Athenry, Co. Galway, Ireland, ²Michigan State University, East Lansing, ³University College Dublin, Ireland, ⁴Teagasc, Fermoy, Co. Cork, Ireland
- 11:45 AM 423 The association between ultrasound reproductive tract scoring and commonly used veterinary therapeutics with pregnancy rates in spring-calved Holstein-Friesian cows. F. Buckley*, J.F. Mee, P. Dillon; Teagasc, Dairy Production Research Centre, Moorepark Fermoy, Co. Cork, Ireland

Production, Management and the Environment

Reproduction and Behavior

Chair: Vincent H. Varel, USDA/ARS, U.S. MARC

Room: 261/262

- | Time | Abstract # | |
|----------|------------|---|
| 9:30 AM | 424 | Minimum Temperature and Maximum Humidity : Predictors for Conception of Crossbred Holstein Cows in Thailand. V Punyapornwithaya ¹ , K Kreausukon ^{*1} , S Theepatimakorn ² , W Suriyasathaporn ¹ ; ¹ Clinic of Ruminant, Faculty of Veterinary Medicine, Chiangmai University Chiang Mai Province, Thailand, ² Chiangmai AI center, Department of Livestock Chiang Mai Province, Thailand |
| 9:45 AM | 425 | Diameter of Head of Tail as a Negative Energy Balance Indicator in Relation to Reproductive Performance in Dairy Cows. K Kreausukon*, V Punyapornwithaya, W Posuya, W Suriyasathaporn; Clinic of Ruminant, Faculty of Veterinary Medicine, Chiang Mai University Chiang Mai Province, Thailand |
| 10:00 AM | 426 | Can acceptable pregnancy rates be achieved using exclusive timed artificial insemination for first service? Michael B Capel ^{*1} , Daryl V Nydam ² , Roger Saltman ³ ; ¹ Perry Veterinary Clinic, ² NYS College of Veterinary Medicine, ³ Pfizer Animal Health |
| 10:15 AM | 427 | System for in vitro production with sexed sperm in commercial dairy herds. R.D. Wilson ^{*1} , K.A. Weigel ¹ , P.M. Fricke ¹ , M.L. Leibfried-Rutledge ² , D.L. Matthews ¹ , V.R. Schutzkus ¹ , J.J. Rutledge ^{1,2} ; ¹ University of Wisconsin, Madison, ² BOMED Inc, Madison, WI |
| 10:30 AM | 428 | Effect of clinical mastitis and other diseases on reproductive performance of Holstein cows. F. Frago ¹ , Amin Ahmadzadeh ^{*1} , B. Shafii ¹ , J. C. Dalton ² , M. A. McGuire ¹ , W. J. Price ¹ ; ¹ University of Idaho Moscow, ² University of Idaho, Caldwell Research & Extension Center, Caldwell |
| 10:45 AM | 429 | Use of audible Doppler and B Mode ultrasonography to monitor fetal heart rate of hair sheep in the tropics. Robert W Godfrey ^{*1} , Lindsay Larsen ¹ , Adam J Weis ¹ , Scott T Willard ² ; ¹ University of the Virgin Islands, Agricultural Experiment Station, Kingshill, ² Department of Animal and Dairy Sciences, Mississippi State University, Mississippi State |
| 11:00 AM | 430 | Effect of time of feed delivery on the feeding and lying behavior of lactating dairy cows. T. J. DeVries*, M. A. G. von Keyserlingk; The University of British Columbia, Vancouver, BC, Canada |
| 11:15 AM | 431 | Impacts of grouping and space during gestation on body-condition and lesion scores and performance of sows. J.L. Salak-Johnson*, S.R. Neikamp, S.E. Curtis, S.L. Rodriguez-Zas. Department of Animal Sciences, University of Illinois, Urbana. |
| 11:30 AM | 432 | Relationships between measures of temperament and carcass traits in feedlot steers. Rhonda C. Vann ^{*1} , Joe C. Paschal ² , Ronald D. Randel ³ ; ¹ MAFES-Brown Loam Experiment Station, Raymond, MS, ² TAMU-Cooperative Extension Service, Corpus Christi, TX, ³ TAMU-Texas Agricultural Research and Extension Center, Overton |
| 11:45 AM | 433 | Temperament alters adrenal response to exogenous ACTH in Brahman heifers. K. O. Curley, Jr. ^{*1,2} , D. A. Neuendorff ² , A. W. Lewis ² , J. J. Cleere ² , T. H. Welsh, Jr. ¹ , R. D. Randel ² ; ¹ Texas Agricultural Experiment Station, College Station, ² Texas Agricultural Experiment Station, Overton |

PSA-Environment and Management

Broiler and Layer Management

Chair: Casey W. Ritz, University of Georgia

Room: 265/266

Time	Abstract #	
9:30 AM	434	The Impact of Layer Dietary Threonine Levels on Egg Component Yield, Composition, and Functionality. Paige R. Niemeyer*, Craig D. Coufal, John B. Carey; Texas A&M University, College Station
9:45 AM	435	Single and Combined Effects of Yeast Cell Wall Residue and Sel-Plex™ on Production and Egg Quality of Laying Hens. Victor G. Stanley* ¹ , Willie F. Krueger ² , Arnold E. Sefton ³ ; ¹ Prairie View A&M University, Prairie View, TX, ² Texas A&M University, College Station, ³ Alltech, Guelph, Canada
10:00 AM	437	Ammonia Emissions of Commercial Broilers from 0-42 Days of Age. Lucian Mitran* ¹ , Jeannine Harter-Dennis ¹ , Jack Meisinger ² , Jennifer Timmons ¹ ; ¹ University of Maryland Eastern Shore, Department of Agriculture and Natural Sciences, Princess Anne, ² USDA-ARS
10:15 AM	977	Beak Trimming of Leghorn Pullets 1: Production effects. K. Schwean-Lardner*, H. L. Classen, C. B. Annett; Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK Canada
10:30 AM	436	Beak Trimming of Leghorn Pullets 2: Healing and Beak Re-growth. C.B. Annett*, K. Schwean-Lardner, H.L. Classen; Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK, Canada
10:45 AM	438	Beak Trimming of Leghorn Pullets 3: Behaviour and welfare effects. K. Schwean-Lardner*, H. L. Classen, C. B. Annett; Department of Animal and Poultry Science, University of Saskatchewan Saskatoon, SK Canada
11:00 AM	439	Effects of bill-trimming on the welfare of muscovy ducks. Leslie Gustafson* ¹ , Heng-Wei Cheng ² , Ed Pajor ² , Joy Mench ¹ ; ¹ University of California, Davis, ² Purdue University, West Lafayette, IN
11:15 AM	440	Effects of top-dressing recycled broiler litter on nitrogen mass balance. Craig D Coufal*, Cesar Chavez, Paige L Niemeyer, John B Carey; Texas A&M University, College Station
11:30 AM	441	In House Composting of Layer Manure for Pest Control. G.P. Martin*, P.H. Patterson, C.A.B. Meyers; The Pennsylvania State University, University Park

PSA-Genetics

Chair: G. F. Barbato, Penn State University

Room: 267

Time	Abstract #	
9:30 AM	442	Direct and correlated response from selection for phytate phosphorus bioavailability in a randombred chicken population. Wensheng Zhang, Samuel E. Aggrey*, Remzi I. Bakalli, Gene M. Pesti, Hardy M. Edwards, Jr.; University of Georgia, Department of Poultry Science, Athens
9:45 AM	443	Allele Frequencies Of Genes Associated With Feed Efficiency Traits In Selected And Unselected Population In A Commercial Broiler Line. Preety Sharma*, Walter Bottje, Ronald Okimoto; University of Arkansas, Fayetteville
10:00 AM	444	Quantitative trait loci affecting bone mineral density in the chicken. M. A. Schreiweis*, P. Y. Hester, D. E. Moody; Purdue University, W. Lafayette, IN
10:15 AM	445	Molecular Characterization of Chicken SOCS2 Gene. G.Y. Zhou*, Frederick C. Leung; The University of Hong Kong, Department of Zoology
10:30 AM	446	Molecular Cloning and Characterization of a Broiler Small Intestine Type IIb Sodium Phosphate Cotransporter Gene. F Yan ^{1,4} , C Ashwell ^{2,3} , R Angel ¹ ; ¹ Department of Animal and Avian Sciences, University of Maryland College Park, ² Growth Biology Lab., Animal and Natural Resources Institute, USDA-ARS, Beltsville, MD, ³ Department of Poultry Science, North Carolina State University Raleigh, ⁴ Department of Poult Science, University of Arkansas, Fayetteville

PSA-Nutrition

Alternate Ingredients and Gastrointestinal System

Chair: Jeff Firman, University of Missouri

Room: 274

Time	Abstract #	
9:30 AM	447	Relative Toxicity of Gossypol Isomers in Laying Hens. M. M. Lordelo* ¹ , A. J. Davis ¹ , M. C. Calhoun ² , N. M. Dale ¹ ; ¹ University of Georgia, Poultry Science Department, Athens, ² Texas A&M University, Texas A&M Research Center, San Angelo
9:45 AM	448	Effect of Increased Heat Processing on Phosphorus (P) Bioavailability in Corn Distiller Dried Grains With Solubles (DDGS). C. Martinez Amezcua*, L.E. Markovic, C.M. Parsons; Department of Animal Sciences, University of Illinois, Urbana
10:00 AM	449	High protein corn distiller dried grains as a feed ingredient. C. Abe* ¹ , N. J. Nagle ² , C. Parsons ³ , J. Brannon ¹ , S. L. Noll ¹ ; ¹ University of Minnesota, St. Paul, ² National Bioenergy Center Golden, CO, ³ University of Illinois, Urbana
10:15 AM	450	Mucin dynamics in the chicken gastrointestinal tract. Asya Smirnov*, Zehava Uni, David Sklan; Hebrew University, Rehovot, Israel
10:30 AM	451	Diurnal variations and quantitative determination of the generation of carboxylic acids by microbial fermentation in the crop of the domestic turkey. Sara A. Johannsen* ¹ , Molly J. Hensley ³ , Mark A. Rasmussen ⁴ , Ronald Griffith ³ , Colin G. Scanes ^{1,2} ; ¹ Iowa State University Dept. Animal Science, ² Iowa State University Biomedical Sciences, ³ Iowa State University Veterinary Microbiology and Preventive Medicine, ⁴ National Animal Disease Center ISU, Animal Science
10:45 AM	452	Effects of Delayed Placement on Villus Characteristics and Barrier Functions of the Small Intestine of the Newly Hatched Turkey. L.P Potturi*, J Patterson, T.J Applegate; Department of Animal Sciences, Purdue University, West Lafayette, IN
11:00 AM	453	Effect of dietary amino acid content on intestinal populations of <i>Clostridium perfringens</i> in broiler chickens fed high-crude protein diets. D.C. Wilkie*, A.G. Van Kessel, L.J. White, M.D. Drew; Dept. of Animal and Poultry Science, University of Saskatchewan, Saskatoon SK, Canada
11:15 AM	454	Molecular tracking of <i>Bifidobacterium animalis</i> colonization in the gastrointestinal tract of broiler chickens using quantitative real time PCR (qPCR). S. A. Briggs* ¹ , T. J. Dumonceaux ¹ , B.G. Goldade ¹ , J. K. Marshall ¹ , J.E. Hill ² , S. M. Hemmingsen ² , A. G. Van Kessel ¹ ; ¹ University of Saskatchewan Saskatoon, SK, Canada, ² National Research Council, Saskatoon, SK, Canada
11:30 AM	455	The effect of glutamine on growth performance and the development of the gastrointestinal tract and immune system of broilers. S. M. Bartell*, A. B. Batal; University of Georgia, Athens
11:45 AM	456	Feeding a semi-purified diet induced early gut development in young turkey poults. Yewande O. Fasina* ¹ , Jim D. Garlich ² , Henry L. Classen ³ , Zehava Uni ⁴ , Peter R. Ferket ² , Shelly R. Mckee ¹ ; ¹ Auburn University, Auburn, AL, ² North Carolina State University, Raleigh, ³ University of Saskatchewan, Saskatoon, Canada, ⁴ Faculty of Agriculture Hebrew University, Rehovot, Israel

PSA-Nutrition

Amino Acids and Vitamin/Mineral Nutrition II

Chair: Carl Parsons, University of Illinois

Room: 275

Time	Abstract #	
9:30 AM	457	Dietary lysine response by broilers in two photoperiods. O.C. Aimiwu*, M.S. Lilburn; The Ohio State University/OARDC, Wooster
9:45 AM	458	A comparison of amino acid digestibility coefficients between chickens and turkeys. O. C. Aimiwu* ¹ , C. M. Parsons ² , M. S. Lilburn ¹ ; ¹ The Ohio State University/OARDC, Wooster, ² University of Illinois, Urbana
10:00 AM	459	Valine needs of broilers from 21 to 42 days of age. S. A. Thornton*, S. J. Barber, A. Corzo, M. T. Kidd; Mississippi State University

10:15 AM	460	Changes in the digestible lysine and sulfur amino acid needs of broiler chicks during the first 21 days posthatching. A. R. Garcia*, T. D. Troutman, A. B. Batal; University of Georgia, Athens
10:30 AM	461	Broiler growth in response to increased lysine in the first week post hatching. Simone Pophal*, Sergio L Vieira, Alexandre M Kessler, Andre R Ebert, Bernardo B Gallo; UFRGS
	462	Withdrawn by author
10:45 AM	463	Development of a whole cell sensor – green fluorescent protein based method for estimating lysine bioavailability in poultry feed proteins. V.I. Chalova*, W.K. Kim, I.B. Zabala-Díaz, C.L. Woodward, S.C. Ricke; Texas A&M University, College Station
11:00 AM	464	The effect of several oligosaccharides on true amino acid digestibility in cecectomized and intact roosters. P.E. Biggs*, C.M. Parsons; Department of Animal Sciences, University of Illinois, Urbana
11:15 AM	465	Zinc-Methionine enhances the intestine development and functionality in the late term embryos and chicks. E Tako* ¹ , P.R Ferket ² , Z Uni ¹ ; ¹ Department of Animal Sciences, Faculty of Agriculture, Hebrew University, Israel, ² Department of Poultry Science, NCSU, Raleigh
11:30 AM	466	Effect of vitamin D source on broiler production and carcass composition. Jennifer L. Saunders-Blades*, Doug R. Korver; University of Alberta, Edmonton, Canada

Ruminant Nutrition

Beef - Minerals & Vitamins

Chair: Beth Kegley, University of Arkansas

Room:124

Time	Abstract #	
9:30 AM	467	Effects of trace mineral source and feeding method on the productivity of grazing Braford cows. John D. Arthington* ¹ , Connie K. Larson ² ; ¹ University of Florida, Range Cattle Research and Education Center, Ona, FL, ² Zinpro Corporation, Eden Prairie, MN
9:45 AM	468	Effects of Tri-Basic Copper Chloride Vs Copper Sulfate on Measures of Copper Status and Forage Intake in Growing Beef Heifers. John D. Arthington*, Findlay M. Pate; University of Florida, Range Cattle Research and Education Center, Ona, FL
10:00 AM	469	Effect of chromium supplementation and copper status on glucose metabolism in beef cows. H.S. Stahlhut*, C.S. Whisnant, K.E. Lloyd, E.J. Baird, L.R. Legleiter, S.L. Hansen, J.W. Spears; North Carolina State University, Dept. of Ani. Sci., Raleigh
10:15 AM	470	Growth, reproductive performance, and manganese status of heifers fed varying concentrations of manganese. S. L. Hansen*, C.S. Whisnant, K.E. Lloyd, E.J. Baird, L.R. Legleiter, H.S. Stahlhut, J.W. Spears; North Carolina State University, Dept. of Ani. Sci., Raleigh
10:30 AM	471	Influence of dietary manganese on performance and serum glucose concentrations in growing steers. L.R. Legleiter*, K.E. Lloyd, J.W. Spears; North Carolina State University, Dept. of Ani. Sci., Raleigh
10:45 AM	472	Selenium in tissues of calves supplemented with selenium yeast. C.J. Richards*, H.M. Blalock, L.C. Miller, H.D. Loveday; The University of Tennessee, Knoxville
11:00 AM	473	Determining the route and amount of P excreted from cattle consuming finishing diets. B.G Geisert*, G.E Erickson, T.J. Klopfenstein, M.K. Luebbe, J.C MacDonald; University of Nebraska, Lincoln
11:15 AM	474	Effects of dietary supplemental vitamin A concentration on growth, intake, and marbling in yearling feedlot steers. T. C. Bryant* ^{1,3} , J. J. Wagner ² , T. E. Engle ³ , K. L. Dorton ³ , P. D. Burns ³ , M. L. Galyean ⁴ ; ¹ ContiBeef LLC, Boulder, CO, ² Continental Beef Research, Lamar, CO, ³ Colorado State University, Fort Collins, ⁴ Texas Tech University, Lubbock
11:30 AM	475	Effects of feeding a polyclonal antibody preparation against <i>Streptococcus bovis</i> or <i>Fusobacterium necrophorum</i> on performance and carcass characteristics of feedlot steers. C. R. Dahlen ² , N. DiLorenzo* ¹ , A. DiCostanzo ¹ , G. C. Lamb ² , L. J. Smith ¹ ; ¹ Department of Animal Science, St. Paul, MN, ² North West Research and Outreach Center, Crookston, MN, ³ North Central Research and Outreach Center, Grand Rapids, MN

Ruminant Nutrition

Dairy - Lactation, Health & Gut Physiology

Chair: Katharine Knowlton, Virginia Polytechnic Institute and State University

Room: 125/126

Time	Abstract #	
9:30 AM	476	Effect of dietary cation-anion difference and crude protein on milk yield and blood metabolites of lactating dairy cows. C.D. Wildman*, J.W. West, J.K. Bernard; The University of Georgia, Tifton
9:45 AM	477	Effect of dietary cation-anion difference and dietary crude protein degradability on milk yield and blood metabolites of lactating dairy cows. C.D. Wildman*, J.W. West, J.K. Bernard; The University of Georgia, Tifton
10:00 AM	478	Maternal undernutrition from early- to mid-gestation versus throughout gestation: Effects on visceral organs of ewes and their fetuses. B.W. Hess* ¹ , K.A. Vonnahme ² , E.J. Scholljegerdes ¹ , S.L. Lake ¹ , J.D.C. Molle ¹ , V. Nayigihugu ¹ , R.L. Atkinson ¹ , P.A. Ludden ¹ , L.R. Miller ¹ , S.P. Ford ¹ ; ¹ University of Wyoming, Department of Animal Science, ² North Dakota State University, Department of Animal and Range Sciences
10:15 AM	479	Energy requirement of close-up dairy cows grazing pasture. JR Roche* ¹ , ES Kolver ¹ , JK Kay ^{1,2} ; ¹ Dexel, Hamilton, New Zealand, ² University of Arizona, Tucson
10:30 AM	480	Potential for dairy feeds to harbor an invasive mold (<i>Aspergillus fumigatus</i>): implications to herd health. Steven B. Puntteney*, Yongqiang Wang, Neil E. Forsberg; Oregon State University, Department of Animal Sciences, Corvallis
10:45 AM	481	Is ruminal acidosis related to high diet fermentability or low buffer recycling? D. Sauvant* ¹ , D. Mertens ² ; ¹ Institut National Agronomique Paris Grignon Département Des Sciences Animales, Paris Cedex 05 - France, ² US Dairy Forage Research Center, Madison, WI
11:00 AM	482	Design of a bovine metabolism gene array. B.E. Etchebarne*, W. Nobis, M.S. Allen, M.J. VandeHaar; Michigan State University, East Lansing
11:15 AM	483	Effect of increasing ruminal valerate, caproate, and heptanoate on splanchnic metabolism of VFA absorbed from the washed reticulorumen of steers. N.B. Kristensen* ¹ , D.L. Harmon ² ; ¹ Danish Institute of Agricultural Sciences, Tjele, Denmark, ² University of Kentucky, Lexington

SYMPOSIUM

ADSA Foundation Scholar Award Lecture - Dairy Production

Chair: Lisa A. Holden, Pennsylvania State University

Sponsor: ADSA Foundation

Room: 223

Time	
1:00 PM	Starting from Birth - Developing a More Systematic and Proactive Approach to Calf Nutrition and Management. Mike Van Amburgh, Cornell University

SYMPOSIUM

ADSA Southern Section

Meeting the Future Needs of the Dairy Industry

Chair: J. K. Bernard, University of Georgia

Room: 124

Time	Abstract #	
1:00 PM		Introduction
1:10 PM		What we are looking for in future employees. David Sumrall, Aurora Dairy Group.
1:30 PM		Equipping graduates to be successful in agribusiness. Steve Larson, Hoard's Dairymen.
1:50 PM		How we have changed our approach to extension. Rex Ricketts, Missouri State, Commercial Ag Program
2:10 PM		Industry perspective on providing information to the dairy industry. Jennifer Garrett, Monsanto.
2:30 PM		Break
2:45 PM		University perspective on funding for teaching, research and extension programs. Louis Armentano, Dept. Head, University of Wisconsin
3:05 PM		Industry perspective on research funding. Kenneth Cummings, Church & Dwight Company
3:25 PM		Overview of a successful dairy producer funding program: The Florida Milk Checkoff. Roger Natzke, University of Florida
3:55 PM		Round Table Discussion
4:30 PM		Southern Branch of the American Dairy Science Association Business Meeting

SYMPOSIUM

Alpharma Beef Cattle Nutrition

Factors Affecting Feedlot Profitability

Chair: S. C. Loerch, The Ohio State University

Sponsors: Alpharma and ASAS Foundation

Room: 131

Time	Abstract #	
1:00 PM		Introduction
1:05 PM	484	Assessing the cost of beef quality. John D. Lawrence*, Cody Forristall, Gary May; Iowa State University Ames
1:50 PM	485	The Effect of cattle health on performance, production costs, and carcass value. Robert L. Larson*; Commerical Agriculture Program, College of Veterinary Medicine, University of Missouri
2:35 PM		Break
2:50 PM	486	Effects of Nutrition and Management on Carcass Value and Profitability. Larry L. Berger*, Nathan A. Pyatt; University of Illinois, Urbana
3:35 PM		Discussion

SYMPOSIUM

Companion Animals

Chair: George C. Fahey, Jr., University of Illinois

Sponsors: Alltech, Inc., Elanco Animal Health and Nestle Purina PTC

Room: 127

Time	Abstract #	
1:00 PM		Welcome to St. Louis, home of Nestle Purina Petcare Research. Daniel Chausow, Nestle-Purina Petcare Research, St. Louis, MO
1:15 PM		Introduction to problems of obesity associated with companion animals. George C. Fahey, Jr., University of Illinois, Urbana
1:20 PM	487	Nutritional Management of Obese Animals. Gregory D. Sunvold*; The Iams Company Research and Development, Lewisburg, OH
2:00 PM	488	Humans and companion animals: hand-in-paw towards aging and obesity. B. T. Larson*, D. F. Lawler, Y. Pan, J. R. Jackson; Nestle Purina PetCare Co.
2:40 PM		Break
3:00 PM		Health issues associated with obesity: Prevalence and general health considerations. Dr. Sharon Center, Cornell University, Ithaca, NY
3:40 PM		Health issues associated with obesity: Skeletal health. Dr. Steve Martinez, Washington State University, Pullman
4:20 PM		General discussion
4:45 PM		Reception

SYMPOSIUM

Dairy Foods

Dairy Foods and Human Nutrition

Chair: Kayanush Aryana, Louisiana State University

Sponsor: Dairy Management Inc. (DMI)

Room: 260

Time	Abstract #	
1:00 PM	489	Fortification in dairy products. Chuck Boeneke*; Louisiana State University Agricultural Center, Baton Rouge
1:30 PM	490	Consumer attitudes toward dairy foods. C.M. Bruhn, University of California, Davis
2:00 PM	491	Probiotics in health: Their immunomodulatory potential against allergic disorders. Z. Ustunol*, J.J. Pestka; Michigan State University, E. Lansing
2:30 PM		Break
3:00 PM	492	Nutritional properties of whey proteins. Kimberlee J. Burrington*; Wisconsin Center for Dairy Research, Madison
3:30 PM	493	The beneficial role of dairy foods on weight and body fat loss: where we are and where we are going. Douglas B. DiRienzo*; National Dairy Council, Rosemont, IL

SYMPOSIUM

Growth and Development and Lactation Biology

ADSA - Mammary Development - The Role of Progenitor Cells and Nutritional Modulation on Lactation

Chair: Mike Van Amburgh, Cornell University

Sponsors: Monsanto Company, Pfizer Animal Health and USDA-NRI

Room: 130

Time	Abstract #	
1:00 PM		Introduction. Mike Van Amburgh, Cornell University, Ithaca, NY
1:10 PM	494	Bovine Mammary Progenitor Cells. Steven Ellis*; Clemson University, Clemson, SC
1:55 PM	495	Characterization of gene expression patterns in bovine mammary epithelial cells isolated using laser capture microdissection. B.E. Etchebarne*, M. Kiupel, M.J. VandeHaar; Michigan State University, East Lansing
2:10 PM	496	Phenotypic and ultrastructural characterization of the developmental pathway of bovine mammary gland progenitor cells. Margo S. Holland* ¹ , Lorri D. Griffin ¹ , Judith A. Stasko ² , Robert E. Holland ³ ; ¹ Veterinary Microbiology and Preventive Medicine, Iowa State University, ² National Animal Disease Center, USDA-ARS, ³ Veterinary Diagnostic and Production Animal Medicine, Iowa State University
2:55 PM		Break
3:10 PM	497	Effects of energy intake and time to puberty on mammary growth of prepubertal Holstein heifers. M.J. Meyer* ¹ , A.V. Capuco ² , M.E. Van Amburgh ¹ ; ¹ Cornell University, Ithaca, NY, ² USDA-ARS, Beltsville, MD
3:25 PM	498	Nutritionally directed compensatory growth affects mammary cell proliferation and apoptosis. C.S. Park*; North Dakota State University, Fargo
4:10 PM	499	Effects of a high rate of gain for increasing lengths of time on body and mammary growth in prepubertal dairy heifers. L. E. Davis*, M. S. Weber Nielsen, L. T. Chapin, J. S. Liesman, M. J. VandeHaar; Michigan State University, East Lansing
4:55 PM	500	Long days that hasten puberty do not reduce lean body growth in heifers. Agustin G Rius* ¹ , Paul E Kendall ¹ , Tera L Auchtung ¹ , Anthony V Capuco ² , Erin E Connor ² , Geoffrey E Dahl ¹ ; ¹ University of Illinois, Urbana, ² USDA-ARS, BGFL, Beltsville, MD

World's Poultry Science Association Invited Lecture

Chair: Fred Silversides, Agriculture and Agri Food Canada

Sponsors: USA and Canadian Branches of the World's Poultry Science Association

Room: 274

Time	Abstract #	
1:00 PM	501	Reducing the Carriage of Foodborne Pathogens by Livestock and Poultry. Michael P Doyle*; Center for Food Safety, University of Georgia

Animal Behavior & Well Being II

Chair: Donald C. Lay Jr., Purdue University

Room: 125/126

Time	Abstract #	
1:00 PM	502	Correlating spatial learning, social recognition and aggression in young pigs. J.M. Siegford*, A.S. Souza, J. Jansen, A.J. Zanella; Michigan State University, Dept. Animal Science, East Lansing
1:15 PM	503	Acute stress impairs spatial learning and social recognition in early-weaned pigs. A.S. Souza*, K. Laughlin, J.M. Siegford, A.J. Zanella; Michigan State University, Dept. Animal Science, East Lansing
1:30 PM	504	Relationships among pre- and post-weaning oral-nasal behaviors and growth rates in newly weaned pigs. Stephanie Torrey*, Tina M. Widowski; Department of Animal and Poultry Sciences, University of Guelph Guelph, ON, Canada
1:45 PM	505	Effects of induced mixing and pen size on performance and serum concentration of acute phase proteins in growing pigs. C. Piñeiro ¹ , J. Morales ¹ , M. Piñeiro ¹ , F. Lampreave ² , G.G. Mateos ³ ; ¹ PigCHAMP Pro Europa, S.A. Spain, ² U. de Zaragoza Spain, ³ UP. de Madrid Spain
2:00 PM	506	Gestation induced changes in behavior and autonomic regulation of cardiac activity in gilts. Ruth M Marchant-Forde*, Jeremy N Marchant-Forde; USDA-ARS, West Lafayette, IN
2:15 PM	507	Circadian rhythmicity in behaviour and cardiac activity of gilts and heifers. Ruth M. Marchant-Forde ¹ , Jeremy N. Marchant-Forde ¹ , Roswitha Hofman ² ; ¹ USDA-ARS, West Lafayette, IN, ² Institute of Animal Husbandry and Welfare, University of Veterinary Medicine, Veterinärplatz, Vienna, Austria
2:30 PM	508	Behavior and heart rate of crated gestating sows given an ICV CRH or a CRH receptor antagonist. Lindsey E. Hulbert ¹ , J. Marq Hellman ¹ , Jeff W. Dailey ² , Julie L. Morrow ² , John J. McGlone ¹ ; ¹ Pork Industry Institute, Texas Tech University, Lubbock, ² USDA-ARS, Livestock Issues Research Unit, Lubbock, TX
2:45 PM		Break
3:15 PM	509	Behavioural description of cannibalism in fattening pig production. Dominique Saffray ¹ , Iltud Madec ¹ , Céline Lafont ¹ , Jean-François Gabarrou ² , Patrick Pageat ¹ ; ¹ Pherosynthese Le Rieu Neuf - 84490 - Saint Saturnin d'Apt - France, ² ESA-Purpan 75, voie du T.O.E.C. - 31076 - Toulouse Cedex 3 - France
3:30 PM	510	Maternal pheromone application before and(or) after weaning: effects on pig behavior and performance. Nadege Krebs*, John, J McGlone; Pork Industry Institute, Texas Tech University, Lubbock
3:45 PM	511	Pig behavioral responses to biologically relevant and non-relevant odors. Nadege Krebs*, John J. McGlone; Pork Industry Institute, Texas Tech University, Lubbock
4:00 PM	512	Effects of mixing stress on plasma cortisol, corticosteroid-binding globulin and free cortisol index in prenatally-stressed pigs. D. C. Lay Jr ¹ , H. G. Kattesh ² , M. P. Roberts ² , M. J. Toscano ¹ , K. A. McMunn ¹ ; ¹ USDA-ARS, Livestock Behavior Research Unit, West Lafayette, IN, ² University of Tennessee, Knoxville

Animal Health

Dairy Cattle Health — Transition Cows and Mastitis

Chair: John Wenz, Colorado State University

Room: 130

Time	Abstract #	
1:00 PM	513	Negative energy balance during the periparturient period is associated with uterine health disorders and fever in Holstein cows. Douglas S. Hammon* ¹ , Ingrid M. Evjen ¹ , Tilak R. Dhiman ¹ , Jeese P. Goff ² ; ¹ Utah State University, Logan, ² USDA, National Animal Disease Center, Ames, IA
1:15 PM	514	The Relationship Between the Incidence of Production-Limiting Disease and Return Over Feed in Ontario Dairy Herds. Chris McLaren* ¹ , Kerry Lissemore ¹ , Todd Duffield ¹ , Ken Leslie ¹ , David Kelton ¹ , Bill Grexton ² ; ¹ University of Guelph, Department of Population Medicine, ² Ontario Dairy Herd Improvement Corporation
1:30 PM	515	An evaluation of rumen-protected choline and monensin controlled release capsule on milk production, health and metabolic function of periparturient dairy cows. Lara Zahra* ¹ , Stephen LeBlanc ¹ , Ken Leslie ¹ , Todd Duffield ¹ , Thomas Overton ² , Dana Putnam ³ ; ¹ Department of Population Medicine University of Guelph, ² Department of Animal Science Cornell University, ³ Balchem Corporation New Hampton, NY
1:45 PM	516	Effect of the method of delivery of monensin on serum insulin and cortisol concentrations in transition dairy cows. Christina S. Petersson* ¹ , Ken E. Leslie ² , Todd F. Duffield ² , Tera M. Osborne ² , Brian W. McBride ³ , Randy Bagg ⁴ , Paul Dick ⁴ ; ¹ Ohio State University - Department of Animal Sciences, Columbus, ² University of Guelph - Department of Population Medicine, Guelph, ON, Canada, ³ University of Guelph - Department of Animal and Poultry Science, Guelph, ON, Canada, ⁴ Elanco Animal Health, a Division of Eli Lilly, Inc., Research Park Centre, Guelph, ON, Canada
2:00 PM	517	Determination of the test characteristics of a rapid, on-site serum NEFA test. Leonie Gooijer, Ken Leslie*, Todd Duffield, Stephen LeBlanc, Nicole Perkins, Erin Vernoooy; University of Guelph, Guelph, ON, Canada
2:15 PM	518	DCAD affects responsiveness of cows to parathyroid hormone -how anion supplementation prevents milk fever. Jesse P Goff*, Ronald L Horst; USDA-ARS, National Animal Disease Center, Ames, IA
2:30 PM	519	Impact of participation in somatic cell count testing on herd average somatic cell score. H. D. Norman, A. H. Sanders*, R. H. Miller, R. L. Powell; Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD
2:45 PM		Break
3:15 PM	520	Dairy Herd Characteristics, Management Practices and Mastitis Prevalence Data from Farm Visits to Improve Milk Quality in New York and Surrounding States. D. Wilson*, R. Gonzalez, G. Bennett, H. Schulte, J. Spatz, L. Tikofsky, F. Welcome, Y. Schukken; Quality Milk Production Services, Cornell University, Department of Population Medicine and Diagnostic Sciences, College of Veterinary Medicine
3:30 PM	521	Efficacy of intramuscular ceftiofur combined with intramammary pirlimycin or cephalixin for treatment of systemically mild clinical mastitis in dairy cattle. John R Wenz*, Rosella Elia, Dusti Pruna, Franlyn B. Garry, R. Page Dinsmore; Integrated Livestock Management, Colorado State University, Fort Collins
3:45 PM	522	The effects of two <i>Escherichia coli</i> J5 immunization protocols on milk production, dry matter feed intake, antibody response and intramammary infection in dairy cattle. Christina S. Petersson* ¹ , Ken E. Leslie ² , David F. Kelton ² , Bonnie A. Mallard ³ , S. Wayne Martin ² ; ¹ Ohio State University - Department of Animal Sciences, Columbus, ² University of Guelph - Department of Population Medicine, Guelph, ON, Canada, ³ University of Guelph - Department of Pathobiology, Guelph, ON, Canada
4:00 PM	523	Tunnel ventilation cooling for lactating dairy cows during hot weather: Comparison to cooling with shade and fans. T.R. Smith* ¹ , A.M. Chapa ¹ , D.O. Pouge ² , T.O. Riley ² , R.J. Williams ¹ , J. Crouch ¹ , H. Wilson ¹ ; ¹ The Department of Animal & Dairy Science, Mississippi State University, Mississippi State, ² The Dairy Research Unit, Mississippi Branch Experiment Station, Holly Springs

Breeding and Genetics

Dairy Crossbreeding and Breeding Objectives

Chair: Dr. Bennet Cassell, Virginia Polytechnic Institute and State University

Room: 267

Time	Abstract #	
1:00 PM	524	Comparison of first-parity Holstein, Normande-Holstein crossbred, Montbeliarde-Holstein crossbred and Scandinavian-Holstein crossbred cows for dystocia and stillbirths. B.J. Heins*, L.B. Hansen, A.J. Seykora; Univeristy of Minnesota, St. Paul
1:15 PM	525	Comparison of the fertility of pure Holstein sires and F1 Jersey x Holstein sires mated to pure Holstein cows in an experimental herd. Kent Weigel*, Christian Maltecca; Department of Dairy Science, University of Wisconsin, Madison
1:30 PM	526	A comparison of reproductive efficiency in four breeds of dairy cow and two cross breeds under seasonal grass-based production systems in Ireland. F. Buckley*, J.F. Mee, N. Byrne, M. Herlihy, P. Dillon; Teagasc, Dairy Production Research Centre, Moorepark, Fermoy, Co. Cork, Ireland
1:45 PM	527	Effect of Holstein females carrying Holstein versus Jersey sired calves on subsequent MEMilk, days open and involuntary culling. A.J. Seykora*, B.J. Heins, L.B. Hansen, J.G. Linn, D.G. Johnson, W.P. Hansen; University of Minnesota, St. Paul
2:00 PM	528	Overview of different breeding objectives in various countries for Holsteins. Filippo Miglior*; Agriculture and Agri-Food Canada - Canadian Dairy Network, Guelph, ON, Canada
2:15 PM	529	Effect of inbreeding on female reproduction in Jerseys. J. P. Cassady*, J. C. Wilk, B. T. McDaniel, S. P. Washburn; North Carolina State University, Raleigh
2:30 PM	530	Effect of synchronization protocols on days open and pregnancy rate at 120 days in dairy cattle. Robert C. Goodling* ¹ , George E. Shook ¹ , Kent A. Weigel ¹ , Nate R. Zwald ¹ , Robert D. Welper ² ; ¹ University of Wisconsin, Madison, ² Alta Genetics, Inc.
2:45 PM		Break
3:15 PM	531	Level of metabolic trait of glucose by young bulls and cows. Lothar Panicke* ¹ , Eckhart Fischer ² , Bernd Fischer ³ , Holger Behn ⁴ , Rudolf Staufenberg ⁴ ; ¹ Research Institute for the Biology of Farm Animals Dummerstorf, Germany, ² Agric. and Environmental Faculty of the University Rostock Rostock, Germany, ³ Institute of Agriculture and Horticulture of Sachsen-Anhalt Iden, Germany, ⁴ Free University Berlin, Clinic of Cattle and Pigs, Berlin, Germany
3:30 PM	532	Heterosis and breed differences for daughter pregnancy rate of crossbred dairy cows. P. M. VanRaden, M. E. Tooker*, J. B. Cole; Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD
3:45 PM	533	Calving difficulty in Holsteins and Jerseys and their crossbreeds. Sara McClintock* ^{1,2} , Beard Kevin ^{3,2} , Michelle Wells ² , Goddard Michael ^{1,2} ; ¹ University of Melbourne, ² Primary Industries Research Victoria, ³ Australian Dairy Herd Improvement Scheme
4:00 PM	534	Early results of Holstein-Jersey crossbreeding at Virginia Tech and Kentucky. B.G. Cassell* ¹ , K.E. Getzewich ¹ , R.L. Nebel ¹ , R.E. Pearson ¹ , A.J. McAllister ² ; ¹ Virginia Polytechnic Institute and State University, Blacksburg, ² University of Kentucky, Lexington
4:15 PM	535	Normande-Holstein crossbreds versus pure Holsteins for conception, days open, calving interval and survival. B.J. Heins*, L.B. Hansen, A.J. Seykora; University of Minnesota, St. Paul
4:30 PM	536	Breed composition codes for crossbred dairy cattle in the United States. J. Cole*, M. Tooker, P. VanRaden, J. Megonigal, Jr.; Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD
4:45 PM	537	Effect of strain of Holstein-Friesian cow and grass based feeding systems on milk production, body weight, body condition score and reproductive performance. P. Dillon* ¹ , B. Horan ^{1,2} , F. Buckley ¹ , J. Mee ¹ , M. Rath ² ; ¹ Teagasc, Moorepark Research Centre Fermoy, Co. Cork, Ireland, ² Faculty of Agriculture, University College, Dublin, Ireland

Dairy Foods

Cheese

Chair: Nana Farkye, California State Polytechnic University

Room: 264

Time	Abstract #	
1:00 PM	538	Use of reverse osmosis concentrated milk for the manufacture of Cheddar and Colby cheese; impact on Ca equilibrium and functional properties. Mee-Ryung Lee*, John A. Lucey, Mark E. Johnson; University of Wisconsin, Madison
1:15 PM	539	A comparison of three different methods for measuring intact casein in cheese. P Lehtola*, L. E. Metzger; MN-SD Dairy Foods Research Center, University of Minnesota, Saint Paul
1:30 PM	540	Vatless manufacture of mozzarella cheese from 8X concentrated microfiltration retentate. Andres V Ardisson*, Syed SH Rizvi; Cornell University, Department of Food Science, Ithaca, NY
1:45 PM	541	Influence of calcium, phosphorus, residual lactose, and salt-to-moisture ratio on cheese quality: manufacture and composition. P. Upreti*, R. Kapoor, S. K. G. Purna, L. E. Metzger; Department of Food Science and Nutrition, MN-SD Dairy Food Research Center, University of Minnesota, St. Paul
2:00 PM	542	Proteolysis and yield of Cheddar cheeses manufactured from milks with different serum protein contents. Brandon K Nelson*; Northeast Dairy Foods Research Center, Cornell University, Ithaca, NY
2:15 PM	543	Gel microstructure, permeability and syneresis kinetics of cottage cheese-type gels made under different gelation rates. Manuel Castillo* ^{1,2} , John A Lucey ¹ , Wang Tao ¹ , Fred A Payne ² ; ¹ Department of Food Science, University of Wisconsin, Madison, ² Department of Biosystems and Agricultural Engineering, University of Kentucky, Lexington
2:30 PM	544	Sensory Differences Among Pecorino Siciliano Cheeses by Geographic Origin. John Horne ¹ , Stefania Carpino* ¹ , Silvia Mallia ¹ , Antonio Difalco ¹ , Giovanni Tumino ¹ , Giuseppe Licitra ^{1,2} ; ¹ CoRFiLaC, Regione Siciliana s.p. 25 km 5 - 97100 Ragusa, Italy, ² D.A.C.P.A. Catania University via Valdisavoia 5 - 95100 Catania, Italy
2:45 PM		Break
3:15 PM	545	Differences between milled curd and stirred curd Cheddar cheese manufactured with different culture/enzyme systems. Shakeel Rehman* ¹ , Nana Farkye ¹ , MaryAnne Drake ² ; ¹ Dairy Products Technology Center, California Polytechnic State University, San Luis Obispo, ² Southeast Dairy Foods Research Center, North Carolina State University, Raleigh
3:30 PM	546	Influence of brine concentration, brine temperature, and presalting on early gas defects in raw milk pasta filata cheese. C. Melilli* ¹ , D. M. Barbano ² , M. Caccamo ¹ , M. A. Calvo ¹ , G. Schembari ¹ , G. Licitra ¹ ; ¹ CoRFiLaC, Regione Siciliana SP 25 Ragusa mare km 5, ² Northeast Dairy Food Research Center, Department of Food Science, Cornell University, Ithaca, NY
3:45 PM	547	Direct acidification and cream homogenization for Mozzarella cheese manufacture. K. J. Ottman, L. E. Metzger*; Department of Food Science and Nutrition, MN-SD Dairy Food Research Center, University of Minnesota, St. Paul
4:00 PM	548	Effects of 6 Month Extended Frozen-storage on Changes in Organic Acid Profiles of Plain Soft and Monterey Jack Goat Milk Cheeses. Young W. Park*, Jung H. Lee, Isabel C. Blackman; Fort Valley State University, Agricultural Research Station, Fort Valley, GA
4:15 PM	549	Interaction of Emulsifying Salts with Milk Proteins. Rei Mizuno* ^{1,2} , John A. Lucey ² ; ¹ Food Research & Development Laboratory, Morinaga Milk Industry Co. Japan, ² Department of Food Science University of Wisconsin, Madison
4:30 PM	550	Impact of type of concentrated sweet cream buttermilk on the manufacture and functionality of pizza cheese. Tammy Y. Lin ¹ , Selvarani Govindasamy-Lucey* ² , John J. Jaeggi ² , Cynthia J. Martinelli ² , Mark E. Johnson ² , John A. Lucey ¹ ; ¹ Department of Food Science, University of Wisconsin, Madison, ² Wisconsin Center for Dairy Research, University of Wisconsin, Madison
4:45 PM	551	Effect of fat content on rheological and melting properties of Mozzarella cheese. Chinthu Udayarajan*, John Lucey; Department of Food Science, University of Wisconsin, Madison

Extension Education

Animal Science

Co-Chairs: Justen Smith, USDA and Twig Marston, Kansas State University

Room: 263

Time	Abstract #	
1:00 PM	552	Beef development costs. Wm. W. Ellis*; Southeast Missouri State University
1:15 PM	553	Elements influencing cattle buyers to participate in preconditioned certified calf sales. M. D. Corro*, D. Lalman, J. D. White, R.P. Wettemann, J. P. Key; Oklahoma State University, Stillwater
1:30 PM	554	Selected management practices of beef cows on cow-calf operations in Oklahoma. M.D. Corro*, D. L. Lalman, K. Barnes, J. L. Evans; Oklahoma State University, Stillwater
1:45 PM	555	Maximizing Extension Efforts By Multi-County Horse Programs. O. Frederick Harper*, J. Hall, J. Goddard, J. Rhea, B. Sliger; University of Tennessee
2:00 PM	556	Expanding Extension Horse Programs By the Internet. O. Frederick Harper*, Emily L. Tipton; University of Tennessee
2:15 PM	557	Holey Cow – The inside story of why cows eat grass – a model for youth agricultural education. D.J.R. Cherney*, B. Berggren-Thomas, A.W. Bell; Cornell University, Ithaca, NY
2:30 PM	558	<i>Healthy Farms—Healthy Agriculture</i> . a new approach to biosecurity education. J. M. Smith*; University of Vermont
2:45 PM	559	An Environmental Assessment Tool for Poultry Farms Developed as Part of Environmental Management Systems. Paul H. Patterson* ¹ , Les E. Lanyon ² , Amanda H. Mende ³ ; ¹ Department of Poultry Science, The Pennsylvania State University, University Park, ² Department of Crop and Soil Sciences, The Pennsylvania State University, University Park, ³ PennAg Industries Association, Harrisburg, PA

Forages and Pastures

Harvesting and Grazing Management of Forages

Chair: Sam Coleman, University of Florida

Room: 221

Time	Abstract #	
1:00 PM	560	The effects of total non-structural carbohydrates (TNC) on voluntary intake of goats and digestibility of gamagrass (GG) harvested in the morning (AM) or afternoon (PM). Alaina Sauve* ¹ , G. Huntington ¹ , J. Burns ^{1,2} ; ¹ North Carolina State University, ² USDA, ARS
1:15 PM	561	Afternoon harvest increases readily fermentable carbohydrate (CHO) concentration and voluntary intake of gamagrass (GG) and switchgrass (SG) baleage fed to beef steers. G. Huntington* ¹ , J. Burns ^{1,2} ; ¹ North Carolina State University, ² USDA, ARS
1:30 PM	562	Digestion characteristics of perennial ryegrass (<i>Lolium perenne</i> L.) at different stages of maturity. A.V. Chaves ¹ , G.C. Waghorn* ² , I.M. Brookes ¹ ; ¹ Institute of Food, Nutrition and Human Health, Massey University, Palmerston North, New Zealand, ² Dexcel Limited, Hamilton, New Zealand
1:45 PM	563	Effects of beef cow grazing management on sediment and phosphorus losses from smooth brome-grass pastures. M. Haan* ¹ , J. Russell ¹ , W. Powers ¹ , S. Mickelson ² , R. Schultz ³ , J. Kovar ⁴ ; ¹ Iowa State University, Department of Animal Science, Ames, ² Iowa State University, Department of Agricultural and Biosystems Engineering, Ames, ³ Iowa State University, Department of Natural Resource and Environmental Management, Ames, ⁴ USDA-National Soil Tilth Laboratory, Ames, IA
2:00 PM	564	Apparent nutrient digestibility and ruminal alterations in beef steers consuming bermudagrass hay and supplemented with soybean hulls and(or) corn. J. C. Henley*, A. I. Orr, B. J. Rude; Mississippi State University, Mississippi State
2:15 PM	565	Evaluation of different backgrounding programs for weaned beef calves. K.H. Hunter*, A.M.M. Shank, R.K. Shanklin, W.S. Swecker, J.P. Fontenot, G. Scaglia, C.L. Pickworth; Virginia Polytechnic Institute and State University, Blacksburg

2:30 PM	566	Impact of stocking rate and stocking strategy on gain per animal and gain per hectare of steers grazing rotational or continuous stocked rye-ryegrass pasture. J.J. Cleere ^{*2} , F.M. Rouquette, Jr. ¹ , G.M. Clary ² ; ¹ Texas Agricultural Experiment Station, Overton, ² Texas Cooperative Extension, Overton
2:45 PM		Break
3:15 PM	567	Accuracy of intake measurements for cows grazing grass/legume pastures using the alkane marker technique. G C Waghorn [*] , S L Woodward, D A Clark; Dexcel Limited, Hamilton, New Zealand
3:30 PM	568	Developing consistent relationships among fiber fractions for uniform alfalfa hay quality guidelines. David R. Mertens ^{*1} , Jack E. Getz ² ; ¹ US Dairy Forage Research Center, Madison, WI, ² USDA-Agricultural Marketing Service, Moses Lake, WA
3:45 PM	569	Effects of purified fiber energy supplementation on digestion and ruminal parameters of steers fed cool season grass hay. H.M. Blalock [*] , C.J. Richards; The University of Tennessee, Knoxville

Nonruminant Nutrition

Amino Acids

Chair: Gary Apgar, Southern Illinois University and Chris Parks, Wenger Feeds

Room: 276

Time	Abstract #	
1:00 PM	570	The optimal true ileal digestible lysine and total sulfur amino acid requirement for nursery pigs between 10 and 20 kg. J. D. Schneider [*] , M. D. Tokach, S. S. Dritz, R. D. Goodband, J. L. Nelssen, J. M. DeRouchey, C. W. Hastad, N. A. Lenehan, N. Z. Frantz, B. W. James, K. R. Lawrence, C. N. Groesbeck, R. O. Gottlob, M. G. Young; Kansas State University, Manhattan
1:15 PM	571	The optimal true ileal digestible lysine and threonine requirement for nursery pigs between 10 and 20 kg. N. A. Lenehan ¹ , M. D. Tokach ¹ , S. S. Dritz ¹ , R. D. Goodband ¹ , J. L. Nelssen ¹ , J. L. Usry ² , J. M. DeRouchey ¹ , N. Z. Frantz ^{*1} ; ¹ Kansas State University, Manhattan, ² Ajinomoto Heartland LLC, Chicago, IL
1:30 PM	572	Assessment of the methionine requirement of pigs in the weight range 11 to 20 kg. Patrick B. Lynch ^{*1} , Meike Rademacher ² , Peadar G. Lawlor ¹ ; ¹ Teagasc Moorepark, Fermoy, Ireland, ² Degussa AG. Feed Additives, Hanau, Germany
1:45 PM	573	Evaluation of the true ileal digestible (TID) lysine requirement for 11 to 29 kg pigs. S.X. Fu ^{*1} , A.M. Gaines ¹ , B.W. Ratliff ¹ , P. Srichana ¹ , G.L. Allee ¹ , J.L. Usry ² ; ¹ University of Missouri, Columbia, ² Ajinomoto Heartland LLC, Chicago, IL
2:00 PM	574	Estimation of the true ileal digestible sulfur amino acid requirement for nursery pigs weighing 13 to 25 kilograms by using Alimet [®] feed supplement. A.M. Gaines ¹ , G.F. Yi ^{*2} , B.W. Ratliff ¹ , P. Srichana ¹ , G.L. Allee ¹ , C.D. Knight ² , K.R. Perryman ² ; ¹ University of Missouri, Columbia, ² Novus International, Inc., St. Louis, MO
2:15 PM	575	Effect of L-lysine•HCl level and true digestible lysine:crude protein ratio on late nursery pig performance. B.W. Ratliff ^{*1} , A.M. Gaines ¹ , P. Srichana ¹ , R.W. Fent ¹ , G.L. Allee ¹ , J.L. Usry ² , R.D. Boyd ³ ; ¹ University of Missouri, Columbia, ² Ajinomoto Heartland LLC, Chicago, IL, ³ The Hanor Company, Franklin, KY
2:30 PM	576	Estimation of the true ileal digestible sulfur amino acid:lysine ratio for growing pigs weighing 29 to 45 kilograms. A.M. Gaines ^{*1} , G.F. Yi ² , B.W. Ratliff ¹ , P. Srichana ¹ , G.L. Allee ¹ , C.D. Knight ² , K.R. Perryman ² ; ¹ University of Missouri, Columbia, ² Novus International, Inc., St. Louis, MO
2:45 PM		Break
3:15 PM	577	Estimation of the true ileal digestible sulfur amino acid:lysine ratio for early finishing gilts weighing 45 to 68 kilograms. A.M. Gaines ^{*1} , G.F. Yi ² , B.W. Ratliff ¹ , P. Srichana ¹ , G.L. Allee ¹ , C.D. Knight ² , K.R. Perryman ² ; ¹ University of Missouri, Columbia, ² Novus International, Inc., St. Louis, MO
3:30 PM	578	Evaluation of the true ileal digestible (TID) lysine requirement for 80-100 kg barrows and gilts. P. Srichana ^{*1} , A.M. Gaines ¹ , B.W. Ratliff ¹ , G.L. Allee ¹ , J.L. Usry ² ; ¹ University of Missouri, Columbia, ² Ajinomoto Heartland LLC, Chicago, IL

3:45 PM	579	Effect of low-protein amino acid supplemented diets on performance and indicators of enteric health in early-weaned pigs. Charles M. Nyachoti ^{*1} , Olufemi F. Omogbenigun ¹ , Meike Rademacher ² , Greg Blank ¹ ; ¹ University of Manitoba, Winnipeg, MB Canada, ² Degussa Ag, Germany
4:00 PM	580	The tryptophan requirement of growing and finishing barrows. J. L. Shelton ^{*1} , A. C. Guzik ¹ , L. L. Southern ¹ , B. J. Kerr ² , T. D. Bidner ¹ ; ¹ LSU Agricultural Center Baton Rouge, LA, ² USDA-ARS-SOMMRU, National Swine Research and Information Center, Ames, IA
4:15 PM	581	The isoleucine requirement of 80- to 120-kilogram barrows. D. W. Dean ^{*1} , L. L. Southern ¹ , B. J. Kerr ² , T. D. Bidner ¹ ; ¹ LSU Agricultural Center, Baton Rouge, ² USDA-ARS-MWA-SOMMRU, Ames, IA
4:30 PM	582	Determination of the optimum threonine:lysine ratio for prolific lactating sows. A.M. Gaines ^{*1} , N.H. Williams ² , M.E. Johnston ³ , C. Zier ² , G.L. Allee ¹ , J.L. Usry ⁴ , R.D. Boyd ³ ; ¹ University of Missouri, Columbia, ² Pig Improvement Company, Franklin, KY, ³ The Hanor Company, Inc., Franklin, KY, ⁴ Ajinomoto Heartland LLC, Chicago, IL
4:45 PM	583	The valine requirement of lactating sows. M. Etienne ^{*1} , J.Y. Dourmad ¹ , J. Noblet ¹ , L. Le Bellego ² , C. Relandeau ² ; ¹ INRA-UMRVP, Saint-Gilles, France, ² Ajinomoto Eurolysine sas, Paris, France

Physiology and Endocrinology

Nutritional Regulation of Reproduction

Chair: Brian Crooker, University of Minnesota

Room: 222

Time	Abstract #	
1:00 PM	584	Energy balance, dry matter intake, and hormone profiles of cows with ovulatory and non-ovulatory follicles during the first postpartum follicle wave. S.T. Butler [*] , W.R. Butler; Cornell University, Ithaca, NY
1:15 PM	585	Effects of feeding menhaden fish meal or Ca salts of fish oil fatty acids on uterine fatty acids composition, COX-2 level and PGF _{2a} production in early lactating cows. A. Heravi Moussavi ^{*3} , R. O. Gilbert ² , T. R. Overton ¹ , D. E. Bauman ¹ , W.R. Butler ¹ ; ¹ Cornell University, Department of Animal Science, Ithaca, NY, ² Cornell University, Department of Clinical Sciences, Ithaca, NY, ³ Dept. of Animal Science, Ferdowsi University, Mashhad, Iran
1:30 PM	586	Effect of Fat Sources Differing in Fatty Acid Profile on Fertilization Rate and Embryo Quality in Lactating Dairy Cows. R.L.A. Cerri ^{*1} , R.G.S. Bruno ¹ , R.C. Chebel ¹ , K.N. Galvao ¹ , H. Rutigliano ¹ , S.O. Juchem ¹ , W.W. Thatcher ² , D. Luchini ³ , J.E.P. Santos ¹ ; ¹ University of California Davis VMTRC, Tulare, ² University of Florida, Gainesville, ³ Bioproducts, Inc.
1:45 PM	587	Expression of growth hormone receptor and IGF-I mRNA in the reproductive tissues of early postpartum dairy cows. M.L. Rhoads [*] , J.P. Meyer, S.J. Kolath, W.R. Lamberson, M.C. Lucy; University of Missouri, Columbia
2:00 PM	588	Influence of postpartum nutrition of primiparous beef cows on insulin-like growth factor binding proteins in follicular fluid and plasma. I. Rubio [*] , F.J. White, N.H. Ciccioli, R.P. Wettemann, L.J. Spicer; Oklahoma Agricultural Experiment Station, Oklahoma State University, Stillwater
2:15 PM	589	Reproductive performance of primiparous and multiparous cows fed whole soybeans before breeding. N. M. Long ^{*2} , G. M. Hill ¹ , J. F. Baker ¹ , W. M. Graves ² , M. A. Froetschel ² , B. G. Mullinix, Jr. ¹ , D. H. Keisler ³ ; ¹ University of Georgia, Tifton, ² University of Georgia, Athens, ³ University of Missouri, Columbia
2:30 PM	590	Recombinant leptin does not acutely accelerate the frequency of LH pulses at any developmental stage in normal and growth-restricted heifers. Dorota A Zieba ^{1,2} , Marcel Amstalden ^{1,2} , Stephanie Morton ^{1,2} , Duane H Keisler ³ , Gary L Williams ^{*1,2} ; ¹ Animal Reproduction Laboratory, Texas A&M University Agricultural Research Station, Beeville, ² Department of Animal Science and Center for Animal Biotechnology and Genomics, College Station, Texas, ³ Department of Animal Science, University of Missouri, Columbia
2:45 PM		Break
3:15 PM	591	Effect of prenatal nutrition on plasma glucose at birth and weaning. D. W. Kastner [*] , I. Rubio, F. J. White, N.H. Ciccioli, R.P. Wettemann; Oklahoma Agricultural Experiment Station, Stillwater

3:30 PM	592	The role of food intake on estrous cyclicity and reproductive potential in white-tailed deer (<i>Odocoileus virginianus</i>). Erin L. Monaco ^{*1} , Randy L. Stanko ¹ , David G. Hewitt ² ; ¹ Department of Animal and Wildlife Sciences, Texas A & M University, Kingsville, ² Caesar Kleberg Wildlife Research Institute, Texas A & M University, Kingsville
3:45 PM	593	Performance and Semen Quality of Yearling Bulls Grazing Tall Fescue Pastures. G. M. Schuenemann ^{*1} , J. C. Waller ¹ , F. M. Hopkins ² , H. S. Adair ² , N. R. Rohrbach ¹ , F. N. Scenna ¹ , D. I. Bryant ¹ , A. M. Saxton ¹ , J. W. Oliver ³ , J. C. Riggins ⁴ , F. N. Schrick ¹ ; ¹ University of Tennessee, Department of Animal Science, ² University of Tennessee, Department of Large Animal Clinical Sciences, ³ University of Tennessee, Department of Comparative Medicine, ⁴ University of Tennessee, Highland Rim Experiment Station
4:00 PM	594	Effects of P.G. 600 treatment at weaning on reproductive performance of sows limit-fed during lactation. B.R. Horsley [*] , M.J. Estienne, A.F. Harper, J.W. Knight; Virginia Polytechnic Institute and State University
4:15 PM	595	Effect of acetate to propionate ratio on clearance of progesterone in the ovid. Darron L. Smith [*] , Beth A. Costine, Matthew E. Wilson; West Virginia University, Morgantown

Production, Management and the Environment

Heat Stress and Environment

Chair: Kathy J. Soder, USDA-ARS Pasture System & Watershed Management

Room: 261/262

Time	Abstract #	
1:00 PM	596	Response of heat stressed dairy cattle to low-pressure soaking or high-pressure misting heat abatement systems. Micheal J. Brouk ^{*1} , Joseph P. Harner, III ² , John F. Smith ¹ , William F. Miller ¹ , Branko Cvetkovic ¹ ; ¹ Department of Animal Sciences and Industry, Kansas State University, ² Department of Agricultural and Biological Engineering, Kansas State University
1:15 PM	597	Impact of air velocity and direction of flow upon respiration rate, body surface temperature and body temperature of heat stressed dairy cattle. Micheal J. Brouk ^{*1} , Joseph P. Harner, III ² , John F. Smith ¹ , William F. Miller ¹ , Branko Cvetkovic ¹ ; ¹ Department of Animal Sciences and Industry, Kansas State University, ² Department of Agricultural and Biological Engineering, Kansas State University
1:30 PM	598	Impact of soaking cows housed in a tunnel ventilated barn equipped with evaporative pads located in Thailand. Dennis V. Armstrong ¹ , John F. Smith ^{*2} , Micheal J. Brouk ² , Veeris Wuthironarith ³ , Joseph P. Harner, III ² ; ¹ University of Arizona, Tucson, ² Kansas State University, Manhattan, ³ Charoen Pokphanol Group Co., LTD, Bangkok, Thailand
1:45 PM	599	Effects of shade, sprinklers, and stocking density on performance, behavior, physiology, and environmental impact of Holstein heifers in drylot pens. Nichole M. Marcillac [*] , Peter H. Robinson, James G. Fadel, Frank M. Mitloehner; University of California, Davis
2:00 PM	600	The effect of fiber characteristics on production, physiological and behavioral traits in heat stressed dairy cows. A. Arieli ^{*1} , A. Rubinstein ¹ , Y. Ahroni ² , U. Moallem ² , I. Halachmi ² ; ¹ Hebrew University of Jerusalem, Fac. Agric., Rehovot, Israel, ² Agricultural Research Organization The Volcani Center, Bet Dagan, Israel
2:15 PM	601	Changes in the diurnal rhythm of rectal temperature of cattle exposed to prolonged heat stress, and cooled with warm salt water. John Gaughan ^{*1} , Simone Holt ² ; ¹ The University of Queensland Gatton, Queensland, Australia, ² South Dakota State University, Brookings
2:30 PM	602	Emissions of Atmospheric Ammonia and a Nitrogen Mass Balance for a Dairy. Brian P. Rumburg ^{*1} , George H. Mount ¹ , Jenny M. Filipy ¹ , Brian K. Lamb ¹ , Ronald L. Kincaid ² , Kristen A. Johnson ² ; ¹ Laboratory for Atmospheric Research, Department of Civil & Environmental Engineering, Washington State University, Pullman, ² Department of Animal Sciences, Washington State University, Pullman
2:45 PM		Break
3:15 PM	603	Effects of dietary crude protein level on nitrogen balance and emissions. Harold A. Rachuonyo [*] , Stanley E. Curtis, Enrique O. Castaneda, Mike Ellis; University of Illinois, Urbana

3:30 PM	604	Calcium clinoptilolite zeolite added to the diet to reduce nitrogen losses from feedlot lagoons and composted manure. K. S Eng ^{*1} , R. Bectel ² , D. P. Hutcheson ³ ; ¹ Eng, Inc, San Antonio, TX, ² Advance Agricultural Testing Baden, Ont. Canada, ³ Animal-Agricultural Consulting, Inc. Amarillo, TX
3:45 PM	605	Combination of a urease inhibitor and a plant essential oil for control of fecal coliforms and emissions of odor and ammonia from cattle waste. V. H. Varel [*] , J. E. Wells, D. N. Miller; USDA-ARS, U.S. Meat Animal Research Center, Clay Center, NE
4:00 PM	606	Evaluation of factors affecting phosphorus solubility in feces of lactating cows. T. D. Nennich ^{*1} , J. H. Harrison ¹ , Z. Dou ² , L. Johnson VanWieringen ¹ , R. L. Kincaid ³ , D. L. Davidson ¹ ; ¹ Washington State University, Puyallup, ² University of Pennsylvania, Kennett Square, ³ Washington State University, Pullman
4:15 PM	607	Separated Drinking Water From Liquid Manure for Swine. J. Morris [*] , R. Fleming, M. MacAlpine; Ridgetown College, University of Guelph, Ridgetown, ON, Canada
4:30 PM	608	Environmental Impact of Integrating Crop and Sylvan Systems with Swine. Charles W. Talbott ^{*1} , Gudigopuram B. Reddy ¹ , Charles Raczkowski ¹ , Teo Barrios ¹ , Mani Matlapudi ¹ , Albert Coffee ² , John Andrews ² ; ¹ North Carolina A&T State University, Greensboro, ² USDA/CSREES Forestry, N.C. Division of Forest Resources, Raleigh

Ruminant Nutrition

Dairy - Additives, Vitamins & Models

Chair: Gale Bateman, Louisiana State University

Room: 132

Time	Abstract #	
1:00 PM	609	Effects of <i>Aspergillus oryzae</i> (Amaferm [®]) on production and metabolic parameters in Holstein cattle during the transition period. L.H. Baumgard ^{*1} , M.E. Dwyer ¹ , C. Davis ¹ , C.E. Moore ¹ , H.C. Hafliger III ¹ , O.B. Mendivil ¹ , H. Jensen ² , B. Christie ² , M.J. VanBaale ¹ ; ¹ The Univ. of Arizona, ² BioZyme Inc., St. Joseph, MO
1:15 PM	610	The effects of feeding yeast culture during the transition from cool to hot weather to Holstein cows on animal performance. J. D. Ward ^{*1} , T. R. Smith ² , L. Zeringue ¹ , R. J. Williams ² , J. Crouch ² , R. Walz ¹ , T. Nueefch ² , H. M. Wilson ² ; ¹ LSU AgCenter, Southeast Research Station, Franklinton, ² Mississippi State University, Department of Animal and Dairy Sciences, Mississippi State
1:30 PM	611	Effects of feeding yeast culture on milk yield during heat stress conditions. Fabian Y. Bernal [*] , Jenks S. Britt, John W. Tako, Nevil C. Speer; Western Kentucky University
1:45 PM	612	Improving the fermentation and aerobic stability of bermudagrass with molasses or a combination of bacteria and enzymes. A. T. Adesogan [*] , N. A. Krueger, D. B. Dean, M. B. Salawu, C. R. Staples; University of Florida, Gainesville
2:00 PM	613	Use of exogenous proteolytic enzymes to improve lactational performance of dairy cows. Jong-Su Eun [*] , Karen Beauchemin; Agriculture and Agri-Food Canada, Lethbridge, AB, Canada
2:15 PM	614	Effects of mixture enzymes on hydrolysis and rate of fermentation of alfalfa in vitro. A.A. Naserian [*] , S. Ghasemi; Animal Science Department of Ferdowsi University, Mashhad, Khorasan, Iran.
2:30 PM	615	Effect of fibrolytic enzymes on the fermentation characteristics, aerobic stability and digestibility of bermudagrass silage. D.B Dean [*] , A.T Adesogan, N Krueger, R.C Littell; University of Florida, Gainesville
2:45 PM		Break
3:15 PM	616	Development and use of an assay to test enzymatic activity of rumen microflora in calves. B.J. Suarez [*] , S. Fiardo, A.H.M Cornelissen, P. Van Wikselaar, W.J.J. Gerrits; Wageningen University, Wageningen, The Netherlands
3:30 PM	617	Effects of feeding increasing levels of vitamin E on milk production variables, plasma fatty acid composition, and milk fatty acid profiles in Holstein cows experiencing diet induced milk fat depression. H.C. Hafliger III [*] , C.E. Moore, S.R. Sanders, L.H. Baumgard; The University of Arizona

3:45 PM	618	Effects of dietary forage and non-fiber carbohydrate concentrations on B-vitamin intake and duodenal flow in dairy cows. E. C. Schwab ¹ , C. G. Schwab ² , C. L. Girard ³ , R. D. Shaver ¹ , D. E. Putnam ⁴ , N. L. Whitehouse ² ; ¹ University of Wisconsin, Madison, ² University of New Hampshire, Durham, ³ Dairy and Swine R&D Center, AAC, Lennoxville, QC, Canada, ⁴ Balchem Encapsulates, New Hampton, NY
4:00 PM	619	Effect of feeding malic acid on performance of lactating Holstein cows. R.J. Grant ¹ , C.S. Ballard ¹ , M.P. Carter ¹ , K.W. Cotanch ¹ , P. Mandebvu ¹ , C.J. Sniffen ² , M. Suekawa ⁵ , S.A. Martin ³ , T.K. Miller-Webster ⁴ , W.H. Hoover ⁴ ; ¹ W.H. Miner Agricultural Research Institute, Chazy, NY, ² Fencrest LLC, Holderness, NH, ³ University of Georgia, Athens, ⁴ West Virginia University, Morgantown, ⁵ Zen-Noh National Federation of Agricultural Co-operative Associations, Tokyo, Japan
4:15 PM	620	Further validation of the fat sub-model in CPM-Dairy. Peter J. Moate*, Raymond C. Boston, William Chalupa; University of Pennsylvania, School of Veterinary Medicine, Kennett Square
4:30 PM	621	Sensitivity analysis of the 2001 Dairy NRC and CNCPS protein fractionation systems. C. Lanzas*, L.O. Tedeschi, D.G. Fox; Cornell University, Ithaca, NY

Ruminant Nutrition

Dairy - Fats

Chair: Greg Bethard, G&R Dairy Consulting, Inc.

Room: 275

Time	Abstract #	
1:00 PM	622	Effect of rumen protected conjugated linoleic acid on energy metabolism of dairy cows during early to mid-lactation. Kevin J Shingfield ¹ , David E Beever ¹ , Christopher K Reynolds ¹ , Suresh K Gulati ^{2,3} , David J Humphries ¹ , Berit Lupoli ¹ , Gonzalo Hervas ¹ , Mikko J Griinari ⁴ ; ¹ Centre for Dairy Research, University of Reading, UK, ² University of Sydney, Australia, ³ Rumentek Pty Limited, Australia, ⁴ University of Helsinki, Finland
1:15 PM	623	Effects of dietary CLA on production parameters and milk fatty acid variables in Holstein and Brown Swiss cows during heat stress. C. E. Moore*, H. C. Hafliger III, O. B. Mendivil, R. J. Collier, L. H. Baumgard; University of Arizona, Tucson
1:30 PM	624	Effects of source and level of dietary lipid on in vitro production of conjugated linoleic acid and trans vaccenic acid. X. Qiu ¹ , K. E. Griswold ² , G. A. Apgar ¹ , D. W. Murdach ¹ , E. D. Frantz ¹ , D. L. Hastings ¹ , B. N. Jacobson ¹ ; ¹ Southern Illinois University, Carbondale, ² Penn State University Extension, Lancaster
1:45 PM	625	Concentration of cis-12 C18:1 in milk is more closely related to milk fat depression (MFD) than trans-10 C18:1 in cows fed fish oil. M.A.S. Gama ¹ , J.M. Griinari ² , P.C. Garnsworthy ³ , P.H.M. Rodrigues ¹ , P.R. Leme ⁴ , L.W.O. Souza ⁴ , D.P.D. Lanna ¹ ; ¹ Esalq-USP Piracicaba, Brazil, ² University of Helsinki, Finland, ³ University of Nottingham, UK, ⁴ Campus Pirassununga-USP, Brazil
2:00 PM	626	Increasing dietary starch fermentability causes milk fat depression in low-producing, but not high-producing cows. B.J. Bradford*, M.S. Allen; Michigan State University, East Lansing
2:15 PM	627	Effect of timing of initiation of fat supplementation on milk production, plasma hormones and metabolites, and conception rates of Holstein cows in summer. F. M. Cullens*, C. R. Staples, T. R. Bilby, F. Silvestre, J. Bartolome, A. Sozzi, L. Badinga, W. W. Thatcher, J.D. Arthington; University of Florida
2:30 PM	628	Kinetic model of rumen biohydrogenation: effects of rumen-protected fatty acid saturation on fractional rate of biohydrogenation and duodenal fatty acid flow in lactating dairy cows. K.J. Harvatine*, M.S. Allen; Michigan State University, East Lansing
2:45 PM		Break
3:15 PM	629	Effect of rumen-protected fatty acid saturation on feed intake and feeding and chewing behavior of lactating dairy cows. K.J. Harvatine*, M.S. Allen; Michigan State University, East Lansing
3:30 PM	630	Abomasal infusion of L-carnitine alters hepatic fatty acid metabolism and decreases liver lipid in lactating Holstein cows. D. B. Carlson ¹ , H. M. Dann ¹ , N. B. Litherland ¹ , J. C. Woodworth ² , J. K. Drackley ¹ ; ¹ University of Illinois, Urbana, ² Lonza, Inc., Fair Lawn, NJ

- 3:45 PM 631 Abomasal infusion of L-carnitine affects metabolic and production responses to feed restriction in lactating Holstein cows. D. B. Carlson*¹, H. M. Dann¹, N. B. Litherland¹, J. C. Woodworth², J. K. Drackley¹; ¹University of Illinois, Urbana, ²Lonza, Inc., Fair Lawn, NJ
- 4:00 PM 632 Cholestykinin mediates intake regulation of high fat diets in ruminants by acting on the reticulo-omasal sphincter. Devendra Kumar¹, Mark A. Froetschel*¹, T. Dean Pringle¹, Duane, H. Keisler²; ¹The University of Georgia, Athens, ²University of Missouri, Columbia
- 4:15 PM 633 Effect of Feeding Ca Salts of Palm Oil (PO) or a Blend of Linoleic and Monoenoic Trans Fatty Acids (LTFA) on Uterine Involution and Reproductive Performance in Holstein Cows. S.O. Juchem*¹, R.L.A. Cerri¹, R. Bruno¹, K.N. Galvao¹, E.W. Lemos¹, M. Villasenor¹, A.C. Coscioni¹, H.M. Rutigliano¹, W.W. Thatcher², D. Luchini³, J.E.P. Santos¹; ¹University of California, Davis, ²University of Florida, ³Bioproducts, Inc.
- 4:30 PM 634 Responses of milk fat composition to dietary non-fiber carbohydrates in Sarda dairy sheep. A. Nudda*, S. Fancellu, F. Porcu, F. Boe, A. Cannas; Dipartimento di Scienze Zootecniche, University of Sassari, Italy
- 4:45 PM 635 Nutritional properties and use of rumen protected oilseed /conjugated linoleic acid (CLA) supplements. S.K. Gulati*¹, S.W. McGregor², T.W. Scott²; ¹Sydney University, Australia, ²Rumentek Pty Ltd, Australia

Sheep Species

Chair: Jay Daniel, South Dakota State University

Room: 220

- | Time | Abstract # | |
|---------|------------|--|
| 1:00 PM | 636 | Effect of GnRH in conjunction with ram introduction on the induction of fertile estrus during the non-breeding season. K.M. Jordan*, A.K. Wurst, E.K. Inskeep, M. Knights; Division of Animal and Veterinary Sciences, West Virginia University, Morgantown |
| 1:15 PM | 637 | The effect of metabolizable protein and machine milking on the periparturient relaxation of immunity against <i>Teladorsagia circumcincta</i> in dairy ewes. Elizabeth, C. Partington*, John Donaldson, Liam, A. Sinclair, Alexander, M. Mackenzie; Harper Adams University College, Newport, Shropshire |
| 1:30 PM | 638 | The effect of iodine supplementation to ewes in late pregnancy on lamb serum immunoglobulin level. T.M. Boland*, M.J. Guinan, M.A. Foley, P.J. Quinn, J.J. Callan, T.F. Crosby; University College Dublin, Belfield, Dublin 4, Ireland |
| 1:45 PM | 639 | The effects of mineral block intake by ewes in late pregnancy on dietary intake and IgG absorption by the progeny. T.M. Boland*, D Joyce, P.J. Quinn, J.J. Callan, T.F. Crosby; University College Dublin, Belfield, Dublin 4, Ireland |
| 2:00 PM | 640 | Shear force and sensory attributes of lamb from hair sheep composite breeds. S.P. Greiner ¹ , D.R. Notter ¹ , S.K. Duckett* ² ; ¹ Virginia Polytechnic Institute and State University, Blacksburg, ² University of Georgia, Athens |
| 2:15 PM | 641 | Evaluation of ultrasound measurements to predict carcass ribeye area and fat thickness in lambs. C.J. Hiemke* ¹ , D.L. Thomas ¹ , T.A. Taylor ¹ , R.G. Gottfredson ¹ , S. Pinnow ² ; ¹ University of Wisconsin, Madison, ² Pinn-Oak Ridge Farm, Delevan, WI |

WEDNESDAY, JULY 28, 2004

POSTER PRESENTATIONS

Room: Exhibit Hall 5

Presentation Time: 7:30 AM – 9:30 AM

PSA-Nutrition

Abstract

- W1 Gluconeogenesis and Krebs Cycle metabolism in 2-day-old fed and fasted chicks. Nishanth E Sunny*, Samer W El-Kadi, Masahito Oba, Sandra L Owens, Rosalina Angel, Brian J Bequette; University of Maryland, College Park
- W2 Effect of decreasing levels of protein in the diet on growth performance of Japanese quail fed fattening diets. R. Barajas*, J.J. Lomeli, J.F. Obregon, J.J. Portillo; FMVZ - Universidad Autonoma de Sinaloa Carr. Culiacan - Mazatlan km 3.5
- W3 2-Hydroxy-4-(Methylthio) Butanoic Acid (HMTBA) and DL-Methionine Yield Equal Growth and Carcass Performance under Thailand Tropical Conditions. S. Attamangkune*, S. Chamrusspollert²; ¹Poultry Research and Development Center, Kasetsart University, Thailand, ²Novus International (Thailand) Co. Ltd
- W4 Dietary glycine needs of broiler chicks. A. Corzo*, M. T. Kidd¹, D. J. Burnham², S. L. Branton³, B. J. Kerr³; ¹Mississippi State University, ²Ajinomoto-Heartland, ³United States Department of Agriculture
- W5 Effect of chromium methionine supplementation on internal egg quality preservation in Japanese quail. F.G. Rios*, C. Angulo, G. Contreras, J.J. Portillo; FMVZ - Universidad Autonoma de Sinaloa (Mexico) Carr. Culiacan-Mazatlan km 3.5
- W6 Breeder hen and broiler dietary carnitine: Carry-over and dietary effects on progeny growth and carcass traits. M. T. Kidd*, C. D. McDaniel¹, E. D. Peebles¹, S. J. Barber¹, A. Corzo¹, S. L. Branton², J. C. Woodworth³; ¹Mississippi State University, ²United States Department of Agriculture, ³Lonza Inc.
- W7 Methionine, cystine, phenylalanine, tyrosine, and non-essential AA maintenance requirements for broiler breeders. J. M. Sun¹, M. Debeer*, N. K. Sakomura², C. N. Coon¹; ¹University of Arkansas, Fayetteville, ²Sao Paulo State University, Jabotcabal, Sao Paulo, Brazil
- W8 Comparison of Methionine Requirements Between an Alternative Slow-Growing Genotype and a Commercial Genotype During the Starter Period. A.C. Fanatico*, P.B. Pillai, J.L. Emmert; University of Arkansas, Fayetteville
- W9 Effect of Tap water Taurine Supplementation upon Mortality Rate by PHS; ascites, Body Weight and Haemotocrit in Broiler Chickens in Northern Mexico. Norma E. Dominguez-Avila*, Rafael Rodriguez-Martinez¹, Miguel Arenas-Vargas², Raul Villegas-Vizcaino¹, Jesus H. Del Rio-Martinez¹, Fausto Sanchez y Garcia Figueroa², Romulo Bañuelos-Valenzuela³; ¹Universidad Autonoma Agraria Antonio Narro Unidad Laguna Periferico y Carretera a Santa Fe, Torreon, Mexico, ²Universidad Autonoma Metropolitana Unidad Xochimilco México, D.F., ³Unidad Academica de Medicina Veterinaria y Zootecnia, UAZ El Cordobel, Enrique Estrada, Zacatecas, Mexico
- W10 Broiler Performance and Carcass Parameters of Broiler Fed Diets Containing Lysine Maize. Mary L. Taylor*, Beverly George², Young Hyun¹, Margaret A. Nemeth¹, Karu Karunanandaa¹, Troy T. Lohrmann³, Gary F. Hartnell¹; ¹Monsanto, Co., LLC, St. Louis, MO, ²Colorado Quality Research, Inc., Wellington, CO, ³Renessen, LLC, Bannockburn, IL
- W11 Effect of protein level and dietary germanium Biotite(Biotite V[®]) on egg production, egg quality and fecal volatile fatty acid in laying hens. W. B. Lee*, O. S. Kwon¹, B. J. Min¹, K. S. Son¹, J. W. Hong¹, Y. K. Han², I. H. Kim¹, Y. K. Jung³; ¹Department of Animal Resource & Science, Dankook University Cheonan, Korea, ²Livestock Research Institute, National Agricultural Cooperatives Federation Korea, ³Seobong BioBestech Co., Ltd Seoul, Korea
- W12 Interrelationship of threonine and glycine in growing broilers. A. Corzo*, M. T. Kidd¹, D. J. Burnham², S. L. Branton³, B. J. Kerr³; ¹Mississippi State University, ²Ajinomoto-Heartland, ³United States Department of Agriculture
- W13 Dietary spray-dried plasma protein improves feed utilization, BW uniformity, and breast-meat yield of broilers raised in a relatively unsanitary environment. K Bregendahl¹, D Ahn¹, D Trampel¹, J Campbell², J Crenshaw*²; ¹Iowa State University, Ames, ²APC Ankeny, IA
- W14 Comparison of biological efficacy of Alimet[®] feed supplement and DL-methionine in broilers. Kew M. Chee*, Jin H. Choi¹, Mahn K. Chung²; ¹College of Life Sciences and Biotechnology, Korea University, Seoul, Korea, ²Novus International Pte Ltd, Singapore

- W15 AA requirements for broiler breeders at peak production. J. M. Sun, M. Debeer*, K. Bramwell, C. N. Coon; University of Arkansas, Fayetteville
- W16 Dietary protein regulates short-term adaptations in lipogenic gene expression. R. W. Rosebrough*, B. A. Russell, S. M. Poch, M. P. Richards; Growth Biology Laboratory, ARS, USDA, Beltsville, MD
- W17 Efficacy of enzyme supplementation in laying hens fed diets based mainly on barley. M.I. Gracia*¹, A. Flores², E. McCartney³, M. Cortés¹, J. Sánchez¹; ¹Imasde Agropecuaria, S.L. Spain, ²Nutreco PRC Spain, ³Pen&Tec Consulting Spain
- W18 Metabolizable energy of meat and bone meal processed differently in broiler diets. M Moschini*¹, C Cerioli¹, L Fiorentini¹, M Morlacchini², G Piva¹; ¹Universita' Cattolica del Sacro Cuore, Piacenza - Italy, ²CERZOO San Bonico, Piacenza - Italy
- W19 True metabolizable energy and amino acid digestibility of distiller's dried grains with solubles. A. B. Batal*, N. M. Dale; Dept. Poultry Science, University of Georgia, Athens
- W20 Modelling Energy Utilization in Laying-type pullets. Nilva Sakomura*¹, Rafael Neme¹, Flavio Fialho², Elma Carrilho¹, Kleber Resende¹; ¹Faculdade de Ciencias Agrarias e Veterinarias-Universidade Estadual Paulista Jaboticabal-SP - Brazil, ²EMBRAPA Bento Gonçalves - RS
- W21 Effect of Defferent Feedstuffs on Endogenous Energy Losses of Roosters. Shaowei Zhai*¹, Guanghai Qi², Fuzhu Liu¹; ¹College of Animal Science, Northwest Sci-Tech University of Agriculture and Forestry, Yangling Shaanxi, China, ² Feed Research Institute, Chinese Academy of Agriculture Science, Zhongguancun, Beijing, China
- W22 Meeting metabolizable energy needs of broilers with corn-soy enzymes. Adriana Nogueira Figueiredo¹, Ronnie L. Dari*¹, E. Ernest M. Pierson², Milan Hruby³, Janet C. Remus², A. Mario Penz¹, T. H. D'Alfonso³; ¹Nutron Animal Nutrition Research Center Campinas, São Paulo, Brazil, ²Danisco Animal Nutrition, St. Louis, MO, ³Danisco Animal Nutrition Marlborough, Wiltshire, UK
- W23 Validation of dual energy X-ray absorptiometry (DXA) bone mineralization measures in broilers as an alternative to bone ash and breaking measures. R. Angel*¹, A. D. Mitchell², M. Christman¹; ¹Univ. of Maryland, College Park, ²USDA, Agricultural Research Service, Beltsville, MD
- W24 A novel organic selenium source (zinc-L-selenomethionine, Availa®Se) for broilers. Beverly George¹, Steve Davis¹, Terry L. Ward*²; ¹Colorado Quality Research, Wellington, ²Zinpro Corporation, Eden Prairie, MN
- W25 Interactive effects of Zn, Cu, and Mn supplementation in diets for chicks. J. L. Shelton*, L. L. Southern; Louisiana State University Agricultural Center, Baton Rouge
- W26 Phosphorus availability of distiller's dried grains plus solubles for male turkey poult. J.L. Kalbfleisch*, K.D. Roberson; Michigan State University, East Lansing
- W27 Effect of supplementing selenium yeast in diets of laying hens on egg selenium content. P. Utterback*¹, C. Parsons¹, I. Yoon², J. Butler²; ¹University of Illinois, Urbana, ²Diamond V Mills, Inc., Cedar Rapids, IA
- W28 Effects of Withdrawing Vitamin and or Trace Mineral Premixes from Grower and Finisher Diets of Broiler. A Kamyab, A M. Hosseini*, R mohammadzadeh, K Taherpour; University of Tehran, Karaj, Iran
- W29 Use of phytase and an enzyme complex containing a-amylase, xylanase and protease in commercial layers. J González*, S Cornejo, E Contreras, B Díaz, L Vera; Universidad de Chile, Facultad de Ciencias Veterinarias y Pecuarias Santa Rosa 11735 La Pintana, Santiago, Chile
- W30 Effect of microbial phytase in low phosphorus and calcium level diet on the performance and nutrient digestibility in laying hens. B. J. Min*¹, O. S. Kwon¹, W. B. Lee¹, K. S. Son¹, J. W. Hong¹, T. H. Moon², Y. K. Han³, I. H. Kim¹; ¹Department of Animal Resource & Science, Dankook University, Cheonan, Korea, ²InterMax System, Inc., Korea, ³Livestock Research Institute, National Agricultural Cooperatives Federation, Korea
- W31 Market Tom Turkey Performance and Dietary Phytase Inclusion. S. L. Noll*¹, J. Brannon¹, J. S. Sands²; ¹University of Minnesota, St. Paul, ²Danisco Animal Nutrition, Marlborough, Wiltshire, UK
- W32 Market Turkey Performance and Inclusion Level of Corn Distillers Dried Grains with Solubles. S. L. Noll*¹, J. Brannon¹, V. Stangeland²; ¹University of Minnesota, St. Paul, ²Stangeland Feed Consulting, Willmar, MN
- W33 Efficacy of Phyzyme® XP phytase in broiler diets containing different levels of calcium and non-phytate phosphorus: nitrogen retention and ileal amino acid digestibility. D.R. Ledoux*¹, J.N. Broomhead¹, J.S. Sands²; ¹University of Missouri, Columbia, ²Danisco Animal Nutrition Marlborough, Wiltshire, UK
- W34 Effects of phytase on the bioavailability of phosphorus in diets containing conventional or low-phytate corn and soybean meal for chicks. E. G. Xavier, G. L. Cromwell*, M. D. Lindemann; University of Kentucky, Lexington

- W35 Influence of phytase enzyme supplementation on the growth performance of broiler chicks. Ahmed S. Hussein*, Ahmed M. Yousif; United Arab Emirates University College of Food Systems, Al-Ain, UAE
- W36 The Use of Near-Infrared Reflectance Spectroscopy to Predict the Moisture, Dry Matter, Nitrogen, Total Phosphorus, and Phytase Phosphorus Contents in Broiler Litter. R.I. Bakalli¹, T.J. Frost², G.M. Pesti^{*1}, J.P. Driver¹, H.M. Edwards, Jr.¹; ¹Poultry Science Department, University of Georgia, ²Gold Kist, Inc., Atlanta, GA
- W37 Bioefficacy of probiotics in broiler diets. M.I. Gracia^{*1}, R.M. Engberg², A.E. Espinel³, M. Cortés¹, F. Baucells¹; ¹Imasde Agropecuaria, S.L. Spain, ²Danish Institute of Agricultural Sciences, Denmark, ³Norel, S.A., Spain
- W38 Effect of a probiotic containing two *Lactobacillus* strains on growth performance and population of bacteria in the ceca and carcass rinse of broiler chickens. Acie C. Murry, Jr.^{*1}, Arthur Hinton, Jr.², Richard J. Buhr²; ¹The University of Georgia, Athens, ²USDA/ARS, Athens, GA
- W39 Comparison of Broiler Performance When Fed Diets Containing Insect-Protected (MON 88017 or MON 88017 x MON 810), Control, or Commercial Corn. Mary L. Taylor^{*1}, Beverly George², Young Hyun¹, Margaret A. Nemeth¹, Karu Karunanandaa¹, Gary F. Hartnell¹; ¹Monsanto, Co., LLC, St. Louis, MO, ²Colorado Quality Research, Inc., Wellington
- W40 Comparison of Broiler Performance When Fed Diets Containing Corn With a Combination of Insect-Protected (MON 863, MON 810) and Glyphosate-Tolerant (NK603) Traits, Control, and Commercial Corn. Mary L. Taylor^{*1}, Beverly George², Young Hyun¹, Margaret A. Nemeth¹, Karu Karunanandaa¹, Gary F. Hartnell¹; ¹Monsanto Company, LLC, St. Louis, MO, ²Colorado Quality Research, Wellington
- W41 Influence of cereal, heat processing of the cereal, and inclusion of fiber in the diet on performance of broilers. E. Jimenez-Moreno¹, J.M. González-Alvarado², D.G. Valencia¹, R. Lázaro¹, G.G. Mateos^{*1}; ¹Universidad Politécnica de Madrid, Spain, ²Universidad Autónoma de Tlaxcala, México
- W42 Effect Of Varied Levels Of Expander Cone Pressure And Dietary Energy Level On Apparent Metabolizable Energy, Nitrogen Retention, And Turkey Poult Performance During The Period Day 7 To 21. K. J. Wilson*, K. R. Cramer, J. S. Moritz, R. S. Beyer; Department of Animal Science and Industry, Kansas State University, Manhattan
- W43 Bioavailability Of Lysine And Methionine In A Broiler Starter Diet Subjected To Varied Levels Of Expander Cone Pressure. K. J. Wilson*, K. R. Cramer, J. S. Moritz, R. S. Beyer; Department of Animal Science and Industry, Kansas State University, Manhattan
- W44 Influence Of Expander Cone Pressure On Apparent Metabolizable Energy, Nitrogen Retention And Broiler Performance During The Starter Phase. K. J. Wilson*, J. S. Moritz, K. R. Cramer, R. S. Beyer; Department of Animal Science and Industry, Kansas State University, Manhattan
- W45 Effect of dietary putrescine (1, 4-diaminobutane) on the small intestine protein and deoxyribonucleic acid concentration and morphometric indices in turkey poults challenged with a mixed coccidial infection. S.R. Girdhar*, J.R. Barta, T.K. Smith; University of Guelph
- W46 Effect of conjugated linoleic acid on antioxidant enzyme activities and lipid peroxidation in the intestine and liver of growing broiler chickens. I. S. Jang*, Y. H. Ko, H. Y. Yang, C. Y. Lee; RAIRC, Jinju National University, Jinju
- W47 Effect of early feed restriction on egg quality characteristics of Japanese quail. G. Contreras*, P.C. De la Rosa, C.B. Castro, J.J. Portillo, F.G. Rios; FMVZ-Universidad Autonoma de Sinaloa (Mexico) Carr. Culiacan-Mazatlan km 3.5
- W48 Effect of early feed restriction on productive performance and carcass characteristics of Japanese quail. C.B. Castro, G. Contreras*, F.G. Rios, J.J. Portillo; FMVZ - Universidad Autonoma de Sinaloa (Mexico) Carr. Culiacan-Mazatlan km 3.5
- W49 Adding thymol to a broiler diet influences in vitro cecal fermentation and in vivo growth performances. Andrea Piva*, Ester Grilli, Gabriele Casadei, Giacomo Biagi; DIMORFIPA - University of Bologna via Tolara di Sopra 50 - 40064 - Ozzano Emilia - Italy
- W50 Palm fatty acid distillate calcium soap as vegetable fat source for broiler diets. J. Sánchez¹, A. Gutiérrez², J.I. Fernández³, D. Menoyo⁴, P. Medel^{*1}; ¹Imasde Agropecuaria, S.L. Spain, ²Nutreco PRRC Spain, ³Norel, S.A. Spain, ⁴Universidad Complutense de Madrid Spain
- W51 Use of palm fatty acid distillate calcium soap as a vegetable fat source for broiler diets. M.I. Gracia^{*1}, A. Flores², J.I. Fernández³, J. Peinado¹, C. López-Bote⁴; ¹Imasde Agropecuaria, S.L. Spain, ²Nutreco PRRC Spain, ³Norel, S.A. Spain, ⁴Universidad Complutense de Madrid Spain
- W52 Processed Mucuna (*Mucuna pruriens*) seeds for broiler production. Eustace A. Iyayi*, Markus Rodehutschord; Institut für Ernährungswissenschaften Martin-Luther-Universität, Emil-Abdrhalden, Halle, Germany
- W53 Fat Quality Assessment of Feed and Pet Food-Grade Poultry By-Product Meals. W. A. Dozier, III^{*1}, N. M. Dale², A. F. Giesen³; ¹USDA-ARS Poultry Research Unit, Mississippi State, MS, ²The University of Georgia, Athens, ³Novus International, Inc. St. Louis, MO

- W54 Influence of boiling, Biogen® or spices mixture to Mangrove leaves on performance of egg type pullets. Ahmed Eldeek*, Mohamed Al-Harhi; King Abdulaziz University Faculty of Meteorology Environmental and Arid Land Agriculture, Jeddah, Saudi Arabia
- W55 Effects of Hippophae Rhomnoides Fruit Extract Supplementation on Egg Quality and Performance of Layers in the Wheat-based Diet. Fuzhu Liu*, Jin Fu, Zhuye Niu; Northwest Sci-Tech University of Agriculture & Forestry
- W56 The Effects of Inclusion of a Fermented Fish By Product Meal in Guinea Fowl (*Numida meleagris*) Diets on Performance and Carcass Quality. Mireille Argüelles*, Héctor L. Santiago, Abner A. Rodríguez; Department of Animal Science, University of Puerto Rico - Mayagüez Campus, Mayagüez, PR
- W57 Inclusion Of Coconut Meal In Broiler Initial Diets. Silvana Bastos, Maria de Fátima Fuentes*, Ednardo Freitas; Universidade Federal do Ceará, Departamento de Zootecnia, Fortaleza, CE, Brasil
- W58 Pea, Faba beans and Lupin as an alternative protein source in broiler diet. M Moschini*¹, F Masoero¹, A Prandini¹, M Morlacchini², G Fusconi², G Piva¹; ¹Universita' Cattolica del Sacro Cuore Via Emilia Parmense 84, Piacenza - Italy, ²CERZOO San Bonico, Piacenza - Italy
- W59 Influence of a paprika extract supplementaion on egg yolk color and performance of laying hens. Zhuye Niu*, Jing Fu, Fuzhu Liu; College of Animal Science & Technology, Northwest Sci-Tech University of Agriculture & Forestry
- W60 Fermenting sludge from a broiler processing plant: Effect of inoculation with lactic acid-producing bacteria. Suzika Pagán*, Rebeka Sanabria, Abner A. Rodríguez, Melvin Pagán; Deparment of Animal Science, University of Puerto Rico - Mayaguez Campus
- W61 Assessment of essential oils as potential substitutes for dietary antibiotics. Weiduo Si*¹, J. Gong¹, R. Cao¹, T. Zhou¹, H. Yu¹, C. Poppe², R Johnson², W. Du³; ¹Food Research Program, Agriculture and Agri-Food Canada, Guelph, ON, ²Laboratory for Foodborne Zoonoses, Health Canada, Guelph, ON, ³Ontario Ministry of Agriculture and Food, Guelph, ON

Nonruminant Nutrition Feedstuffs & Methodology

Abstract

- W62 Comparison of classical and marker method, using three different markers and two analytical techniques, for the measurement of apparent digestibility in swine. Liliana L. Oetting*¹, Adibe L. Abdalla², Jacinta D.F. Gomes³, Ana R.A. Nogueira⁴, Carlos E. Utiyama¹; ¹Escola Superior de Agricultura "Luiz de Queiroz" da Universidade de São Paulo, Piracicaba-SP, Brazil, ²Centro de Energia Nuclear na Agricultura da Universidade de São Paulo, Piracicaba-SP, Brazil, ³Faculdade de Zootecnia e Engenharia de Alimentos da Universidade de São Paulo, Pirassununga-SP, Brazil, ⁴Empresa Brasileira de Pesquisa Agropecuária-Centro de Pesquisa de Pecuária do Sudeste Rod., São Carlos-SP, Brazil
- W63 Comparison of the single dose and withdrawal method for measuring the rate of passage of swine basal diets using multiple markers and alternative analytical techniques. Liliana L. Oetting*¹, Adibe L. Abdalla², Jacinta D.F. Gomes³, Ana R.A. Nogueira⁴, Carlos E. Utiyama¹; ¹Escola Superior de Agricultura "Luiz de Queiroz" da Universidade de São Paulo, Piracicaba-SP, Brazil, ²Centro de Energia Nuclear na Agricultura da Universidade de São Paulo, Piracicaba-SP, Brazil, ³Faculdade de Zootecnia e Engenharia de Alimentos da Universidade de São Paulo, Pirassununga-SP, ⁴Empresa Brasileira de Pesquisa Agropecuária - Centro de Pesquisa de Pecuária do Sudeste Rod., São Carlos-SP, Brazil
- W64 International Life Sciences Institute crop composition database: documenting natural variability in crop composition. William P. Ridley*¹, Raymond D. Shillito², Lucyna Kurtyka³; ¹Monsanto Company, St. Louis, MO, ²Bayer CropScience, Research Triangle Park, NC, ³International Life Sciences, Washington, DC
- W65 Comparison of corn grain from biotech and non-biotech counterparts for grow-finish pig performance. H H Stein*¹, T Sauber², D Rice², M Hinds², D Peters¹, G Dana², P Hunst³; ¹South Dakota State University, Brookings, ²Pioneer Hi-Bred International Inc., Johnston, IA, ³Dow AgroSciences LLC, Zionsville, IN
- W66 Digestive fate of a *gdhA* gene from a genetically modified corn fed to growing pigs. X. Qiu*¹, G. A. Apgar¹, K. E. Griswold², J. M. Beagle¹, M. P. Martin¹, K. L. Jones¹, M. J. Iqbal¹, D. A. Lightfoot¹; ¹Southern Illinois University, Carbondale, ²Penn State University Extension, Lancaster
- W67 Herbicide-tolerant rice versus conventional rice in diets for growing-finishing pigs. G. L. Cromwell*¹, B. J. Henry², D. W. Fletcher³; ¹University of Kentucky, Lexington, ²Bayer CropScience LP, Research Triangle Park, NC, ³Genesis Midwest Laboratories, Neillsville, WI

- W68 Ultrastructural-chemical makeup of canola seed tissues explored with synchrotron reflection FTIR microspectroscopy: A preliminary study. P. Yu*¹, J. J. McKinnon¹, R. W. Newkirk², C. R. Christensen³, D. A. Christensen¹; ¹College of Agriculture, University of Saskatchewan, Saskatoon, Canada, ²Canadian International Grains Institute, Winnipeg, Canada, ³Canadian Light Source, Saskatoon, Canada
- W69 Proximate and amino acid composition in different sources of rice bran for pigs. C. Kaufmann¹, W. Sauer¹, M. Cervantes*², M. Rademacher³, J. He¹; ¹Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Canada, ²Instituto de Ciencias Agrícolas, Universidad Autónoma de Baja California Mexicali, BC, México, ³Degussa-Huls AG D-63457 Hanau-Wolfgang
- W70 Maturity zone effects on composition of soybean meals sampled from 55 U.S. processing plants. Lisa K. Karr-Lilienthal*, Chris M. Grieshop, Julie K. Spears, George C. Fahey, Jr.; University of Illinois, Urbana
- W71 Sensory tests reveal that the efficacy on masking capacity of a strawberry flavor changes with different protein sources and their level in feed. Inés Pérez-Portabella, Conchita Puyuelo, Carles Ibáñez, Josep Solà, Eugeni Roura*; Lucta SA Barcelona, Spain
- W72 An improved method for the rapid determination of phytase activity in animal feeds. T.W. Kim*, X.G. Lei; Cornell University Ithaca, NY
- W73 The effect of dietary calcium on indicators of bone turnover in mares. Bryan D Cassill*, Susan Hayes, Jennifer Ringler, Kristen Janicki, Laurie Lawrence; University of Kentucky, Lexington
- W74 Partitioning of metabolizable energy by rainbow trout and Atlantic salmon using a multivariate approach: species and diet effects. P.A. Azevedo*, S. Leeson, C.Y. Cho, S. Birkett, D.P. Bureau; University of Guelph, ON, Canada

Nonruminant Nutrition

Sow & Gilt Nutrition

Abstract #

- W75 Ideal protein to improve lactation performance of multiparous sows. F. Ji*¹, Y. G. Kim², S. W. Kim¹; ¹Texas Tech University, Lubbock, ²CJ Corporation, Seoul, Korea
- W76 Utilization of seaweed (*Macrocystis pyrifera*) meal in wheat-based diets for lactating sows. J. Baeza¹, M. Cervantes*², J. L. Figueroa¹, E. Chi¹, M. Cuca¹, N. Torrentera²; ¹Ganadería, Colegio de Postgraduados Montesillos, México, ²ICA, Universidad Autónoma de Baja California Mexicali, BC, México
- W77 The importance of dietary selenium on antioxidant status and hormonal profile in post-pubertal gilts. Marie-Ève Fortier*¹, Hélène Quesnel², Alain Giguère³, Jean-François Bilodeau¹, Jean-Paul Laforest¹, J. Jacques Matte³; ¹Université Laval Québec, QC, Canada, ²Institut de la Recherche Agronomique St-Gilles, France, ³Agriculture and Agri-Food Canada Lennoxville, QC, Canada
- W78 The effect of mannan oligosaccharides on reproductive performance in sows. P. Medel*¹, C. Piñeiro², A. Kocher³, F. Baucells¹, M. I. Gracia¹; ¹Imasde Agropecuaria, S.L. Spain, ²PigChamp Pro Europa Spain, ³Alltech Inc. Ireland
- W79 The influence of feed intake during mid-gestation on performance of pregnant sows and progeny growth: a preliminary study. A. Cerisuelo¹, R. Sala¹, J. Coma², D. Carrión*³, J. Gasa¹, M. Baucells¹; ¹Universitat Autònoma de Barcelona Spain, ²Agrocesa, S.A. Spain, ³PIC España, S.A. Spain

Ruminant Nutrition

Abstract #

- W80 The Effect of Distillers Dried Grains with Solubles as the Protein Source in a Creep Feed. Phillip Lancaster, James Williams*, Joel Corners, Lori Thompson, Denise McNamara, Mark Ellersieck; University of Missouri, Columbia
- W81 Effects of sire marbling EPD and creep feeding on feedlot performance and carcass characteristics of Hereford calves. J.E. Rossi*¹, T.D. Pringle², J.K. Bertrand²; ¹University of Georgia, Tifton, ²University of Georgia, Athens
- W82 Effects Of Feeding Byproducts On Animal Performance And Carcass Characteristics Of Finishing Beef Cattle Grazing Tropical Grass During Dry Season. André Alves Souza*³, Celso Boin¹, Marcelo Queiroz Manella¹, Antônio João Lourenço²; ¹ESALQ/USP Brazil, ²Instituto Zootecnia Brazil, ³UNESP Brazil

- W83 Effect of supplements of self feed on efficiency of microbial protein synthesis and excretion of N contents - urea on steers grazing *Brachiaria decumbens*, in the rainy season. Joanis Tilemahos Zervoudakis^{*1}, Mário Fonseca Paulino², Luciano Cabral¹, Edenio Detmann³, Sebastião de Campos Valadares Filho², Eduardo Henrique Bevitoni Kling de Moraes², Alexandre Lima de Souza¹; ¹Universidade Federal de Mato Grosso Av. Fernando Corrêa da Costa, s/n, Cuiabá-MT-Brazil, ²Universidade Federal de Viçosa Av. P.H. Rolphs, s/n, Viçosa, MG-Brazil, ³Universidade Estadual Norte Fluminense Av. Alberto Lamego, Campos dos Goytacazes-RJ, Brazil
- W84 Effects of CLA on tissue response to homeostatic signals and plasma lipid metabolism variables in growing beef steers. O.B. Mendivil*, C.E. Moore, H.C. Hafliger III, S.R. Sanders, G.C. Duff, L.H. Baumgard; The University of Arizona, Tucson
- W85 Dietary effect on n-3 fatty acids, CLA and C18:1trans isomers in beef and lamb meat. K. Nuernberg^{*1}, D. Dannenberger¹, G. Nuernberg¹, N. Scollan², W. Zupp³, K. Ender¹; ¹Research Institute of the Biology of Farm Animals, Dummerstorf, Wilhelm-Stahl-Allee 2, Germany, ²Institute of Grassland and Environmental Research Aberystwyth, UK, ³Research Institute of Agriculture and Fishery Mecklenburg-Pomerania, State Institute for Animal Production, Dummerstorf, W.-Stahl-Allee 2, Germany
- W86 Effect of CRINA RUMINANTS, a mixture of essential oil components, on continuous culture fermentation and milk production of lactating cows. G. Varga¹, E. Block^{*2}, P. Williams³, T. W. Cassidy¹, R. Losa⁴; ¹The Pennsylvania State University, University Park, ²Church & Dwight Co., Inc, Princeton, NJ, ³Akzo Nobel, Inc, Davis, CA, ⁴CRINA S.A., Gland, Switzerland
- W87 Milk production and milk fatty acid profiles of cows fed different carbohydrate sources and soybean oil. E.C. Eifert^{*1,2}, R.P. Lana^{1,2}, J.M.S. Campos¹, D.P.D. Lanna³, P.B. Arcuri⁴, M.I. Leão¹, R.D. Valadares¹; ¹Universidade Federal de Viçosa-DZO 36571-000, Viçosa, MG, Brazil, ²CNPq Brasília, DF, Brazil, ³LNCA-ESALQ/USP, ⁴CNPGL-EMBRAPA
- W88 Effects of increasing doses of a specific blend of essential oils on rumen nitrogen metabolism and fermentation profile in continuous culture system. Lorena Castillejos¹, Sergio Calsamiglia^{*1}, Alfred Ferret¹, Riccardo Losa²; ¹Universidad Autonoma de Barcelona Spain, ²AKZONOBEL/CRINA SA Gland, Switzerland
- W89 Effect of essential oils on ruminal fermentation in vitro. A. N. Hristov, J. K. Ropp, A. Melgar*; Department of Animal and Veterinary Science, University of Idaho, Moscow
- W90 The conjugated linoleic acid and ω -3 fatty acids in milk and cheese from cows fed calcium salts of fish oil alone or in combination with soybean products. S. L. Allred^{*1}, T. R. Dhiman¹, C. P. Brennand¹, R. C. Khanal¹, D. J. McMahon¹, N. D. Luchini²; ¹Utah State University, Logan, ²Bioproducts, Inc., Fairlawn, OH
- W91 Evaluation of the degree of rumen inertness and bioavailability of *trans*-10, *cis*-12 CLA in a lipid encapsulated supplement. A. L. Lock^{*1}, J. W. Perfield II¹, D. E. Putnam², D. E. Bauman¹; ¹Cornell University, Ithaca, NY, ²Balchem Encapsulates, New Hampton, NY
- W92 Milk fat conjugated linoleic acid in selected commercial dairies of Utah and Idaho. R. C. Khanal*, T. R. Dhiman; Utah State University, Logan
- W93 Synthesis of trans fatty acids and isomers of conjugated linoleic acid in the rumen of cows fed grass silage based diets supplemented with incremental levels of sunflower oil. Kevin J Shingfield^{*1}, Seppo Ahvenjärvi¹, Vesa Toivonen¹, Pekka Huhtanen¹, Mikko J Griinari²; ¹MTT Agrifood Research Finland Jokioinen, Finland, ²University of Helsinki Helsinki, Finland
- W94 Effect of fish oil and sunflower oil supplements offered alone or in varying combinations on milk fatty acid composition in cows fed maize silage based diets. Kevin J Shingfield^{*1}, Christopher K Reynolds¹, David J Humphries¹, Berit Lupoli¹, Vesa Toivonen², Alistair S Grandison³, Mikko J Griinari⁴, David E Beever¹; ¹Centre for Dairy Research, University of Reading Reading, UK, ²MTT Agrifood Finland Jokioinen, Finland, ³School of Food Biosciences, University of Reading Reading, UK, ⁴University of Helsinki Helsinki, Finland
- W95 Effects of rumen-protected fatty acid saturation on ruminal and total tract nutrient digestion in lactating dairy cows. K.J. Harvatine*, M.S. Allen; Michigan State University, East Lansing
- W96 Effect of Ca Salts of Palm and Fish Oils on Lactation and Reproduction of Dairy Cows Under Heat Stress. R.G.S. Bruno^{*1}, K.N. Galvao¹, S.O. Juchem¹, W.W. Thatcher², E.J. DePeters¹, D. Luchini³, J.E.P. Santos¹; ¹University of California Davis VMTRC, Tulare, ²University of Florida, Gainesville, ³Bioproducts, Inc.
- W97 Modulation of bovine hepatic lipid metabolism by fatty acids. J.A.A. Pires^{*1}, R.R. Grummer¹, D.G. Mashek¹, S.J. Bertics¹, D. Pirazzi², U. Bernabucci²; ¹University of Wisconsin, Madison, ²Università della Tuscia Viterbo, Italia
- W98 Milk fatty acid composition and lactation performance of cows fed linseed oil or fish oil in combination with sunflower seeds. K. F. Kalscheur*, A. R. Hippen, D. J. Schingoethe; South Dakota State University, Brookings
- W99 The effect of dilution rate and pH on the conversion of stable isotopically labeled oleic acid to trans monoenes in continuous cultures. A. A. AbuGhazaleh*, M. B. Riley, T. C. Jenkins; Clemson University, Clemson, SC

- W100 Feeding encapsulated ground full-fat soybean or sunflower oil gel containing tocopheryl acetate to increase tocopherol and linoleic acid levels in lamb carcass. Jung H Lee^{*2,1}, Sharon L Melton¹, John C Waller¹; ¹University of Tennessee Agricultural Experimental Station, Knoxville, ²Fort Valley State University, Georgia Small Ruminant Research Center, Fort Valley
- W101 Corn silage hybrid quality effects on milk production in dairy cows. D.J.R. Cherney^{*}, J.H. Cherney, L.E. Chase, W.J. Cox; Cornell University, Ithaca, NY
- W102 Variation throughout lactation and between herds in maintenance energy expenditures of dairy cows estimated from energy balance data. J.L. Ellis^{*}, F. Qiao, J.P. Cant; The University of Guelph, Guelph, ON
- W103 Effect of an amino polysaccharide on production and composition of milk of Holstein and Jersey cows in México. G. González-Luna¹, J. Sánchez-Meraz¹, S. S. González^{*1}, J. Pinos-Rodríguez², R. Bárcena-Gama¹, Ma. E. Ortega-Cerrila¹, S. Infante-Gil¹; ¹Colegio de Postgraduados Montecillo, Estado de México, México, ²Universidad Autónoma de San Luis Potosí UASLP, Estado de San Luis Potosí, México
- W104 Replacing Chopped Alfalfa Hay with Alfalfa Silage in Barley Grain and Alfalfa Based Total Mixed Rations for Lactating Dairy Cows. J.C. Plaizier^{*}; Department of Animal Science, University of Manitoba
- W105 Soybean hulls and corn gluten feed for replacing corn silage neutral detergent fiber in total mixed rations of lactating cows. Milton Lima^{*1}, Luiz Gustavo Nussio², Wilson Mattos²; ¹Universidade Federal de Goiás, Escola de Veterinária, DPA Campus II, Goiânia, GO, Brazil, ²Escola Superior de Agricultura Luiz de Queiroz Av. Pádua Dias, Piracicaba, SP, Brazil
- W106 Effects of dietary forage and non-fiber carbohydrate concentrations on apparent B-vitamin synthesis in dairy cows. E. C. Schwab^{*1}, C. G. Schwab², C. L. Girard³, R. D. Shaver¹, D. E. Putnam⁴, N. L. Whitehouse²; ¹University of Wisconsin Madison, ²University of New Hampshire, Durham, ³Dairy and Swine R&D Center, AAC, QC, Canada, ⁴Balchem Encapsulates, New Hampton, NY
- W107 Effects of physically effective NDF on chewing activity and rumen pH of dairy cows fed diets based on corn silage. Wen Z. Yang^{*}, Karen A. Beauchemin; Research Center, Agriculture and Agri-Food Canada, Lethbridge, AB, Canada
- W108 Effect of physical and heat processing of cottonseed on chewing activity of Holstein dairy cows. A.R. Foroughi^{*}, A. A. Naserian, R. Valizadeh, M. Danesh Mesgaran; Ferdowsi University of Mashhad
- W109 Relationship between TMR, corn silage particle size and manure evaluation in dairy cows. G Mancin¹, V Dell'Orto², G Savoini^{*2}; ¹Dept. of Morphology, Biochemistry, Physiology and Animal Productions, University of Messina, Italy, ²Dept. of Veterinary Sciences and Technologies for Food Safety, University of Milan, Italy
- W110 Intake and milk production of cows fed diets that differed in dietary NDF and NDF digestibility. C. Kendall^{*}, D. K. Combs; University of Wisconsin, Madison
- W111 Effect of physical forms of concentrate on milk composition and milk production of lactating Holstein cows. Julio Teixeira^{*}, Beatriz Madeira, Lucia Teixeira, Mariana Santos; Universidade Federal de Lavras, Lavras, MG, Brasil
- W112 Daily and diurnal variations in fecal ratios of n-alkanes concentrations in lactating cows grazing a tropical plant. Dimas Estrásulas de Oliveira^{*2}, Sérgio Raposo de Medeiros³, Luís Januário Magalhães Aroeira⁴, Dante Pazzanese Duarte Lanna⁵; ¹FAPESP, ²Agroceres Nutrição Animal, ³Embrapa Gado de Corte, ⁴Embrapa Gado de Leite, ⁵USP/ESALQ
- W113 Changes in milk fatty acids during transition of dairy cows from diets based on conserved forage and grain to pasture. G. Aguiar, T. R. Dhiman^{*}, A. L. Ure, S. F. Porter, L. L. Jeffs; Utah State University, Logan
- W114 Preparation of fresh forage for *in vitro* and *in sacco* incubations. A.V. Chaves¹, G.C. Waghorn^{*2}, I.M. Brookes¹; ¹Institute of Food, Nutrition and Human Health, Massey University, Palmerston North, New Zealand, ²Dexel Limited, Hamilton, New Zealand
- W115 Inducing subacute ruminal acidosis (SARA): Effects on ruminal pH, DMI, and milk production. K. M. Krause^{*}, G. R. Oetzel; School of Veterinary Medicine, University of Wisconsin, Madison
- W116 The effects of monensin on feed intake pattern during sub-acute ruminal acidosis in dairy cows. D. E. Lunn¹, T. Mutsvangwa¹, N. E. Odongo^{*1}, T. F. Duffield², R. Bagg³, P. Dick³, G. Vessie³, B. W. McBride¹; ¹Department of Animal and Poultry Science University of Guelph, Guelph, ON, Canada, ²Department of Population Medicine University of Guelph, Guelph, ON, Canada, ³Elanco Animal Health Division, Eli Lilly Canada Inc. Guelph, ON, Canada
- W117 Diet digestibility and rate of passage in Jersey and Holstein Friesian cows during transition. P. C. Aikman^{*1}, A. Boydell², A. Le Gallais³, D. J. Humphries¹, C. K. Reynolds⁴, D. E. Beever¹; ¹CEDAR, The University of Reading UK, ²BOCM PAULS Ltd Bristol, UK, ³Jersey Milk Marketing Board St. Saviour, Jersey, ⁴The Ohio State University, Wooster

- W118 The effects of glucogenic supplements prepartum and calcium soap of fatty acids postpartum on production and peripartum metabolites in high producing dairy cows. Uzi Moallem^{*1}, Hana Lehrer¹, Maya Katz^{1,2}, David Sklan²; ¹Department of Dairy Cattle, Institute of Animal Science, ARO POB 50250, Israel, ²Animal Science Department, Faculty of Agriculture, Hebrew University Rehovot, Israel
- W119 Physiological responses of Holstein cows fed rations with glucogenic supplements during the transition period. T.I. Belloso^{*1}, M.J. Hayen¹, M. Liboni¹, M.S. Gulay¹, F. Valdez², H.H. Head¹; ¹University of Florida, Gainesville, ²Kemin Americas, Lancaster, OH
- W120 Ruminant and plasma responses in dairy cows to drenching or feeding glycerol. Pete L. Linke^{*1}, Jeff M. DeFrain¹, Arnold R. Hippen¹, Phillip W. Jardon²; ¹South Dakota State University, Brookings, ²West Central Soy, Ralston, IA
- W121 Adipose tissue metabolism, feed intake and milk production in response to dietary calcium propionate and chromium propionate from 21 days prepartum to 35 days postpartum in Holstein dairy cattle. John P. McNamara^{*1}, Fernando Valdez²; ¹Washington State University, Pullman, ²Kemin Industries, Inc., Des Moines IA
- W122 Effect of rumen protected choline on liver metabolism in periparturient dairy cows. P. Elek^{*1}, F. Husv eth², T. Ga al³, J. R. Newbold⁴; ¹AGROKOMPLEX C. S. Co. Zichy ufalu, Hungary, ²Veszpr em University Keszthely, Hungary, ³Szent Istv an University Budapest, Hungary, ⁴Provimi Research and Technology Centre Brussels, Belgium
- W123 Supplemental Choline for Prevention and Alleviation of Fatty Liver. Reinaldo R. Cooke, Ric R. Grummer^{*}, Sandra J. Bertics, Daniel Z. Caraviello, Marcelo H. Ramos, Noelia Silva del Rio; Univeristy of Wisconsin-Madison
- W124 Feeding soybeans and rumen-protected choline to dairy cows during the periparturient period and early lactation. 1. Effects on production and energy balance. W.A. Oelrichs^{*}, M.C. Lucy, M.S. Kerley, J.N. Spain; University of Missouri - Columbia
- W125 Feeding soybeans and rumen-protected choline to dairy cows during the periparturient period and early lactation. 2. Effects on reproduction. W.A. Oelrichs^{*}, M.C. Lucy, M.S. Kerley, J.N. Spain; University of Missouri-Columbia
- W126 Estimation of VFA and Glucose Kinetics on Transition Dairy Cows provided monensin. X. Markantonatos^{*1}, Y. Aharoni³, T. Cassidy¹, R. K. McGuffey², L. F. Richardson², G. A. Varga¹; ¹The Pennsylvania State University, ²ELANCO Animal Health, Greenfield, IN, ³ARO, Neve Yaar Research Center, Israel
- W127 Effect of level of prepartum alimentation in dairy cows on milk production, mRNA expression for gluconeogenic enzymes, and liver triglyceride concentration. J R Townsend^{*}, S S Donkin; Department of Animal Sciences, Purdue University, West Lafayette, IN
- W128 Nicotinic acid supplemented at a therapeutic level minimizes prepartum feed intake depression in dairy cows. P. D. French^{*}; Oregon State University, Corvallis
- W129 The effects of supplemental anionic salt fed during the periparturient period: Implications of milk production and feed intake for high producing dairy cows. James Spain, R.J. Vogel^{*}, J.D. Sampson; University of Missouri - Columbia
- W130 Effects of dry period length on performance and health of dairy cows during the subsequent lactation. J. Fernandez^{*}, C. M. Ryan, D. M. Galton, T. R. Overton; Cornell University, Ithaca, NY
- W131 Effects of Tri-LutionTM on Immune Response in the Pre-Fresh Dairy Cow. D. Jones^{*}, D. Spangler, and R. Arendt; Agri-King, Inc., Fulton, IL
- W132 Effect of feeding red clover or ryegrass silage to dry dairy cows on nitrogen balance and blood metabolites. J. M. Moorby^{*1}, P. H. Robinson², R. T. Evans¹; ¹Institute of Grassland and Environmental Research, Aberystwyth, UK, ²UCCE, Dept. of Animal Science, University of California, Davis
- W133 Estimations of milk production by the NRC and the Cornell models when ruminal N balance was negative and MP was limiting. H. Kajikawa^{*1}, T. Koga², S. Ishizaki³, H. Shinohara⁴, K. Akutsu⁵, S. Sato⁶, K. Shimizu⁷, T. Tamura⁸, M. Seki⁹; ¹Natl. Inst. Livest. Grassl. Sci. Tsukuba, Ibaraki, Japan, ²Nagano Anim. Ind. Exp. St. Shiojiri, Nagano, Japan, ³Chiba Pref. Livest. Res. Center Yachimata, Chiba, Japan, ⁴Gunma Anim. Husbandry Exp. St. Fujimi, Gunma, Japan, ⁵Tochigi Pref. Dairy Exp. Inst. Nishinasuno, Tochigi, Japan, ⁶Aichi-ken Agric. Res. Center Nagakute, Aichi, Japan, ⁷Yamanashi Pref. Dairy Exp. St. Nagasaka, Yamanashi, Japan, ⁸Tokyo Metropolitan Livest. Exp. St. Ome, Tokyo, Japan, ⁹Niigata Livest. Res. Center Shitada, Niigata, Japan
- W134 Prediction of Nutrient Supply to Dairy Cows from Concentrates: Comparison of the National Research Council-2001 Model with the Dutch System (DVE/OEB). P. Yu^{*}; Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK, Canada
- W135 Nutritive value of processed field tick beans predicted by two dairy models (NRC and DVE/OEB). P. Yu^{*1}, B. J. Leury², A. R. Egan²; ¹Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK, Canada, ²School of Agriculture and Food Systems, University of Melbourne Parkville, Victoria, Australia

Production, Management and the Environment

Nutrition and Environment

Abstract

- W136 Application of manure screening as an on farm a tool to evaluate the animal/diet interface. M.J. Jerred*¹, T.G. Brion¹, S.R. Burghardi¹, K. A. Ruppel², M. A. Messman¹; ¹Cargill Animal Nutrition, Elk River, MN, ²Cargill Animal Nutrition, Albany, NY
- W137 Prediction of urine N excretion from creatinine and milk urea nitrogen in primiparous and multiparous cows. S.A. Flis*, M.A. Wattiaux; University of Wisconsin-Madison
- W138 Identifying dairy farms facing challenges in P management. Virginia A Ishler*, Les E Lanyon; Pennsylvania State University, University Park
- W139 The effect of TASC0 meal, on body temperature, respiration rate, horn flies, hair score and calf immunoglobulin levels in beef cows. Richard R. Evans*, John E. Huston, Tim F. Best; Mississippi State University, Prairie
- W140 Efficacy of yeast ferment as urease inhibitor on controlling ammonia emission from manure slurry. Soonok Park*¹, Sejong Oh², Saehun Kim¹; ¹Division of Food Science, Korea University, ²Department of Animal Science, Chonnam University
- W141 Benefits of reducing the volume of cleaning wastewater on large dairy farms. Jennifer K Diehl*, W James Harper; The Ohio State University, Columbus
- W142 Composting organic wastes from a commercial slaughter house in Puerto Rico. Rebeka Sanabria-León*, Abner A. Rodríguez, Héctor L. Santiago; University of Puerto Rico Mayagüez Campus, Mayagüez, PR
- W143 Effects of pit flushing frequency on farrowing house odor and gas concentrations. Janelle M. Schlipf*, Mike Ellis, Jibin Ni, Yuanhui Zhang, Atilla Mutlu, Ted L. Funk; University of Illinois, Urbana-Champaign
- W144 Evaluation of round bale feeding sites on soil fecal bacteria and nutrient concentrations. N. A. Lenehan, J. M. DeRouchey*, T. T. Marston, M. L. Christian, G. L. Marchin; Kansas State University, Manhattan

Beef Species

Management and Performance

Abstract

- W145 Evaluation of SafeGuard® (fenbendazole) oral drench in addition to Ivomec® (ivermectin) pour-on on performance and carcass merit of finishing heifers. C.D. Reinhardt*, J.P. Hutcheson, W.T. Nichols; Intervet, Inc., Millsboro, DE
- W146 Examination of reproduction and weaning results in Limousin cattle population in Hungary. Ferenc Szabo*¹, Zoltan Lengyel¹, Sandor Balika², Ildiko Erdei¹, David Marton¹, Timea Major¹, Szabolcs Bene¹; ¹University of Veszprem Georgikon Faculty of Agriculture Deak F. u. 16. 8360 Hungary, ²Hungarian Limousin Association Loportar u. 16. Budapest 1136 Hungary
- W147 Predictors of the final carcass grades in crossbred steers. Katsuji K. Uetake*¹, Toshie T. Ishiwata¹, Naoshige N. Abe², Yusuke Y. Eguchi¹, Toshio T. Tanaka¹; ¹School of Veterinary Medicine, Azabu University, Sagamiara, Japan, ²Faculty of Agriculture, Tamagawa University, Machida, Japan
- W148 Evaluation of implant strategy and days on feed on performance and carcass merit of finishing yearling steers. John P. Hutcheson*¹, Wade T. Nichols¹, Chris R. Reinhardt¹, Spencer R. Swingle², Kendall J. Karr²; ¹Intervet, Inc., Millsboro, DE, ²Cactus Research, Ltd., Amarillo, TX
- W149 Comparison of weaning and yearling ultrasonic measures of body composition in angus breeding cattle. Tommy Perkins*, Arbindra Rimal; Southwest Missouri State University, Springfield
- W150 Effects of an artificial sweetener (Sucram C-150) on performance and health of newly received beef cattle. J. D. Rivera*¹, John T. Richeson¹, Michael L. Galyean¹, Whitney Rounds², Patrick Schlegel³; ¹Texas Tech University, Lubbock, ²Prince Agri Products, Inc., Quincy, IL, ³Pancosma Geneva, Switzerland
- W151 Effect of shade in feedlot pen on growth performance response of finishing beef cattle the cold season in the northwest of Mexico. R. Barajas*¹, B.J. Cervantes¹, R.J. Virgilio², P. Castro²; ¹FMVZ-Universidad Autonoma de Sinaloa (Mexico) Carr. Culiacan-Mazatlan km 3.5, ²Tecnologia de Maxima Produccion S.A. de C.V. Boulevard Enrique Cabrera, Sector Humaya

- W152 Effect of hormonal implant failure on growth performance response of finishing beef cattle re-implanted during raining hot season in the northwest of Mexico. R. Barajas*¹, B.J. Cervantes¹, R.J. Virgilio², P. Castro²; ¹FMVZ-Universidad Autonoma de Sinaloa (Mexico) Carr. Culiacan-Mazatlan km 3.5, ²Tecnologia de Maxima Produccion S.A. de C. V. Blvd. Enrique Cabrera Sector Humaya
- W153 Long term comparative trial of ear tags and ceramic boluses for the electronic identification of beef cattle under European rangeland conditions. J. J. Ghiradi^{1,2}, G. Caja¹, C. Conill¹, M. Hernández-Jover*¹, D. Garín^{1,3}; ¹Universitat Autonoma de Barcelona, Bellaterra, Spain, ²Universidad Nacional del Litoral, Esperanza, Argentina, ³Universidad de la República, Montevideo, Uruguay
- W154 Comparison of pre-yearling, yearling, and post-yearling ultrasonic measurements of body composition in Brahman bulls. Tracy D. Jennings*¹, Tommy Perkins¹, Joe C. Paschal²; ¹Southwest Missouri State University, Springfield, ²Texas A&M University, Corpus Christi
- W155 Cow-calf efficiency of four different dam genotypes. L. Calegare¹, M. M. Alencar², G. M. Cruz², D. P. D. Lanna*¹; ¹Animal Growth and Nutrition Lab. ESALQ/USP Piracicaba, SP, Brazil, ²Brazilian Southeast Cattle Research Center
- W156 Efficacy and persistency of pour-on dewormers differing in active ingredient and carrier on weight gain and fecal egg count in stocker beef cattle. Jonathon L Beckett*¹, Brian P Wetzel¹, Tim Richards², Bill Clymer³; ¹Cal Poly State University, San Luis Obispo, ²Kahua Ranch, Ltd, Kamuela, HI, ³Fort Dodge Animal Health, Overland Park, KS
- W157 Ultrasound and carcass measures of different biological types of beef cattle developed under a rotational management-intensive grazing system. M. L. Thomas*¹, T. L. Perkins², A. H. Brown, Jr.¹, R. T. Baublits¹, D. W. Kellogg¹, Z. B. Johnson¹; ¹University of Arkansas, ²Southwest Missouri State University
- W158 Effect of feeding corn silage diets on reduction of drinking water intake and growth performance of cattle in feedlot under hot humid weather in the Northwest of Mexico. R. Barajas*¹, B.J. Cervantes¹, A. Camacho¹, R.J. Virgilio², P. Castro², E. Sanchez³; ¹FMVZ - Universidad Autonoma de Sinaloa Carr. Culiacan - Mazatlan km 3.5, ²Tecnologia de Maxima Produccion S.A. de C.V. Blvd. E. Cabrera, Sector Humaya, ³UAEGES Carr. Culiacan-Sanalona, km 3
- W159 The Effect Of Different Types Of Morphologically Abnormal Spermatozoa On Bovine Embryo Development After IVF. Anneke H. Walters*¹, W.E. Eyestone², R.G. Saacke¹, R.E. Pearson¹, F.C. Gwazdauskas¹; ¹Department of Dairy Science, Virginia Polytechnic Institute and State University, ²Department of Large Animal Clinical Science, Virginia Polytechnic Institute and State University

Goat Species

Abstract

- W160 Replacement of alfalfa neutral detergent fiber with a combination of nonforage fiber sources on ruminal pH and performance in Alpine goats raised under natural conditions in northern Mexico. Pedro Antonio Robles-Trillo*¹, Leodan Garcia-Palestina¹, Edgar De Lazaro-Urbina¹, Rafael Rodriguez-Martinez¹, Romulo Bañuelos-Valenzuela²; ¹Universidad Autonoma Agraria Antonio Narro Unidad Laguna Periferico y Carretera a Santa Fe, Torreon, Mexico, ²Unidad Academica de Medicina Veterinaria y Zootecnia, UAZ Calera de Victor Rosales, Mexico
- W161 Influence of diet and gut fill on blood metabolites and fecal shedding of E. coli in sheep and goats. V. R. Gutta*, G. Kannan, B. Kouakou, K. M. Gadiyaram, W. R. Getz, G. W. McCommon, Y. Lan; Fort Valley State University, Fort Valley, GA
- W162 Effect of different levels of food and water deprivation on serum levels of catecholamines, glucose, and creatinine in Mexican-native goats. C Meza, RM Rincon, R Bañuelos, F Echavarría, CF Arechiga*; Universidad Autonoma de Zacatecas Zacatecas, Mexico
- W163 Effect of buck presence on frequency, amplitude, and concentration of luteinizing hormone (LH) in Mexican-native goats exposed to artificial photoperiod. RM Rincon*¹, CF Arechiga¹, FJ Escobar¹, MA Lopez¹, J Valencia²; ¹Universidad Autonoma de Zacatecas Zacatecas, Mexico., ²Universidad Nacional Autonoma de Mexico, Mexico, D.F.
- W164 Mineral content of diets selected by range criollo goats in a poor condition shrubland of north Mexico. M.A. Cerrillo-Soto*, G. Nevarez-Carrasco, R. Montoya-Escalante, A.S. Juarez-Reyes; Universidad Juarez del Estado de Durango Durango, Dgo. Mexico
- W165 Mineral content of forage selected by goats grazing an oak shrubland in north Mexico. M.A. Cerrillo-Soto*, G. Nevarez-Carrasco, R. Montoya-Escalante, A.S. Juárez-Reyes; Universidad Juárez del Estado de Durango Durango, Dgo. México

- W166 Silymarin administration to transition dairy goats: effects on liver tissue and plasma metabolites. Doriana Tedesco*¹, Sara Galletti¹, Daniela Olivero², Marco Tameni¹, Stefania Rossetti¹; ¹Department of Veterinary Sciences and Technologies for Food Safety Via Celoria, Milan, Italy, ²BiEsseA Via Amedeo D'Aosta, Milan, Italy
- W167 Assay of antibiotic residues in goat milk. Mohammad Bsharat*, Rahmat Attaie; Prairie View A&M University Prairie View, TX
- W168 Evaluation of Mimosa (*Albizia julibrissin*) and Leucaena (*Leucaena leucocephala*) as feeds for goats. Jada Q. Bing*, Robert N. Corley III; Tuskegee University, Tuskegee, AL
- W169 Evaluation of *Albizia julibrissin* (mimosa) for internal parasite control in goats. Carla Hopkins-Shoemaker*¹, Sandra Solaiman², Byron Blagburn¹, David Bransby¹, Chris Kerth¹; ¹Auburn University, Auburn, AL, ²Tuskegee University, Tuskegee, AL
- W170 The use of crawfish meal waste as a protein source for feeding goats. Sebhatu Gebrelul*, C. Reuben Walker, Antonio Harris, Arthur Dantzler; Southern University and A&M College SU Agricultural Research and Extension Center, Baton Rouge, LA
- W171 Evaluation of three novel anthelmintics to control internal parasites in female Boer goats. R Franco*¹, M Worku¹, J Miller², D Libby¹, T Hanner¹, P Matterson¹; ¹North Carolina Agricultural and Technical State University, Greensboro, ²Louisiana State University, Baton Rouge
- W172 Evaluation of diatomaceous earth as a component of goat production practices. C Bernard*, M Worku, P Matterson, D Libby, T Hanner, M Ahmedna; North Carolina Agricultural and Technical State University, Greensboro
- W173 Effect of two levels of energy supplementation on forage intake, growth, and blood parameters in Boer and Kiko-sired crossbred kids. Stephan Wildeus¹, Kenneth E. Turner*², Joni R. Collins¹; ¹Virginia State University, Petersburg, ²USDA, ARS, AFSRC, Beaver, WV
- W174 Effects of the number of yearling Boer crossbred wethers per automated feeding system on feed intake, feeding behavior, and growth performance. A. L. Goetsch*, T. A. Gipson, G. Detweiler, R. C. Merkel, T. Sahl; E (Kika) de la Garza American Institute for Goat Research, Langston University, Langston, OK
- W175 Influence of progesterone on synchronization and pregnancy rate of Alpine does. M. L. Looper*¹, R. C. Merkel², E. R. Loetz², A. L. Goetsch², L. J. Dawson³, J. M. Burke¹, R. Flores⁴; ¹USDA-ARS, Dale Bumpers Small Farms Research Center Booneville, AR, ²E (Kika) de la Garza American Institute for Goat Research, Langston University, Langston, OK, ³College of Veterinary Medicine, Oklahoma State University, Stillwater, ⁴University of Arkansas, Fayetteville
- W176 Effect of breed and litter size on yields of milk, milk fat, and milk protein in Boer x Spanish and Spanish does. B. Tamir, R. C. Merkel*, T. A. Gipson, A. L. Goetsch; E (Kika) de la Garza American Institute for Goat Research, Langston University Langston, OK
- W177 Evaluation of predictions of body weight and feed intake by growing crossbred Boer goats with a goat simulation model. M. Villaquiran*¹, L. C. Nuty², T. A. Gipson¹, A. L. Goetsch¹, H. D. Blackburn³; ¹E (Kika) de la Garza American Institute for Goat Research, Langston University, Langston, OK, ²Cooperative Agricultural Research Center, Prairie View A&M University, Prairie View, TX, ³USDA/ARS/NPA/NSSL/NAGP, Fort Collins, CO
- W178 Goats for vegetation management: animal performance and carrying capacity. S. Hart*, J. Joseph, A. Goetsch; E (Kika) de la Garza American Institute for Goat Research, Langston University, Langston, OK
- W179 Effects of feed restriction on heat production by mature meat goats. I. Tovar-Luna*, A. L. Goetsch, R. Puchala, T. Sahl; E (Kika) de la Garza American Institute for Goat Research, Langston University, Langston, OK
- W180 Effects of length of pasture access on energy use by growing meat goats. T. Berhan, R. Puchala*, R.C. Merkel, T.A. Gipson, G. Animut, A.L. Goetsch, T. Sahl; E (Kika) de la Garza American Institute for Goat Research, Langston University, Langston, OK
- W181 Effects of pasture inclusion of mimosa on growth by co-grazing goats and sheep. G. Animut*^{1,2}, A.L. Goetsch¹, G.E. Aiken³, R. Puchala¹, G. Detweiler¹, C.R. Krehbiel², R.C. Merkel¹, T. Sahl¹, L.J. Dawson⁴, Z.B. Johnson⁵; ¹E (Kika) de la Garza American Institute for Goat Research, Langston University, Langston, OK, ²Animal Science Department, Oklahoma State University, Stillwater, ³USDA ARS Dale Bumpers Small Farms Research Center, Booneville, AR, ⁴College of Veterinary Medicine, Oklahoma State University, Stillwater, ⁵Department of Animal Science, University of Arkansas, Fayetteville

Animal Behavior and Well-being

Abstract

- W182 A computerized system for monitoring feeding behavior and individual feed intake of dairy cattle in loose-house conditions. Alex Bach*^{1,2}, Cristina Iglesias², Isabel Busto³; ¹ICREA, Barcelona, Spain, ²IRTA-Unitat de Remugants, Barcelona, Spain, ³Diputació de Girona, Semega, Girona, Spain
- W183 A Comparison of Three Animal Welfare Assessment Programs on California Dairies. C.L. Stull¹, B.A. Reed*², S.L. Berry¹; ¹University of California Cooperative Extension, Davis, ²University of California Cooperative Extension, Orland
- W184 Effects of feed barrier design on feeding and social behavior of loose housed dairy cows. M. I. Endres*¹, M. A. G. von Keyserlingk², T. J. DeVries², D. M. Weary²; ¹University of Minnesota, St. Paul, ²The University of British Columbia, Vancouver, Canada
- W185 The Effect of Feed Intake Levels on Behaviors of Transition Dairy Cows. K.J. Daniels*, J.R. Townsend, S.S. Donkin, E.A. Pajor, A.G. Fahey, M.M. Schutz; Purdue University, West Lafayette, IN
- W186 Suckling latency in neonatal Holstein calves. H. E. Carpenter*, J. S. Birney, K. A. Koudele; Andrews University, Berrien Springs, MI
- W187 Subsequent effects of an environmental enrichment in the early fattening stage of beef cattle on their behavior, physiology and productivity. Toshie T. Ishiwata*¹, Katsuji K. Uetake¹, Naoshige N. Abe², Yusuke Y. Eguchi¹, Toshio T. Tanaka¹; ¹School of Veterinary Medicine, Azabu University, Sagamihara, Japan, ²Faculty of Agriculture, Tamagawa University, Machida, Japan
- W188 Effect of increasing sodium bicarbonate proportion in high concentrate diets on performance, intake, water consumption and feeding behavior in finishing beef heifers. L. González*, A. Ferret, S. Calsamiglia, X. Manteca; Universitat Autònoma de Barcelona Edifici V, Campus UAB, Bellaterra, Barcelona, Spain
- W189 Can sheep learn to minimise the length of their foraging path? Andrew J. Rook*, James E. Cook; Institute of Grassland and Environmental Research North Wyke, Okehampton, Devon, UK
- W190 ***We have ways of getting you to . . . behave!*** Jocelyn K Haskell*, Fredrick D Provenza; Department of Forestry, Range and Wildlife, Utah State University, Logan
- W191 Effects of fescue toxicosis on CYP3A4 in rats at thermoneutrality. R.S. Settivari*, V.C. Dhulipala, P.A. Eichen, L.E. Wax, T.J. Evans, G.E. Rottinghaus, D.E. Spiers; University of Missouri, Columbia
- W192 Dose-response relationship between ergovaline and physiological changes associated with fescue toxicosis. P. A. Eichen*, D. E. Spiers, G. E. Rottinghaus; University of Missouri, Columbia
- W193 Housing effect on behavior and physiology during feed-withdrawal molt in laying hens: furnished cages vs. conventional cages. Kim Pohle*¹, Heng-Wei Cheng^{1,2}; ¹Purdue University, ²USDA-LBRU-ARS
- W194 Effects of acute stress on physical and hormonal response in three genetic strains of laying hens. Laura Jefferson*, Heng-wei Cheng; United States Department of Agriculture, Agricultural Research Service, Livestock Behavior Research Unit, West Lafayette, IN
- W195 Can perches and platforms affect the incidence of gait abnormalities in broiler chickens? C. Falcone*^{1,2}, J. A. Mench², P. Wakenell³; ¹Departamento de Psicologia, Universidade de Sao Paulo, CAPES, Brazil, ²Department of Animal Science, University of California, Davis, ³Department of Health and Reproduction, University of California, Davis
- W196 Evolution of nursing behavior in Meishan-derived and white sows subjected to an auditory stimulus to decrease nursing intervals throughout lactation. Chantal Farmer*, Suzanne Robert; Agriculture and Agri-Food Canada, Dairy and Swine R & D Centre, Lennoxville, Canada AAFC, Research Centre, Lennoxville, QC, Canada
- W197 Trickle versus drop feeding for gilts and sows in gestation crates or pens: reproductive performance and rates of injury. John McGlone¹, Lindsey Hulbert*¹, Jeff Dailey², Rebecca McPherson¹, Julie Morrow²; ¹Texas Tech University Pork Industry Institute, ²USDA-ARS Livestock Issues Research Unit
- W198 Performance and longevity of gestating sows housed in pens with electronic sow feeder (ESF) and in individual stalls. L. Anil*¹, S. Anil¹, S. K. Baidoo², J. Deen¹; ¹Department of Veterinary Population Medicine, University of Minnesota, Saint Paul, ²Southern Research and Outreach Center, University of Minnesota, Waseca
- W199 Novel arena/object test to assess housing related stress in gestating sows housed in stalls and in pens with electronic sow feeders (ESF). L. Anil*¹, S. Anil¹, S. K. Baidoo², J. Deen¹; ¹Department of Veterinary Population Medicine, University of Minnesota, Saint Paul, ²Southern Research and Outreach Center, University of Minnesota, Waseca
- W200 The effect of cold draft on behavior of newly weaned piglets. Andrea Bruni*, Tina M. Widowski; University of Guelph, Guelph, ON, Canada

- W201 Analysis of euthanasia and death in swine breeding herds. Sukumarannair S. Anil*, Leena Anil, John Deen; Department of Veterinary Population Medicine, University of Minnesota, Saint Paul
- W303 Cow preference between conventional sand bedded free stalls and free stalls with sand savers. Richard J Norell*¹, Phillip C Deaton¹, Joel H Packham², Stuart C Parkinson³; ¹University of Idaho, Idaho Falls, ²University of Idaho, Paris, ³University of Idaho, Preston

ADSA Growth and Development

Abstract #

- W202 Effects of weaning and ionophore on selected blood metabolites and growth in dairy calves. J. L. Klotz*, R. N. Heitmann; Department of Animal Science, The University of Tennessee, Knoxville
- W203 The effects of feeding chlortetracycline on the performance of breeding age dairy heifers. E.D. Reid*, P.S. Erickson; University of New Hampshire, Durham
- W204 The effect of feeding three milk replacer regimens preweaning on heifer intake, prepubertal and pubertal growth parameters and reproductive performance. C.S. Ballard*¹, H.M. Wolford¹, C.J. Sniffen², T. Sato³, K. Uchida³, Y. Yabuuchi³; ¹W.H. Miner Agricultural Research Institute Chazy, NY, ²Fencrest LLC Holderness, NH, ³Zen-Noh National Federation of Agricultural Co-operative Associations Tokyo, Japan
- W205 Effects of intake, selection for milk yield, and bST administration on hepatic expression of insulin receptors and components of the somatotrophic axis in growing Holstein heifers. S. H. Wu*, W. J. Weber, H. Cheser-Jones, L. B. Hansen, B. A. Crooker; University of Minnesota St. Paul
- W206 Effect of implant program on somatotropin (ST) response to growth hormone releasing factor (GRF) in finishing Holstein steers. B. A. Crooker*¹, W. J. Weber¹, C. Cheatham², L. H. Baumgard², G. C. Duff²; ¹University of Minnesota St. Paul, ²University of Arizona Tucson
- W207 Analysis of in vivo body composition of new born calves using dual energy x-ray absorptiometry (DXA). Julia Hampe*, Stefan Nueske, Armin M. Scholz, Martin Foerster; University Munich, GE
- W208 Updating growth standards for Canadian Holstein and Ayrshires. Daniel M. Lefebvre*¹, René Lacroix¹; ¹Dept. of R&D, PATLQ - Quebec DHI Ste-Anne-de-Bellevue, QC, Canada, ²Dairy Information Systems Group, McGill University Ste-Anne-de-Bellevue, QC, Canada
- W209 Identifying ruminal drinking by measurement of respiratory quotient and methane production in preruminant calves. J.J.G.C. van den Borne*, S.J.J. Alferink, W.J.J. Gerrits; Animal Sciences Group, Wageningen University and Research Centre, Wageningen, The Netherlands
- W210 Cloning the genomic sequence and proximal promoter of bovine pyruvate carboxylase. Sarah M. Rodriguez*, Christopher A. Bidwell, Shawn S. Donkin; Purdue University, West Lafayette, IN

Physiology and Endocrinology

Reproductive Technologies and Management

Abstract #

- W211 The effect of day six or day seven prostaglandin F_{2a} (PGF_{2a}) injections and using a disinfectant lubricant with Controlled Internal Drug Release (CIDR®) inserts for estrus synchronization in dairy heifers. W. M. Graves*¹, A. K. McLean¹, R. C. Smith¹, J. B. Rosenberg², B. C. Beachnuau³; ¹University of Georgia, Athens, ²Fort Dodge Animal Health, Fort Dodge, IA, ³Pfizer Animal Health, Portland, MI
- W212 Development of a boar semen mobility assay. AA Olivera, DL Fernandez*, ES Fonda; Department of Animal and Veterinary Sciences, California State Polytechnic University, Pomona
- W213 In vitro production of Holstein embryos using "Beltsville method" sex-sorted sperm. R.D. Wilson*¹, K.A. Weigel¹, P.M. Fricke¹, M.L. Leibfried-Rutledge², D.L. Matthews¹, J.J. Rutledge^{1,2}, V.R. Schutzkus¹; ¹University of Wisconsin Madison, Madison, ²BOMED Inc, Madison, WI
- W214 Induction of bilateral double ovulation to promote twinning in beef cattle. M. Hoge¹, A. Bor², Y. Lavon¹, M. Maman¹, S. Jacoby², D. Wolfenson*¹; ¹The Hebrew University, Rehovot, Israel, ²Agricultural Research Organization Bet Dagan, Israel
- W215 Effects of holding time prior to freezing on the motility, viability and membrane binding ability of ram sperm. Phillip H. Purdy*; USDA-ARS-National Animal Germplasm Program, Fort Collins, CO

- W216 Effects of PGF presynchronization and CIDR on pregnancy rates in suckled beef cattle subjected to fixed-time insemination following estradiol and progesterone treatment to synchronize follicular growth, and PGF and estradiol cypionate treatment to synchronize ovulation. J. A. Small^{*1}, M. G. Colazo², J. P. Kastelic³, R. J. Mapletoft²; ¹Agriculture and Agri-Food Canada Brandon, MB, Canada, ²WCVM-University of Saskatchewan Saskatoon, SK, Canada, ³Agriculture and Agri-Food Canada Lethbridge, AB, Canada
- W217 Effect of Presynchronization with GnRH on Fertility of Holstein Dairy Heifers Receiving Synchronization of Ovulation and Timed Artificial Insemination (TAI). Humberto Rivera*, Paul M. Fricke; University of Wisconsin, Madison
- W218 Effect of termination of pregnancy on serum concentrations of pregnancy associated glycoproteins in beef cows. D.C. Busch*, J.A. Atkins, D.J. Schafer, J.F. Bader, D.J. Patterson, T.E. Parks, J.A. Green, M.F. Smith; University of Missouri, Columbia
- W219 Use of supplemental GnRH following timed-insemination on pregnancy rates in dairy cattle exposed to mild heat stress or cool season environments. T Dickerson*, K Graves, J White, S Bowers, A Denson, S Schmidt, S Willard; Mississippi State University, Mississippi State
- W220 Effect of prolonged in vivo incubation of sperm from high and low fertility bulls on pregnancy survival in lactating dairy cows. Melissa W. Macfarlane*, Bruce J. Macfarlane, J. Richard Pursley; Michigan State University, East Lansing
- W221 Synchronization of beef heifers using cidr with estradiol cypionate. Daniel M. Kniffen^{*1}, B. M. Neely¹, P. R. Tozer², M. L. O'Connor¹; ¹Penn State University, University Park, ²Western Australian Department of Agriculture Geraldton, WA, Australia
- W222 Synchronization of estrus in suckled beef cows using GnRH, prostaglandin F_{2a} (PG), and progesterone (CIDR): a multi location study. J. E. Larson^{*1}, G. C. Lamb¹, J. S. Stevenson², S. K. Johnson², M. L. Day³, T. W. Geary⁴, D. J. Kesler⁵, J. M. DeJarnette⁶, F. N. Schrick⁷, J. D. Arseneau⁸; ¹University of Minnesota, ²Kansas State University, ³The Ohio State University, ⁴USDA-ARS, ⁵University of Illinois, ⁶Select Sires, Inc., ⁷University of Tennessee, ⁸Purdue University
- W223 Synchronization of estrus in replacement beef heifers using GnRH, prostaglandin F_{2a} (PG), and progesterone (CIDR): a multi-location study. J. E. Larson^{*1}, G. C. Lamb¹, T. W. Geary², J. S. Stevenson³, S. K. Johnson³, M. L. Day⁴, D. J. Kesler⁵, J. M. DeJarnette⁶, D. G. Landblom⁷; ¹University of Minnesota, ²USDA-ARS, ³Kansas State University, ⁴The Ohio State University, ⁵University of Illinois, ⁶Select Sires, Inc., ⁷North Dakota State University
- W224 Ovulatory and reproductive characteristics of sows treated with an intravaginal GnRH agonist gel. Kara Roski^{*1}, William Flowers¹, G.B. Rampacek², D.L. Gregor³, M. Swanson³, H.D. Hafs³; ¹North Carolina State University, Raleigh, ²University of Georgia, Athens, ³EIEICO, Inc., Radnor, PA
- W225 The effects of estradiol cypionate on expression of estrus in a follicular synchronization program. B. Dixon*, D. L. Ray, T. B. Hatler, W. J. Silvia; Department of Animal Science, University of Kentucky, Lexington
- W226 Influence of milk production on conception following artificial insemination or embryo transfer in lactating Holstein cows. DGB Demetrio^{*1}, JLM Vasconcelos¹, CA Rodrigues²; ¹FMVZ-UNESP Botucatu, SP, Brazil, ²Samvet Clinica e Embrioes, Brazil
- W227 Follicular diameter in postpartum Nellore cows treated with CRESTAR protocol. GC Perez*, RM Santos, JLM Vasconcelos, ETN Pereira, DB Araujo; DPEA-FMVZ-UNESP Botucatu, SP, Brazil
- W228 Serum progesterone concentrations in Nellore x Angus heifers treated with 1.38-g or 1.9-g CIDR devices. RM Santos^{*1}, JLM Vasconcelos², GC Perez², ABB Maciel², OG Sa Filho²; ¹FCAV-UNESP Jaboticabal, SP, Brazil, ²FMVZ-UNESP Botucatu, SP, Brazil
- W229 Prolonged in vivo incubation of sperm affects fertility of lactating dairy cows and gender ratio of resulting offspring. Melissa W. Macfarlane*, Bruce J. Macfarlane, J. Richard Pursley; Michigan State University, E. Lansing
- W230 Effect of eCG and/or calf removal after CRESTAR protocol in Nellore cows. GC Perez*, JLM Vasconcelos, RM Santos, ETN Pereira, OG Sa Filho; DPEA-FMVZ-UNESP Botucatu, SP, Brazil
- W231 Assessment of pregnancy in the mare using digital infrared thermography. S. Bowers*, S. Gandy, B. Anderson, P. Ryan, S. Willard; Mississippi State University, Mississippi State
- W232 Optimizing sperm concentration to maximize monospermy and minimize polyspermy with bovine in vitro fertilization. Moises Barcelo-Fimbres*, George E Seidel Jr; Colorado State University, Ft Collins
- W233 Fixed-time insemination utilizing an Eazi-Breed™ CIDR® in combination with gonadotropin-releasing hormone or estradiol cypionate. K.J. Stutts^{*1}, D.W. Forrest¹, C.R. Looney²; ¹Texas A&M University, College Station, ²OvaGenix, Navasota, TX
- W234 Deep uterine horn AI improves fertility of lactating dairy cows. J. Richard Pursley*; Michigan State University, E. Lansing

- W235 Addition of ECP or calf removal to a modified MGA + CO-Synch protocol for synchronization of ovulation in beef cows. S.K. Johnson, K.R. Harmony, J.S. Stevenson*; Kansas State University, Manhattan
- W236 Effect of a Addition of a CIDR Insert to the Heatsynch Protocol on Ovulation Rate, Pregnancy Rate and Pregnancy Loss in Lactating Dairy Cows. K.N. Gavao*, S.O. Juchem, R.L.A. Cerri, A.C. Coscioni, M. Villasenor, J.E.P. Santos; University of California Davis VMTRC, Tulare
- W237 Use of milk progesterone following artificial insemination in a resynchronization program for early rebreeding in dairy cows. A. Denson*, T. Dickerson, S. Bowers, S. Schmidt, K. Graves, K. Moulton, S. Willard; Mississippi State University, Mississippi State
- W238 Use of CIDR with a Timed Insemination Protocol in Lactating Dairy Cows During Summer in Mexico. Frederico Moreira*, Rogelio Flores, Joseph Boucher; Pfizer Animal Health
- W239 Efficacy of an Injection of Dinoprost Tromethamine When Given Subcutaneously in Two Different Sites on Luteal Regression in Lactating Holstein Cows. R.C. Chebel*¹, J.P. Reynolds¹, R.L.A. Cerri¹, J. Versteeg², H. M. Rutigliano¹, J.E.P. Santos¹; ¹University of California Davis VMTRC, Tulare, ²Pfizer Animal Health

Production, Management and the Environment

Reproduction and Health Management

Abstract #

- W240 A Herd Health Management Program Resulted in Decreased Days Open in First Lactating cows in Northern Thailand. Khwanchai Kreausukon*¹, Veerasak Punyapornwithaya¹, Pongpat Kattapan², Witaya Suriyasathaporn³; ¹Clinic of Ruminant, Chiang Mai University, Chiang Mai Province, Thailand, ²LumPhoon Office of Department of Livestock Development, LumPhoon Province, Thailand
- W241 Pregnancy rates and serum cortisol concentrations of relocated recipient cows in an embryo transfer program. JL Lopez*, E Gonzalez, DL Fernandez; California State Polytechnic University, Pomona
- W242 Evaluation of temperature and temperature-humidity index and their effects on reproduction in beef cattle. Jamee L. Amundson*, Terry L. Mader, Richard J. Rasby, Q. Steven Hu; University of Nebraska-Lincoln
- W243 Synchronization of beef cows using GnRH, prostaglandin F_{2a}, and estradiol. W.A. Greene, M.L. Borger*; The Ohio State University, Wooster
- W244 Monitoring of estrus characteristics in pubertal and pregnant heifers using radiotelemetry. Melissa Paczkowski*, Thomas Craig, Derry Magee, James Thompson, David Forrest; Texas A&M University, College Station
- W245 The effect of body weight change on conception. C.D. Dechow*, J.E. Vallimont, M.L. O'Connor; The Pennsylvania State University, University Park
- W246 Productive and reproductive performance of bathed Holstein cows during the summer. M. Tarazon*, J. Valenzuela, S. Araiza, F. Denogean; Universidad de Sonora, Hemosillo, MX
- W247 Financial losses and management practices associated with BTSCC. Ana Carolina O. Rodrigues*, Daniel Z. Caraviello, Pamela L. Ruegg; Dept. of Dairy Science, University of Wisconsin-Madison
- W248 Consistency Index as a Dynamic Field Measure of BTSCC Variation. Joanna Lukas*¹, M. L. Kinsel², J. K. Reneau¹; ¹University of Minnesota, St Paul, ²Agricultural Information Management, Inc., Ellensburg, WA
- W249 Factors Affecting Raw Milk Quality at Milk Collecting Center-Level in Northern Thailand. S. Boonyayatra¹, S. Rojanasthien¹, K. Kreausukon*¹, P. Tharavichitkul², K. Ajariyakhajorn³; ¹Faculty of Veterinary Medicine Chiang Mai University, Chiangmai, Thailand, ²Chiang Mai University, Chiangmai, Thailand, ³Chulalongkorn University, Bangkok, Thailand
- W250 Effect of Season on High Bulk Milk Somatic Cell Count in Northern Thailand. Suvichai Rojstian*, Veerasak Punyapornwittaya, Weerawan Tiwanuntakorn, Sukolrat Boonyayatra, Jarunluk Younggad, Chutchai Apairoj, Witaya Suriyasathaporn; Department of Clinic of Ruminant, Chiangmai University Chiang Mai Province, Thailand
- W251 Growth and parasite burdens of St. Croix White and Dorper X St. Croix White lambs grazing native pasture during the wet season in the US Virgin Islands. Raina E. Dodson*, Adam J. Weis, Robert W. Godfrey; University of the Virgin Islands, Agricultural Experiment Station, Kingshill
- W252 Phylogenetic relationship and distribution of bacteria in the mucosa of chicken guts: from the crops to ceca. J. Gong¹, W. Si*¹, R. Huang², F. Deng¹, Y. Yin¹, H. Yu¹, Y. Han³; ¹Food Research Program, Agriculture and Agri-Food Canada Guelph, ON, Canada, ²Institute of Subtropical Agriculture, Chinese Academy of Sciences Changsha, China, ³Maple Leaf Foods Agresearch Guelph, ON

Breeding and Genetics

Abstract

- W253 A computerized approach to minimize inbreeding of breeding plans. John R. Garbe*, Yang Da; Department of Animal Science, University of Minnesota, St. Paul
- W254 Full pedigree analysis of QTL affecting growth, carcass, and meat quality in pigs. N. Vukasinovic^{*1}, F.-X. Du¹, L. A. Messer¹, J. C. Byatt¹, M. M. Lohuis¹, A. C. Clutter¹, J. Bennewitz², N. Reinsch², G. Otto², K. Sanders², N. Borchers², E. Kalm²; ¹Animal AG Monsanto Company, ²Institute of Animal Breeding and Husbandry Christian-Albrechts University of Kiel, Germany
- W255 Efficiency of selection on multiple QTL in a crossbred population. Napapan Piyasatian*, Rohan Fernando, Jack Dekkers; Iowa State University, Ames
- W256 Comparison of normalization and models for the analysis of gene expression data. S. L. Rodriguez-Zas^{*1}, M. R. Band², R. E. Everts¹, B. R. Southey¹, Z. L. Liu¹, H. A. Lewin^{1,2}; ¹University of Illinois, Urbana, ²W. M. Keck Center for Comparative and Functional Genomics, University of Illinois, Urbana
- W257 Graphical visualization of two large complex populations using Pedigraph 2.0. John R. Garbe*, Yang Da; Department of Animal Science, University of Minnesota, St. Paul
- W258 Spanish buck β -B inhibin/activin (INHBB) microsatellite polymorphisms. R. Realivasquez^{*1}, S. A. Ericsson¹, S. F. Spiller¹, W. T. Campbell¹, K. L. Sternes¹, P. H. Purdy², H. D. Blackburn², J. M. Dzakuma³; ¹Sul Ross State University Alpine, TX, ²USDA-ARS-National Animal Germplasm Program, Fort Collins, CO, ³Prairie View A&M University, Prairie View, TX
- W259 Mapping QTL in complex pedigrees. G. Freyer^{*1}, N. Vukasinovic²; ¹Research Institute for the Biology of Farm Animals, Dummerstorf, Germany, ²Animal AG Monsanto Company
- W260 INHA microsatellite polymorphisms in Angora bucks. S. F. Spiller^{*1}, S. A. Ericsson¹, R. Realivasquez¹, W. T. Campbell¹, K. L. Sternes¹, P. H. Purdy², H. D. Blackburn², J. M. Dzakuma³; ¹Sul Ross State University Alpine, TX, ²USDA-ARS-National Animal Germplasm Program, Ft. Collins, CO, ³Prairie View A&M University, Prairie View, TX
- W261 Effects of the **Compact** mutant myostatin allele *Mstn^{Cmpt-dl1Abc}* introgressed into a high growth mouse line on skeletal muscle cellularity. C. Rehfeldt^{*1}, G. Ott², D.E. Gerrard³, L. Varga⁴, W. Schlote⁵, J.L. Williams⁶, L. Bunger⁷; ¹Research Institute for the Biology of Farm Animals Dummerstorf, Germany, ²University of Applied Sciences Lemgo, Germany, ³Purdue University, West Lafayette, IN, ⁴Agricultural Biotechnology Center Godollo, Hungary, ⁵Humboldt University, Berlin, Germany, ⁶Roslin Institute (Edinburgh), Roslin Midlothian, UK, ⁷ICAPB University of Edinburgh, Edinburgh, UK
- W262 Detection and characterization of microsatellite loci based on PCR. Hoyoung Y. Chung*, Jimin M. Ha, Sungjong J. Oh, Seungwhan W. Lee; National Livestock Research Institute 564 Omokchon
- W263 Using plasma IGF-I concentration for genetic improvement of feed efficiency in beef cattle. R. M. Herd¹, D. J. Johnston², K. Moore², H-U. Graser², P. F. Arthur^{*3}; ¹NSW Agriculture - Armidale, Australia, ²Animal Genetics and Breeding Unit, Armidale, Australia, ³NSW Agriculture - Camden, Australia
- W264 Growth hormone gene polymorphisms differentially predict ADG and carcass traits in performance tested Angus and Brangus bulls. M.G. Thomas¹, R.M. Enns², G.A. Silver^{*1}, M.D. Garcia¹, K.L. Shirley¹, V.R. Beauchemin¹, D.M. Hallford¹; ¹New Mexico State University, ²Colorado State University
- W265 An improved approximation of the gametic covariance matrix for marker assisted genetic evaluation by BLUP. F. Pita^{*1}, R. Fernando², L. Totir²; ¹Newsham Genetics, LC, ²Iowa State University
- W266 Identification of quantitative trait loci for carcass and growth traits in swine using principal components analysis. T. M. Stearns*, S. L. Rodriguez-Zas, J. E. Beever, M. Ellis, F. McKeith, B. R. Southey, J. Hartschuh, R. J. Feltes; Department of Animal Sciences, University of Illinois, Urbana
- W267 Chromosomal assignment of 24 candidate genes for swine efficient growth. M Grosz^{*1}, J Byatt¹, C Dyer¹, K Hinds¹, K Eyer², C Beattie²; ¹Monsanto Company, Chesterfield, MO, ²Department of Animal Biotechnology, University of Nevada-Reno
- W268 Mapping and genetic variation within porcine 70 kiloDalton heat shock protein 2 (HSPA2). M Grosz^{*1}, G Rohrer²; ¹Monsanto Company, Chesterfield, MO, ²USDA-ARS US Meat Animal Research Center, Clay Center, NE

Food Safety

Abstract

- W269 Correlation of genomic changes with morphological dimorphism of *Campylobacter jejuni*. Hong Wang*, Michael Slavik; POSC University of Arkansas, Fayetteville
- W270 Risk assessment for antibiotic resistance in foodborne pathogens isolated from poultry products. N Kotrola, Rachel Roy*; Auburn University, Auburn, AL
- W271 Risk Assessment of stress factors and *Listeria monocytogenes* Biofilm formation. Bridget Dean*, Paulo Mohyla, Rachel Roy, Nahed Kotrola; Auburn University, Auburn, AL
- W272 Fumonisin B1 absorption study in Ussing Chamber model reveals a possible active transport. Gabriele Casadei¹, Fabio Galvano², Nino Chiulli¹, Giacomo Biagi¹, Andrea Piva*¹; ¹University of Bologna, ITALY, ²University of Reggio Calabria, ITALY
- W273 Effects of Fumonisin B1 on Pathological and Immunological Parameters in Pigs Consuming Diets With or Without the Addition of Activated Charcoal. Andrea Piva*¹, Duarte E. Diaz⁴, Gabriele Casadei¹, Enrico Cabassi², Gianfranco Piva³; ¹University of Bologna, ITALY, ²University of Parma, ITALY, ³Catholic University of the Sacred Heart, ITALY, ⁴Fondazione Parco Tecnologico Padano, ITALY
- W274 Comparison of Rectoanal Mucosal Swabs (RAMS) and Fecal Culture for Determining Prevalence of *Escherichia coli* O157 in Feedlot Cattle. M. A. Greenquist*¹, J. S. Drouillard¹, T. G. Nagaraja², J. M. Sargeant², B. E. Depenbusch¹, X. Shi², K. F. Lechtenberg³; ¹Department of Animal Sciences and Industry, Kansas State University, Manhattan, ²Department of Diagnostic Medicine and Pathobiology, Kansas State University, Manhattan, ³Midwest Veterinary Services, Inc., Oakland, NE
- W275 Effects of nitrate adaptation and chlorate supplementation on fecal *escherichia coli* concentrations in holstein steers. J. T. Fox*¹, R. C. Anderson², G. E. Carstens¹, R. K. Miller¹, D. J. Nisbet²; ¹Texas A&M University, College Station, ²USDA-ARS, FFSRU, College Station, TX
- W276 Effect of caffeine on inactivation of *Escherichia coli* O157:H7 in laboratory media. S. A. Ibrahim*; North Carolina A&T State University
- W277 Using origanox in combination with sodium lactate and sodium acetate to inhibit the growth of *Escherichia coli* O157:H7. S. A. Ibrahim*, S. R. K. Dharmavaram; North Carolina A&T State University
- W278 Selection of anti-bacterial peptides against *E. coli* O157:H7 and UTI from f88-4/15 library. C. J. Fu*, F. J. Schmidt, S. A. Mounter, M. S. Kerley; University of Missouri, Columbia

Dairy Foods

Microbiology

Abstract

- W279 Lactic acid fermentation by *Lactobacillus reuteri* in laboratory medium supplemented with various nutrients. S. Phetsomphou*, S. A. Ibrahim; North Carolina A&T State University
- W280 Influence of an *Arthrospira (Spirulina) platensis* biomass on acid production of lactococci. Noémi Molnár, László Varga*, Jenő Szigei, Beáta Gyenis; Institute of Food Science, Faculty of Agricultural and Food Sciences, University of West Hungary, Mosonmagyaróvár, Hungary
- W281 Occurrence of Glutathione sulphhydryl(GSH) and Antioxidant Activities of Probiotic *Lactobacillus* spp. Yung H. Yoon*, Jung. R. Byun; Department of Animal Science and Technology, Chung-Ang University
- W282 Functionality and Survivability of Probiotics in Carbonated Yogurt Beverage. Frank Lee, Mingrui Guo*; University of Vermont, Burlington
- W283 Influence of bile salts on growth, antimicrobial activity and β -galactosidase activity of *Lactobacillus reuteri*. S. A. Ibrahim*, S. A. Ahmed; North Carolina A&T State University
- W284 Incidence of *Escherichia coli* O157:H7 in raw milk and survival of a five strain cocktail of *E. coli* O157:H7 during the 60 days aging period of hard cheese made from unpasteurized milk. Joseph Schlessner*¹, Robert Gerdes²; ¹Food and Drug Administration, NCFST, Summit-Argo, IL, ²Illinois Institute of Technology, Summit-Argo
- W285 Incorporation and survival of probiotic bacteria in yogurt for use as a functional food. S. Hekmat*¹, S. Royal^{2,3}, G. Reid^{2,3}; ¹Brescia University College at The University of Western Ontario, ²The University of Western Ontario, ³Lawson Health Research Institute

- W286 Development of probiotic concentrated yogurt using direct reconstitution method. S. Hekmat*, V. W. Y. Ng, A. J. Holman; Brescia University College at The University of Western Ontario
- W287 Suitability of *Kluyveromyces* spp. for use in single-cell protein production from sweet cheese whey. Balázs Ásványi, Jeno Szigeti, László Varga*; Institute of Food Science, Faculty of Agricultural and Food Sciences, University of West Hungary, Mosonmagyaróvár, Hungary
- W288 Ethanol Metabolism by Probiotic Lactic Acid Bacteria *in vivo*. Woo Y. Yang*¹, Young T. Ahn², Kwang S. Lim², Chul S. Huh², Young J. Baek², Hyung S. Kim¹; ¹Culture Systems, Inc., Mishawaka, IN, ²Korea Yakult Co., Ltd Yongin si, Kyunggi do, South Korea
- W289 Effects of proteolytic starter cultures on melt characteristics of low moisture part skim (LMPS) Mozzarella cheese. S. Das*, R. I. Dave; Dairy Science Department, South Dakota State University, Brookings
- W290 Exo-polysaccharides Production in Whey Mineral Concentrate. Nirav Pandya*¹, Rajiv Dave¹, Ashraf Hassan¹, Lloyd Metzger²; ¹Dairy Science Department, South Dakota State University, ²Food Science and Nutrition Department, University of Minnesota
- W291 Modification of sweet whey for the growth of *Bifidobacterium bifidum*. Humberto Hernandez-Sanchez*, Maria Luisa Mier-Espinosa, Maria Teresa Cruz y Victoria; Escuela Nacional de Ciencias Biológicas - Instituto Politecnico Nacional
- W292 Optimization Of Fermentation Conditions For Development Of Environmentally Friendly Deicer. Lanwei Zhang, Sumangala Gokavi*, Jiancai Li, Mingruo Guo; University of Vermont
- W293 Extraction Of Acetic Acid From Fermented Whey Permeate Broth. Lanwei Zhang, Sumangala Gokavi, Jiancai Li*, Mingruo Guo; University of Vermont
- W294 Evaluation of modified M17 broth for growth of *Lactobacillus reuteri* and *Bifidobacterium* sp. S. A. Ahmed*, S. A. Ibrahim; North Carolina A&T State University
- W295 Effect of dietary whey protein and *Lactobacillus Casei* ATCC 393 on the change of lymphocytic cell population in rats. H. J. Lim*, J. G. Kim, H. Y. Oh, S. H. Kim, K. Y. Whang; Korea Univ., Seoul, Korea
- W296 Viability of *Bifidobacterium longum* and *Lactobacillus reuteri* in sour cream. S. A. Ibrahim, E.D. Wilson*; North Carolina A&T State University
- W297 Yogurt development from camel milk. Isameldin B. Hashim*, Ali H. Khalil; United Arab Emirates University
- W298 Physico-chemical and sensory properties of liquid-type yogurt with *Lactobacillus casei* 00692. B. J. Jeon*, J. S. Seok, H. S. Kwak; Sejong University, Seoul, Korea 98 Kunja-dong, Kwangjin-gu, Seoul, Korea

International Animal Agriculture

Abstract #

- W299 Utilization of *Leucaena leucocephala* as supplement for goats in the semi arid areas of Venezuela. T. Clavero*, R. Razz; La Universidad del Zulia
- W300 Estimation of genetic and phenotypic parameters of total milk production in Suran Holstein dairy farm. Sonia Zakizadeh, Arash Horufi*, Masume Qolipur; High Education Center of Jihad & Agriculture Mashhad, Sento High Way, Between Jihad and Television Squares
- W301 Assessment of microbial colonization and kinetics degradation of Distichlis grass irrigated with fresh or brackish water in dromedary camels. G Alhadrami*¹, A El Awad¹, M Pessaraki²; ¹Department of Aridland Agriculture, College of Food Systems, United Arab Emirates University, Al Ain, United Arab Emirates, ²Department of Plant Sciences, University of Arizona, Tucson
- W302 Effect of molasses on nutritional quality of *Pithecellobium dulce* silage. T. Clavero*, R. Razz; La Universidad del Zulia
- W303 See page 148

WEDNESDAY, JULY 28, 2004
SYMPOSIA AND ORAL SESSIONS

SYMPOSIUM

Animal Behavior and Well-Being

Chair: Barry Steevens, University of Missouri

Room: 261/262

Time	Abstract #	
10:30 AM		Introduction, Barry Steevens
10:35 AM		Positive Impact of Behavior and Welfare Research on Poultry Production. Patricia Hester, Purdue University
11:15 AM		Bridging the Gap Between Animal Welfare Research and Application. Temple Grandin, Colorado State University, Ft. Collins.

SYMPOSIUM

Contemporary and Emerging Issues

Current and Future Prospects for Animal Nutrition Management for Environmental Impact Reduction

Chair: Alan Sutton, Purdue University

Sponsors: ARPAS, ASAS Foundation, Elanco Animal Health, FASS and NRCS

Room: 131

Time	Abstract #	
10:30 AM		Introduction - Why is USDA Interested? USDA, Natural Resources Conservation Service Representative
10:50 AM	642	Natural Resources Conservation Service (NRCS) involvement in animal nutrition management. Thomas Christensen*; USDA NRCS
11:10 AM	643	Industry assessment of feed management practice implementation through animal nutritionist focus groups. Glenn Carpenter*; USDA-NRCS
11:30 AM	644	Development of rapid methods for assessing nutrient bioavailability. S.C. Ricke*, V.I. Chalova, W.K. Kim; Texas A&M University, College Station
11:50 AM		Round Table Question and Answer
12:10 PM		Lunch Break

SYMPOSIUM

Dairy Foods

Marschall Rhodia International Dairy Science Award Lecture

Chair: Scott Rankin, University of Wisconsin

Sponsor: Rhodia, Inc.

Room: 124

Time	Abstract #	
10:30 AM		Pathways for flavour development in cheese. Paul L.H. McSweeney, Department of Food and Nutritional Sciences, University College, Cork, Ireland

Breeding and Genetics

Chair: Don Franke, Louisiana State University

Room: 223

Time	Abstract #	
10:30 AM	647	Evaluation of Dorset, Finnsheep, Romanov, Texel, and Montadale breeds of sheep: Reproduction of F1 ewes in spring mating seasons. K. A. Leymaster*, E. Casas, B. A. Freking; USDA-ARS, U.S. Meat Animal Research Center, Clay Center, NE
10:45 AM	648	Linear versus threshold model analysis of trainability in a colony of German Shepherd dog guides. J. Cole* ¹ , E. Leighton ² ; ¹ Animal Improvement Programs Laboratory Agricultural Research Service, USDA, Beltsville, MD, ² The Seeing Eye, Inc., Morristown, NJ
11:00 AM	649	Developing breeding objectives for Targhee sheep. R. C. Borg* ¹ , D. R. Notter ¹ , R. W. Kott ² , L. A. Kuehn ¹ ; ¹ Department of Animal and Poultry Sciences, Virginia Polytechnic Institute and State University, Blacksburg, ² Department of Animal and Range Sciences, Montana State University, Bozeman
11:15 AM	650	Genetic and environmental factors affecting camel reproduction. Suleiman Hermas*; University of Al-fatah Faculty of Agriculture Dept. of Animal Production, Tripoli-Libya
11:30 AM	651	Development of web-based cow-calf decision support software. B.W. Brigham*, D.J. Garrick, R.M. Enns; Colorado State University

Goat Species

Products

Chair: Sandra Solaiman, Tuskegee University

Room: 263

Time	Abstract #	
10:30 AM	652	Protein profile of goat milk in relation with udder health status and somatic cell counts. G. Pisoni ¹ , L. Basiricò ² , P. Moroni ¹ , U. Bernabucci* ² , G. Savoini ³ ; ¹ Dipartimento di Patologia Animale, Igiene e Sanità Pubblica Veterinaria Milano, Italy, ² Dipartimento di Produzioni Animali Viterbo, Italy, ³ Dipartimento di Scienze e Tecnologie Veterinarie per la Sicurezza Alimentare Milano, Italy
10:45 AM	653	Silymarin administration to periparturient dairy goats: effects on milk production and quality. Dorian Tedesco* ¹ , Sara Galletti ¹ , Stefania Rossetti ¹ , Jacopo Turini ¹ , Giorgio Varisco ² ; ¹ Department of Veterinary Sciences and Technologies for Food Safety, Milan, Italy, ² Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna, Brescia, Italy
11:00 AM	654	Effects of goat breed and stage of lactation on yield, sensory quality, and fatty acid concentration of soft cheese. Steve S. Zeng*, Kamal A. Soryal, Beney A. Fekadu, Keseti Tesfai, Blaise Bah; Langston University E (Kika) de la Garza American Institute for Goat Research, Langston University, Langston, OK
11:15 AM	655	Growth and carcass characteristics of castrated or intact male Boer X Spanish goats grazing Marshall annual ryegrass. Carla Hopkins-Shoemaker* ¹ , Sandra Solaiman ² , Chris Kerth ¹ , William Jones ¹ , David Bransby ¹ ; ¹ Auburn University, Auburn, AL, ² Tuskegee University, Tuskegee, AL
11:30 AM	656	Influence of maternal breed on meat goat carcass characteristics. R. Browning, Jr.* ¹ , C. Chisley ² , O. Phelps ² , S. H. Kebe ¹ , B. Donnelly ¹ , M. Byars ¹ , T. Payton ¹ ; ¹ Tennessee State University, Nashville, ² USDA-Agricultural Marketing Service, Baton Rouge, LA
11:45 AM	657	Size, color, and texture of major muscles from kid goat carcasses. K.W. McMillin*, A.P. Brock; Louisiana State University Agricultural Center Dept of Animal Sciences, Baton Rouge, LA

ADSA Growth and Development

Chair: James Loften, Milk Specialties, Inc.

Room: 267

Time	Abstract #	
10:30 AM	658	Effects of intramammary endotoxin treatment on porcine milk composition, yield, and resultant piglet growth performance. A. C. W. Kauf*, D. C. Pighetti, A. L. Magliaro, D. A. Pape, L. C. Griel, Jr., R. S. Kensinger; Penn State University, University Park
10:45 AM	659	Effects of diet and bST on gene expression profile of heifer mammary parenchyma. B. J. Lew* ^{1,2} , S. S. Sipkovsky ¹ , G. J. M. Rosa ¹ , J. S. Liesman ¹ , R. P. Radcliff ¹ , H. A. Tucker ¹ , M. D. S. Oliveira ² , M. J. VandeHaar ¹ ; ¹ Michigan State University, East Lansing, ² UNESP Jaboticabal, São Paulo, Brazil
11:00 AM	660	Growth and developmental characteristics of Holstein and Gir (<i>Bos indicus</i>) x Holstein bulls and heifers. S. Schmidt* ¹ , S. Bowers ¹ , T. Dickerson ¹ , K. Graves ¹ , R. Vann ² , S. Willard ¹ ; ¹ Mississippi State University, Mississippi State, ² Brown Loam Experiment Station, Mississippi State University, Raymond
11:15 AM	661	Growth of crossbred and purebred calves from birth to an age of 50 days studied by dual energy x-ray absorptiometry (DXA). Julia Hampe, Stefan Nueske, Armin M. Scholz*, Martin Foerster; Experimental Farm, University Munich, GE
11:30 AM	662	Portal nutrient flux during pre- and post-weaning growth in dairy calves. J. L. Klotz*, R. N. Heitmann; Department of Animal Science, The University of Tennessee, Knoxville

PSA-Environment and Management

Broiler Management

Chair: George Malone, University of Delaware

Room: 265/266

Time	Abstract #	
9:30 AM	663	Impact assessment of feeding high-oil corn to poultry in Brazil. Ermias Kebreab* ¹ , James France ¹ , Richard Phipps ² , Steve Leeson ¹ ; ¹ University of Guelph Department of Animal and Poultry Science, University of Guelph, Guelph, ON, Canada, ² The University of Reading School of AP&D, Earley Gate, Reading, UK
9:45 AM	664	Electrostatic space charge system for dust reduction and air quality improvement in commercial broiler facilities. Casey Ritz* ¹ , Bailey Mitchell ² , Brian Fairchild ¹ , Michael Czarick ¹ , John Worley ¹ ; ¹ University of Georgia, ² Southeast Poultry Research Laboratory USDA-ARS
10:00 AM	665	In-house composting of litter and poultry carcasses infected with avian influenza. George W. Malone* ¹ , Sandy S. Cloud ¹ , Robert L. Alphin ¹ , Lewis E. Carr ² , Nathaniel L. Tablante ² ; ¹ University of Delaware, Newark, ² University of Maryland, College Park
10:15 AM	666	Spatial Variability of Nutrient Species Within a Poultry House. Phillip R. Owens*, Dana M. Miles, Dennis E. Rowe; USDA-ARS, Waste Management and Forage Research Unit, MS State

PSA-Nutrition

Feed Additives

Chair: Scott Beyer, Kansas State

Room: 274

Time	Abstract #	
9:30 AM	667	Egg antibody to phospholipase A ₂ increases carcass yield in male broilers. K.D. Roberson* ¹ , J.L. Kalbfleisch ¹ , W. Pan ¹ , R.A. Charbeneau ¹ , M.E. Cook ² , M. Yang ² ; ¹ Michigan State University, ² University of Wisconsin-Madison
9:45 AM	668	Effect of Growth Promoters (Antibiotics + Roxarsone + Copper Sulfate) on Broiler Performance during Stress: Possible Mechanisms of Growth Promotion. Alfonso Mireles Jr.* ¹ , David Sutton ¹ , Elizabeth Koutsos ² , Robert Spiller ² , Sun Kim ¹ ; ¹ Foster Poultry Farms, ² California Polytechnic State University, San Luis Obispo
10:00 AM	669	Growth Performance of Male Broiler Chicks Fed Diets Supplemented with Two Levels of Versazyme™ to 26 days of Age. N.H. Odetallah* ¹ , M.H. Fosnaught ¹ , J.C.H. Shih ² ; ¹ Bioresource International, Raleigh, NC, ² North Carolina State University, Raleigh
10:15 AM	670	Effects of purified β-Mannanase and commercial product, Hemicell® on performance and uniformity in commercial broilers compared with dietary nutrient adjustment. Mark E. Jackson* ¹ , Hung-Yu Hsiao ¹ , David M. Anderson ¹ , Roger L. James ¹ , Greg F. Mathis ² ; ¹ ChemGen Corp., Gaithersburg, MD, ² Southern Poultry Research, Inc., Athens, GA
10:30 AM	671	Efficacy of purified β-mannanase isolated from Hemicell® in broiler chickens with Coccidiosis and Necrotic enteritis. Hung-Yu Hsiao* ¹ , David M. Anderson ¹ , Mark E. Jackson ¹ , Frank L. Jin ¹ , Greg F. Mathis ² ; ¹ ChemGen Corp., Gaithersburg, MD, ² Southern Poultry Research, Inc., Athens, GA
10:45 AM	672	Effect of Growth Promoters (Antibiotics + Roxarsone + Copper Sulfate) on Broiler Composition during Stress: Possible Mechanisms of Growth Promotion. Alfonso Mireles Jr.* ¹ , Dave Sutton ¹ , Elizabeth Koutsos ² , Robert Spiller ² , Sun Kim ¹ ; ¹ Foster Poultry Farms, ² California Polytechnic State University, San Luis Obispo
11:00 AM	673	Effect of mannan oligosaccharides supplementation to laying hen diets. M.I. Gracia* ¹ , P. Cachaldora ² , L. Tucker ³ , F. Baucells ¹ , P. Medel ¹ ; ¹ Imasde Agropecuaria, S.L. Spain, ² Coren, S.C.L. Spain, ³ Alltech Inc. Ireland
11:15 AM	674	CRINA® POULTRY Essential Oils and BMD in the Diet of Broilers Exposed to <i>Clostridium perfringens</i> . M Sims* ¹ , P Williams ² , M Frehner ³ , R Losa ³ ; ¹ Virginia Diversified Research Harrisonburg, VA, ² Akzo Nobel Surface Chemistry LLC, Davis, CA, ³ CRINA SA, Akzo Nobel Group, Switzerland
11:30 AM	675	Comparison of direct-fed microbial products Avi-Lution or Avi-Lution Custom to bacitracin methylene disalicylate or no additive in diets of broiler chickens exposed to <i>Clostridium perfringens</i> . D. Spangler ¹ , J. Corley ² , G. F. Mathis ³ , M. D. Sims ⁴ , D. M. Hooge* ⁵ ; ¹ Agri-King, Inc. Fulton, IL, ² Prince Agri Products, Inc. Quincy, IL, ³ Southern Poultry Research, Inc., Athens, GA, ⁴ Virginia Scientific Research, Inc., Harrisonburg, VA, ⁵ Hooge Consulting Service, Inc., Eagle Mountain, UT
11:45 AM	676	Growth Performance of Male Broiler Chicks Fed Diets Supplemented with Versazyme™ in Dry and Liquid Form to 26 days of Age. N.H. Odetallah ¹ , M.H. Fosnaught* ¹ , J.C.H. Shih ² ; ¹ BioResource International Raleigh, NC, ² North Carolina State University, Raleigh

PSA-Nutrition

Layer and Miscellaneous Nutrition

Chair: Jeff Firman, University of Missouri

Room: 275

Time	Abstract #	
9:30 AM	677	The influence of restricted intake of energy and fat on egg solids in laying hens. James A. Arthur* ¹ , Kenton S. Kreager ¹ , Neil P. O'Sullivan ¹ , H. John Kuhl, Jr. ² ; ¹ Hy-Line International Dallas Center, IA, ² Nest Egg Nutrition Gardnerville, NV
9:45 AM	678	Evaluation of Prediction Equations and Modeling Metabolizable Energy Intake for Commercial Strains of Laying Hens. M. A. Jalal ¹ , S. E. Scheideler ¹ , D. Marx ² ; ¹ Department of Animal Science, University of Nebraska-Lincoln, ² Department of Statistics, University of Nebraska-Lincoln
10:00 AM	679	Effect of enzyme supplementation in laying hens on egg weight and commercial egg classification. M.I. Gracia* ¹ , G.L. Campbell ² , E. McCartney ³ , J. Peinado ¹ , P. Medel ¹ ; ¹ Imasde Agropecuaria, S.L. Spain, ² GNC Bioferm Canada, ³ Pen&Tec Consulting Spain
10:15 AM	680	Enzyme supplementation of laying hens fed diets containing barley and wheat. P. Medel* ¹ , L. Pastrana ² , J. Méndez ³ , E. McCartney ⁴ , M.I. Gracia ¹ ; ¹ Imasde Agropecuaria, S.L. Spain, ² Universidad de Vigo Spain, ³ Coren, S.C.L. Spain, ⁴ Pen&Tec Consulting Spain
10:30 AM	681	Evaluation of low-energy diets for a non-feed withdrawal laying hen molt program. P.L. Utterback*, P.E. Biggs, K.A. Rafacz, C.M. Amezcua, K.W. Koelkebeck, C.M. Parsons; University of Illinois
10:45 AM	682	The effect of supplemental phytase sources on the sparing effect of phosphorus in Pekin ducks. J. K. Rush*, K. M. Banks, K. L. Thompson, T. J. Applegate; Dept. of Animal Sciences, Purdue University
11:00 AM	683	The availability of energy in meat and bone meal and poultry by-product meal in poultry rations. David H Robbins*, Jeffere D Firman; University of Missouri-Columbia
11:15 AM	684	Broiler study nutritional evaluation of b.t.cry1f maize corn from <i>bacillus thuringiensis</i> subsp. <i>aizawai</i> and phosphinothricin-n-acetyltransferase. James L McNaughton* ¹ , Larry Zeph ² ; ¹ Solution BioSciences, Inc., Salisbury, MD, ² Pioneer Hi-Bred International, Inc., Johnston, IA
11:30 AM	685	Nutrient composition of peanut meal. Nick M. Dale*, Amy B. Batal; Poultry Science, University of Georgia, Athens
11:45 AM	686	Sweet potato as a feed resource for layer production in Nigeria. Olusola O.A Ladokun*, Olumide O.O Tewe; University of Ibadan, Ibadan, Nigeria

Ruminant Nutrition

Beef and Dairy Calves

Chair: Julie Smith, University of Vermont

Room: 132

Time	Abstract #	
10:30 AM	687	Calf adipose tissue fatty acid profile, immune function and performance while nursing beef cows consuming high-linoleate or high oleate safflower seed supplements. S. L. Lake*, E. J. Scholljegerdes, E. L. Belden, R. L. Atkinson, D. C. Rule, B. W. Hess; Univeristy of Wyoming, Laramie
10:45 AM	688	Effect of feeding extruded soybeans to nursing beef cows on conjugated linoleic acid concentrations in adipose tissue of suckling calves. C. Paradis* ¹ , R. Bertiaume ² , C. Lafrenière ² , P.Y. Chouinard ¹ ; ¹ Universite Laval Quebec, QC., Canada, ² Agriculture and Agri-Food Canada Lennoxville, QC., Canada
11:00 AM	689	Responses of neonatal calves to milk replacer formulation and pasteurized whole milk. Mark Hill*, Jim Aldrich, Rick Schlotterbeck; Akey, Lewisburg, OH
11:15 AM	690	Effect of level of starch and Apex botanicals in neonatal calf starter feeds. Mark Hill*, Jim Aldrich, Rick Schlotterbeck; Akey, Lewisburg, OH

11:30 AM	691	Effect of feeding neonatal calves selenium yeast or sodium selenite and supplementing specific fatty acids. Mark Hill*, Jim Aldrich, Rick Schlotterbeck; Akey, Lewisburg, OH
11:45 AM	692	Performance and plasma amino acid concentrations of calves on an enhanced-growth feeding program. Marta Terré* ¹ , Alex Bach ^{1,2} , Maria Devant ¹ ; ¹ IRTA-Unitat de Remugants Barcelona, Spain, ² ICREA Barcelona, Spain

Teaching/Undergraduate and Graduate Education

Chair: Dan Hagen, Penn State University

Room: 264

Time	Abstract #	
10:30 AM	693	A practicum-based course in equine parturition for undergraduate students. Peter L. Ryan*, David L. Christiansen, Richard M. Hopper, Scott T. Willard, Susan D. Bowers, Timothy W. Dickerson, Gavin L. Olsen; Mississippi State University, Mississippi State
	694	Withdrawn by author
10:45 AM	695	Dairy management symposium training: Instructive partnership between academia and industry. Amin Ahmadzadeh*, M. A. McGuire; University of Idaho, Moscow
11:00 AM	696	Development of a Distance Education based Food Safety Microbiology Course in Poultry Science. R.S Hardin*, E.M Hirschler, M.M Kundinger, A.R Sams, S.C Ricke; Texas A&M University, College Station
11:15 AM		Digital Image Galleries to Improve Teaching Animal Sciences. H. D. Hafs* ¹ , G. K. McCone ² , J. W. Riesen ³ , P. A. Schoknecht ⁴ , and M. R. Stokes ⁵ . ¹ Rutgers Univ., New Brunswick, NJ; ² Natl. Agric. Library, Beltsville, MD; ³ Univ. Conn, Storrs; ⁴ Univ. Richmond, VA; ⁵ Univ. Maine, Orono

SYMPOSIUM

Contemporary and Emerging Issues

Current and Future Prospects for Animal Nutrition Management for Environmental Impact Reduction (con't.)

Chair: Alan Sutton, Purdue University

Sponsors: ARPAS, ASAS Foundation, Elanco Animal Health, FASS and NRCS

Room: 131

Time	Abstract #	
1:00 PM	697	Use of mass balance techniques for nutrient excretion modeling. Todd J. Applegate* ¹ , Roselina Angel ² ; ¹ Department of Animal Sciences, Purdue University, ² Department of Animal and Avian Sciences, University of Maryland, College Park
1:20 PM	698	Interactions between indigenous gut microbiota and animal waste production. John A. Patterson*, Alan L. Sutton; Purdue University, W. Lafayette
1:40 PM	699	Historical and current perspectives of nutritional formulation in swine and poultry to reduce environmental impact. Gary Allee*; University of Missouri, Columbia
2:10 PM	700	Reducing environmental impact of cattle through precision feeding. Danny G. Fox* ¹ , Thomas P. Tylutki ¹ , Luis Orlando Tedeschi ¹ , Paul E. Cerasoletti ² ; ¹ Cornell University, Ithaca, NY, ² Cornell Cooperative Extension, Hamden, NY
2:40 PM	701	Environmentally friendly feeds: manipulations of diets and feeding to reduce environmental impact from intensive aquaculture. Gary Fornshell*; University of Idaho
3:10 PM		Break
3:30 PM	702	The history and current perspectives of dietary formulation in the horse. L. Lawrence*; University of Kentucky, Lexington

2:15 PM	707	Strategies to reduce <i>Campylobacter</i> . Norman J. Stern* ¹ , E. A. Svetoch ² , B. V. Eruslanov ² , Y. N. Kovalev ² , L. I. Volodina ² , V. V. Perelygin ² , E. V. Mitsevich ² , I. P. Mitsevich ² , V. D. Pokhilenko ² , V. N. Borzenkov ² , V. P. Levchuk ² , O. E. Svetoch ² , T. Y. Kudriavtseva ² ; ¹ USDA-ARS-Russell Research Center, Athens, GA, ² State Research Center for Applied Microbiology, Obolensk, Russia
2:40 PM	708	Strategies to reduce <i>Clostridium perfringens</i> . Gregory R. Siragusa*; Agricultural Research Service, USDA Russell Research Center, Athens, GA
3:05 PM		Round Table Discussion with all Speakers

SYMPOSIUM

Physiology and Endocrinology

The Biology of Stress in Animals

Co-Chairs: Tom Adams, University of California and Chris McDaniel, Mississippi State University

Room: 223

Time	Abstract #	
1:00 PM		Welcome and Acknowledgements. Dr. Gary Williams
1:05 PM		Mechanisms governing the response of the hypothalamic-pituitary-adrenal axis to stressors. Catherine Rivier, The Salk Institute, La Jolla, CA
1:45 PM		Question and Answer Session
2:00 PM		Neuroendocrine mechanisms for stress-induced disruption of the sheep estrous cycle. Fred Karsch, University of Michigan, Ann Arbor
2:30 PM		Question and Answer Session
2:40 PM		Break
3:10 PM		Physiological and behavioral consequences of genetic selection for a reduced stress response in Japanese quail. Daniel Satterlee, Louisiana State University, Baton Rouge
3:40 PM		Question and Answer Session
3:50 PM		Mechanisms by which heat stress disrupts follicular function and oocyte competence in cattle. Zvi Roth, University of Florida, Gainesville
4:20 PM		Question and Answer Session

SYMPOSIUM

Women & Minority Issues in Animal Agriculture

Chair: Francine Bradley, University of California-Davis

Sponsor: Embrex Inc.

Room: 263

Time	Abstract #	
1:00 PM		Welcome, Introduction and Thanks to Sponsors. Francine Bradley
1:05 PM		Animal Agriculture traditions and their current influences with respect to participation of women minorities. Francine Bradley, University of California, Davis
1:15 PM	709	Gender and Animal Agriculture. Carolyn Sachs*; Professor of Rural Sociology and Women's Studies, Penn State University, University Park
2:00 PM	710	A Respect for the Land. Annie J. King*; University of California - Davis
2:30 PM		Break
3:00 PM		Challenges and Opportunities for Minorities and Women in Dairy Production. Tilak Dhiman, Utah State University, Logan

Beef Species

Enhancing Energetic Efficiency

Chair: Susan Duckett, University of Georgia

Room: 132

Time	Abstract #	
1:00 PM	721	Growing program effects on efficiency of energy use by feedlot cattle. Clinton R. Krehbiel*, Matthew P. McCurdy, Gerald W. Horn; Oklahoma State University, Stillwater
1:30 PM	722	Nutrition <i>in utero</i> and pre-weaning has long-term consequences for growth and size of Piedmontese- and Wagyu-sired steers. Paul L Greenwood* ^{1,2} , Helen Hearnshaw ^{1,3} , Linda M Cafe ^{1,3} , David W Hennessy ^{1,3} , Gregory S Harper ^{1,4} ; ¹ CRC for Cattle and Beef Quality, Armidale, NSW Australia, ² NSW Agriculture, Armidale, NSW Australia, ³ NSW Agriculture, Grafton, NSW Australia, ⁴ CSIRO Livestock Industries, St Lucia, QLD Australia
2:00 PM	723	Effects of Limit Feeding on Net Nutrient Flux and Oxygen Consumption by the Portal-Drained Viscera. Matthew P. McCurdy*, Matthew J. Hersom, Clinton R. Krehbiel, Gerald W. Horn; Oklahoma State University, Stillwater
2:15 PM	724	Effect of time of feeding a limit-fed high grain diet during winter months on growing feedlot steers. S. M. Holt*, R. H. Pritchard, J. A. Clapper; South Dakota State University, Brookings
2:30 PM	725	Residual feed intake: an alternative measure of feed efficiency for beef cattle. Gordon E. Carstens* ¹ , M. S. Kerley ² ; ¹ Texas A&M University, College Station, ² University of Missouri, Columbia
2:45 PM		Break
3:15 PM	726	Correlations among ultrasound carcass estimates, growth performance measures, and residual feed intake in Angus steers. J.I. Szasz*, C.W. Hunt, S.D. Baker, T. Klein, P.S. Kuber, B. Glaze, D. Falk, R. Richard, J. Miller, R.A. Battaglia, R.A. Hill; University of Idaho
3:30 PM	727	Relationship of feeding behavior to feed efficiency in crossbred Angus steers. Joseph W. Golden*, Monty S. Kerley; University of Missouri, Columbia
3:45 PM	728	The effect of mitochondrial uncoupling proteins 2 and 3 on feed efficiency in crossbred angus steers. W.H. Kolath*, M.S. Kerley, J.W. Golden; University of Missouri, Columbia
4:00 PM	729	Variation in energy expenditures between growing steers with divergent residual feed intakes. Monte B White*, Gordon E Carstens, Casey M Theis, Michael W Kurz, Ching-Yi Chen, Lisa J Slay, Tom H Welsh Jr.; Texas A&M University, College Station
4:15 PM	730	Effects of Revalor [®] -200 vs. Finaplix [®] -H in single and reimplant strategies for yearling heifers. C.D. Reinhardt ¹ , W.T. Nichols* ¹ , J.P. Hutcheson ¹ , S. Swingle ² , K. Karr ² ; ¹ Intervet, Inc., Millsboro, DE, ² Cactus Research, Ltd., Amarillo, TX

Breeding and Genetics

Dairy Genetic Evaluation

Chair: Daryl Nash, Ferrum College

Room: 267

Time	Abstract #	
1:00 PM	731	International genetic evaluation of longevity traits. J. H. Jakobsen*, U. Emanuelson; Interbull Centre, Uppsala, Sweden
1:15 PM	732	Correlated traits used for indirect prediction of productive life in Holsteins. S. Tsuruta* ¹ , I. Misztal ¹ , T. J. Lawlor ² ; ¹ University of Georgia, Athens, ² Holstein Association USA Inc., Brattleboro, VT
1:30 PM	733	Analysis of the Relationship Between Type Traits and Functional Survival in Canadian Jersey cows. Asheber Sewalem* ^{1,2} , Gerrit Kistemaker ² , Brian Van Doormaal ² ; ¹ Agriculture and Agri-Food Canada, ² Canadian Dairy Network
1:45 PM	734	Potential of three-stage selection strategies for enhancing the efficiency of progeny testing programs in US dairy cattle. Kent Weigel*, Nate Zwald; Department of Dairy Science, University of Wisconsin, Madison

2:00 PM	735	Genetic base and trait definition update. P. M. VanRaden*; Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD
2:15 PM	736	International evaluation of Milking Shorthorn-type dairy cattle for production traits. R. A. Barrett* ¹ , F. Miglior ² , J. Jamrozik ¹ , G. Jansen ¹ ; ¹ CGIL, Dept. Animal & Poultry Science, University of Guelph, ON, Canada, ² Agriculture & Agri-Food Canada - CDN, Guelph, ON, Canada
2:30 PM	737	Accounting for differences in rate of maturity in yield evaluations. G.R. Wiggans*, P.M. VanRaden; Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD
2:45 PM		Break
3:15 PM	738	Prediction of service sire fertility. Melvin T. Kuhn* ¹ , Jana L. Hutchison ¹ , John S. Clay ² ; ¹ Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD, ² Dairy Records Management Systems, Raleigh, NC
3:30 PM	739	Estimation of the economic impact of a unit change in PTA for daughter pregnancy rate. Eunsun Yook* ¹ , Ronald E. Pearson ¹ , Paul M. VanRaden ² ; ¹ Virginia Tech, Blacksburg, VA, ² Animal Improvement Programs Laboratory, Animal Research Service, USDA, Beltsville, MD
3:45 PM	740	Genetic parameters for days open and pregnancy rate in US Holsteins. S. Oseni, I. Misztal*, S. Tsuruta, R. Rekaya; The University of Georgia, Athens
4:00 PM	741	Genetic relationships of milk yield for different parities between bulls and their sons. H. D. Norman*, R. L. Powell, J. R. Wright, P. M. VanRaden; Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD
4:15 PM	742	Effects of udder traits on milk flow and their associations with temperament of first lactation dairy cows during milking time. Boulbaba Rekik*, Abderrahmen Ben Gara, Rachid Bouraoui, Kaouther Kouki; ESA Mateur 7030 Mateur, Tunisia

Breeding and Genetics

Molecular Genetics, QTL Detection and Marker Assisted Selection

Chair: Milt Thomas, New Mexico State University

Room: 127

Time	Abstract #	
	743	Withdrawn by author
1:15 PM	744	Detection of quantitative trait loci affecting conformation traits in Holstein cattle. Melissa S Ashwell* ^{1,3} , D Wayne Heyen ² , Tad S Sonstegard ³ , Curtis P Van Tassell ³ , Harris A Lewin ² ; ¹ North Carolina State University, Raleigh, ² University of Illinois, Urbana, ³ USDA-ARS, Beltsville, MD
1:30 PM	745	Statistical power for detecting epistasis QTL effects under the F2 design. Yongcai Mao*, Yang Da; Department of Animal Science, University of Minnesota, St. Paul
1:45 PM	746	Including genetic groups for QTL effects in marker assisted selection. K. J. Hanford* ¹ , R. M. Thallman ² , S. D. Kachman ³ , L. D. Van Vleck ¹ ; ¹ USDA-ARS, Roman L. Hruska U.S. Meat Animal Research Center, University of Nebraska, Lincoln, ² USDA-ARS, Roman L. Hruska U.S. Meat Animal Research Center, Clay Center, NE, ³ University of Nebraska, Department of Statistics, Lincoln
2:00 PM	747	Computational analysis of putative imprinting signatures of bovine IGF-II and IGF-II receptor genes. Ikhide G. Imumorin* ¹ , JongJoo Kim ² , Osaro O. Mgbere ³ , Dennis O. Umesiobi ⁴ ; ¹ Valdosta State University, Valdosta, GA, ² Iowa State University, Ames, ³ Rivers State University of Science & Technology, Port Harcourt, Nigeria, ⁴ University of Natal, Pietermaritzburg, South Africa
2:15 PM	748	Evaluation of microsatellite markers on bovine chromosomes 1 and 5 for potential allelic associations with meat characteristics and growth traits in beef cattle. K.-S. Kim* ¹ , S. Costello ² , G. J. M. Rosa ¹ , A. M. Mullen ² , N. E. Raney ¹ , C. W. Ernst ¹ ; ¹ Michigan State University, East Lansing, ² National Food Centre Teagasc, Dublin, Ireland
2:30 PM	749	A combined line-cross and halfsib model to detect and characterize QTL in an F2 outbred cross population. Jong-Joo Kim*, Jack C.M. Dekkers; Iowa State University, Ames
2:45 PM		Break

3:15 PM	750	Identification of an ovulation rate QTL in cattle on BTA14 using selective DNA pooling and interval mapping. Michael G Gonda* ¹ , Juan A Arias ² , George E Shook ¹ , Brian W Kirkpatrick ² ; ¹ Dairy Science Department, University of Wisconsin, Madison, ² Animal Sciences Department, University of Wisconsin, Madison
3:30 PM	751	Power and sample size calculations for two color microarray experiments with biological and technical replication. J.P. Steibel* ¹ , R.J. Tempelman ¹ , G.J.M. Rosa ^{1,2} ; ¹ Department of Animal Science, Michigan State University, ² Department of Fisheries and Wildlife, Michigan State University
3:45 PM	752	A new method to fine map a quantitative trait locus using linkage disequilibrium. Helene Gilbert* ^{1,2} , Mehmet Z. Firat ² , Liviu R. Totir ² , Jack C.M. Dekkers ² , Rohan L. Fernando ² ; ¹ Institut National de la Recherche Agronomique SGQA, INRA, 78352 Jouy-en-Josas Cedex, France, ² Iowa State University, Animal Science, Ames
4:00 PM	753	Assessment of respiratory chain complex activities and electron transport chain protein expression in muscle mitochondria in Angus steers with low and high feed efficiency. B.A. Sandelin* ¹ , A.H. Brown Jr ¹ , C. Ojano-Dirain ¹ , M. Iqbal ¹ , M.A. Brown ² , W.O. Herring ³ , M. Akin ⁴ , Z.B. Johnson ¹ , R.T. Baublits ¹ ; ¹ University of Arkansas, Fayetteville, ² USDA-ARS Grazinglands Research Laboratory, El Reno, OK, ³ Smithfield Premium Genetics Group, Roanoke Rapids, NC, ⁴ Circle A Angus Ranch, Iberia, MO
4:15 PM	754	Samples classification using microarray data: Dealing with potential diagnostics misclassification. Romdhane Rekaya*; Department of Animal and Dairy Science, University of Georgia, Athens
4:30 PM	755	Statistical methods to detect imprinted QTL with gender-specific recombination frequencies. Nicole R. London*, Yang Da; Department of Animal Science, University of Minnesota, St. Paul

Dairy Foods

Microbiology

Chair: Scott Rankin, University of Wisconsin-Madison

Room: 124

Time	Abstract #	
1:00 PM	756	Comparison of viscosity and stability of bovine fluid and evaporated milks with those of caprine milk counterparts stored under refrigeration. Catherine O. Maduko* ¹ , Rob Shewfelt ¹ , Romeo Toledo ¹ , Joseph Frank ¹ , Yao-wen Huang ¹ , Young W. Park ² ; ¹ Department of Food Science and Technology, University of Georgia, Athens, ² Fort Valley State University Agricultural Research Station, Fort Valley, GA
1:15 PM	757	Immunostimulatory activities of a novel AT oligonucleotide from "Immunobiotic" <i>Lactobacillus gasserii</i> on swine peyer's patch cells. Haruki Kitazawa*, Takeshi Shimosato, Shinichiro Katoh, Masanori Tohno, Yasushi Kawai, Tadao Saito; Graduate School of Agricultural Science, Tohoku University Sendai, Japan
1:30 PM	758	AT oligonucleotide from "Immunobiotic" <i>Lactobacillus gasserii</i> augments immune responses via Toll-like receptor 9 signaling. Takeshi Shimosato*, Haruki Kitazawa, Masanori Tohno, Shinichiro Katoh, Yasushi Kawai, Tadao Saito; Graduate School of Agricultural Science Sendai, Japan
1:45 PM	759	Extending shelf life of skim milk with microfiltration. Mark W. Elwell*, David M. Barbano; Northeast Dairy Foods Research Center, Department of Food Science, Cornell University, Ithaca, NY
2:00 PM	760	Descriptive analysis of processed cheese manufactured by extrusion technology. Andrea AC Cole* ¹ , Koushik KA Adhikari ² , Ingolf IU Gruen ¹ , Hildegard Heymann ³ ; ¹ University of Missouri, Columbia, ² California State Polytechnic University, Pomona, ³ University of California, Davis
2:15 PM	761	Developments in the small scale manufacture of process cheese using RVA. R Kapoor*, A Pollard, P Upreti, L. E. Metzger; MN-SD Dairy Foods Research Center, University of Minnesota, Saint Paul
2:30 PM	762	Evaluation of process cheese spread meltability using a Rapid Visco Analyzer. Lisa A. Prow*, Lloyd E. Metzger; University of Minnesota, St. Paul
2:45 PM		Break

- 4:00 PM 776 Dietary coconut oil and conjugated linoleic acid reduce body fat in mice. KM Hargrave*, JL Miner; University of Nebraska, Lincoln
- 4:15 PM 777 Subcutaneous and abdominal fatty acid composition and CLA profiles in grain finished steers. L.H. Baumgard*¹, S.R. Sanders¹, O.B. Mendivil¹, J.K. Kay¹, J.A. Marchello¹, P. Delmonte², J.M. Griinari³, M.P. Yurawecz²; ¹The University of Arizona, Tucson, ²U.S. Food and Drug Administration, Washington D.C., ³University of Helsinki, Finland

Lactation Biology

Biology of Lactation

Chair: Suzanne Sechen, FDA

Room: 264

- | Time | Abstract # | |
|---------|------------|---|
| 1:00 PM | 778 | Exogenous porcine prolactin stimulates mammary development in prepubertal gilts. Chantal Farmer*, Marie-France Palin; Agriculture and Agri-Food Canada, Dairy and Swine R & D Centre, Lennoxville, QC, Canada |
| 1:15 PM | 779 | Gene expression profiling of bovine mammary epithelial cells in response to prolactin and extracellular matrix. Lynn Rowley* ¹ , D Baird ² , T Wilson ³ , J Whitley ¹ , C Berends ¹ , M Wells ¹ , M Goddard ¹ ; ¹ Primary Industries Research, Victoria Attwood, Australia, ² AgResearch, Lincoln, New Zealand, ³ AgResearch Molecular Biology Unit University of Otago, Dunedin, New Zealand |
| 1:30 PM | 780 | Microarray analysis of prolactin signalling in the bovine mammary gland during lactogenesis. M Wells* ¹ , C Prosser ² , D Baird ³ , T Wilson ⁴ , M Auld ⁵ , JC Whitley ¹ , JK Lee ¹ , J Argento ¹ , M Goddard ¹ ; ¹ Primary Industries Research Victoria Attwood, Australia, ² AgResearch Ruakura, New Zealand, ³ AgResearch Lincoln, New Zealand, ⁴ AgResearch Molecular Biology Unit University of Otago, Dunedin, New Zealand, ⁵ Primary Industries Research Victoria Ellinbank, Australia |
| 1:45 PM | 781 | Expression of prolactin responsive genes following experimental manipulation of the prolactin axis during early lactation in dairy cows. E. H. Wall* ¹ , H. M. Crawford ² , G. E. Dahl ² , T. B. McFadden ¹ ; ¹ University of Vermont, Burlington, ² University of Illinois, Urbana |
| 2:00 PM | 782 | Effects of 21-day short day photoperiod (SDPP) during the dry period on prolactin (PRL) concentrations, lymphocyte PRL receptor (PRL-R) mRNA, and general health of dairy cows. E. D. Reid* ¹ , T. L. Auchtung ¹ , D.E. Morin ¹ , T.B. McFadden ² , G.E. Dahl ¹ ; ¹ University of Illinois, Urbana, ² University of Vermont, Burlington |
| 2:15 PM | 783 | Exposure to long day photoperiod during the dry period increases mammary gland expression of suppressors of cytokine signaling in dairy cows. E. H. Wall* ¹ , T. L. Auchtung ² , G. E. Dahl ² , T. B. McFadden ¹ ; ¹ University of Vermont, Burlington, ² University of Illinois, Urbana |
| 2:30 PM | 784 | The effects of a 21-day short day photoperiod treatment during the dry period on dry matter intake and subsequent milk production in cows. E.D. Reid* ¹ , R.L. Wallace ¹ , T.B. McFadden ² , G.E. Dahl ¹ ; ¹ University of Illinois, Urbana, ² University of Vermont, Burlington |
| 2:45 PM | | Break |
| 3:15 PM | 785 | Evidence that prolactin (PRL) mediates effects of milking frequency in early lactation. H.M. Crawford* ¹ , T.L. Auchtung ¹ , E.H. Wall ² , T.B. McFadden ² , G.E. Dahl ¹ ; ¹ University of Illinois, Urbana, ² University of Vermont, Burlington |
| 3:30 PM | 786 | Impact of Increased Milking Frequency in Early Lactation in Multiparous Dairy Cows. M. J. VanBaale* ¹ , D. Ledwith ² , J. M. Thompson ³ , R. J. Collier ¹ , L.H. Baumgard ¹ ; ¹ The University of Arizona, Tucson, ² Stotz Dairy, Buckeye, AZ, ³ California State Polytechnic University, San Luis Obispo |
| 3:45 PM | 787 | Effects of milking frequency during early lactation on performance and health of dairy cows. J. Fernandez*, C. M. Ryan, D. M. Galton, T. R. Overton; Cornell University, Ithaca, NY |
| 4:00 PM | 788 | Effects of continuous milking, bST and early-lactation milking frequency on mammary development, milk yield and composition in primiparous cows. A.C. Fitzgerald*, E.L. Annen, P.C. Gentry, L.H. Baumgard, R.J. Collier; University of Arizona, Tucson |

2:00 PM	801	Effect of feeding a low nutrient excretion diet on pig growth performance and carcass characteristics in a commercial wean-finish setting. R.B. Hinson*, M.C. Walsh, D.M. Sholly, S.A. Trapp, D.T. Kelly, J.S. Radcliffe, A.L. Sutton, A.P. Schinckel, B.T. Richert; Purdue University, West Lafayette, IN
2:15 PM	802	Finishing steer performance on diets with added vegetable oil. G. M. Hill* ¹ , S. K. Duckett ² , J. F. Baker ¹ , E. Paven ² , B. G. Mullinix ¹ ; ¹ University of Georgia, Tifton, ² University of Georgia, Athens
2:30 PM	803	Effect of oil supplementation to finishing cattle on carcass quality and subcutaneous fat composition. Enrique Pavan* ¹ , Susan Duckett ¹ , Gary Hill ² ; ¹ University of Georgia, Athens, ² University of Georgia, Tifton
2:45 PM		Break
3:15 PM	804	Effects of Supplement Type on Growth and Pregnancy Rate of Yearling, Brahman-Crossbred Heifers. John D. Arthington* ¹ , G. Cliff Lamb ² , Findlay M. Pate ¹ ; ¹ University of Florida, Range Cattle Research and Education Center, Ona, ² University of Minnesota, North Central Experiment Station, Grand Rapids
3:30 PM	805	Effects of supplemental yeast fermentation product on early-weaned calf performance while grazing winter ryegrass summer stargrass pastures in Florida. John D. Arthington ¹ , Sebastian Galindo-Gonzalez* ¹ , Joao M. B. Vendramini ^{1,2} , Robert S. Kalmbacher ¹ , Paul Mislevy ¹ , Lynn E. Sollenberger ² , Ilkyu Yoon ³ ; ¹ University of Florida, Range Cattle Research and Education Center, Ona, ² University of Florida, Department of Agronomy, Gainesville, ³ Diamond V, Cedar Rapids, IA
3:45 PM	806	Response of cow/calf pairs grazing fescue and individually-supplemented with gradient levels of FEB-200™. D. K. Aaron* ¹ , D. G. Ely ¹ , J. Wyles ¹ , V. Akay ² ; ¹ University of Kentucky, ² Alltech, Inc.
4:00 PM	807	Response of cows and calves to gradient levels of a supplemented modified glucomannan when grazing tall fescue. D. G. Ely* ¹ , D. K. Aaron ¹ , J. Wyles ¹ , V. Akay ² ; ¹ University of Kentucky, ² Alltech, Inc.
4:15 PM	808	Birth season, preweaning stocking rates and sex effects on birth-to-harvest growth and carcass composition of Simmental-sired calves. F. M. Rouquette* ¹ , G. Estefan ² , J. W. Turner ² , D. P. Hutcheson ³ ; ¹ Texas Agricultural Experiment Station, Overton, ² Texas A&M University, College Station, ³ Texas Agricultural Experiment Station, Amarillo
4:30 PM	809	Performance of Early-Weaned Calves Grazing Tifton 85 Bermudagrass and Receiving Three Levels of Supplemental Concentrate. J. M. B. Vendramini* ^{1,2} , L. E. Sollenberger ¹ , J. D. Arthington ² , J. B. Dubeux, Jr. ¹ , S. M. Interrante ¹ ; ¹ Department of Agronomy, University of Florida, Gainesville, ² Range Cattle Research and Education Center, University of Florida, Ona

PSA-Nutrition

Amino Acids

Chair: Jason Emmert, University of Arkansas

Room: 274

Time	Abstract #	
1:00 PM	810	Comparison of methionine sources based on an equimolar trial design with broiler chickens in Brazil. S. Vieira ¹ , D. Hoehler* ² , A. Lemme ² , A. Kessler ¹ , S. Pophal ¹ , A. Ebert ¹ , G. Eichner ¹ ; ¹ Federal University of Rio Grande del Sul, Brazil, ² Degussa Corporation, Kennesaw, GA
1:15 PM	811	Very young turkeys utilize 2-hydroxy-4-(methylthio) butanoic acid (HMTBA) effectively as a methionine (M) source. R. Gonzalez-Esquerria, M. Vazquez-Añon, T. Hampton, T. W. York, C. W. Wuelling, C. D. Knight; Novus International, Inc., St Charles, MO
1:30 PM	812	The Methionine Requirements of Chicks and Hens Fed Corn and Peanut Meal or Soybean Meal Based Diets. G.M. Pesti*, R.I. Bakalli, J.P. Driver; The University of Georgia, Athens
1:45 PM	813	The response of broilers to feeds limiting in threonine in the period 7 to 21 days of age. Robert M. Gous ¹ , Sabine Van Cauwenberghe ² , Claire Relandeau ² , David J. Burnham* ³ ; ¹ University of KwaZulu-Natal Pietermaritzburg, Natal, South Africa, ² Ajinomoto Eurolysine SAS Paris, France, ³ Ajinomoto Heartland LLC, Chicago, IL

2:15 PM	828	Plasma and tissue selenium and plasma glutathione peroxidase concentrations of broilers fed a selenium-deficient diet following a selenium-loading period. R. L. Payne*, L. L. Southern; LSU Agricultural Center, Baton Rouge
2:30 PM	829	Validation of a selenium-deficient diet for broilers. R. L. Payne*, L. L. Southern; LSU Agricultural Center, Baton Rouge
2:45 PM		Break
3:15 PM	830	Growth performance and spontaneous bone fracture incidence of toms fed various levels of calcium and non-phytate phosphorus to heavy market weight. K.D. Roberson*, J.L. Kalbfleisch, R.A. Charbeneau, W. Pan; Michigan State University
3:30 PM	831	The impact of dietary copper source and level on hen performance, egg quality and egg yolk cholesterol. Paul H. Patterson ¹ , Terri L. Cravener ¹ , Danny M. Hooge ^{*2} ; ¹ The Pennsylvania State University, University Park, ² Hooge Consulting Service, Inc., Eagle Mountain, UT
3:45 PM	832	Use of 2-hydroxy-4(methylthio) butanoic acid (HMTBA) as a ligand for organic trace minerals. J.J. Dibner*, M. Trehy, C.S. Schasteen, J.A. Hume; Novus International, Inc., St. Louis, MO
4:00 PM	833	Reduction of ascites mortality in broilers by dietary coenzyme Q ₁₀ supplementation. Ailian Geng*, Yuming Guo, Ying Yang; College of Animal Science and Technology, China Agricultural University Yuanming West Road, Beijing, P.R. China
4:15 PM	834	Comparison of growth potential and carcass components of a new strain of tom turkeys with other commercial strains. K.D. Roberson ^{*1} , J.L. Kalbfleisch ¹ , D. Dransfield ² ; ¹ Michigan State University, ² British United Turkeys of America
4:30 PM	835	Effects of cereal, heat processing, and fiber on productive performance and digestive traits of broilers. J.M. González-Alvarado ¹ , E.J. Moreno ² , D.G. Valencia ² , R. Lázaro ² , G.G. Mateos ^{*2} ; ¹ Universidad Autónoma de Tlaxcala, México, ² Universidad Politécnica de Madrid, Spain

Ruminant Nutrition

Beef - Digestibility & Production

Chair: Harvey Freetly, USDA, ARS

Room: 220

Time	Abstract #	
1:00 PM	836	Site and extent of digestion in beef cattle consuming restricted amounts of forage and supplemental ruminally undegradable protein. E. J. Scholljegerdes*, T. R. Weston, F. S. D'Angieri, P. A. Ludden, B. W. Hess; Department of Animal Science, University of Wyoming, Laramie
1:15 PM	837	Digestion of barley-based high-grain diets supplemented with rumen degradable and undegradable protein in steers. - digestion trial. B. W. Pamp*, M. L. Bauer, G. P. Lardy, S. A. Soto-Navarro; Dept. of Animal and Range Sciences, North Dakota State University, Fargo
1:30 PM	838	Effect Of Choice-Select Spread On Carcass Value And Profitability In Early-Weaned Simmental Steers. Nathan A. Pyatt ^{*1} , Larry L. Berger ¹ , Dan B. Faulkner ¹ , Paul M. Walker ² ; ¹ University of Illinois, Urbana, ² Illinois State University, Normal
1:45 PM	839	Effect Of Dressed Price On Carcass Value And Profitability In Early-Weaned Simmental Steers. Nathan A. Pyatt ^{*1} , Larry L. Berger ¹ , Dan B. Faulkner ¹ , Paul M. Walker ² ; ¹ University of Illinois, Urbana, ² Illinois State University, Normal
2:00 PM	840	Effects of carbohydrate source and forage level in the diet on nitrogen balance, digestibility and portal nutrient flux in sheep. A. F. Branco*, G. F. Mouro, F. J. Maia, T. F. Minella, L. P. Rigolon, S. M. Coneglian; Universidade Estadual de Maringa
2:15 PM	841	Digestion characteristics of corn plus cottonseed meal compared to whole cottonseed plus de-oiled rice bran as supplements for beef cattle and the effects of extrusion. MS Gadberry ^{*1} , PA Beck ² , SA Gunter ² , DW Kellogg ³ ; ¹ University of Arkansas, Cooperative Extension Service Little Rock, ² University of Arkansas, Southwest Research and Extension Center, Hope, ³ University of Arkansas, Dept Animal Science, Fayetteville

- 2:30 PM 842 Using a dynamic mechanistic ruminant model to estimate the effect of large changes in starch fermentation rates and site of digestion on cattle growth. B.N. Nagorcka^{*1}, S. Bird²; ¹CSIRO Livestock Industries Canberra, Australia, ²University of New England NSW, Australia
- 2:45 PM 843 Ruminant nutrient degradation of untreated and chemically treated wheat grain. K.-H. Suedekum^{*1}, M. Klein¹, M. Paschke-Beese¹, O. Schade²; ¹University of Kiel, Germany, ²Raiffeisen HaGe Nord, Rendsburg, Germany

Ruminant Nutrition

Dairy - Transition Cows

Chair: Clay Zimmerman, Blue Seal Feeds, Inc.

Room: 130

- | Time | Abstract # | |
|---------|------------|---|
| 1:00 PM | 844 | Altered feeding behavior occurs in both primiparous and multiparous Holsteins during the periparturient period. M. A. DeGroot [*] , P. D. French; Oregon State University, Corvallis |
| 1:15 PM | 845 | Effects of increased exposure to pre-calving diets containing BioChlor: Reproductive performance. PJ DeGaris ¹ , IJ Lean ^{*1} , DM McNeill ² , AR Rabiee ¹ ; ¹ Bovine Research Australasia NSW, Australia, ² University of Sydney NSW, Australia |
| 1:30 PM | 846 | Effects of increased exposure to pre-calving diets containing BioChlor: Milk production. PJ DeGaris ¹ , IJ Lean ^{*1} , DM McNeill ² , AR Rabiee ¹ ; ¹ Bovine Research Australasia NSW, Australia, ² University of Sydney NSW, Australia |
| 1:45 PM | 847 | Effects of increased exposure to pre-calving diets containing BioChlor: Cow health. PJ DeGaris ¹ , IJ Lean ^{*1} , DM McNeill ² , AR Rabiee ¹ ; ¹ Bovine Research Australasia NSW, Australia, ² University of Sydney NSW, Australia |
| 2:00 PM | 848 | Effect of a dry propylene glycol product for postpartum Holstein dairy cows on health and performance. Y.-H. Chung ^{*1} , K. S. Heyler ¹ , T. W. Cassidy ¹ , S. L. Ward ¹ , I. D. Girard ² , G. A. Varga ¹ ; ¹ Department of Dairy and Animal Science, The Pennsylvania State University, University Park, ² Probiotech International Inc., Saint-Hyacinthe, QC, Canada |
| 2:15 PM | 849 | Effects of method of delivery of glycerol on performance of dairy cows during the transition period. K. L. Ogborn ^{*1} , R. Paratte ¹ , K. L. Smith ¹ , P. W. Jardon ² , T. R. Overton ¹ ; ¹ Cornell University, Ithaca, NY, ² West Central Soy, Ralston, IA |
| 2:30 PM | 850 | Effects of feeding propionate and calcium salts of long-chain fatty acids on transition dairy cow performance. J.M. DeFraire [*] , A.R. Hippen, K.F. Kalscheur, R.S. Patton; South Dakota State University, Brookings |
| 2:45 PM | | Break |
| 3:15 PM | 851 | The effect of prepartum monensin supplementation on milk production in dairy cows. A. Arieli [*] , U. Dicken; Hebrew University Fac. Agric, Rehovot 76100, Israel |
| 3:30 PM | 852 | Effect of lowered prepartum DCAD on urinary pH: A meta-analysis. E. Charbonneau ^{*1} , D. Pellerin ¹ , G.R. Oetzel ² ; ¹ Université Laval, QC, Canada, ² University of Wisconsin, Madison |
| 3:45 PM | 853 | Direct-Fed Microbial Supplementation On Ruminant Digestion, Health And Performance Of Pre-And Postpartum Dairy Cattle. James E. Nocek ^{*1} , William P. Kautz ² ; ¹ Spruce Haven Farm and Res Ctr, Auburn, NY, ² Chr Hansen BioSystems, Milwaukee, WI |
| 4:00 PM | 854 | Production and blood metabolites in multiparous Holstein and Jersey cows fed rumen-protected choline during the periparturient period. N. A. Janovick ^{*1} , D. B. Carlson ¹ , J. E. Garrett ² , J. K. Drackley ¹ ; ¹ University of Illinois, Urbana, ² Balchem Encapsulates, Slate Hill, NY |
| 4:15 PM | 855 | Feeding soybeans and rumen-protected choline to dairy cows during the periparturient period and early lactation: effects on plasma lipid balance. W.A. Oelrichs [*] , M.C. Lucy, M.S. Kerley, J.N. Spain; University of Missouri, Columbia |

- 4:30 PM 856 Effects of physiological state, prepartum dietary carbohydrate source, and chromium supplementation on dynamics of insulin, glucose, and fatty acid metabolism in dairy cows. K. L. Smith*¹, M. R. Waldron¹, T. R. Overton¹, J. K. Drackley², R. C. Boston³, M. T. Socha⁴; ¹Cornell University, Ithaca, NY, ²University of Illinois, Urbana, ³University of Pennsylvania, Kennett Square, ⁴Zinpro Corporation, Eden Prairie, MN
- 4:45 PM 857 Inducing hypocalcemia in rumen fistulated steers to determine effectiveness of anionic salt treatments for transition dairy cattle. Mark A. Froetschel*¹, Devendra Kumar¹, Pat G. Smith¹, Stacy N. Nichols²; ¹The University of Georgia, Athens, ²West Central Soy, Ralston, IA

Swine Species

Chair: Bob Goodband, Kansas State University

Room: 276

- | Time | Abstract # | |
|---------|------------|---|
| 3:15 PM | 858 | Gilt selection for improved lifetime productivity. J.L. Patterson* ¹ , G.R. Foxcroft ¹ , M.J. Pettitt ² , E. Beltranena ¹ ; ¹ Swine Research & Technology Centre, Edmonton, AB, ² Prairie Swine Centre Inc., Saskatoon, SK |
| 3:30 PM | 859 | Efficient sows are good mothers. Rob Bergsma*; IPG, Institute for Pig Genetics, 6640 AA Beuningen, The Netherlands |
| 3:45 PM | 860 | Comparison of different measures of carcass composition and lean growth in swine. D.W. Newcom ¹ , K.J. Stalder* ¹ , G.F. Jones ² ; ¹ Dept. of Animal Science, Iowa State University, Ames, ² Dept. of Agriculture, Western Kentucky University, Bowling Green |
| 4:00 PM | 861 | Effects of removing different proportions of slaughter weight pigs from pens on subsequent growth performance. Jacob M. DeDecker* ¹ , Mike Ellis ¹ , Bradley F. Wolter ² , Beau A. Peterson ¹ ; ¹ University of Illinois, Urbana, ² The Maschhoffs, Inc., Carlyle, IL |

THURSDAY, JULY 29, 2004

SYMPOSIA AND ORAL SESSIONS

SYMPOSIUM

Animal Health

Integrative Aspects of Immunity, Nutrient Metabolism, and Production in Livestock

Chair: Thomas Overton, Cornell University

Sponsors: Elanco Animal Health and Pfizer Animal Health

Room: 274

Time	Abstract #	
8:00 AM		Introduction. T.R. Overton, Cornell University Ithaca, NY
8:05 AM	862	What are the costs of immunity? Kirk C. Klasing ^{*1} , Brooke D. Humphrey ¹ , Alfonso J. Mireles ² , Elizabeth A. Koutsos ³ ; ¹ Dept Animal Science, University of California, Davis, ² Foster Farms Dept. Feed Research, ³ Dept. Animal Science, California State University, San Luis Obispo
8:50 AM	863	Interactive responses in gut immunity, and systemic and local changes in the IGF system in nursery pigs in response to <i>Salmonella enterica</i> serovar Typhimurium. B. J. Johnson [*] , S. S. Dritz, K. A. Skjolaas-Wilson, T. E. Burkey, J. E. Minton; Kansas State University, Manhattan
9:35 AM	864	Protein tyrosine nitration: a membrane-organized mechanism for altered signal transduction during proinflammatory stress. T.H. Elsasser ^{*1} , S. Kahl ¹ , J.L. Sartin ² , C. Li ¹ ; ¹ USDA, Agricultural Research Service, Beltsville, MD, ² Auburn University, Auburn, AL
10:20 AM	865	Parturition-Induced Changes in Neutrophil Gene Expression: Implications for Cell Function. Jeanne L. Burton [*] , Sally A. Madsen, Ling-Chu Chang, Patty S.D. Weber, Kelly R. Buckham, Paul M. Coussens; Michigan State University, Department of Animal Science

SYMPOSIUM

Extension Education

The Use of Electronic Media for Extension and Producer Education

Chair: Tom R. Troxel, University of Arkansas

Room: 124

Time	Abstract #	
8:00 AM		Introduction. Tom Troxel, University of Arkansas
8:10 AM	866	Maximize your efficiency through online knowledge bases. Craig H. Wood [*] , Ashley S. Griffin; University of Kentucky, Lexington
8:30 AM		E-Extension. Jan Poley, NE
8:50 AM	867	The power of W ³ : delivering courses, training, and extension programs over the web. Ashley S. Griffin [*] , Craig H. Wood; University of Kentucky, Lexington
9:10 AM		Break
9:25 AM		On line certification program for beef producers. Ron Lemenager, Purdue University
9:45 AM		Swine and beef business daily. Thomas Stein, Megafarms
10:05 AM		Using online technology to teach advance reproductive management. Darrel Kesler, University of Illinois

SYMPOSIUM

Goat Species

Export Potential, Market Outlook, and Value-Added Processing

Chair: Terry A. Gipson, Langston University

Room: 263

Time	Abstract #	
8:05 AM		Introduction. Terry A. Gipson, E (Kika) de la Garza American Institute for Goat Research, Langston University
8:15 AM	868	Export potential, market outlook, and value-added processing of goat fibers. Christopher J. Lupton*; Texas Agricultural Experiment Station, Texas A&M University System, San Angelo
8:45 AM	869	Marketing slaughter goats and goat meat products. Tatiana L. Stanton*; Cornell University, Ithaca, NY
9:30 AM		Break
9:45 AM	870	Value-added processing and consumer preference of goat meat. K.W. McMillin*; Louisiana State University Agricultural Center Dept of Animal Sciences, Baton Rouge
10:30 AM		Dairy goats and dairy goat products: export potential, market outlook, and value-added processing. Linda S. Campbell, Khimaira Farm, Luray, Virginia

Thursday
Orals

SYMPOSIUM

International Animal Agriculture

Animal Agriculture in Global Context

Chair: Tilak R. Dhiman, Utah State University

Sponsors: EAAP and Monsanto Company

Room: 125/126

Time	Abstract #	
8:30 AM		The livestock revolution/implications-a view from developing countries. David Miano Mwangi, Kenya Agricultural Research Institute and International Livestock Research Institute Kenya
9:15 AM	871	Setting research agendas for animal science in a global context. Margaret Gill*, Rodd Dyer; Macaulay Institute Craigiebuckler, Aberdeen, Scotland
10:15 AM		Livestock and environment from global prospect. Emilio A. Laca; Egronomy and Range Science Department, University of California, Davis
11:00 AM	872	Today's poultry industry from a global perspective. Paul Aho*; Poultry Perspective Storrs, Connecticut
11:45 AM		Panel Discussion

Mixed Models Workshop

Room: 265/266

Time: 8:00 AM – 12:00 PM

(Previous session on 7/28, 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 the animal sciences. Emphasis on repeated measures analysis is continued from previous years. Applications to the analysis of complete and incomplete block designs, including microarray experiments, are also presented. Bioequivalence testing and power computations using mixed model software are introduced this year. Emphasis is placed on the use of SAS PROC MIXED. All professionals and graduate students are invited to attend.

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Animal Behavior and Well-Being

Chair: Adroaldo Zanella, Michigan State University

Room: 127

Time	Abstract #	
	873	Withdrawn by author
8:15 AM	874	Choice of attractive conditions by beef cattle in a Y-maze just after release from restraint. Toshie T. Ishiwata* ¹ , Robert J. R. J. Kilgour ² , Katsuji K. Uetake ¹ , Yusuke Y. Eguchi ¹ , Toshio T. Tanaka ¹ ; ¹ School of Veterinary Medicine, Azabu University Sagamihara, Japan, ² Agricultural Research Centre, NSW Agriculture Trangie, NSW, Australia
8:30 AM	875	Out-wintering pads (owp) for steers–animal wellbeing and production. M.C. Hickey* ¹ , A.P. Moloney ² , P. French ³ ; ¹ Teagasc Beef Research Centre Grange, Dunsany, Co. Meath, Ireland, ² Teagasc Beef Research Centre Dunsany, Co. Meath, Ireland, ³ Teagasc Beef Research Centre Dunsany, Co. Meath, Ireland
8:45 AM	876	Effect of feeding <i>Ascophyllum Nodosum</i> on thermoregulation, behavior, and dehydration of sheep subjected to 12-h of transport. Gregory S Archer*, Ted H. Friend, Christa Iacono, Peter Krawczel, Ryan Johnson; Texas A&M University, College Station
9:00 AM	877	The Effect Of A Naloxone Implant On The Oestrus Behavior, The Lh Preovulatory Surge And On The Ovulation Rate Of The Crossbreed Mexican Ewe During The Breeding Season. Victor Fuentes*, Paula Fuentes; CentroUniversitario de los Altos, Universidad de Guadalajara, Mexico Km 7.5 Carretera a Yahualica, Tepatitlan, Jalisco, Mexico
9:15 AM	878	Utilization of an onboard watering system by slaughter horses during transport. Christa M Iacono*, Ted H Friend, Ryan Johnson, Peter Krawczel, Greg Archer; Texas A&M University, College Station
9:30 AM	879	Effect of continuous versus rested transport on blood chemistry, electrolytes and behavior of lambs. P. Krawczel*, T. Friend; Department of Animal Science, Texas A&M University, College Station
9:45 AM	880	The effect of long-chain polyunsaturated fatty acid and vitamin E supplementation of ewes on neonatal lamb vigour. Judith L. Capper*, Robert G. Wilkinson, Sandra E. Pattinson, Alexander M. Mackenzie, Liam A. Sinclair; Harper Adams University College Newport, Shropshire, United Kingdom

Breeding and Genetics

Beef Cattle

Chair: Denny Crews, Agriculture and Agri-Food Canada Research Centre

Room: 261/262

Time	Abstract #	
8:00 AM	881	Estimates of genetic parameters for infectious keratoconjunctivitis in beef calves before weaning. G. D. Snowder ^{*1} , L. D. Van Vleck ² , L. V. Cundiff ¹ , G. L. Bennett ¹ ; ¹ USDA-ARS, U.S. Meat Animal Research Center Clay Center, NE, ² USDA-ARS, U.S. Meat Animal Research Center Lincoln, NE
8:15 AM	882	Investigation of gestation length in <i>Bos indicus</i> x <i>Bos taurus</i> reciprocal backcross calves produced through embryo transfer. T.S. Amen [*] , A.D. Herring, C.A. Gill, J.O. Sanders; Texas A&M University, College Station
8:30 AM	883	Genetic correlations between postweaning feed efficiency and cow traits. P. F. Arthur ^{*1} , J. A. Archer ² , A. Reverter ³ , D. J. Johnston ⁴ , R. M. Herd ⁵ ; ¹ NSW Agriculture - Camden, Australia, ² AgResearch, Mosgiel, New Zealand, ³ CSIRO, Brisbane, Australia, ⁴ Animal Genetics and Breeding Unit, Armidale, Australia, ⁵ NSW Agriculture - Armidale, Australia
8:45 AM	884	Investigation of birth weight in <i>Bos indicus</i> x <i>Bos taurus</i> reciprocal backcross calves produced through embryo transfer. T.S. Amen [*] , A.D. Herring, C.A. Gill, J.O. Sanders; Texas A&M University, College Station
9:00 AM	885	Teat scores in first-parity Gelbvieh cows: Relationship with suspensory score and calf growth traits. R. L. Sapp [*] , R. Rekaya, J. K. Bertrand; The University of Georgia, Athens
9:15 AM	886	Calving day and age at first calving in Angus heifers. Jennifer Minick [*] , Doyle Wilson; Iowa State University, Ames
9:30 AM	887	Genetic prediction for estimating mature cow maintenance energy requirements. Scott E. Speidel [*] , Dorian J. Garrick, Richard M. Enns; Colorado State University, Fort Collins
9:45 AM		Break
10:15 AM	888	Estimates of genetic correlations among carcass traits adjusted to different end points. A. Rios-Utrera ^{*1} , Larry V. Cundiff ² , Keith E. Gregory ² , Robert M. Koch ¹ , Michael E. Dikeman ³ , Mohammad Koochmaraie ² , L. Dale Van Vleck ⁴ ; ¹ University of Nebraska, Lincoln, ² USDA, ARS, Roman L. Hruska U.S. Meat Animal Research Center, Clay Center, NE, ³ Kansas State University Department of Animal Sciences and Industry, Manhattan, ⁴ USDA, ARS, Roman L. Hruska U.S. Meat Animal Research Center, Lincoln, NE
10:30 AM	889	Genetic evaluation of beef cattle for growth using records across a wide range of ages. J. Bohmanova [*] , I. Misztal; University of Georgia, Athens
10:45 AM	890	Examining the genetic diversity of Hereford cattle. M.A. Cleveland ^{*1} , R.M. Enns ¹ , D.J. Garrick ¹ , H.D. Blackburn ² ; ¹ Colorado State University, Fort Collins, ² National Animal Germplasm Program, National Center for Genetic Resources Preservation, ARS, USDA, Fort Collins, CO
11:00 AM	891	Evaluation of Angus field records: Using new sets of variances to estimate weaning weight EPDs and the effect on genetic trends. A. Hassen [*] , D. E. Wilson; Iowa State University
11:15 AM	892	Genetic evaluation of feedlot performance and efficiency in beef cattle marketed at a constant finish endpoint. C.J.B. Devitt ^{*1} , J.W. Wilton ² , T.L. Fernandes ² , S.P. Miller ² ; ¹ Beef Improvement Ontario, Guelph, ON, Canada, ² University of Guelph, Guelph, ON, Canada
11:30 AM	893	Predicting breeding values for feed intake from individual or pen-fed data. K.M. Olson [*] , D.J. Garrick, R.M. Enns; Colorado State University, Fort Collins
11:45 AM	894	The use of ultrasound to evaluate growth and carcass quality in Nelore cattle. Fabiano R. C. Araujo ^{1,2} , Fernando Manicardi ³ , José Roberto Hofig Ramos ⁴ , Cláudio U. Magnabosco ^{5,1} , Thomas R. Famula ¹ , Roberto D. Sainz ^{*1} ; ¹ University of California, Davis, ² Aval Serviços Tecnológicos S/S Uberaba, MG, Brasil, ³ Grupo OMB Pontes e Lacerda, MT, Brasil, ⁴ Grupo HoRa Cornélio Procópio, PR, Brasil, ⁵ Embrapa Cerrados, Bolsista CNPq Brasília, DF, Brasil

Breeding and Genetics

Swine

Chair: Jack Dekkers, Iowa State University

Room: 260

Time	Abstract #	
8:00 AM	895	Validation of QTL's in a swine population selected for ovulation rate. Michelle R. Mousel*, Gary A. Rohrer, Kreg A. Leymaster, Ron K. Christenson; USDA-ARS; U.S. Meat Animal Research Center, Clay Center, NE
8:15 AM	896	Identification of quantitative trait loci affecting reproduction and early growth in pigs. J. Holl* ¹ , J. P. Cassady ² , D. Pomp ¹ , R. K. Johnson ¹ ; ¹ University of Nebraska, Lincoln, ² North Carolina State University, Raleigh
8:30 AM	897	Mapping genes affecting scrotal hernia condition in domestic pigs. F.-X. Du*, N. Mathialagan, C.J. Dyer, M.D. Grosz, L.A. Messer, A.C. Clutter, T. Wang, M.M. Lohuis, J.C. Byatt; Animal AG Monsanto Company
8:45 AM	898	Prospecting for pig SNPs in the human genome: have we struck gold? Laura Grapes* ¹ , Stephen Rudd ² , Rohan Fernando ¹ , Karine Megy ³ , Dominique Rocha ³ , Max Rothschild ¹ ; ¹ Iowa State University, ² Institute for Bioinformatics, GSF-National Research Center for Environment and Health, ³ University of Cambridge
9:00 AM	899	An evaluation of performance and carcass characteristics between pigs sired by boars from two different time periods. C.R. Schwab*, T.J. Baas, D.W. Newcom, K.J. Stalder; Iowa State University
9:15 AM	900	Characterization of a line of pigs selected for increased litter size for two RFLPs identified in <i>folliclestatin</i> . C. D. Blowe*, E. J. Eisen, O. W. Robison, J. P. Cassady; North Carolina State University, Raleigh
9:30 AM	901	Detection of Quantitative Trait Loci for Growth, Carcass, and Meat Quality Traits in a Pietrain x (Large White x Landrace) Line Cross. N. Vukasinovic* ¹ , F.-X. Du ¹ , L. A. Messer ¹ , J. C. Byatt ¹ , M. M. Lohuis ¹ , A. C. Clutter ¹ , J. Bennewitz ² , N. Reinsch ² , G. Otto ² , K. Sanders ² , N. Borchers ² , C. Looft ² , E. Kalm ² ; ¹ Animal AG Monsanto Company, ² Institute of Animal Breeding and Husbandry Christian-Albrechts University of Kiel, Germany
9:45 AM		Break
10:15 AM	902	An evaluation of meat and eating quality traits between pigs sired by boars from two different time periods. C.R. Schwab*, T.J. Baas, D.W. Newcom, K.J. Stalder; Iowa State University
10:30 AM	903	Growth and carcass composition in pig lines divergently selected for testosterone production and their crossbred progeny. J. M. Bender*, J. P. Cassady; North Carolina State University
10:45 AM	904	Detection of quantitative trait loci segregation within pure breeds in a Berkshire x Yorkshire F ₂ population. H. Zhao* ¹ , J.-J. Kim ¹ , M. Perez-Enciso ² , J. C. M. Dekkers ¹ ; ¹ Iowa State University, Ames, ² Universitat Autònoma de Barcelona Spain
11:00 AM	905	PACE: An integrated pig genome database. Jan W.M. Merks* ¹ , Tony J.A. van Kampen ² , Rik van Wijk ¹ , Barbara Harlizius ¹ , Annemieke Rattink ³ , Gerard Albers ³ , Martien A.M. Groenen ² ; ¹ IPG, Institute for Pig Genetics BV, 6640 AA Beuningen, The Netherlands, ² Wageningen University and Research Centre, Department of Animal Sciences - Animal Breeding and Genetics Group, 6700 AH Wageningen, The Netherlands, ³ Nutreco Breeding Research Centre, 5830 AE Boxmeer
11:15 AM	906	Estimation of genetic parameters for farrowing mortality, litter size and test performance of first parity Large White sows. Jesus Arango* ¹ , Ignacy Misztal ¹ , Shogo Tsuruta ¹ , Matt Culbertson ² , William Herring ² ; ¹ University of Georgia, Athens, ² Smithfield Premium Genetics, Roanoke Rapids, NC
11:30 AM	907	Comparison of deposition rates for loin muscle area, backfat, and intramuscular fat percentage among breeds in the 2003 National Barrow Show Sire Progeny Test. Bryce D. Martin*, Tom J. Baas, Clint Schwab, Doug W. Newcom, Jay F. Lampe, Ken J. Stalder; Iowa State University

Nonruminant Nutrition
Feed Ingredients & Management

Chair: Scott Radcliffe, Purdue University and Gonzalo Mateos, Universidad Politecnica de Madrid

Room: 276

Time	Abstract #	
8:00 AM	908	Effect of whey and lactose source on nursery pig performance. A.M. Gaines*, B.W. Ratliff, P. Srichana, G.L. Allee; University of Missouri, Columbia
8:15 AM	909	Effect of specialty protein supplements on nitrogen balance and digestibility in weanling pigs. J. Zhao*, A.F. Harper, K.E. Webb, Jr., M.E. Estienne; Virginia Polytechnic Institute and State University, Blacksburg
8:30 AM	910	Use of rice in substitution of corn in diets for young pigs. B. Vicente ¹ , D. G. Valencia ¹ , R. Lázaro* ¹ , M. A. Latorre ² , G. G. Mateos ¹ ; ¹ Universidad Politécnica de Madrid Spain, ² Universidad Cardenal H.Oria CEU Spain
8:45 AM	911	Growth and carcass characteristics of pigs fed biotechnologically derived and non-biotechnologically derived corn and harvested at different weights. M.G. Custodio* ¹ , W.J. Powers ¹ , E. Huff-Lonergan ¹ , M.A. Faust ² , J. Stein ³ ; ¹ Iowa State University, Ames, ² ABS Global, Inc., DeForest, WI, ³ Syngenta Biotechnology, Inc., Research Triangle Park, NC
9:00 AM	912	Nutritional value of a corn containing a glutamate dehydrogenase gene for growing pigs. Gary A. Apgar* ¹ , Thomas A. Guthrie ¹ , Kenneth E. Griswold ² , Michael P. Martin ¹ , J. Scott Radcliffe ³ , Merlin D. Lindemann ⁴ ; ¹ Southern Illinois University, Carbondale, ² Penn State Univ. Extension, Lancaster, ³ Purdue University, West Lafayette, IN, ⁴ University of Kentucky, Lexington
9:15 AM	913	The digestive fate of the <i>gdhA</i> transgene in corn diets fed to weanling swine. J. M. Beagle* ¹ , G. A. Apgar ¹ , K. L. Jones ¹ , K. E. Griswold ² , X. Qui ¹ , M. P. Martin ¹ ; ¹ Southern Illinois University, Carbondale, ² Penn State Extension, Lancaster
9:30 AM	914	Effects of increasing pantothenic acid on growth performance and carcass characteristics of finishing pigs reared in a commercial environment. C.N. Groesbeck*, R.D. Goodband, M.D. Tokach, S.S. Dritz, J.L. Nelssen, J.M. DeRouchey; Kansas State University
9:45 AM		Break
10:15 AM	915	Effects of reduced crude protein and fiber supplementation on nitrogen and phosphorus digestibility and manure generation. D.M. Sholly*, S.L. Hankins, M.C. Walsh, A.L. Sutton, B.T. Richert; Purdue University, West Lafayette, IN
10:30 AM	916	Comparison of models fitted to electronically recorded swine growth data over a limited test period. Gordon Vander Voort*, C.F.M de Lange; University of Guelph, Guelph, ON, Canada
10:45 AM	917	Processing of Western Canadian feed ingredients improves their digestibility in Nile tilapia (<i>Oreochromis niloticus</i>). T.L. Borgeson*, D.L. Thiessen, V.J. Racz, M.D. Drew; University of Saskatchewan

Thursday
Orals

Physiology and Endocrinology

Stress and Inflammation: Effects on Animal Performance

Chair: Tom Adams, University of California

Room: 264

Time	Abstract #	
8:00 AM	918	Performance of gilts housed individually in stalls or in groups in pens during the first 30 d post-mating. M.J. Estienne*, A.F. Harper, J.W. Knight; Virginia Polytechnic Institute and State University, Blacksburg
8:15 AM	919	Effects of stress and genotype on immune and cortisol measures in pigs. Mhairi A Sutherland*, Sherrie R Niekamp, Sandra L Rodriguez-Zas, Janeen L Salak-Johnson; University of Illinois, Urbana
8:30 AM	920	The use of a Hens' Odorant Analogue to control stress consequences in Broilers. Iltud Madec* ¹ , Jean Francois Gabarrou ² , Alexandre Bruneau ¹ , Laurent Bougrat ¹ , Dominique Saffray ¹ , Brigitte Silliant ³ , Patrick Pageat ¹ ; ¹ Pherosynthese le Rieu Neuf 84490 Saint Saturnin apt France, ² Esa Purpan 75 Voie du Toec 31076 Toulouse France, ³ Env Nantes la Chantrerie 44307 Nantes France
8:45 AM	921	Involvement of anterior pituitary arginine vasopressin receptor V3 in the stress response of cattle. Marlon Knights* ¹ , N. Kent Ames ² , George. W Smith ² ; ¹ Div. Animal and Veterinary Sciences, West Virginia University, ² Departments of Large Animal Clinical Sciences, Michigan State University, ³ Departments of Animal and Physiology, Michigan State University
9:00 AM	922	Plasma progesterone response to ACTH administration in the ewe during diestrus and following ovariectomy. Robert W. Godfrey* ¹ , Adam J. Weis ¹ , Raina E. Dodson ¹ , Melinda Loewer ¹ , Scott T. Willard ² ; ¹ University of the Virgin Islands, ² Mississippi State University
9:15 AM	923	Plasma progesterone response to ACTH administration in the pregnant ewe during early and late stages of gestation. Scott T. Willard* ¹ , Adam J. Weis ² , Raina E. Dodson ² , Melinda Loewer ² , Robert W. Godfrey ² ; ¹ Mississippi State University, ² University of the Virgin Islands
9:30 AM	924	Effects of temperament on stress indicators in Brahman heifers. K. O. Curley, Jr.* ^{1,2} , D. A. Neuendorff ² , A. W. Lewis ² , J. J. Cleere ² , T. H. Welsh, Jr. ¹ , R. D. Randel ² ; ¹ Texas Agricultural Experiment Station College Station, ² Texas Agricultural Experiment Station, Overton
9:45 AM		Break
10:15 AM	925	Administration of exogenous prolactin (PRL) to steers on short day photoperiod: effects on PRL, PRL-receptor (PRL-R) expression, and immune function. T. L. Auchtung*, G. E. Dahl; University of Illinois, Urbana
10:30 AM	926	Characterization of changes in hepatic expression of inflammation-associated genes during the peripartum period in multiparous Holstein cows using quantitative real time-PCR (RT-PCR). N. A. Janovick*, J. J. Loor, H. M. Dann, H. A. Lewin, J. K. Drackley; University of Illinois, Urbana
10:45 AM	927	Effect of estrus and pregnancy status on growth hormone receptor and IGF-I gene expression in the uterus and liver of postpartum dairy cows. M.L. Rhoads*, J.P. Meyer, W.R. Lamberson, D.H. Keisler, M.C. Lucy; University of Missouri, Columbia
11:00 AM	928	Assessments of udder temperature gradients pre- and post-milking relative to milk production in Holstein cows as determined by digital infrared thermography. S. Schmidt*, S. Bowers, T. Dickerson, K. Graves, S. Willard; Mississippi State University, Mississippi State
11:15 AM	929	Heat dissipation in winter-acclimated lactating cows and non-lactating heifers subjected to increased ambient temperature and solar radiation in Arizona. B.C. Pollard*, E.A. Annen, L.H. Baumgard, R.C. Cheatham, M.D. Estheimer, M.E. Dwyer, A.C. Fitzgerald, H.C. Halfliker, C.E. Moore, J.K. Kay, O.B. Mendivil, P.C. Gentry, D.A. Henderson, C.M. Steining, R.J. Collier; The University of Arizona, Tucson
11:30 AM	930	Hepatic gene expression profiling in lactating dairy cows during an initial period of hyperthermia. R. P. Rhoads* ¹ , J. D. Sampson ¹ , R. J. Tempelman ² , S. S. Sipkovsky ² , P. M. Coussens ² , M. C. Lucy ¹ , J. N. Spain ¹ , D. E. Spiers ¹ ; ¹ University of Missouri, Columbia, ² Michigan State University, East Lansing
11:45 AM	931	Exposure to endotoxin during estrus or corpus luteum formation impaired reproductive functions in cows. Y. Lavon ¹ , G. Leitner ² , T. Goshen ¹ , M. Hoge ¹ , R. Braw-Tal ³ , M. Maman ¹ , S. Jacoby ³ , D. Wolfenson* ¹ ; ¹ The Hebrew University Rehovot, Israel, ² The Veterinary Institute Bet Dagan, Israel, ³ Agricultural Research Organization Bet Dagan, Israel

Ruminant Nutrition

Dairy - Digestibility and Microbiology

Chair: Kenneth Griswold, Penn State University Cooperative Extension

Room: 131

Time	Abstract #	
8:00 AM	932	Estimation of energy value of feed and its use in ration formulation. Henry F. Tyrrell*; Cooperative State Research, Education & Extension Service, USDA, Washington, DC
8:30 AM	933	Feed Efficiency Is Driven By Dry Matter Digestibility. David P. Casper*, Lance Whitlock, Dan Schauff, Dave Jones, Dave Spangler, Gbenga Ayangbile; Agri-King, Inc., Fulton, IL
8:45 AM	934	Predicting feed passage rate in dairy cattle. Seongwon Seo* ¹ , Luis O Tedeschi ¹ , Charles G Schwab ² , Danny G Fox ¹ ; ¹ Cornell University, Ithaca, NY, ² University of New Hampshire, Durham
9:00 AM	935	Effect of peNDF and starch source on digestibility and ruminal pH and turnover in dairy cows. P. Berzaghi* ¹ , D.R. Mertens ² ; ¹ University of Padova, Italy, ² ARS-US Dairy Forage Research Center, Madison, WI
9:15 AM	936	In situ estimation of dry matter digestibility and degradable intake protein to evaluate the effects of corn processing method and length of ensiling. Joshua R. Benton*, Terry J. Klopfenstein, Galen E. Erickson; University of Nebraska, Lincoln
9:30 AM	937	Effects of nonfiber carbohydrate source and protein degradability on ruminal protein fractions and NDF disappearance. M. B. Hall*, C. C. Larson; Department of Animal Sciences, University of Florida, Gainesville
9:45 AM	938	Effect of starch source on supply of glycogenic nutrients in dairy cows. A.M. van Vuuren*, V.A. Hindle, J.W. Cone; Animal Sciences Group, Wageningen UR, AB Lelystad, The Netherlands
10:00 AM		Break
10:30 AM	939	Microbial profiling of ruminal and omasal samples from cows fed different sources of methionine. S. K. R. Karnati*, J. T. Sylvester, Z. Yu, S. M. Nofstger, N. R. St-Pierre, M. Morrison, J. L. Firkins; The Ohio State University, Columbus
10:45 AM	940	Effects of different components of garlic oil on rumen microbial fermentation in a continuous culture system. Marta Busquet ¹ , Sergio Calsamiglia* ¹ , Alfred Ferret ¹ , Christopher Kamel ² ; ¹ Universitat Autònoma de Barcelona, Spain, ² University of Leeds, UK
11:00 AM	941	Effects of <i>Lactobacillus acidophilus</i> and <i>Propionibacterium freudenreichii</i> on performance and rumen characteristics of Holstein dairy cows in mid-lactation. M. L. Raeth-Knight*, J. G. Linn; University of Minnesota, St. Paul
11:15 AM	942	Effect of calcium source on ruminal soluble calcium and microbial fermentation. E.J. Baird* ¹ , V. Fellner ¹ , S.J. McLeod ¹ , J.W. Spears ¹ , F.R. Valdez ² ; ¹ Dept. of Ani. Sci., North Carolina State University, Raleigh, ² Kemin Americas, Des Moines, IA

Thursday
Orals

Ruminant Nutrition

Dairy – Feedstuffs

Chair: Lance Baumgard, University of Arizona

Room: 132

Time	Abstract #	
8:00 AM	943	Impact of feeding high free fatty acid whole cottonseed on milk yield and composition. J. K. Bernard* ¹ , J. Siciliano-Jones ² , T. C. Wedegaertner ³ ; ¹ The University of Georgia, ² FARME Institute, ³ Cotton Incorporated
8:15 AM	944	Utilisation of whole-crop pea silage in dairy cow rations as a potential protein source to replace soya bean meal. Kenton J Hart*, Robert G Wilkinson, Liam A Sinclair, Jim A Huntington; Harper Adams University College Newport, Shropshire, UK
8:30 AM	945	Replacement of blood meal with a supplement containing bacterial and fungal fermentation extracts in diets fed to mid-lactation dairy cows. C.S. Ballard* ¹ , P. Mandevu ¹ , M.P. Carter ¹ , K.W. Cotanch ¹ , R.J. Grant ¹ , C.J. Sniffen ² , W. Rodee ³ , L. Robinson ³ ; ¹ W.H. Miner Agricultural Research Institute, Chazy, NY, ² Fencrest LLC, Holderness, NH, ³ Agriformulations, Inc., Waddington, NY
8:45 AM	946	Replacement of alfalfa haylage with ensiled wet distillers grains and beet pulp in lactating dairy cows diets. A. D. Garcia*, K. F. Kalscheur, A. R. Hippen, D. J. Schingoethe; South Dakota State University, Brookings
9:00 AM	947	Increasing wet distillers grains in the diets of dairy cows on milk production and nutrient utilization. K. F. Kalscheur*, A. L. Justin, A. R. Hippen, D. J. Schingoethe; South Dakota State University, Brookings
9:15 AM	948	Dietary factors influencing milk protein content of cows fed grass silage-based diets. P Huhtanen* ¹ , J Nousiainen ² ; ¹ MTT Agrifood Research Finland FIN-31600 Finland, ² Valio Ltd, Valio, Finland
9:30 AM	949	Effects of NDF from alfalfa hay, grass hay, straw, and whole cottonseed on performance of lactating cows. P.B. Bucci*, M.L. Eastridge, C.V.D.M. Ribeiro; The Ohio State University, Columbus
9:45 AM		Break
10:15 AM	950	Rumen fill and intake regulation of grazing dairy cows under continuous stocking. Hassan Z. H. Taweel*, Bart M. Tas, Jan Dijkstra, Seerp Tamminga; Department of Animal Sciences, Animal Nutrition Group, Wageningen University, Wageningen, The Netherlands
10:30 AM	951	Corn grain endosperm type and brown midrib 3 corn silage: site of nutrient digestion and ruminal digestion kinetics in lactating dairy cows. C. C. Taylor*, M. S. Allen; Michigan State University, East Lansing
10:45 AM	952	Effects of physically effective NDF on chewing activity and rumen pH of dairy cows fed diets based on barley silage. Karen A. Beauchemin*, Wen Z. Yang; Research Center, Agriculture and Agri-Food Canada, Lethbridge, AB, Canada
11:00 AM	953	Effect of barley and its amylopectin content on ruminal fermentation and nitrogen utilization in lactating dairy cows. A. E. Foley* ¹ , A. N. Hristov ¹ , A. Melgar ¹ , J. K. Ropp ¹ , R. P. Etter ¹ , C. W. Hunt ¹ , K. Huber ² ; ¹ Department of Animal and Veterinary Science, ² Department of Food Science and Toxicology, University of Idaho, Moscow
11:15 AM	954	A nutritional evaluation of assiniboia oat, baler oat, and rosier barley silage for dairy cattle. T.L. Heck*, D.A. Christensen, J.J. McKinnon, P. Yu; Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK, Canada.
11:30 AM	955	Lactation performance and milk fatty acid profile of dairy goats fed four different forage species. A. Doyon* ¹ , G.F. Tremblay ² , P.Y. Chouinard ¹ ; ¹ Universite Laval Quebec, QC., Canada, ² Agriculture and Agri-Food Canada Quebec, QC., Canada
11:45 AM	956	Effects of Feeding Flaxseed on Fatty Acid Composition in Milk and Cheese in Dairy Ewes. R. Zhang*, A. F. Mustafa, X. Zhao; McGill University, Ste-Anne-De-Bellevue-QC Canada

ADSA Student Affiliate Division

MONDAY, JULY 26, 2004

Undergraduate Paper Presentations

Chair: David Winston, Virginia Polytechnic Institute and State University

Room: 230

Time Abstract #

Original Research/Independent Study Undergraduate Paper Presentations

- 11:00 AM 957 The luteolytic potential of reduced doses of prostaglandin. J Brinkerhoff*, R Silcox, J Donley, C Kubo; Brigham Young University, Provo, UT
- 11:15 AM 958 Evidence for differential degradation of α_s - and β -casein in milk from mastitic quarters. K. M. Matson*, A. C. W. Kauf, A. L. Magliaro, R. S. Kensinger; The Pennsylvania State University, University Park
- 11:30 AM 959 Cottage cheese manufactured using transglutaminase enzyme for increase in yield. Karissa Nielsen*, D.R. Henning; South Dakota State University, Brookings
- 11:45 AM 960 Analysis of financial measures comparing 3 management styles. Wayne T. Wencl*, Gregg Hadley; University of Wisconsin, River Falls
- 12:00 PM 961 Wastewater treatment to reduce phosphorus losses from dairy farms. L.D. Hughes*, K.F. Knowlton, N.G. Love, A.M. Gamboni, C.M. Parsons; Virginia Polytechnic Institute and State University, Blacksburg

Dairy Production Undergraduate Paper Presentations

- 1:00 PM 962 Leptin: what is its role in the dairy cow? D. C. Barbour*, E. H. Jaster; California Polytechnic State University San Luis Obispo
- 1:15 PM 963 Managing an Ovulation Synchronization Program with PCDART. Justin C. Roberts*; Louisiana State University, Baton Rouge
- 1:30 PM 964 "Factors Affecting Fertility Rates in Embryo Transfers". Jessica Hockney*; North Carolina State University, Raleigh
- 1:45 PM 965 Effects of pasteurization on colostrum quality. Meghan L Moody*; Pennsylvania State University
- 2:00 PM 966 Got Milk Insurance? Lindsay B Core*; University of Kentucky, Lexington
- 2:15 PM 967 The battle against high somatic cell counts: worth fighting - worth winning. Amy R. Hazel*, Jeffrey K. Reneau; University of Minnesota, St. Paul
- 2:30 PM 968 The Effects of Presynchronization, in Conjunction with Ovsynch, on Pregnancy Rate in Dairy Cattle. R. A. Sterry*, S. C. Kelm; University of Wisconsin-River Falls
- 2:45 PM 969 Ionophores: Friend or Foe? M.C. Scott*; Virginia Polytechnic Institute and State University, Blacksburg
- 3:00 PM 970 Centralized Pregnancy Detection- A New Option for Fertility Evaluation. Andrea Barten*, Larry Fox; Washington State University, Pullman

Dairy Foods Undergraduate Paper Presentations

- 3:30 PM 971 An Industry Approach to Increasing the Consumption of Dairy Products. Bridget Lyons*; Louisiana State University, Baton Rouge
- 3:45 PM 972 Probiotics in dairy products- Beyond nutrition. Somphavanh Phetsomphou*; North Carolina A&T State University
- 4:00 PM 973 On-Farm Milk Processing. Abigail R Nelkie*; North Carolina State University, Raleigh
- 4:15 PM 974 Farmstead Cheese Production. Katherine E. Harwick*; Pennsylvania State University, University Park

- 4:30 PM 975 Eliminating the Calcium Crisis. Jenni D. Woodcock*; University of Kentucky
- 4:45 PM 976 Low-fat Dairy Products: Meeting the Needs of a Health Conscious Generation. L. Daubert*; Virginia Polytechnic Institute and State University, Blacksburg

Abstract #

977 See page 121

Author Index

Numbers following names refer to abstract numbers: a number alone indicates an oral presentation, an M prior to a number indicates a Monday poster, a T indicates a Tuesday poster, and a W indicates a Wednesday poster.

The author index is created directly and automatically from the abstracts. If an author's name is typed differently on multiple abstracts, the entries in the author index will reflect these discrepancies. Efforts have been made to make this index consistent; however, errors from author entry contribute to inaccuracies.

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Program at a Glance

Sunday, July 25

Room	8 am - 5 pm	8 am - 12 pm	1 pm - 5 pm	7 pm - 10 pm
Room 124	Set up in	Triennial Growth Symposium	Triennial Growth Symposium	
Room 125/126	Exhibit Hall 5		(2 pm - 3 pm) ADSA Production Division Council Meeting (3 pm - 4 pm) ADSA Production Division Nominating Committee (3 pm - 5 pm) 2004/2005 Program Chairs Meeting	
Room 127				
Room 130		(12 pm - 1 pm) PSA Ancillary Scientist Lunch	(2 pm - 4 pm) ADSA Committee on Evaluation of Dairy Products	
Room 131			PSA Informal Nutrition Conference	
Room 132		PSA Ancillary Scientist Symposium	PSA Ancillary Scientist Symposium	
Room 220		Set up Opening Session	Set up Opening Session	Opening Session/Reception
Room 221		Set up Opening Session	Set up Opening Session	Opening Session/Reception
Room 222		Set up Opening Session	Set up Opening Session	Opening Session/Reception
Room 223		Set up Opening Session	Set up Opening Session	Opening Session/Reception
Room 224		Set up Opening Session	Set up Opening Session	Opening Session/Reception
Room 225		Dairy Foods Workshop	Set up Opening Session	Opening Session/Reception
Room 226		Set up Opening Session	Set up Opening Session	Opening Session/Reception
Room 227		Set up Opening Session	Set up Opening Session	Opening Session/Reception
Room 228		Set up Opening Session	Set up Opening Session	Opening Session/Reception
Room 229		Set up Opening Session	Set up Opening Session	Opening Session/Reception
Room 230		(11 am - 12 pm) SAD Advisor-Officer Meeting		
Room 231		(12 pm - 1 pm) SAD Mid-day Mixer and Pizza Party		
Room 232		(12 pm - 1 pm) SAD Mid-day Mixer and Pizza Party		
Room 240			SAD Dairy Quiz Bowl Seating and Preliminary Rounds	(6:30 pm - 7 pm) SAD Dairy Quiz Bowl Final Round
Room 241			SAD Dairy Quiz Bowl Seating and Preliminary Rounds	
Show Management Rooms				
Room 116	Media Room	Media Room	Media Room	
Room 120	Speaker Ready Room	Speaker Ready Room	Speaker Ready Room	
Room 121	Hospitality Room	Hospitality Room	Hospitality Room	
Room 123	Committee Meetings		(3 pm - 4 pm) ADSA Production Division Resolutions Committee (5 pm - 6 pm) ADSA Dairy Foods Division Council Meeting	(9 pm - 11 pm) FSADAH Committee Meeting

Program at a Glance

Monday, July 26

Room	7:30 am - 9:30 am	9:30 am - 12 pm	1 pm - 5 pm
Room 124	Posters Only in Exhibit Hall 5	Forages & Pastures: Tall Fescue	Meat Science/Muscle Biology I
Room 125/126		ADSA Foods GS Competition	ADSA ASAS Northeast GS Competition
Room 127		ADSA Production GS Competition	ADSA Production GS Competition/ADSA Southern Branch
Room 130		Ruminant Nutrition: Beef-Energy & Nitrogen	Ruminant Nutrition: Beef-Feedstuffs
Room 131		Growth & Development: Gut Peptides	Air Emissions & Poultry Production
Room 132		Ruminant Nutrition: Dairy-Minerals	Ruminant Nutrition: Dairy-Protein & Amino Acids
Room 220		Physiology & Endocrinology: Fetal Mort	Lactation Biology: Physiology of Lactation
Room 221		Breeding & Genetics: Methodology 1	Physiology/Endocrinology: Genomics
Room 222		Combined Extension Symposium	Combined Extension Symposium
Room 223		Breeding & Genetics: Genetics of Dairy Health	Breeding & Genetics: Feed Utilization
Room 224		Milk Protein & Enzymes: Dairy Foods	PME: Health & Misc.
Room 225		Animal Behavior II	Extension Education: Applied Reproduction Management
Room 228		(12 pm - 1 pm) Poultry National Extension Luncheon	
Room 229		(8:30 am - 9:30 am) ADSA Centennial Publications Committee Meeting; (10 am - 12 pm) ARPAS Exams	
Room 230		(8:30 am - 9:15 am) SAD Business Meeting (9:30 am - 10:30 am) SAD Activities Symposium (11 - 12:15 pm) SAD Undergraduate Paper Presentations	SAD Undergraduate Paper Presentations
Room 231		(9:30 am - 10:30 am) SAD Judging of Yearbooks, Scrapbooks, Annual Reports	
Room 232		(9:30 am - 10:30 am) SAD Interviews for Outstanding Student and Advisor Awards	
Room 260		Dairy Foods: Chemistry	Dairy Foods: Raw Milk Cheese (5:15 pm) ADSA Town Hall Meeting
Room 261/262		Horse Abstracts	Horse Symposium
Room 263		PSA Processing & Products: Meat Quality	PSA Processing & Products: Microbiology & Egg
Room 264		PSA Physiology: Poultry Digestion & Metabolism	PSA Physiology: Reproduction Physiology
Room 265/266		PSA Environment & Management: Enteric Bacteria	PSA Environment & Management: Breeder & Incubation
Room 267		PSA Pathology	PSA Immunology
Room 274		PSA Nutrition: Amino Acids	PSA Nutrition: Feed Additives
Room 275		Nonruminant Nutrition: Finishing Pigs	Nonruminant Nutrition: Weaning Pigs
Room 276		PSA Antibiotics in Animal Feeds	Food Safety: Animal Production
Exhibit Hall 5	Poster Presentations	Exhibits and Posters	Exhibits and Posters
Show Management Rooms			
Room 116	Media Room	Media Room	Media Room
Room 120	Speaker Ready Room	Speaker Ready Room	Speaker Ready Room
Room 121	Hospitality Room	Hospitality Room	Hospitality Room
Room 123	Committee Meetings	(7:30 am - 9:30 am) PSA Foundation Breakfast Meeting (12 pm - 1 pm) WPSA-USA Branch Luncheon	(2 pm - 3:30 pm) ADSA DISCOVER Steering Committee Meeting

Program at a Glance

Tuesday, July 27

Room	7:30 am - 9:30 am	9:30 am - 12 pm	1 pm - 5 pm
Room 124	Posters Only in Exhibit Hall 5	Ruminant Nutrition: Beef Minerals	ADSA Southern Section Symposium
Room 125/126		Ruminant Nutrition: Lactation, Health & Gut	Animal Behavior II
Room 127		Companion Animals Abstracts	Companion Animals Symposium
Room 130		Growth & Development/Lactation/Biology Symposium	Growth & Development/Lactation/Biology Symposium
Room 131		Ruminant Nutrition Symposium	Alpha Beef Cattle Nutrition Symposium
Room 132		Bioethics Symposium	Ruminant Nutrition: Dairy Additives
Room 220		Breeding & Genetics: Method II	Sheep Species
Room 221		Forages & Pastures: Dairy Production	Forages & Pastures: Grazing Management
Room 222		Growth & Development: ASAS II	Physiology & Endocrinology: Nutritional Regulations
Room 223		Physiology & Endocrinology: Strategic Appt Breeding	ADSA Foundation Scholar Production
Room 224		ADSA Production Division Business Meeting (11 am)	
Room 225		(12 pm - 1 pm) PSA Graduate Student Luncheon	
Room 226		(12 pm - 1 pm) National Poultry Waste Management Luncheon	
Room 227		(12 pm - 1 pm) ARPAS Business Meeting	(1 pm - 3 pm) ARPAS Exams
Room 229			
Room 230		(8:30 am - 10 am) SAD Business Meeting Election of Officers (10 am - 11:15 am) SAD Student Careers Symposium: Leaders in Training	(2 pm - 3:30 pm) SAD Committee Meeting: Old & New Officers and Advisors
Room 231			(12 pm - 2 pm) SAD Student Awards Luncheon (2 pm - 3 pm) SAD Pictures
Room 232			(12 pm - 2 pm) SAD Student Awards Luncheon (2 pm - 3 pm) SAD Pictures
Room 260		ADSA Foundation Scholar Foods & Dairy Foods Division Business Meeting	Dairy Foods Human Nutrition Symposium
Room 261/262		Production/Management/Environment: Reproduction & Behavior	Production/Management/Environment: Heat Stress
Room 263		Extension Education: Dairy	Extension Education: Animal
Room 264		Swine Symposium	Dairy Foods: Cheeses
Room 265/266		PSA Environment & Management: Layer Management	Animal Health: Transition Cow
Room 267		PSA Genetics	Breeding & Genetics: Dairy Crossbreeding
Room 274		PSA Nutrition: Alternate Ingredients	WPSA Lecture/PSA Business Meeting
Room 275		PSA Nutrition: Amino Acids II	Ruminant Nutrition: Dairy Fats
Room 276		Nonruminant Nutrition: Minerals	Nonruminant Nutrition: Amino Acids
Exhibit Hall 5	Poster Presentations	Exhibits and Posters	Exhibits and Posters
Show Management Rooms			
Room 116	Media Room	Media Room	Media Room
Room 120	Speaker Ready Room	Speaker Ready Room	Speaker Ready Room
Room 121	Hospitality Room	Hospitality Room	Hospitality Room
Room 123	Committee Meetings	(8:30 am - 12:30 pm) WAAP General Assembly	(3:30 pm - 5:30 pm) ASAS/JAS Forum

Program at a Glance

Wednesday, July 28

Room	7:30 am - 9:30 am	9:30 am - 12 pm	1 pm - 5 pm
Room 124	ADSA Business Meeting/Marschall Rhodia Lecture		Dairy Foods: Microbiology
Room 125/126	Joint Business Meeting/Bioethics Abstracts (11 am)		Animal Health: Growth & Immunity
Room 127	ASAS Business Meeting		Breeding & Genetics: Molecular Genetics
Room 130			Ruminant Nutrition: Transition Cow
Room 131	Contemporary and Emerging Issues		Contemporary and Emerging Issues
Room 132	Ruminant Nutrition: Beef & Dairy Calves		Beef Species (with invited abstracts)
Room 220			Ruminant Nutrition: Beef Digest
Room 221			Food Safety Symposium
Room 222			Growth & Development: ASAS II
Room 223	Breeding & Genetics		Physiology & Endocrinology: Stress Symposium
Room 225	PSA Banquet Setup		PSA Banquet Setup
Room 226	PSA Banquet Setup		PSA Banquet Setup
Room 227	(12 pm-1 pm) WPSA-Canada Business Meeting		
Room 229			(1 pm-3 pm) ARPAS Exams
Room 230			(4:30 pm-6 pm) International/Closing Reception
Room 231			(4:30 pm-6 pm) International/Closing Reception
Room 232			(4:30 pm-6 pm) International/Closing Reception
Room 260	Growth & Development Workshop		Production/Management/Environment: Nutritional Management
Room 261/262	Animal Behavior & Well Being Symposium		Extension Education: Future Roles
Room 263	Goat Species Abstracts		Women & Minority Issues Symposium
Room 264	Teaching & Undergraduate Education		Lactation Biology
Room 265/266	Mixed Models Workshop		Mixed Models Workshop
Room 267	Growth & Development: ADSA II		Breeding & Genetics: Dairy Genetics
Room 274	PSA Nutrition: Feed Additives		PSA Nutrition: Amino Acids
Room 275	PSA Nutrition: Layer Nutrition		PSA Nutrition: Vitamins and Minerals
Room 276	PSA Environment & Management: Broiler Management		Nonruminant Nutrition: Sow Feeding/Swine Species
Exhibit Hall 5	Poster Presentations	Exhibits and Posters	Exhibits and Posters
Show Management Rooms			
Room 116	Media Room	Media Room	Media Room
Room 120	Speaker/Ready Room	Speaker/Ready Room	Speaker/Ready Room
Room 121	Hospitality Room	Hospitality Room	Hospitality Room
Room 123	Committee Meetings	(11 am-2 pm) NEASAS/ADSA Business Meeting & Luncheon	(11 am-2 pm) NEASAS/ADSA Business Meeting & Luncheon (2:30 pm-3:30 pm) Retirees Social

Program at a Glance

Thursday, July 29

Room	8 am - 12 pm
Room 124	Extension Education: Electronic Media
Room 125/126	International Animal Agriculture
Room 127	Animal Behavior & Well Being III
Room 131	Ruminant Nutrition: Dairy Digestibility
Room 132	Ruminant Nutrition: Feedstuffs
Room 260	Breeding & Genetics: Swine
Room 261/262	Breeding & Genetics: Beef
Room 263	Goat Symposium
Room 264	Physiology & Endocrinology: Stress
Room 265/266	Mixed Models Workshop
Room 274	Animal Health Symposium
Room 276	Nonruminant Nutrition: Ingredients
Show Management Rooms	
Room 116	Media Room
Room 120	Speaker Ready Room
Room 121	Hospitality Room
Room 123	Committee Meetings

Notes