



ORAL PRESENTATIONS

Sunday, July 6, 2025

ASAS-NANP Symposium: Mathematical Modeling and Data Predictive Analytics in Animal Nutrition - Sponsored by National Animal Nutrition Program

Chair: Luis Tedeschi, Texas A&M University

8:00 AM - 5:00 PM

Great Hall 6

8:00 a.m. **ASAS-NANP Symposium Introduction**

8:10 a.m. 1 **Lecture I: Modeling the dynamics of complex systems: Incorporating AI and HPC into dynamic modeling**

Ignacio J. Martinez Moyano ¹

¹Argonne National Laboratory

8:50 a.m. 2 **Lecture II: From Empirical to Mechanistic to AI models, Making Livestock Production More Efficient**

Jennifer L. Ellis ¹

¹University of Guelph

9:30 a.m. **ASAS-NANP Symposium Break I**

9:50 a.m. 3 **Hands-on 1: Applying Bayesian modeling to improve nutrient utilization in cattle**

Ira L. Parsons ¹

¹South Dakota State University

11:20 a.m. **Round Table Discussions and Updates I**

Hector M. Menendez ¹

¹South Dakota State University

11:40 a.m. **ASAS-NANP Symposium Networking Lunch**

12:30 p.m. 4 **Hands-on 2: Computer vision classification for cattle food grading with a hands-on exercise (Python) on Google Co-lab**

Yalong Pi ¹

¹Texas A&M Institute of Data Science

2:20 p.m. **ASAS-NANP Symposium Break II**

2:40 p.m. 5 **Hands-on 3: Building a customizable chatbot using large language models**

John Gottula ¹, Shelly Hunt ¹

¹SAS

4:30 p.m. **Round Table Discussions and Updates II**

Luis O. Tedeschi ¹

¹Texas A&M University

4:50 p.m. **De-briefing: A RAG-Based Approach to Context-Aware Knowledge Retrieval in Animal Science Research**

Harshit Garg ¹, Karun Kaniyamattam ¹, Luis O. Tedeschi ¹

¹Texas A&M University

Monday, July 7, 2025

**Comparative Gut Physiology Symposium:
Changes in gut energy demands in response to stress**

Chair: Andrew Foote, Oklahoma State University

8:00 AM - 11:30 AM

Diplomat Ballroom 1

8:00 a.m. **Comparative Gut Physiology Symposium Introduction**

8:05 a.m. 16 **Methods to study effects of stress on gut permeability and energy consumption**

Sarah C. Pearce ¹

¹USDA-ARS

8:50 a.m. 17 **Marked for Life: The Lasting Impact of Early Stress on Gut Development**

Adam J. Moeser ¹

¹Michigan State University

9:35 a.m. **Comparative Gut Physiology Symposium Break**

9:50 a.m. 18 **Impact of nutritional management strategies on the gastrointestinal development, barrier function and metabolism of the calf and cow**

Michael A. Steele ¹

¹University of Guelph

10:35 a.m. 19 **The FarmGTEx Project: Building Reference Omics Datasets for Future Gut Stress Studies**

George E. Liu ¹

¹USDA ARS

ARPAS Symposium: Water requirements for crop production, beef production, swine production and meat processing facilities

Chair: Glenn Duff, New Mexico State University, Clayton Livestock Research Center

8:00 AM - 12:00 PM

Great Hall 1

8:00 a.m. **ARPAS Symposium Introduction**

8:00 a.m. **Tools to measure water production in beef cattle**

Mozart A. Fonseca ¹

¹Department of Agriculture, Nutrition and Veterinary Sciences, University of Nevada

8:00 a.m. **Water requirements for feedlot cattle**

Mozart A. Fonseca ¹

¹Department of Agriculture, Nutrition and Veterinary Sciences, University of Nevada

8:00 a.m. **Water requirements for grazing cattle**

Nelcino Francisco De Paula ¹

¹Federal University of Mato Grosso / New Mexico State University

8:00 a.m. **Water requirements for irrigated crops and forage production**

Glenn C. Duff ¹

¹New Mexico State University, Clayton Livestock Research Center

Nonruminant Nutrition I

Chair: Robert Goodband, Kansas State University

8:15 AM - 10:30 AM

Great Hall 5

8:15 a.m. 33 **Award Talk: Precision calcium and phosphorus nutrition in pigs and poultry**

Marie-Pierre Letourneau-Montminy ¹

¹Laval University

8:45 a.m. 35 **Zinc, copper, potassium, sulfur, and iron excretion in pigs**

Julian Arroyave Jaramillo ¹, Mike D. Tokach ¹, Jason C. Woodworth ¹, Katelyn N. Gaffield ¹, Robert D. Goodband ¹, Joel M. DeRouchey ¹, Jordan T. Gebhardt ¹

¹Kansas State University

9:00 a.m. 36 **Greenhouse gas emission, nitrogen balance, and ileal digestibility of amino acids and acid hydrolyzed ether extract in diets containing different inclusion rates of hybrid rye fed to growing pigs**

Jessica P. Acosta ¹, Su A Lee ², Hans H. Stein ²

¹University of Illinois Urbana Champaign, ²University of Illinois Urbana-Champaign

9:15 a.m. **Nonruminant Nutrition I Break**

9:30 a.m. 37 **The dynamic interplay between microbial consortia and arabinoxylan reveals the remodeling of metabolism by swine gut microbiome variation**

Siyu Wei ¹, Yaling Liu ², Hong Zhang ², Yizhen Wang ², Mingliang Jin ²

¹Zhejiang University, College of Animal Science, ²Zhejiang University

9:45 a.m. 38 **Increasing dietary amylose increases hindgut fermentation of starch and thereby alters microbial metabolites, gut immunity, and energy metabolism in weaned pigs**

F.P.Y. Tan ¹, L.F. Wang ¹, L. L. Guan ¹, M.G. G. Gaenzle ¹, R.T. T. Zijlstra ¹

¹University of Alberta

10:00 a.m. 39 **Determination of net energy and nitrogen balance in group-housed pigs fed diets containing varying levels of starch and fiber**

Su A Lee ¹, Hans H. Stein ¹

¹University of Illinois Urbana-Champaign

10:15 a.m. 40 **Phosphorus digestibility in short-season corn and roasted full-fat soybean fed to growing pigs without or with exogenous enzymes**

Ismael França ¹, Jinyoung Lee ², Luciano Hauschild ³, Martin Martin Nyachoti ²

¹São Paulo State University, ²University of Manitoba, ³São Paulo State University "Julio de Mesquita Filho" (UNESP)

Animal Behavior and Well-Being I

Chair: Peixin Fan, Mississippi State University

8:30 AM - 10:00 AM

Diplomat Ballroom 3

8:30 a.m. 53 **Investigating the relationship between hoof and heart abnormalities in fed cattle at slaughter**

Emma M. Hamilton ¹, Karly N. Anderson ², Ashlynn A. Kirk ², Kurt D. Vogel ², Temple Grandin ¹

¹Department of Animal Sciences, Colorado State University, Fort Collins, Colorado, 80523-1171, USA, ²Humane Handling Institute, University of Wisconsin - River Falls

8:45 a.m. 54 **The effect of weaning age on physiological, behavioral, and performance indicators of welfare in weaned piglets**

Bianca F. Metallo ¹, Lucas C. Spetic Da Selva ¹, Arieli Daieny Da Fonseca ¹, Richard T. Niblett ¹, Edgar O. Aviles-Rosa ¹

¹Texas Tech University

9:00 a.m. 55 **Maternal bovine appeasing substance improves feeding behaviour, growth performance, feed efficiency, and health indicators in weaned feedlot heifers**

Desiree Gellatly ¹, Yaogeng Lei ¹, Lyndsey Smith ¹, Emilie Edgar ¹, Alison Neale ¹, Brittany Bloomfield ¹, Brianna Elliot ¹, Laio Silva Sobrinho ¹, Lorna Baird ¹, Sean Thompson ¹

¹Olds College of Agriculture & Technology

9:15 a.m. 56 **Assessing the effect of topical gels containing oleic acid and fish oil on wound healing in piglets following surgical castration**

Omowumi A. Olatinwo¹, Jennifer M. Young¹, Tetiana Shevtsova², Andriy Voronov², Christopher J. Byrd³

¹Department of Animal Sciences, North Dakota State University, ²Coatings and Polymeric Materials, North Dakota State University, ³North Dakota State University

9:30 a.m. 57 **Efficacy of a Lidocaine Impregnated Band on Pain Mitigation for Tail Docking**

Ryne D. Haggard¹, Rachael M. Stucke¹, Alex Varela¹, Allison Villard¹, Lily N. Edwards-Callaway¹, Caitlin N. Cadaret¹

¹Colorado State University

9:45 a.m. 58 **Late-Breaking: Vision-Based ResNet-50-CNN and YOLOv8 Models for Predicting Behavioral Patterns Under Heat Stress in Lactating Holstein and Jersey Cows**

Himani Joshi¹, Gagana Sathya Narayana Prasad¹, Aravind Bethini¹, Abigail McBride², Marcus McGee¹, Peixin Fan¹

¹Mississippi State University

Ruminant Nutrition I: Feeding Studies I

Chair: Luis Tedeschi, Texas A&M University

8:30 AM - 10:30 AM

Great Hall 3

8:30 a.m. 20 **Replacing conventional protein sources and Flint Corn with dried distillers grains with solubles in finishing diets for Beef Cattle**

Pedro Souto Lamas¹, Augusto Nardi¹, Luiz Oliveira¹, Mário O. oliveira¹, Bárbara Martins Brixner¹, Daiana Dos Santos dos Santos de Oliveira¹, Larissa M. Coelho¹, Livia M. Benez¹, Flavio Augusto Portela Santos¹, Flávio Junior², Paulo Rodrigues², Daniel Montanher Polizel³

¹Escola Superior de Agricultura Luiz de Queiroz, ²Faculdade de Medicina Veterinária e Zootecnia - Universidade de São Paulo, ³Universidade Estadual Paulista "Júlio de Mesquita Filho" - Unesp

8:45 a.m. 21 **Effect of increased time spent on a high-forage receiving ration on growth performance, carcass characteristics, and liver abscess prevalence in Angus x Holstein steers**

Becca B. Grimes Francis¹, Forest Francis², Warren C. Rusche¹, Zachary K. Smith³

¹South Dakota State University, ²Texas A&M University - Kingsville, ³Department of Animal Science, South Dakota State University, Brookings, SD 57007, USA.

9:00 a.m. 22 **Comparison of linear and machine learning models to predict dry matter intake in feedlot cattle**

Jacquelyn M. Prestegaard-Wilson¹, Miles Theurer², Lorna Marshall³, Cheryl Marti³, Chuck Sattler³

¹Texas A&M AgriLife Extension, ²Veterinary Research and Consulting Services, LLC, ³Select Sires, Inc

9:15 a.m. 23 **Effect of Extended Days on Feed on Growth Performance, Efficiency, and Carcass Characteristics of Steers and Heifers of Different Proportions of Angus and Limousin Genetics**

Grace H. Olinger ¹, Zachary K. Smith ², Forest Francis ³, Becca B. Grimes Francis ¹, Riley J. Leeson ¹, Michael Gonda ¹, Robert L. Weaver ⁴, Warren C. Rusche ¹

¹South Dakota State University, ²Department of Animal Science, South Dakota State University, Brookings, SD 57007, USA., ³Texas A&M University - Kingsville, ⁴Kansas State University

9:30 a.m. 24 **Effects of an accelerated adaptation protocol in conjunction with Lactipro on performance, carcass characteristics, and health of finishing steers**

Rebecca L. McDermott ¹, Samuel Loy ², Isaque Vicci ², Joshua R. Benton ², Mark Corrigan ³, Braden Troyer ³, Galen E. Erickson ², Jim C. MacDonald ²

¹University of Nebraska- Lincoln, ²University of Nebraska-Lincoln, ³Axiota Animal Health

9:45 a.m. 25 **Adjusting the use of body weight on dry matter intake predictive equations in feedlot finishing cattle.**

Alejandro Pittaluga ¹, Federico Podversich ², Zachary K. Smith ³, Alejandro E. Relling ¹

¹The Ohio State University, ²South Dakota State University, ³Department of Animal Science, South Dakota State University, Brookings, SD 57007, USA.

10:00 a.m. 26 **Effects of restricted feeding on growth performance and carcass characteristics in finishing beef steers**

Madeline S. Grant ¹, Aubrey C. Thompson-Smith ¹, Colten W. Dornbach ¹, Kallie D. Childress ¹, P. Rand Broadway ², Nicole C. Burdick Sanchez ², Landon G. Canterbury ¹, Michael L. Galyean ³, Kristin E. Hales ¹

¹Department of Animal and Food Sciences, Texas Tech University, ²United States Department of Agriculture, Agriculture Research Service, Livestock Issues Research Unit, ³Department of Veterinary Sciences, Texas Tech University

10:15 a.m. 27 **A phytogenic additive improves performance of feedlot beef cattle compared with the use of sodium monensin**

André F. Francischinelli ¹, Maria B. Niehues ¹, Daniel I. C. G. Gouvêa ¹, Victor Valério de Carvalho ², Alexandre Perdigão ³, Tiago S. Acedo ⁴, Laura H. Di Piero ⁵, Tyler Turner ⁶, Cyntia L. L. Martins ¹, Mário B. B. Arrigoni ¹

¹College of Veterinary Medicine and Animal Science (FMVZ), São Paulo State University – UNESP, Botucatu, Brazil, ²dsm-firmenich, Department of Innovation, São Paulo, Brazil, ³DSM-Firmenich, Department of Innovation and Applied Science, São Paulo, Brazil, ⁴dsm-firmenich, ⁵College of Veterinary Medicine and Animal Science (FMVZ), São Paulo State University – UNESP, Botucatu, Brazil, ⁶dsm-firmenich, Animal Nutrition and Health, Switzerland

Animal Breeding and Genetics Symposium I: Riding the CRISPR Wave to Understand and Manipulate Genome to Phenome in Livestock

Chair: Fernando Biase, Virginia Tech

8:30 AM - 11:30 AM

Great Hall 2

8:30 a.m. **Animal Breeding and Genetics Symposium I Introduction**

8:45 a.m. 8 **Editing livestock for production**

Jon Oatley ¹

¹Washington State University

9:20 a.m. 7 **Editing pigs for biomedical applications**

Kiho Lee ¹

¹National Swine Resource and Research Center, University of Missouri

9:55 a.m. **Animal Breeding and Genetics Symposium I Break**

10:10 a.m. 8 **Editing pigs for xenotransplantation (GalSafe & 10-GE pigs)**

John Bianchi ¹

¹Blue Ribbon Koi & Marine

10:45 a.m. 6 **Perspectives on the Global Regulation of Genetically Modified Livestock**

Alison L. Van Eenennaam ¹

¹University of California, Davis

ASAS Public Policy Symposium and Workshop: Effectively Communicating Animal Science

Chairs: Penny Riggs, Texas A&M University;

Don Mulvaney, Department of Animal Sciences, Auburn University

8:30 AM - 12:00 PM

Great Hall 6

8:30 a.m. **ASAS Public Policy Symposium and Workshop Introduction**

8:45 a.m. 210 **Key Issues Shaping Animal Agriculture: Communicating as animal scientists to inform consumers, regulators, legislators, and policy makers**

Teresa A. Davis ¹, Chris Hostetler ², Lowell Randel ³

¹Institute for Advancing Health Through Agriculture, Texas A&M AgriLife, ²National Pork Board, ³The Randel Group

9:50 a.m. **ASAS Public Policy Symposium and Workshop Break**

10:00 a.m. 211 **Writing for Lay Audiences**

Barbara Gastel ¹

¹Texas A&M University

10:40 a.m. 212 **Possibility Thinking Mini-Workshop: Generating impact through Effective Animal Science Communication**

Don Mulvaney ¹

¹Department of Animal Sciences, Auburn University

11:45 a.m. **ASAS Public Policy Symposium and Workshop Closing Challenge and Call to Action**

Don Mulvaney ¹

¹Department of Animal Sciences, Auburn University

Forages and Pastures I

Chair: S. Leanne Dillard, Auburn University

8:45 AM - 11:15 AM

Diplomat Ballroom 2

8:45 a.m. 45 **Award Talk: Integration and Synergism: Where Ruminant Nutrition Meets Forage Systems and Where Teaching Meets Research**

William B. Smith ¹

¹Auburn University

9:15 a.m. 47 **Effect of two herbage allowance on herbage mass, stocking rate and cow body weight and condition score**

Martin Do Carmo ¹, Martin Claramunt ¹, Marcello Martinelli ¹, Pablo Soca ¹

¹Universidad de la República

9:30 a.m. 48 **Using alternative forage species to reduce emissions of the greenhouse gas from grazing goats onto soil**

Hossam Ismael ¹, Byeng Ryel Min ¹, Mariline Hilaire ¹, Santosh Chaudhary ¹, Vivian Kanyi ¹, Heba Abdo ¹

¹Tuskegee University

9:45 a.m. **Forages and Pastures I Break**

10:00 a.m. 49 **Award Talk: The Effect of Bermudagrass Cultivar on the Comprehensive Comparison of Digestive and Metabolic Profiles in Beef Heifers**

Abbigail R. Hines ¹, Werner G. Bergen ¹, Kim Mullenix ¹, S. Leanne Dillard ¹, Todd Callaway ², William B. Smith ¹

¹Auburn University, ²University of Georgia

10:30 a.m. 50 **Optimizing Grass-Fed Beef: Enhanced Grazing Strategies and Their Impact on Carcass Quality and Methane Emissions**

Lydia Salsbury ¹, Ricardo H. Ribeiro ¹, Marília Chiavegato ¹

¹The Ohio State University

10:45 a.m. 51 **Effect of grazing pasture on ricotta cheese quality traits**

Guido Mangione ¹, Martino Musati ¹, Margherita Caccamo ², Antonino Bertino ¹, Fabrizio Mangano ¹, Antonio Natalello ¹, Giuseppe Luciano ¹, Alessandro Priolo ¹

¹Department of Agriculture, Food and Environment (Di3A), University of Catania, Via Santa Sofia 100, 95123, Catania, Italy, ²CoRFiLaC Consorzio per la Ricerca nel settore della Filiera Lattiero-Casearia e dell'agroalimentare

11:00 a.m. 52 **Late-Breaking: Architecture and implementation of a Scalable Platform for Precision Rangeland and Livestock Management**

Santiago A. Utsumi ¹, Mehmet Bakir ¹, Andres R. Perea ¹, Rick E. Estell ², Andres Cibils ³, Huiping Cao ⁴, Sheri A. Spiegel ², Sara McCord ⁵, Brandon Bestelmeyer ⁵

¹Animal and Range Sciences Department, New Mexico State University, ²USDA - Agricultural Research Service Jornada Experimental Range, ³USDA ARS OCPARC, Southern Plains Climate Hub, ⁴Department of Computer Science, New Mexico State University, ⁵USDA ARS Jornada Experimental Range

Growth and Development I

Chair: Marcio Duarte, University of Guelph, Guelph, ON, Canada

9:00 AM - 10:30 AM

Diplomat Ballroom 4

9:00 a.m. 64 **Moderate body weight loss and one-carbon metabolite**

supplementation in early gestation beef heifers alters the fetal liver transcriptome

Rebecca M. Swanson ¹, Layla E. King ², Wellison JS Diniz ³, Kathlyn M. Hauxwell ⁴, Jennifer L. Hurlbert ⁵, Yssi L. Enztie ⁴, Jessica G. Syring ⁴, Alison K. Ward ⁶, Carl Robertson Dahlen ⁵, Lawrence P. Reynolds ⁴, Matthew S. Crouse ⁷, Joel S. Caton ⁴

¹South Dakota State University, ²University of Minnesota Crookston, ³Auburn University, ⁴North Dakota State University, ⁵North Dakota State University Department of Animal Sciences Center for Nutrition and Pregnancy, ⁶University of Saskatchewan, ⁷United States Department of Agriculture

9:15 a.m. 65 **Moderate body weight loss and one-carbon metabolite**

supplementation in early gestation beef heifers alters the fetal Longissimus dorsi transcriptome

Rebecca M. Swanson ¹, Layla E. King ², Wellison JS Diniz ³, Kathlyn M. Hauxwell ⁴, Jennifer L. Hurlbert ⁵, Yssi L. Enztie ⁴, Jessica G. Syring ⁴, Alison K. Ward ⁶, Carl Robertson Dahlen ⁵, Lawrence P. Reynolds ⁴, Matthew S. Crouse ⁷, Joel S. Caton ⁴

¹South Dakota State University, ²University of Minnesota Crookston, ³Auburn University, ⁴North Dakota State University, ⁵North Dakota State University Department of Animal Sciences Center for Nutrition and Pregnancy, ⁶University of Saskatchewan, ⁷United States Department of Agriculture

9:30 a.m. 66 **Targeting Inflammation with ω -3 Polyunsaturated Fatty Acid Nutraceutical Interventions Improved Lipid Flux and Partially Restored Lipid Metabolic Indicators in Heat-Stressed Finishing Wethers**

Shelley A. Curry ¹, Micah S. Most ¹, Pablo C. Grijalva ¹, Rachel L. Gibbs ², Melanie R. White ¹, Eileen S. Marks-Nelson ¹, Ty B. Schmidt ³, Jessica L. Petersen ¹, Dustin T. Yates ¹

¹University of Nebraska-Lincoln, ²North Dakota State University, ³Department of Animal Science, University of Nebraska – Lincoln, 68588

9:45 a.m. 67 **Targeting Inflammatory Tone with Daily Oral ω -3 Polyunsaturated Fatty Acids Improved Growth and Body Composition in Heat-Stressed Finishing Lambs**

Melanie R. White ¹, Rachel L. Gibbs ², Shelley A. Curry ¹, Pablo C. Grijalva ¹, Jessica L. Petersen ¹, Ty B. Schmidt ³, Dustin T. Yates ¹

¹University of Nebraska-Lincoln, ²North Dakota State University, ³Department of Animal Science, University of Nebraska – Lincoln, 68588

10:00 a.m. 68 **A single citrulline-supplemented meal increases arginine availability but not mTORC1 signaling or protein synthesis in skeletal muscle of preterm piglets**

Antonio Carlos Ramos dos Santos ¹, Ki Beom Jang ², Agus Suryawan ², Rosemarie D. Almonaci ², Mahmoud A. Mohammad ², Caitlin Vonderohe ², Barbara Stoll ², Douglas G. Burrin ², Marta L. Fiorotto ², Teresa A. Davis ³

¹Institute for Advancing Health Through Agriculture, Texas A&M AgriLife, ²USDA/ARS Children's Nutrition Research Center, Department of Pediatrics, Baylor College of Medicine, Houston, TX., ³Institute for Advancing Health Through Agriculture, Texas A&M AgriLife

10:15 a.m. 69 **Late-Breaking: Maternal Vitamin and Mineral Supplementation During Gestation Affects Multi-Tissue Regulatory Network in Neonatal Beef Calves**

Thais Ribeiro da Silva ¹, Audrey J. Craner ¹, Carl Robertson Dahlen ², Jennifer L. Hurlbert ², Ana B. Clara B. Menezes ³, Priyanka Banerjee ¹, Friederike Baumgaertner ⁴, Kerri A. Bochantin ⁴, Samat Amat ⁵, Kevin K. Sedivec ⁵, Kendall C. Swanson ⁴, Wellison JS Diniz ¹

¹Auburn University, ²North Dakota State University Department of Animal Sciences Center for Nutrition and Pregnancy, ³South Dakota State University, ⁴Department of Animal Sciences, Center for Nutrition and Pregnancy, North Dakota State University, ⁵North Dakota State University

CSAS Graduate Student Oral Competition: MS I

Chair: Nuria Prieto, Agriculture and Agri-Food Canada

9:00 AM - 11:15 AM

Diplomat Ballroom 5

9:00 a.m. **CSAS Graduate Student Oral Competition: MS I Introduction**

9:05 a.m. 71 **Effect of dry rolled, temper rolled, or steam flaked barley on dry matter intake, feeding behavior, and ruminal fermentation of finishing beef heifers**

Cassie Delver ¹, Gabriel O. Ribeiro Junior ¹, Óscar López-Campos ², Gregory B. Penner ¹

¹University of Saskatchewan, ²Agriculture and Agri-Food Canada - Lacombe Research and Development Centre

9:35 a.m. 73 **The effect of feed sulfur and water sulfate on ruminal hydrogen sulfide concentrations and gastrointestinal tract permeability in beef heifers**

Emma C. Fehr¹, Koryn S. Hare¹, Jordan A. Johnson¹, Emily R. Snyder¹, Gregory B. Penner¹

¹University of Saskatchewan

9:50 a.m. 74 **Genome-Wide Association Study for Gestation Length in Canadian Beef Cattle**

Emily Doreen Fuessel¹, Mika Asai-Coakwell¹

¹University of Saskatchewan

10:05 a.m. **CSAS Graduate Student Oral Competition: MS I Break**

10:15 a.m. 75 **Re-evaluating Recommendations for Eicosapentaenoic acid (EPA) and Docosahexaenoic acid (DHA) for Adult Dogs: A Dose-Response Study on Antioxidant Status**

Fumiko Imai¹, Lindsey Rummell¹, Jordyn Welsh¹, Sydney Banton¹, Pawanpreet Singh¹, Janelle Kelly², Jennifer L. Saunders-Blades², David W.L. Ma³, James R. Templeman⁴, Lindsay E. Robinson³, Anna K. Shoveller¹

¹Department of Animal Biosciences, University of Guelph, Guelph, Ontario, Canada,

²Champion Petfoods Holding Ltd., Morinville, Alberta, Canada, ³Department of Human Health and Nutritional Sciences, University of Guelph, Guelph, Ontario, Canada, ⁴Primal Pet Foods, Primal Pet Group, Fairfield, California, United States

10:30 a.m. 76 **Effects of maternal chromium propionate supplementation for beef cows at late gestation on skeletal muscle metabolism in the offspring**

Emily Knapper¹, Luiza Vitarelli Kladt², Ivan Avalos-Rosario¹, Sarah E. Dean¹, Walimir Silva¹, Nick Serao³, Jerilyn Hergenreder⁴, Elliot Neto⁴, Katharine M. Wood¹, Michael A. Steele¹, Marcio S. Duarte⁵

¹University of Guelph, ²Federal University of Viçosa, ³Federal University of Lavras, ⁴Kemin Industries, Inc, ⁵University of Guelph, Guelph, ON, Canada

10:45 a.m. 77 **Utilizing porcine hepatocyte cultures to test the effect of short chain fatty acids on skatole metabolism and assess sex-dependent differences between boars and barrows**

Austin J. Lawson¹, Christine Bone¹, James Squires¹

¹University of Guelph

11:00 a.m. 78 **The impact of intercropping corn with annual forages on forage chemical composition and bred heifer performance during late fall/early winter grazing in Western Canada.**

Connor McIntyre¹, Emma J. McGeough², Kim H. Ominski², Yvonne Lawley³

¹Department of Animal Science, Faculty of Agriculture and Food Sciences, University of Manitoba, Winnipeg, Manitoba, Canada, R3T 2N2, ²Department of Animal Science, Faculty of Agricultural and Food Sciences, University of Manitoba, Winnipeg, Manitoba, Canada, R3T 2N2, ³Department of Plant Science, Faculty of Agricultural and Food Sciences, University of Manitoba, Winnipeg, Manitoba, Canada, R3T 2N2

Swine Species

Chairs: Ricardo Ekmay, Arbiom; Young Dal Jang, University of Georgia

10:15 AM - 11:15 AM

Diplomat Ballroom 3

10:15 a.m. 59 No synergistic effect of supplementary lysine in late gestation and domperidone in lactation for sow milk yield

Chantal Farmer ¹, Jakob C. Johannsen ², Lee-Anne Huber ³

¹Agriculture and Agri-Food Canada, Sherbrooke Research and Development Centre, Sherbrooke, QC, Canada, ²Aarhus University, Department of Animal and Veterinary Sciences, Tjele, Denmark, ³Department of Animal Bioscience, University of Guelph, Guelph, ON, Canada

10:30 a.m. 60 Whole genome prediction of the onset of puberty in a pig growth model based on body weight and feed intake data from boar stations using a Bayesian hierarchical model

Rodrigo Mezencio Godinho ¹, Haipeng Yu ², Lisanne Verschuren ¹, Egbert F. Frank Knol ¹, Rohan Fernando ³, Jack C.M. Dekkers ³, Eli Grindflek ⁴

¹Topigs Norsvin Research Center B.V., ²Department of Animal Sciences, University of Florida, ³Iowa State University, ⁴Topigs Norsvin

10:45 a.m. 61 Low sow hemoglobin status is a risk factor for sow removal in commercial herds

Katlyn A. McClellan ¹, Bart Borg ², Robert Harrell ², Eric M. Weaver ¹

¹South Dakota State University, ²Passel Farms

11:00 a.m. 63 Late-Breaking: Effects of a dietary supplementation of piglet diets with a combination of live yeast and yeast cell wall fraction as alternative to ZnO on the health and performance of nursery piglets

Tadele G. Kiro ¹, Pingping XU ², Hao K. Zhang ², Shauai Zhang ³, Xiangshi LOU ³

¹Phileo by Lesaffre, ²phileo by Lesaffre- China, ³China Agricultural University

Animal Breeding and Genetics II: Phenotyping Tools

Chair: Zuleica Trujano, University of Georgia

10:45 AM - 11:45 AM

Great Hall 5

10:45 a.m. 41 Using digital phenotypes for genomic evaluations in pigs

Sergio N. Sanchez Sierra ¹, Matias Bermann ², Ching-Yi Chen ³, Eric Psota ⁴, Ignacy Misztal ⁵, Daniela Lourenco ⁵

¹University of Georgia, ²Research Scientist, University of Georgia, ³Research Scientist Manager at PIC, Genus PLC, ⁴Digital Innovation Manager at PIC, Genus PLC, ⁵University of Georgia

11:00 a.m. 42 Automated Segmentation and Tracking of Group Housed Pigs Using Zero-Shot Vision-Language Tools

Ye Bi ¹, Mina Shumaly ¹, Bimala Acharya ¹, David S. Rosero ¹, Juan P. Steibel ¹

¹Iowa State University

11:15 a.m. 43 **Advancing poultry phenotyping: A novel CT-derived lung trait for turkey (*Meleagris gallopavo*) selection**

Natalee T. Richardson¹, Emily M. Leishman², Bayode O. Makanjuola¹, Xuechun Bai³, Ryley J. Vanderhout³, Jennifer L. Ellis¹, Shai Barbut¹, Christine F. Baes¹, Ricarda E. Jahnel¹

¹University of Guelph, ²Aarhus University, ³Hybrid Turkeys

11:30 a.m. 44 **GNSS tracking to phenotype cattle locomotion energy requirements in mountainous rangelands**

Eseró Padrón Tejera¹, Manuel J. García García¹, M. Pilar Torralbo Muñoz¹, Dolores C. Pérez Marín¹, Francisco Maroto Molina¹

¹Department of Animal Production, School of Agricultural and Forestry Engineering, University of Cordoba, Cordoba, Spain

Animal Breeding and Genetics I: Functional and Molecular Genetics and Other Omics

Chair: Rafael Silva, Angus Genetics Inc., Saint Joseph, MO

11:00 AM - 12:00 PM

Great Hall 3

11:00 a.m. 29 **Mitochondrial haplotype variation and its association with feed efficiency in beef cattle**

Lauren E. Seier¹, Mackenzie C. Batt¹, Anna M. Fuller¹, Andrew Lakamp¹, Dustin T. Yates¹, Kristi Montooth¹, Jessica L. Petersen¹

¹University of Nebraska-Lincoln

11:15 a.m. 30 **Investigation into the relationship of mitochondrial haplotype on respiratory complex I activity in beef cattle skeletal muscle**

Mackenzie C. Batt¹, Lauren E. Seier¹, Abigail Webb¹, Andrew Lakamp¹, Anna M. Fuller¹, Dustin T. Yates¹, Kristi Montooth¹, Jessica L. Petersen¹

¹University of Nebraska-Lincoln

11:30 a.m. 31 **SLC45A2 is associated with diluted coat color in Dexter cattle**

Anna M. Fuller¹, Jessica L. Petersen¹

¹University of Nebraska-Lincoln

11:40 a.m. 32 **Longitudinal investigation reveal changes in microbiome for lactating sows**

Aakilah Hernandez¹, Christian Maltecca¹, Francesco Tiezzi²

¹North Carolina State University, ²University of Florence

Physiology and Endocrinology I: General Physiology and Endocrinology

Chair: Jeremy Block, Department of Animal Science, University of Wyoming

1:30 PM - 3:15 PM

Diplomat Ballroom 3

1:30 p.m. 123 Fibroblast Growth Factor 21 (FGF21) Improves Insulin Action in Obese Sheep

Antonio Carlos Ramos dos Santos ¹, Molly M. McGuckin ², Sarah L. Giesy ², Yves R. Boisclair ²

¹Institute for Advancing Health Through Agriculture, Texas A&M AgriLife, ²Department of Animal Science, College of Agriculture and Life Sciences, Cornell University, Ithaca, NY.

1:45 p.m. 122 Changes in blood metabolic profile of beef cows with and without access to shade or chromium supplementation during gestation under heat stress conditions

Matheus Feliipe Lana Ferreira ¹, Isabelle Siqueira ¹, Ronaldo Gomes ¹, Ashley K. Edwards ², Barbara Roqueto do Reis ³, Marcelo Vedovatto ², Hiam Marcon ², Luciana Renno ⁴

¹Louisiana State University, ²Louisiana State University Agricultural Center, ³CREC-White Sand Beef Unit, Mississippi State University, ⁴Universidade Federal de Vicosa

2:00 p.m. 125 Stimulation of the hypothalamus and pituitary with exogenous kisspeptin and GnRH showed a similar response in LH pulsatile secretion in ovariectomized Bos taurus and Bos indicus beef heifers

Sarah M. West ¹, Lucas e Silva ², Viviana Garza ³, Jessica F. Sustaita-Monroe ¹, Leslie N. King ³, Hayden Feist ¹, Ryan Keener ¹, George A. Perry ⁴, Roberto Sartori ², Rodolfo C. Cardoso ³

¹Department of Animal Science, Texas A&M University, ²Department of Animal Science, Luiz de Queiroz College of Agriculture, University of São Paulo (ESALQ/USP), ³Texas A&M University, ⁴Texas A&M AgriLife Research

2:15 p.m. 126 Temperament assessment at the feedlot: evaluation of changes in exit velocity, hematology, and serum biomarkers of cattle temperament in steers

Nicole C. Burdick Sanchez ¹, Jeffery W. Dailey ², Jeffery A. Carroll ², P. Rand Broadway ¹, Kristin E. Hales ³

¹United States Department of Agriculture, Agriculture Research Service, Livestock Issues Research Unit, ²United States Department of Agriculture, Agricultural Research Service, Livestock Issues Research Unit, ³Department of Animal and Food Sciences, Texas Tech University

2:30 p.m. 127 Temporal Changes in Plasma and Hair Cortisol and Leukocyte Activity Following ACTH Treatment in Cattle

Pedro L. J. Monteiro ¹, Thiago O. Cunha ², Taynara J. B. Silva ², Sophia G. Schoenfeld ², Joao Paulo Andrade ³, Danielle N. Coleman ⁴, Daniel D. Luchini ⁴, Milo C. Wiltbank ², Laura L. Hernandez ⁵

¹Department of Large Animal Clinical Sciences, University of Florida, ²Department of Animal and Dairy Sciences, University of Wisconsin-Madison, ³Department of Agricultural Science, West Texas A&M University, ⁴Adisseo, ⁵Department of Animal and Dairy Sciences, University of Wisconsin-Madison

2:45 p.m. 128 **The Effect of Natural Product Treatments on the Hepatic Metabolism of Androstenedione in Boars**

Christine Bone ¹, James Squires ¹

¹University of Guelph

3:00 p.m. 265 **Changes in Cytokine Concentrations among Bos indicus and Bos indicus-influenced Cattle after Vaccination with a Combination or Individual Modified Live Viral Vaccine.**

Haley N. Weidman ¹, Sarah G. Blaske ¹, Chloey P. Carson ², Alexandria P. Snider ³, Charles R. Long ², George A. Perry ⁴

¹Department of Animal Science, Texas A&M University, ²Texas A&M AgriLife, Overton, ³U.S. Meat Animal Research Center, USDA-ARS, ⁴Texas A&M AgriLife Research

CSAS Graduate Student Oral Competition: MS II

Chair: Flavia van Cleef, College of Agriculture and Bioresources,
University of Saskatchewan

1:30 PM - 3:30 PM

Diplomat Ballroom 5

1:30 p.m. **CSAS Graduate Student Oral Competition: MS II Introduction**

1:35 p.m. 79 **Maximizing the utilization of wheat straw in finishing beef cattle diets with canola or flax screenings supplementation: growth performance, carcass characteristics and economic analysis.**

Beatriz J. Montenegro ¹, Gregory B. Penner ¹, Herbert A. Lardner ², Kathy A. Larson ³, John J. McKinnon ², Darryl Gibb ⁴, Tim A. McAllister ⁵, Gabriel O. Ribeiro Junior ¹

¹University of Saskatchewan, ²Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK Canada, ³Department of Agricultural and Resource Economics, University of Saskatchewan, Saskatoon, SK Canada, ⁴Telus Agriculture & Consumer Goods, ⁵Agriculture and Agri-Food Canada (AAFC)

1:50 p.m. 80 **Biochar as a Broadly Applicable Dietary Treatment for the Prevention of Boar Taint**

Melissa Parent ¹, Christine Bone ¹, James Squires ¹

¹University of Guelph

2:05 p.m. 81 **Genetic relationships among feed intake, growth, and body weight in Holstein calves**

Avalon GR Phillips ¹, Bayode O. Makanjuola ¹, Filippo Miglior ², Flavio S. Schenkel ¹, Christine F. Baes ¹, Ricarda E. Jahnel ¹

¹University of Guelph, ²Lactanet

2:35 p.m. **CSAS Graduate Student Oral Competition: MS II Break**

2:45 p.m. 83 **Canola fat supplementation for mid-late gestating beef cows and the effects on progeny backgrounding and finishing performance**

Cabri A. Tanchak¹, Daalkhaijav Damiran¹, Kathy A. Larson², Carolyn Fitzsimmons³, John J. McKinnon¹, Herbert A. Lardner¹

¹Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK Canada, ²Department of Agricultural and Resource Economics, University of Saskatchewan, Saskatoon, SK Canada, ³Agriculture and Agri-Food Canada, Edmonton, AB Canada; Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB Canada

3:00 p.m. 84 **Intercropping corn with annual forages for potential fall/winter grazing of beef cattle across the Canadian prairies**

Talyia Tober¹, Yvonne Lawley², Kim H. Ominski¹, Emma J. McGeough¹

¹Department of Animal Science, Faculty of Agricultural and Food Sciences, University of Manitoba, Winnipeg, Manitoba, Canada, R3T 2N2, ²Department of Plant Science, Faculty of Agricultural and Food Sciences, University of Manitoba, Winnipeg, Manitoba, Canada, R3T 2N2

3:15 p.m. 85 **Tibiotarsus cortical bone area: Opportunities and challenges to define novel leg health traits in purebred male turkeys (*Meleagris gallopavo*) using computed tomography**

Seyedehbaran Amini¹, Bayode O. Makanjuola¹, Dan Tulpan², Xuechun Bai³, Ryley J. Vanderhout³, Shai Barbut¹, Alexandra Harlander¹, Filippo Miglior⁴, Jennifer L. Ellis¹, Emily M. Leishman⁵, Christine F. Baes¹, Ricarda E. Jahnel¹

¹University of Guelph, ²University of Guelph, ³Hybrid Turkeys, ⁴Lactanet, ⁵Aarhus University

**EAAP Symposium: European Perspectives on Animal Behavior and Welfare -
Sponsored by European Federation of Animal Science**

Chair: Christopher Byrd, North Dakota State University

2:00 PM - 4:15 PM

Great Hall 6

2:00 p.m. **EAAP Symposium Introduction**

2:05 p.m. **Challenges to promote (positive) welfare and sustainable farming for pigs: developing production systems to allow behaviour performance (free farrowing, outdoor access, non tail-docking)**

Emma Fàbrega i Romans¹

¹Institute of Agrifood Research and Technology (IRTA)

2:45 p.m. **Water supply for dairy cattle: understanding drinking behaviour to improve water access in production systems**

Day Teixeira¹

¹Hartpury University

3:25 p.m. **Using human behaviour change science to improve animal welfare**

Grace Anna Carroll¹

¹Queen's University, Belfast

Forages and Pastures II

Chair: S. Leanne Dillard, Auburn University

2:00 PM - 4:15 PM

Diplomat Ballroom 2

2:00 p.m. 116 Award Talk: Increasing Awareness of Forage Management Benefits for Livestock Production in the Southeastern U.S.

Joao M. B. Vendramini ¹, Maria L. Silveira ², Lynn Sollenberger ³, Philippe Moriel ⁴, José C. B. Dubeux ⁵, Marcelo Wallau ³

¹Texas A&M AgriLife Research, ²Noble Research Institute, ³University of Florida, ⁴University of Florida, IFAS / Range Cattle Research and Education Center, ⁵University of Florida IFSA North Florida Research and Education Center

2:30 p.m. 117 Fermentation losses of the sugarcane silage with anti-yeast antibodies

Geraldo Balieiro Neto ¹, Acyr Wanderlei de Paula Freitas ², Roberto Branco Botelho ², Carlos A Rosa ³, Jose Paulo Sampaio ⁴, Cristina Maria Pacheco Barbosa ¹

¹Animal Science Institute from São Paulo Government, ²IZ/SAA, ³UFMG, ⁴UNL

2:45 p.m. 118 Forage Mass Estimation of Sudangrass-based Pasture using Vegetation Indices

Pedro Henrique Jota Fernandes ¹, Shelby L. Davies-Jenkins ¹, Biquan zhao ¹, Mary E. Drewnoski ¹, Yijie Xiong ¹

¹University of Nebraska-Lincoln

3:00 p.m. Forages and Pastures II Break

3:15 p.m. 119 Award Talk: The effect of grass-legume mixtures on cattle in the Southeastern U.S.

Mason B. Henson ¹, S. Leanne Dillard ¹, Kim Mullenix ¹, William B. Smith ¹

¹Auburn University

3:45 p.m. 120 Yield and Nutritive Value of Cool- and Warm-Season Forage Forb Species Grown Under Greenhouse Conditions

Cynthia Siziba ¹, Micayla H. West ², Aghata Elins Moreira Silva ³, Kimberly Mullenix ¹, S. Leanne Dillard ¹, James P. Muir ⁴, William B. Smith ¹

¹Auburn University, ²Department of Animal sciences, Auburn University, ³University of Alberta, ⁴Tarleton State University; Texas A&M AgriLife Research

4:00 p.m. 121 Assessment of pasture sustainability using satellite time series analysis: a study on bermudagrass overseeded with clover or ryegrass under different stocking rates

Marcia H. Fernandes ¹, Monte Rouquette ¹, Kelli Norman ¹, Gerald Smith ¹, Jordan M. Adams ¹, Luis O. Tedeschi ¹

¹Texas A&M University

Teaching/Undergraduate and Graduate Education

Chair: Caitlin Cadaret, Colorado State University

2:00 PM - 4:30 PM

Great Hall 1

2:00 p.m. 92 **Award Talk: Who ARE These People?? Current Animal Science Student Trends—and how Educators can 'Flex'**

Jodi A. Sterle ¹

¹Iowa State University

2:30 p.m. 93 **Shifting Student Expectations in Higher Education: A Comparative Analysis of Classroom Instruction, Grading, and Communication Preferences Across Academic Classifications**

Carly Hoffmann ¹, Mark Anderson ¹, Stanley F. Kelley ¹, Marcy M. Beverley ¹, Kyle Stutts ¹, Robert W. McQueen ¹, Brittany Paris ¹

¹Sam Houston State University

2:45 p.m. 94 **Exam Déjà vu: Offering students the opportunity to correct mistakes on exams in undergraduate reproduction course improves self-reported test anxiety**

Danielle M. Stock ¹, Allen G. Schwartz ¹, Sydney H. Flax ¹, Lucilene Bessa Rangel ², Alice P. Poggi Brandao ³, Nicholas Wege Dias ¹

¹Kansas State University - Department of Animal Sciences & Industry, ²Kansas State University, ³Texas A&M University

3:00 p.m. 95 **Wicked learning environments and long feedback loops: Using iterative, game-based teaching approaches to improve student understanding of core concepts in reproductive management**

Jordan M. Thomas ¹

¹Division of Animal Sciences, University of Missouri

3:15 p.m. **Teaching/Undergraduate and Graduate Education Break**

3:30 p.m. 96 **Award Talk: Shaping Future Animal Scientists: The Role of Mentoring in Graduate Education and Career Development**

Talline Martins ¹, Antonio P. Faciola ¹

¹University of Florida

4:00 p.m. 97 **Impacts of a trip to the Texas Panhandle on impressions and comprehension of the beef industry by animal science students**

Alice P. Poggi Brandao ¹, Tryon A. Wickersham ¹, Merritt L. Drewery ²

¹Texas A&M University, ²Texas State University

4:15 p.m. 233 **Late-Breaking: A first required animal welfare undergraduate course in a BIG10 animal science program**

Ruth Woiwode ¹, Kacie Leonard ¹, Morgan Marquardt ¹

¹University of Nebraska-Lincoln

Animal Breeding and Genetics Symposium II: Academic and industry collaborations to advance animal breeding and genetic research

Chair: Breno Fragomeni, University of Connecticut

2:00 PM - 4:45 PM

Great Hall 2

2:00 p.m. **Animal Breeding and Genetics Symposium II Introduction**

2:05 p.m. 86 **Building industry-academic collaborations to use genetic technologies for solving challenges in the beef industry**

R. Mark Enns ¹, Scott E. Speidel ¹

¹Colorado State University

2:30 p.m. 87 **Academic-Industry Collaborations in Animal Breeding: Advancing Breeding Through Strategic Partnerships**

Austin Putz ¹

¹Hendrix Genetics

2:55 p.m. 428 **Government, academia and industry collaborations to advance selective breeding and genetic research in rainbow trout aquaculture and recreational fisheries**

Yniv Palti ¹

¹USDA-ARS National Center for Cool and Cold Water Aquaculture

3:20 p.m. 429 **Invited Speaker Dr. Breno Fragomeni**

Breno O. Fragomeni ¹

¹University of Connecticut

3:45 p.m. 430 **Invited Speaker Dr. Yeni Liliana Bernal Rubio**

Yeni Liliana Bernal-Rubio ¹

¹Zoetis

4:10 p.m. **Animal Breeding and Genetics Symposium II Discussion**

Growth and Development II

Chair: Marcio Duarte, University of Guelph, Guelph, ON, Canada

2:00 PM - 4:45 PM

Diplomat Ballroom 4

2:00 p.m. 135 **Award Talk: Increasing our understanding of skeletal muscle growth and development through the use of exogenous growth promotants**

Bradley J. Johnson ¹

¹Texas Tech University

2:30 p.m. 136 **Long-term effects of maternal undernutrition on DNA methylation in skeletal muscle of postnatal Wagyu cattle**

Daichi Nishino ¹, Taketo Haginouchi ², Susumu Muroya ³, Takeshi Shimogiri ³, Kenji Kawabata ⁴, Saki Urasoko ⁴, Shinobu Yasuo ¹, Takafumi Gotoh ²

¹Kyushu University, ²Hokkaido university, ³Kagoshima University, ⁴Kagoshima Prefectural Institute

2:45 p.m. 137 **Impacts of maternal nutrition during gestation on second parity F2 offspring growth and metabolism**

Cheyenne S. Summers ¹, Amanda Reiter ¹, Nicole M. Tillquist ¹, Nicholas Barnello ¹, Santhi Priya Voggu ¹, Rachel Carter ¹, Mia Y. Kawaida ¹, Kristen E. Govoni ¹, Steven A. Zinn ¹, Sarah Reed ¹

¹University of Connecticut

3:00 p.m. 138 **Placental insufficiency Induced Fetal and Skeletal Muscle Growth Restriction in Fetal Sheep**

Weicheng Zhao ¹, Mariangel Varela ¹, Daniel B. Chrisenberry ¹, Rosa Icela Luna Ramirez ¹, Laura D. Brown ², Sean W. Limesand ¹

¹The University of Arizona, ²University of Colorado Anschutz Medical Campus

3:15 p.m. **Growth and Development II Break**

3:30 p.m. 139 **Downregulation of mitochondrial metabolism is a driver for fetal adaptation to maternal nutrient restriction during gestation in beef cattle**

John F. Odhiambo ¹, Kasey A. Elder ², Caleb O. Lemley ²

¹Alabama Agricultural and Mechanical University, ²Mississippi State University

3:45 p.m. 140 **Chronic Heat Stress in Finishing Lambs Induced Metabolic Changes in Muscle That Indicated Greater Glycogen Utilization and Lactate Production, which May Explain Greater Prevalence of Dark Cutters**

Ashley A. Hahn ¹, Micah S. Most ¹, Pablo C. Grijalva ¹, Rachel L. Gibbs ², Melanie R. White ¹, Eileen S. Marks-Nelson ¹, Ty B. Schmidt ³, Jessica L. Petersen ¹, Dustin T. Yates ¹

¹University of Nebraska-Lincoln, ²North Dakota State University, ³Department of Animal Science, University of Nebraska – Lincoln, 68588

4:00 p.m. 141 **The effect of anatomical location and marbling degree on the extracellular matrix properties in muscle and adipose tissue of finished beef steers**

Olivia P. Nelson ¹, Mollie M. Green ¹, Bikash Bhattari ¹, Gordon Christopher ¹, Oscar J. Benitez ¹, Bradley J. Johnson ¹, Clarissa Strieder-Barboza ¹

¹Texas Tech University

4:15 p.m. 142 **Preliminary Study: Effect of concentrate feed amount on histochemical characteristics of pituitary, blood metabolites and organ development in young Japanese black heifers**

Taketo Haginouchi ¹, Daichi Nishino ², Takafumi Gotoh ¹

¹Hokkaido university, ²Kyushu University

4:30 p.m. 143 **Late-Breaking: Maternal vitamin and mineral supplementation modulate placental gene expression related to angiogenesis, nutrient transport, and immune regulation in neonatal beef heifers**

Audrey J. Craner¹, Carl Robertson Dahlen², Jennifer L. Hurlbert², Ana B. Clara B. Menezes³, Priyanka Banerjee¹, Friederike Baumgaertner⁴, Kerri A. Bochantin⁴, Samat Amat⁵, Kevin K. Sedivec⁵, Kendall C. Swanson⁴, Wellison JS Diniz¹

¹Auburn University, ²North Dakota State University Department of Animal Sciences Center for Nutrition and Pregnancy, ³South Dakota State University, ⁴Department of Animal Sciences, Center for Nutrition and Pregnancy, North Dakota State University, ⁵North Dakota State University

Ruminant Nutrition II: Feeding Studies II

Chair: Marcelo Vedovatto, Louisiana State University Agricultural Center

2:00 PM - 5:00 PM

Great Hall 3

2:00 p.m. 98 **Award Talk: Exploring the Ruminal Microbiome of Beef Cattle with Divergent Feed Efficiency**

Taylor S. Sidney¹

¹West Virginia University

2:30 p.m. 99 **Differential rumen microbial taxa in Charolais bulls with divergent residual feed intake-expected progeny difference**

Taylor S. Sidney¹, Emily Treon¹, Godstime Taiwo¹, Peixin Fan², Ibukun M M. Ogunade¹

¹West Virginia University, ²Mississippi State University

2:45 p.m. 100 **Dietary threshold of tannin extracts from various sources to prevent unacceptable suppression in intake, digestibility and growth in sheep and cattle: A meta-analysis**

Abubeker Hassen Imamu¹, Osman Ahmed², Khoboso Lehloenyia³

¹Department of Animal Science, University of Pretoria, ²Department of Animal Science, University of Pretoria, ³Department of Agriculture, University of Zululand

3:00 p.m. 101 **Effects of Vitamin B Complex Supplementation on Blood Metabolites and Performance of Weaned Beef Calves during a 42-Day Preconditioning Program**

Erica Ferri de Oliveira¹, Aline Cristine Rezende dos Santos¹, Ana L. P. Ramalho¹, Carlos E. M. Dos Santos¹, Matheus Fellipe Lana Ferreira², Jeff S. Heldt³, Chance G. G. Farmer³, Juliana Ranches¹

¹Oregon State University, ²Louisiana State University, ³Selko

3:15 p.m. **Ruminant Nutrition IV Break**

3:30 p.m. 102 **Award Talk: Bacillus-Based Direct-Fed Microbials as a Strategic Tool in Beef Cattle Production**

Arnaldo Limede¹, Rodrigo Marques², Fernando Cidrini², Vinicius Alves Cruz³, Erollykens F. Santos², Frank Even³, Vitor RG Mercadante⁴

¹Virginia Polytechnic and State University, ²Virginia Tech, ³Virginia Tech - School of Animal Sciences, ⁴Virginia Tech - School of Animal Sciences; Large Animal Clinical Sciences

4:00 p.m. 103 **Performance of a Model Trained on Moderate-Energy Rations in Predicting Feed Intake of Cattle on High-Energy Rations**

Deborah Ologunagba ¹, Nathan Blake ¹, Tylor J. Yost ¹, Matthew Walker ¹, Eswar ArunKumar Kalaga ¹, Ida Holaskova ¹, Miles Theurer ², Jarred Yates ¹, Matthew E. Wilson ¹
¹West Virginia University, ²Veterinary Research and Consulting Services, LLC

4:15 p.m. 104 **Effects of a fermentation extract additive on feedlot performance of Bos indicus cattle fed in tropical environment**

Rodrigo Dias Lauritano Pacheco ¹, Victor Campanelli ¹, Pedro Terencio ¹, Jéssica Gusmão ², Rafael da Costa Cervieri ³, João Fontanari ³, Alex Maia ⁴, Gustavo A B Moura ⁴, Vinicius Fonseca ⁴, Elias J. Bungenstab ⁵, Gilson A. Gomes ⁵
¹Campanelli Innovation Center, ²Campanelli Innovation Center, Agro-Pastoril Paschoal Campanelli, Altair, 15430-000, São Paulo, Brazil., ³Nutribeef, ⁴São Paulo State University (Unesp), ⁵AB Vista

4:30 p.m. 105 **Inclusion of palm oil products in finishing diets on ground beef quality and retail stability**

Anna M. Kobza ¹, Rebecca L. McDermott ², Galen E. Erickson ¹, Jim C. MacDonald ¹, Joshua R. Benton ¹, Mitch M. Norman ¹, Jessie Morrill ¹, Long Zou ³, Kyra Elliot ¹, Anna Hilton ¹, Chad Russell ¹
¹University of Nebraska-Lincoln, ²University of Nebraska- Lincoln, ³Bunge Creative Solutions

4:45 p.m. 106 **Effects of 28-d rotation of ionophores on commercial cattle performance during the growing phase**

Madison L. Bemisderfer ¹, Cody Schneider ², Logan R. Thompson ¹, Haley E. Larson ³
¹Kansas State University, ²Cornbelt Livestock Services, ³Kansas State University - Olathe

Ruminant Nutrition Symposium: Gut permeability: What is it and what is the impact?

Chair: David Harmon, University of Kentucky

2:00 PM - 5:00 PM

Diplomat Ballroom 1

2:00 p.m. **Ruminant Nutrition Symposium Introduction**

2:05 p.m. 88 **Factors that influence instances of increased gut permeability**

Gregory B. Penner ¹, Claire A. Bertens ¹, Koralie Lambert ¹, Koryn S. Hare ¹
¹University of Saskatchewan

2:45 p.m. 89 **Mechanisms of gut permeability**

Sarah C. Pearce ¹
¹USDA-ARS

3:25 p.m. **Ruminant Nutrition Symposium Break**

3:40 p.m. 90 **Methods to measure gut barrier function in ruminants**

Jon P. Schoonmaker ¹
¹Purdue University

4:20 p.m. 91 **The consequences of leaky gut and opportunities for intervention**

Victoria Sanz Fernandez ¹

¹Trouw Nutrition R&D

Nonruminant Nutrition II

Chair: Marko Rudar, Department of Animal Sciences, Auburn University

2:30 PM - 4:30 PM

Great Hall 5

2:30 p.m. 109 **Effects of Dietary L-glutamate, L-aspartate, and Their Combination on Growth Performance and Diarrhea Severity of Weaned Piglets Challenged with Enterotoxigenic Escherichia coli**

Supatirada Wongchanla ¹, Youngmin Park ¹, Sangwoo Park ¹, Shuhan Sun ¹, Thi Thu Huong Nguyen ¹, Tina Du ¹, Yating Zhao ¹, Yanhong Liu ¹

¹University of California, Davis

2:45 p.m. 110 **Glycine supplementation activates MTOR cell signaling in skeletal muscle and enhances the growth of sow-reared IUGR pigs**

Shengdi Hu ¹, David W. Long ¹, Fuller W. Bazer ¹, Robert C. Burghardt ², Gregory A. Johnson ², Guoyao Wu ³

¹Department of Animal Science, Texas A&M University, College Station, TX 77843, USA,

²Department of Veterinary Integrative Biosciences, Texas A&M University, College Station, TX 77843, USA, ³Department of Animal Science, Texas A&M University

3:00 p.m. 111 **Increased dietary DL-methionine supplementation enhanced intestinal integrity and immunity in growing pigs**

Emmanuel O. Oladejo ¹, Md Shamimul Hasan ¹, John K. Htoo ², Jean M. Feugang ¹, Shengfa Liao ¹

¹Mississippi State University, ²Evonik

3:15 p.m. 112 **Dietary supplementation with 0.1% and 0.2% creatine does not improve the growth of postweaning piglets with normal birth weights**

David W. Long ¹, John T. T. Brosnan ¹, Barry D. Long ¹, Fuller W. Bazer ¹, Guoyao Wu ¹

¹Department of Animal Science, Texas A&M University, College Station

3:30 p.m. **Nonruminant Nutrition II Break**

3:45 p.m. 113 **An organic acid blend containing the Ca salt of 2-hydroxy,4-methylthiobutanoic acid fed mid gestation through lactation may improve sow nutrient utilization and reduce offspring immune challenge**

Jesus A. Acosta ¹, Alex Hintz ¹, Brad V. Lawrence ¹, Deana Hancock ¹

¹Novus International Inc

4:00 p.m. 114 **Late-Breaking: Gestation Stage, Lactation, and Partial Substitution of Hydroxy Minerals with Methionine Hydroxy Analogue Chelated Minerals Impacts Nutrient Retention**

Jesus A. Acosta¹, Brad V. Lawrence¹, Eric Myers², Chelsie K. K. Foran², Hans H. Stein³, Deana Hancock¹

¹Novus International Inc, ²Novus International Inc., ³University of Illinois Urbana-Champaign

4:15 p.m. 115 **Late-Breaking: Multi-Parity Evaluation of Performance Effects of Methionine Hydroxy Analogue Bis-Chelated Zn, Cu and Mn on Sows and Offspring Compared with Similar Levels of Mineral in the Glycinate Form**

Jesus A. Acosta¹, Brad V. Lawrence¹, Roberto barea¹, Marisol Castillo¹, Silvia Peris¹, de Grave Benthem², Francesc Molist², Deana Hancock¹

¹Novus International Inc, ²Schothorst Feed Research

Production, Management and Environment I

Chair: Barbara Roqueto do Reis, CREC-White Sand Beef Unit, Mississippi State University

3:30 PM - 5:00 PM

Diplomat Ballroom 3

3:30 p.m. 129 **Late-Breaking: Effect of adopting multiple management technologies on cattle performance in a small grazing beef cow-calf system: impacts on reproductive performance**

Ashley K. Edwards¹, Marcelo Vedovatto¹, Jeffrey A. Gurie¹, Hiam Marcon¹, Guillermo Scaglia², J. Matthew Fannin¹, Kurt M. Guidry¹, Glen T. Gentry¹

¹Louisiana State University Agricultural Center, ²North Dakota State University

3:45 p.m. 130 **Late-Breaking: Sustainability assessment of sub-species and management on growth performance and gas flux of steers finished in summer conditions**

Ashley K. Schilling-Hazlett¹, Kimberly R. Stackhouse-Lawson¹, Tony C. C. Bryant², Juan J. Vargas¹, Sara E. Place¹, John P. Ritten¹, Edilane C. Martins¹, Willian A. Souza³, Erin N. Burke¹, Rhyse K. Campion¹, Anna M. Shadbolt¹, Pedro H.V. Carvalho¹

¹Colorado State University, AgNext, Department of Animal Sciences, ²Five Rivers Cattle Feeding, ³olorado State University, AgNext, Department of Animal Sciences

4:00 p.m. 131 **Late-Breaking: Use of fetal age and concentrations of pregnancy-specific protein B as a tool to determine pregnancy status and to assign commercial beef females to calving management groups**

Antonio R. Braga¹, Carl Robertson Dahlen², Christopher S. Schauer¹

¹North Dakota State University, ²North Dakota State University Department of Animal Sciences Center for Nutrition and Pregnancy

4:15 p.m. 132 **Late-Breaking: Whole-farm System Comparisons of Organic and Conventional Beef Production in the Southern High Plains of United States**

Daniel Abreu ¹, Mozart Fonseca ², André Oliveira ³, Aaron Hoshide ³, Glenn C. Duff ⁴, Wininton Silva ⁵, Ronaldo Oliveira ¹

¹AgriSciences, Universidade Federal de Mato Grosso, ²New Mexico State University,

³Universidade Federal de Mato Grosso, ⁴New Mexico State University, Clayton Livestock Research Center, ⁵Empresa Mato-Grossense de Pesquisa, Assistência e Extensão Rural

4:30 p.m. 133 **Late-Breaking: Physiological parameters and reproductive performance of New Zealand white rabbit bucks given *Amaranthus cruentus* (L) leaf extracts**

Nthabiseng A. Sebola ¹, Tlou C. Kujoana ², Monnye Mabelebele ¹

¹University of South Africa - Florida Cam, ²University of South Africa

4:45 p.m. 134 **Late-Breaking: Seminal total phenolic and antioxidant status, semen evaluation and quality parameters of the New Zealand white rabbit bucks in response to increased levels of dietary *Hibiscus cannabinus* L. Leaf meal**

Tlou C. Kujoana ¹, Monnye Mabelebele ², Nthabiseng A. Sebola ²

¹University of South Africa, ²University of South Africa - Florida Cam

Tuesday, July 8, 2025

Poster Session I

7:00 AM - 8:15 AM

Great Hall 4

7:00 a.m. PSI-23 **An inaugural animal welfare judging contest for Nebraska 4-H**

Morgan Marquardt ¹, Kacie Leonard ², Ruth Woiwode ¹

¹University of Nebraska-Lincoln, ²University of Nebraska - Lincoln

7:00 a.m. PSI-26 **Beef Cattle Producer's Perceptions, Familiarity, and Adoption of Forage Tests in the Southeast**

Mattie Thrasher ¹, Ashley K. Edwards ², J. Matthew Fannin ²

¹LSU AgCenter, ²Louisiana State University Agricultural Center

7:00 a.m. PSI-29 **Behavior of ZnO micro and nanoparticles in ewes using radiolabeled ⁶⁵Zn**

Helder Louvandini ¹, Bruno Gatti ², Marcio L. Bacchi ², Murilo L. Fernandes ², Karinna L. Scotton ², Elisabete L. Fernandes ², Adibe L. Abdalla ³

¹Center for Nuclear Energy in Agriculture, University of São Paulo, ²USP, ³Centro de Energia Nuclear na Agricultura, Universidade de São Paulo, Piracicaba, SP, Brazil

7:00 a.m. PSI-10 **Comparative evaluation of colostrum substitutes on lamb passive immunoglobulin transfer, and adaptive immune development.**

Clay A. Schoen ¹, Blake Johnson ¹, Steve Lawson ¹, Christopher Chase ¹, Rosemarie Nold ¹, Kelly Froehlich ², Benoit St-Pierre ¹, Manuel Alexander Vasquez-Hidalgo ¹

¹South Dakota State University, ²Snake River Acres

7:00 a.m. PSI-25 **Consumer-Based Assessment Analysis of Local Organic Beef Versus Grain-Finished Beef**

Imani Murphy ¹, Clarissa Harris ¹

¹Tuskegee University

7:00 a.m. PSI-6 **Early Weaning Stress Alters the Ileal Mucosal Transcriptome in a Sex-Specific Manner in Pigs**

Carolini Schultz ¹, Adam J. Moeser ²

¹Michigan State University, ²Michigan State University

7:00 a.m. PSI-9 **Effect of replacing cottonseed hulls with a low-quality forage pellet on intake, digestion, and performance in growing Bos indicus steers**

Raylee A. Ezzell ¹, Henry Hilscher ², Clay P. Mathis ¹, Alyson B. Fontenot ¹, Jodi R. Cox ¹, Callie J. Swaim ¹, Kaitlyn E. Kempen ¹, Tryon A. Wickersham ¹

¹Texas A&M University, ²Livestock Nutrition Center LLC

7:00 a.m. PSI-28 **Effects of 3-nitrooxypropanol on methane production, rumen fermentation and performance of Hanwoo steers fed an early stage fattening diet**

Rajaraman Bharanidharan ¹, Byamungu Mayange Tomple ², Luis Fernando Tamassia ³, Woohyeong Hong ⁴, Athauda Arachige Kavindu Nirmal Athauda ⁴, Sujoung Huh ⁴, Jee Yeon Cho ³, Bokyung Hong ³, Maik Kindermann ³, Reto Zihlmann ³, Seokman Hong ⁵, Kyoung Hoon Kim ⁴

¹Institutes of Green Bio Science and Technology, Seoul National University, ²Animal Genetic Resources Research Center, National Institute of Animal Sciences, Rural Development Administration, ³dsm-firmenich Nutritional Products Ltd., ⁴Graduate School of International Agricultural Technology, Seoul National University, ⁵Woosung Feed Co., Ltd.

7:00 a.m. PSI-18 **Effects of a bovine appeasing substance applied at estrous synchronization on stress and reproductive performance**

Lauren K. Solice ¹, Natalie E. Reyes ¹, Olivia S. Brummett ¹, Michael B. Sims ¹, Eryn L. Pierdolla ¹, Cesar A. Rosales-Nieto ¹, Brian L. Bruner ¹, Jeremy G. Powell ², Reagan N. Sims ¹

¹Texas State University, ²University of Arkansas

7:00 a.m. PSI-1 **Effects of arginine, tryptophan, and threonine on cell viability, antioxidant capacity, and tight junction gene expression of chicken intestinal epithelial cells induced with oxidative stress**

Ju Yeong Park ¹, Yeong Bin Kim ¹, Gyu Lim Yeom ¹, Ha Neul Lee ¹, Geun Yong Park ¹, Ji Won Shin ¹, Jong Hyuk Kim ¹

¹Chungbuk National University

7:00 a.m. PSI-27 **Effects of Bioflavex Supplementation Compared to Monensin on Rumen and Gut Microbiome Composition in Finishing Steers**

Mar Serra Pesquer ¹, Florencia Miccoli ², David Romaní López ¹, Javier crespo Montero ¹, Ornella Rossi ³, Jorge Cornale ³, Rodolfo Fattore ³, Leandro Guerrero ⁴, Rafael A. Palladino ⁴

¹HTBA, ²FCA-UNLZ, ³Eurotec, ⁴CONICET

7:00 a.m. PSI-22 **Effects of modifying PPAR activity on carnitine uptake in swine mammary organoids**

Lin Xi ¹, Feng Wang ¹, Tim E. Boston ¹, Joshua Childs ¹, Jack Odle ¹, Mark Knauer ¹

¹North Carolina State University

7:00 a.m. PSI-14 **Effects of Replacing Molasses with MSG-CMS on Growth Performance and Economics in Growing-Finishing Pigs**

Yang Jinmo ¹, Cho Jinho ¹, Song Dongcheol ¹, Kyeongho Jeon ¹, Hyuck Kim ²

¹Chungbuk National University, ²Chungbuk National University, Department of Animal Science

7:00 a.m. PSI-8 **Evaluating the impact of residual feed intake on feeding behavior, growth performance, breeding soundness and carcass traits of beef bulls.**

ANEES MON ALIYARUKUNJU ¹, Ann Mary Kodackal Stanly ¹, Jayakrishnan Nair ¹

¹Southern Illinois University Carbondale

7:00 a.m. PSI-20 **Herbal Extract Supplementation as a Functional Ingredient in Modulating Canine Gut Microbiome and Biomarkers of Gut Health**

Carlie J. Mettler ¹, Julio Mito ¹, Diego Navarro ², S. Ravichandran ², Maria R.C. de Godoy ³

¹University of Illinois Urbana-Champaign, ²AVT Natural North America, ³University of Illinois at Urbana-Champaign

7:00 a.m. PSI-17 **Impact of Within-Field Variability in Soybean Yield on Nutrient Composition and Inclusion Levels of Meal in Beef Cattle Diets**

Ann Mary Kodackal Stanly ¹, ANEES MON ALIYARUKUNJU ¹, Jayakrishnan Nair ¹

¹Southern Illinois University Carbondale

7:00 a.m. PSI-2 **Investigating dietary protein's role in mitigating enteric emissions from finishing beef cattle**

Marisa R. Werner ¹, Sara E. Place ², Edward James J. Raynor ¹, Ashley K. Schilling-Hazlett ², Maya Swenson ¹, Sydney Bowman-Schnug ³, Cesar Velasquez ², Erin N. Burke ², Rhyse K. Champion ², Catie Wharton ¹, Pedro H.V. Carvalho ², Kimberly R. Stackhouse-Lawson ², Juan J. Vargas ², Anna M. Shadbolt ², Leo Gomes-Sitorski ¹

¹Colorado State University, ²Colorado State University, AgNext, Department of Animal Sciences, ³Colorado State University

7:00 a.m. PSI-3 **Major Histocompatibility Complex gene expression profile in bovine pairs submitted to fixed time artificial insemination (FTAI)**

Thais Ferreira Machado ¹, Louise Belmonte Faverzani ¹, Daniele Alves de Oliveira ¹, Evandro Neves Silva ², Diego Zeni ¹, Gilson Antônio Pessoa ¹, Danielly Beraldo dos Santos Silva ³, Thaise Pinto de Melo ¹

¹Federal University of Santa Maria, ²Federal University of Alfenas, ³José do Rosário Vellano University

7:00 a.m. PSI-24 **Meat and Poultry Processing Workforce Development Program: Providing Market Access to Kentucky Producers using a Mobile Processing Unit**

Olufemi Oyewo ¹, Sarah N. Carr ¹, Abigail Hines ¹, Megan Goins ¹, Steven Skelton ¹

¹Kentucky State University

7:00 a.m. PSI-19 **Plasma haptoglobin concentration as a potential biomarker for stress caused by horn fly infestation in lactating beef cows**

Camila Gomez-Lopez ¹, Araceli B. Maderal ¹, Ignacio Fernandez-Marenchino ¹, Georgia J. Dubeux ¹, Federico Tarnonsky ¹, Macarena Gomez-Salmoral ¹, Mariana Larrauri ², Liza Garcia ¹, Andres Fernandez-Lehmann ¹, Tessa M. Schulmeister ¹, Wilmer Cuervo-Vivas ², Federico Podversich ³, Andres Lacherre ¹, Tomas Andres Soto ¹, Nicolas DiLorenzo ⁴, Edwin Burgess ⁵

¹University of Florida, ²University of Florida, Animal Sciences department, ³South Dakota State University, ⁴Florida University, ⁵University of Florida, Entomology and Nematology department

7:00 a.m. PSI-12 **Predicting Active and Non-Active Corpus Luteum in Early Pregnancy Using Computer Vision and Machine Learning on Doppler Ultrasound Images in Beef Cattle**

JOSE L. INFANTE ¹, Jin Wang ², Daniella C. Heredia ³, Mauro Venturini ⁴, Maria Camila C. Lopez-Duarte ³, Haipeng Yu ², Angela M. Gonella ³

¹jinfantecangrejo@ufl.edu, ²Department of Animal Sciences, University of Florida, ³UNIVERSITY OF FLORIDA, ⁴University of Florida

7:00 a.m. PSI-5 **Pregnancy and calving rates following fixed time AI in beef cows: A comparison between two estrus synchronization protocols**

Janan Fareed ¹, Venkata Pavan Tanguturi ¹, Hanuman Balagoni ¹, Abdallah M. Shahat ¹, Niki C. Whitley ¹, Adel R. Moawad ¹

¹Fort Valley State University

7:00 a.m. PSI-4 **Stair-step supplementation effects on early-weaned beef calves receiving annual ryegrass**

Joao Lazarin ¹, Joao M. B. Vendramini ², Philippe Moriel ¹, Chadwade Anderson ³, Vinicius S. Izquierdo ¹, Luciana Melo Sousa ¹

¹University of Florida, IFAS / Range Cattle Research and Education Center, ²Texas A&M AgriLife Research, ³University of Florida, IFAS / Range Cattle Research and Education Center

7:00 a.m. PSI-7 **The dietary supplementation of fatty acids and choline modulates the concentration of metabolites in embryonic tissues during elongation**

Allyson McCarty ¹, Megan Bahr ¹, Zaeem Sarwar ², Damon Smith ³, Matt H. Poore ¹, Daniel H. Poole ¹, Jeanette Bishop ⁴, Thomas R. Hansen ⁴, Nadia Ashrafi ⁵, Roman A. Mimi ⁶, Stewart F. Graham ⁶, Ky G. Pohler ⁷, Jose E. P. Santos ², Felipe A.C.C. Silva ¹

¹North Carolina State University, ²University of Florida, ³Department of Animal Science, Texas A&M University, ⁴Colorado State University, ⁵Metabolomics Department, Beaumont Research Institute, ⁶Corewell Health, ⁷Department of Animal Sciences, Texas A&M University

7:00 a.m. PSI-16 **Trans-10 Biohydrogenation Intermediates Are Negatively Associated with the Monounsaturated-to-Saturated Fatty Acids Ratio in Backfat of Calf-Fed Holstein Steers**

Maykal Tsonov ¹, Jingyi Yang ¹, Juan Hernandez ², Yanqing Xu ¹, Timothy J. Hackmann ¹, Payam Vahmani ¹

¹University of California, Davis, ²UC Davis

7:00 a.m. PSI-15 **Understanding Seasonal Trends in Anemia Risk: A Multi-Scale Analysis of Fecal Egg Count, PCV, and FAMACHA Scores**

Goutham Isai ¹, Ramya Kota ², Aftab Siddique ², Phaneendra Batchu ², Ajit Mahapatra ², Sudhanshu Panda ³, Eric Morgan ⁴, Jan Van Wyk ⁵, David Shapiro-Ilan ⁶, Thomas H. Terrill ²

¹Fort valley State University, ²Fort Valley State University, ³University of North Georgia,

⁴Queen's University, ⁵University of Pretoria, ⁶USDA ARS

7:00 a.m. PSI-13 **Using anogenital distance at pre-breeding examination to predict pregnancy by artificial insemination in yearling beef heifers.**

Juliet E. Henning ¹, Lucas C S Branco ¹, Genevieve VanWye ², Morgan Brown ², Chad Duit ³, Jordan M. Thomas ², Thiago Martins ², Cecilia C. Rocha ¹

¹Division of Animal Sciences, Southwest Research, Extension, and Education Center, University of Missouri, ²Division of Animal Sciences, University of Missouri, ³Southwest Research, Extension, and Education Center, University of Missouri

7:00 a.m. PSI-21 **Zinc oxide nanoparticles and their impacts on the normality, activation, development, viability, and oxidative stress of in vitro cultured preantral ovarian follicles**

Carolina Rodriguez Jimenez ¹, Livia M. Presuto ¹, Willinton P. Pinchao ¹, Patricia Spoto Correa ¹, Helder Louvandini ², Severino R.M. de Alencar ³

¹Center for Nuclear Energy in Agriculture, University of São Paulo (CENA/USP), ²Center for Nuclear Energy in Agriculture, University of São Paulo, ³Luiz de Queiroz" College of Agriculture

Animal Health Symposium: Metabolomic Biomarkers of Animal Health

Chair: Jiuzhou Song, University of Maryland

8:00 AM - 11:45 AM

Great Hall 2

8:00 a.m. **Animal Health Symposium Introduction**

8:05 a.m. 151 **Invited Speaker Dr. Boone Clemmons**

Brooke A. Clemmons ¹

¹Texas A&M University

8:55 a.m. 152 **Invited Speaker Dr. Nishanth E. Sunny**

Nishanth E. Sunny ¹

¹University of Maryland, College Park

9:45 a.m. **Animal Health Symposium Break**

10:00 a.m. 153 **Hsp60 as a biomarker for inflamed gut**

Arun K. Bhunia ¹

¹Purdue University

10:50 a.m. 154 **Invited Speaker Dr. Juan Llor**

Juan Llor ¹

¹University of Illinois Urbana Champaign

Livestock Symposium: The Essential Societal Role of Livestock, Today and Tomorrow

Chair: Peter Ballerstedt, Grass Based Health, LLC

8:00 AM - 12:00 PM

Diplomat Ballroom 3

8:00 a.m. Livestock Symposium Introduction

8:10 a.m. 163 2024 International Summit: The societal role of meat and livestock

Keith E. Belk¹, Peer Ederer², Frédéric Leroy³

¹Colorado State University, ²Global Food and Agriculture Network, ³Vrije Universiteit Brussel

8:40 a.m. 164 Livestock's vital role in nourishing the world

Adegbola T. Adesogan¹

¹University of Florida

9:20 a.m. 165 Sustainable food systems require livestock

Sara E. Place¹

¹Colorado State University, AgNext, Department of Animal Sciences

10:00 a.m. Livestock Symposium Break

10:20 a.m. 166 Livestock AND Crops: Integrated Systems

Paulo C. F. Carvalho¹

¹Universidade Federal do Rio Grande do Sul

11:00 a.m. 167 Humanity's Existential Crisis: Malnutrition and chronic illnesses

Peter J. Ballerstedt¹

¹Grass Based Health, LLC

11:30 a.m. Livestock Symposium Q&A

Teaching/Undergraduate and Graduate Education Symposium: Mentoring That Works: Practical Strategies for Faculty and Graduate Success - Sponsored by Novus

Chair: Stephanie Hansen, Iowa State University

8:00 AM - 12:00 PM

Diplomat Ballroom 4

8:00 a.m. Teaching/Undergraduate and Graduate Education Symposium Introduction

8:20 a.m. 168 Strategies to tailor mentoring to the individual

Stephanie L. Hansen¹

¹Iowa State University

9:05 a.m. 169 Preparing mentees for their future

Rocio M. Rivera¹

¹University of Missouri

9:50 a.m. **Teaching/Undergraduate and Graduate Education Symposium Break**

10:10 a.m. 170 **Innovating Mentorship Through Idea Brokering**

Mary E. Drewnoski ¹

¹University of Nebraska-Lincoln

10:55 a.m. 171 **Preparing undergraduates for graduate school**

Daniel W. Shike ¹

¹University of Illinois at Urbana-Champaign

11:40 a.m. **Teaching/Undergraduate and Graduate Education Symposium Discussion**

Poster Session II

8:30 AM - 9:30 AM

Great Hall 4

8:30 a.m. PSII-22 **Assessing the environmental footprint of feed ingredients in pig feed formulation**

Marta Ruiz-Colmenero ¹, Ariadna Ballega ¹, Ana Ramírez ¹, Victor Rancaño ¹, Maria Devant ²

¹Sustainability in Biosystems, IRTA, ²Ruminant Production, IRTA

8:30 a.m. PSII-3 **Candidate Lethal Haplotypes Associated with Functional Longevity in Angus Cattle**

Rafael Medeiros ¹, Larissa Novo ¹, Andre Garcia ¹, Kelli J. Retallick-Riley ¹

¹Angus Genetics Inc.

8:30 a.m. PSII-12 **Carcass characteristics and revenue of beef x dairy crossbred calves sired by Angus, Charolais, Hereford, Limousin, and Simmental.**

Kirsten Sharpe ¹, Brad J. Heins ¹

¹University of Minnesota

8:30 a.m. PSII-8 **Comparison of traditional and novel genetic diversity metrics based on the metafounders methodology**

Hélène Wilmot ¹, Matias Bermann ², Daniela Lourenco ¹

¹University of Georgia, ²Research Scientist, University of Georgia

8:30 a.m. PSII-17 **Comparison of Woody Breast Characteristics Between Commercial Broilers and Korean Native Chickens Using a Non-invasive Device**

Ji-Won Kim ¹, Da-Eun Han ¹, Seong-Hwan Park ¹, Dong-Hun Noh ¹, Jung-U Choi ¹, Eun-Jung Cho ¹, Sang-Hyon OH ¹

¹Gyeongsang National University

8:30 a.m. PSII-2 **Different levels of herbage allowance during the gestation of Nellore cows result in differentially abundant proteins on skeletal muscle of offspring at slaughter**

Iorrano A. Cidrini ¹, Karla A. Oliveira ¹, William L. Souza ¹, Luciana Melo Sousa ², Igor M. Ferreira ¹, Amanda C. M. Queiroz ¹, Keuven S. Nascimento ¹, Mariana N. F. Vital ¹, Flávio D. Resende ³, Gustavo R. Siqueira ³, Claudia C. P Paz ⁴, Nedenia B. Stafuzza ⁴

¹Faculdade de Ciências Agrárias e Veterinárias, Universidade Estadual Paulista Júlio de Mesquita Filho (UNESP), Jaboticabal, SP, Brazil, ²University of Florida, IFAS / Range Cattle Research and Education Center, ³Agência Paulista de Tecnologia dos Agronegócios, Colina, SP, Brazil, ⁴Centro de Pesquisa em Pecuária Sustentável, Instituto de Zootecnia, São José do Rio Preto, SP, Brazil

8:30 a.m. PSII-25 **Dose Effect of Rumen-Protected Choline on Growth Performance of Receiving Beef Cattle**

Clay A. Zimmerman ¹, Juan Bollatti ², Marcos Zenobi ¹, Kari Estes ¹, Ramiro Andreola ²

¹Balchem Corporation, ²Biofarma

8:30 a.m. PSII-13 **Effect of Clomiphene citrate on the transcriptome of porcine oocytes in vitro**

Brooke Newell ¹, Paul W. Dyce ², Priyanka Banerjee ²

¹Auburn Univeristy, ²Auburn University

8:30 a.m. PSII-26 **Effect of Fennel Essential Oils at Different Particle Sizes and Inclusion Levels on Volatile Fatty Acid Production in an In Vitro Rumen Fermentation System**

Olatunde A. Oderinwale ¹, Oludotun O. Adelusi ², Joel O. Alabi ², James M. Enikhuomahin ³, Michael Wuaku ⁴, Yasmin Shaw ², Kelechi A. Ike ⁵, Ahmed E. Kholif ⁶, Uchenna Y. Anele ²

¹North Carolina Agricultural and Technical State University, Greensboro, NC 27401, USA,

²North Carolina Agricultural and Technical State University, ³North Carolina A&T State University, ⁴North Carolina Agricultural & Technical State University - Greensboro, NC,

⁵North Carolina Agricultural & Technical state University, ⁶Animal Sciences

8:30 a.m. PSII-24 **Effect of intensification of backgrounding phase on liver, kidney and visceral fat weight in tropical beef cattle production**

Miguel HA Santana ¹, Guilherme HG Polizel ¹, Bárbara CT Prati ¹, Arícia C. Fernandes ¹, Édison Furlan ¹, Fernando José Schalch Jr ¹, Germán D. Ramírez-Zamudio ¹, Carl

Robertson Dahlen ²

¹School of Animal Science and Food Engineering FZEA; São Paulo University - USP,

²North Dakota State University Department of Animal Sciences Center for Nutrition and Pregnancy

8:30 a.m. PSII-28 **Effects of Saccharomyces cerevisiae fermentation product on rumen metabolome of steers fed high grain diet**

Happiness Ajayi ¹, Oluwaseun Odunfa ², Anjan Dhungana ³, Yun Jiang ², Changzheng Wang ¹

¹College of Agriculture, Health Science, and Natural Resources, Kentucky State University, Frankfort, KY, 40601, USA, ²Department of Animal and Dairy Science, University of Wisconsin-Madison, WI, 53706, USA., ³Department of Poultry Science, University of Georgia, Athens, GA 30602, USA.

8:30 a.m. PSII-18 **Effects of Temperature-Humidity Index, Age and Breed on Egg-Laying Rate in Four Korean Native Chicken Breeds**

Ji-Won Kim ¹, Jung-U Choi ¹, Dong-Hun Noh ¹, Seong-Hwan Park ¹, Da-Eun Han ¹, Eun-Jung Cho ¹, Sang-Hyon OH ¹

¹Gyeongsang National University

8:30 a.m. PSII-21 **Evaluating the environmental impact of feed ingredients in beef feed formulation**

Marta Ruiz-Colmenero ¹, Ariadna Ballega ¹, Ana Ramírez ¹, Victor Rancaño ¹, Maria Devant ²

¹Sustainability in Biosystems, IRTA, ²Ruminant Production, IRTA

8:30 a.m. PSII-23 **Evaluation of diets varying in rumen available protein on methane production in continuous culture fermenters.**

Yairanex Roman Garcia ¹, Aimee N. Hafla ², Pablo J. Guiroy ¹, Maria I. Sardi ¹, Samia El-Haddad ¹, William H. Kolath ², Guillermo F. Schroeder ¹, Pedro Veiga ¹

¹Cargill Animal Nutrition and Health, Innovation Center, ²Cargill Inc.

8:30 a.m. PSII-20 **Extension programming and stakeholder engagement on a long-term project developing a bioeconomy around dairy manure**

Mario E. de Haro Marti ¹, Mireille Chahine ¹, Linda Schott ¹, Savanah Nunes ¹, Mark McGuire ¹

¹University of Idaho

8:30 a.m. PSII-5 **Genetic parameters for new approaches to stayability in early-challenged females of the Nellore breed and their correlations with economically important traits**

Cláudio Ulhoa Magnabosco ¹, Leticia Pereira ², Larissa B. Temp ³, Eduarda Oliveira ³, Maria Paula Negreiros ⁴, Fernando S. Baldi ⁵

¹Embrapa Cerrados, Planaltina, Brasília, Distrito Federal, Brazil, ²National Association of Breeders and Researchers (ANCP), ³Animal Science Department, State University of São Paulo, ⁴National Association of Breeders and Researchers - ANCP, ⁵Faculdade de Zootecnia e Engenharia de Alimentos, Universidade de São Paulo, Pirassununga, SP, Brazil

8:30 a.m. PSII-7 **Genome-Wide Characterization of SNPs and Indels in Royal White and White Dorper Sheep Using Whole-Genome Sequencing**

Mingsi Liao ¹, Amanda Kravitz ², David Haak ³, Nammalwar Sriranganathan ², Rebecca R. Cockrum ¹

¹School of Animal Sciences, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, United States, ²Department of Biomedical Sciences and Pathobiology, Virginia-Maryland College of Veterinary Medicine, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, United States, ³School of Plant and Environmental Sciences, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, United States

8:30 a.m. PSII-6 **Genomic association study and metabolic pathway enrichment for the validation of molecular markers and genes associated with meat tenderness in Nellore cattle**

Cláudio Ulhoa Magnabosco ¹, Byanka Soares ², Ludmilla Brunes ¹, Eduardo Eifert ¹, Marcos Fernando Oliveira e Costa ¹, Roberto Daniel Sainz ³

¹Embrapa Cerrados, Planaltina, Brasília, Distrito Federal, Brazil, ²Federal University of Goiás, Department of Animal Production, Goiania, Goiás, Brazil, ³Department of Animal Science, University of California, Davis, California, USA

8:30 a.m. PSII-4 **Genomic Prediction for Meat Tenderness in Nellore Cattle: Multi-trait Approaches and Weighted Best Linear Unbiased Predictor**

Cláudio Ulhoa Magnabosco ¹, Byanka Soares ², Ludmilla Brunes ¹, Eduardo Eifert ¹, Marcos Fernando Oliveira e Costa ¹, Roberto Daniel Sainz ³

¹Embrapa Cerrados, Planaltina, Brasília, Distrito Federal, Brazil, ²Federal University of Goiás, Department of Animal Production, Goiania, Goiás, Brazil, ³Department of Animal Science, University of California, Davis, California, USA

8:30 a.m. PSII-1 **Genomic Study for Pregnancy Loss in Brahman Cattle**

Sabrina T. Amorim ¹, Nedenia B. Stafuzza ², Daniel C. Cifuentes ³, Joao Moraes ¹, Barbara Roqueto do Reis ⁴, Riley Messmann ¹, Luis Camaripano ⁵, Fernando S. Baldi ⁶

¹Oklahoma State University, ²Centro de Pesquisa em Pecuária Sustentável, Instituto de Zootecnia, São José do Rio Preto, SP, Brazil, ³Universidade Estadual Paulista, ⁴CREC-White Sand Beef Unit, Mississippi State University, ⁵Grupo Ganadero Estancias Espíritu, ⁶Faculdade de Zootecnia e Engenharia de Alimentos, Universidade de São Paulo, Pirassununga, SP, Brazil

8:30 a.m. PSII-19 **Inclusion of Bacillus Probiotics in the Maternal Diet: Effects on Microbiome Modulation and Offspring Performance**

Paula Tribulo ¹, Paula Florit ¹, Fabrisio Alustiza ², Jorgelina Manes ², Genaro Rivarola ¹, Santiago Bocco ¹, Magdalena Rivarola ¹, Magali Pino ¹, Carlos Alvarez ¹, Lautaro Rostoll Cangiano ³

¹Universidad Nacional de Córdoba, Facultad Cs Agropecuarias, Córdoba, Argentina, ²Instituto Nacional de Tecnología Agropecuaria, EEA INTA Marcos Juárez, Córdoba, Argentina, ³Department of Animal and Dairy Sciences, University of Wisconsin–Madison

8:30 a.m. PSII-29 **Maternal Zinc Oxide Nanoparticle Supplementation During Pregnancy and Lactation Shapes Lamb Ruminal Microbiota**

Patricia Louvandini ¹, Brenda S. Silva ², João P Duarte ³, Livia M. Presuto ⁴, Henrique D.B. Guedes ⁴, Adibe L. Abdalla ⁵

¹Center for Nuclear Energy in Agriculture/University of São Paulo- CENA/USP, ²Helder Louvandini, ³Nuclear Energy Center in Agriculture, University of São Paulo, ⁴Center for Nuclear Energy in Agriculture, University of São Paulo (CENA/USP), ⁵Centro de Energia Nuclear na Agricultura, Universidade de São Paulo, Piracicaba, SP, Brazil

8:30 a.m. PSII-27 **Meta-analysis of the dietary inclusion of grape pomace on intake, carcass yield, and meat quality of sheep.**

Andres Alfredo Pech Cervantes ¹, Kamari King ¹, Faran Atkins ¹, Mustafa Hitit ¹, Zeynep Erdogan ¹, Zaira M. Estrada-Reyes ², Thomas H. Terrill ³

¹Prairie View A&M University, ²North Carolina Agricultural and Technical State University,

³Fort Valley State University

8:30 a.m. PSII-16 **Opportunities and Challenges Related to Water Use Intensity and its Effects on Sustainability Within the U.S. Beef Supply Chain**

Matthew G. Kinghorn ¹, Jennifer M. Bormann ¹, Robert L. Weaver ¹, Megan M. Rolf ¹

¹Kansas State University

8:30 a.m. PSII-11 **Selection signatures in a Rarámuri Criollo cattle population introduced to the Southwestern United States**

Maximiliano J. Spetter ¹, Santiago A. Utsumi ¹, Eileen M. Armstrong ², Felipe A. Rodríguez Almeida ³, Pablo J. Ross ⁴, Lara Macon ⁵, Eugenio Jara ², Andrew Cox ¹, Andres R. Perea ¹, Micah Funk ¹, Matthew Redd ⁶, Andres F. Cibils ⁷, Sheri A. Spiegel ⁵, Rick E. Estell ⁵

¹Animal and Range Sciences Department, New Mexico State University, ²Facultad de Veterinaria, Universidad de la República, ³Facultad de Zootecnia y Ecología, Universidad Autónoma de Chihuahua, ⁴Inguran LLC dba STgenetics, ⁵USDA - Agricultural Research Service Jornada Experimental Range, ⁶Dugout Ranch/Canyonlands Research Center, The Nature Conservancy, ⁷USDA Southern Plains Climate Hub, Oklahoma and Central Plains Agricultural Research Center

8:30 a.m. PSII-9 **Supplementation with calcium salts from soybean oil in Nellore heifers during gestation leads to proteomic changes on Longissimus thoracis of offspring at slaughter**

Claudia C. P Paz ¹, Amanda C. M. Queiroz ², Aline N. Rodrigues ², Keuven S. Nascimento ², Igor M. Ferreira ², Mateus J. I. Abreu ³, Mariana N. F. Vital ², Gustavo R. Siqueira ⁴, Flávio D. Resende ⁴, Nedenia B. Stafuzza ¹

¹Centro de Pesquisa em Pecuária Sustentável, Instituto de Zootecnia, São José do Rio Preto, SP, Brazil, ²Faculdade de Ciências Agrárias e Veterinárias, Universidade Estadual Paulista Júlio de Mesquita Filho (UNESP), Jaboticabal, SP, Brazil, ³College of Agronomics and Veterinary Sciences - University of São Paulo State Júlio de Mesquita Filho, ⁴Agência Paulista de Tecnologia dos Agronegócios, Colina, SP, Brazil

8:30 a.m. PSII-14 **Transcriptome response to heat stress in white blood cells of dairy calves**

Sonia Moisa ¹, Trevor Freeman ¹, Zhantao Yu ¹, Juan Cantet ¹, Reshma Nair ¹, Jon E. Beever ¹, Agustin G. Rius ¹

¹The University of Tennessee

8:30 a.m. PSII-15 **Validation of polymorphisms as molecular markers for milk production and thermo-tolerance in Holstein cows managed in a heat-stressed environment.**

Carolina García-Benitez ¹, Rosa Icela Luna Ramirez ², Juan F. F. Medrano ³, R. Mark Mark Enns ⁴, Scott E. Speidel ⁴, Ricardo Zamorano-Algandar ¹, Miguel Sánchez-Castro ¹, Guillermo Luna-Nevárez ¹, José C. Leyva-Corona ¹, Pablo Luna-Nevárez ¹

¹Instituto Tecnológico de Sonora, ²The University of Arizona, ³University of California-Davis,

⁴Colorado State University

Production, Management and Environment II

Chair: Jacquelyn Prestegaard-Wilson, Texas A&M AgriLife Extension

8:30 AM - 10:45 AM

Regency Ballroom 1

8:30 a.m. 268 **Determination and classification of growing steers according to residual methane emissions.**

Juan J. Vargas ¹, Maya Swenson ², Marisa R. Werner ², Scott E. Speidel ², R. Mark Mark Enns ², Diego Manriquez ², Pedro H.V. Carvalho ¹, Kimberly R. Stackhouse-Lawson ¹, Sara E. Place ¹

¹Colorado State University, AgNext, Department of Animal Sciences, ²Colorado State University

8:45 a.m. 269 **The relationship between metabolic gas emissions and performance in Angus Bulls and Heifers**

Meredith A. Harrison ¹, Sarah Reilly ¹, Keely Carmichael ¹, Ligia Cavani ¹, Scott Zimmerman ¹

¹C-Lock Inc.

9:00 a.m. 270 **Seasonal Variation in Enteric Methane Emissions in Cows Grazing Native Sagebrush Steppe**

Jocelyn Torres ¹, Aline Cristine Rezende dos Santos ¹, Erica Ferri de Oliveira ¹, David W. Bohnert ¹, Rory C. C. O'Connor ², Juliana Ranches ¹

¹Oregon State University, ²USDA

9:15 a.m. 271 **Effects of Vaccination on Enteric Methane Emissions, Growth Performance, and Feeding Behavior of Beef Cattle**

Musah Muntari ¹, Brigid R. Arciero ², Zachary K. Seekford ¹, Zoe Adcock ³, Jeff Bickmeier ², John Sullivan ², Zeljko Radulovic ², Caleb McGrath ², Caitlin Allen ², Lauren E. Fitch ⁴, Jim Spoonamore ², Kristin J. Adolfsen ², Ky G. Pohler ¹, Gordon E. Carstens ³, Cliff C. Lamb ⁵, Matthew R. Dunn ²

¹Department of Animal Sciences, Texas A&M University, ²Arkea Bio Corp, ³Texas A&M University, ⁴Arkea Bio Corp., ⁵Texas A&M AgriLife

9:30 a.m. 272 **Acoustic burp detection for scalable enteric methane monitoring in precision livestock farming**

Xiaohui Wu ¹, Arnaldo Limede ², Rodrigo Marques ¹, Gonzalo Ferreira ³, C.P. James Chen ³

¹Virginia Tech, ²Virginia Polytechnic and State University, ³Virginia Polytechnic Institute and State University

9:45 a.m. **Production, Management and Environment II Break**

10:00 a.m. 273 **Comparing the Utility of Machine Learning Algorithms in Methane Predictions from a Global Beef Cattle Database**

Serinmary Pulikkottil Rejimon ¹, Jay Yan ², Vishal Subramanyam ², Mingyung Lee ¹, Karun Kaniyamattam ¹

¹Texas A&M University, ²College of Engineering, Texas A&M University

10:15 a.m. 274 **Evaluating Climate-Smart Beef Production Practices through Sustainability Metrics**

Serinmary Pulikkottil Rejimon ¹, Vishal Subramanyam ², Aushmeet Singh ³, Ashley Wang ⁴, Karun Kaniyamattam ¹

¹Texas A&M University, ²College of Engineering, Texas A&M University, ³College of Engineering, Texas A&M University, ⁴School of Public Health, Texas A&M University

10:30 a.m. 276 **Parasite control as a potential strategy to mitigate methane emissions in lactating beef cows**

Camila Gomez-Lopez ¹, Araceli B. Maderal ¹, Ignacio Fernandez-Marenchino ¹, Georgia J. Dubeux ¹, Federico Tarnonsky ¹, Andres Fernandez-Lehmann ¹, Macarena Gomez-Salmoral ¹, Mariana Larrauri ¹, Liza Garcia ¹, Tessa M. Schulmeister ¹, Wilmer Cuervo-Vivas ², Federico Podversich ¹, Andres Lacherre ¹, Tomas Andres Soto ¹, Nicolas DiLorenzo ¹, Edwin Burgess ³

¹University of Florida, ²University of Florida, Animal Sciences department, ³University of Florida, Entomology and Nematology department

Animal Breeding and Genetics III: Methods in Genetic and Genomic Evaluations

Chair: Hélène Wilmot, University of Georgia

8:30 AM - 11:00 AM

Diplomat Ballroom 1

8:30 a.m. 234 **Award Talk: From Genomics to Herd Improvement: Pioneering Strategies in Dairy Cattle Breeding**

John B. Cole ¹

¹Council on Dairy Cattle Breeding

9:00 a.m. 235 **The impact of genotyping strategies and pedigree errors on single-step genomic prediction in sheep populations: a simulation study**

Artur O. Rocha ¹, Leonardo S. Gloria ², Andre C. Araujo ³, Hui Wen ¹, Carrie S. Wilson ⁴, Bradley A. Freking ⁵, Thomas W. Murphy ⁵, Joan M. Burke ⁶, Ronald M. Lewis ⁷, Luiz F. Brito ⁸

¹Department of Animal Sciences, Purdue University, ²The Pig Improvement Company, Genus PIC, ³AcuFast Swine, AcuFastTM, ⁴USDA, ARS, Range Sheep Production Efficiency Research Unit, ⁵USDA, ARS, Roman L. Hruska U.S. Meat Animal Research Center, ⁶USDA, ARS, Dale Bumpers Small Farms Research Center, ⁷Department of Animal Science, University of Nebraska-Lincoln, ⁸Purdue University

9:15 a.m. 236 **Preliminary analysis of the relationship between heart score and carcass value in Angus cattle**

Miranda L. Zuvich ¹, Scott E. Speidel ¹, Timothy N. Holt ¹, R. Mark Mark Enns ¹

¹Colorado State University

9:30 a.m. 237 **Optimizing computing time of genetic evaluations through data truncation in Angus cattle**

Zuleica Trujano ¹, Andre Garcia ², Kelli J. Retallick-Riley ², Jorge Hidalgo ³, Daniela Lourenco ¹, Ignacy Misztal ¹

¹University of Georgia, ²Angus Genetics Inc., ³University of Georgia Department of Animal and Dairy Sciences

9:45 a.m. **Animal Breeding and Genetics III Break**

10:00 a.m. 238 **Applying the algorithm for proven and young in genome-wide association studies for reproductive traits in Nellore cattle**

Adebisi R. Ogunbawo ¹, Jorge Hidalgo ², Henrique A. Mulim ¹, Eula Carrara ³, Henrique Ventura ⁴, Nadson Souza ⁵, Daniela Lourenco ³, Hinayah Rojas de Oliveira ¹

¹Purdue University, ²University of Georgia Department of Animal and Dairy Sciences,

³University of Georgia, ⁴The Brazilian association of zebu breeders, ⁵The Brazilian Association of Zebu breeders

10:15 a.m. 239 **The Genetic Cost of Inbreeding: Evaluating the Impact of Inbreeding on Angus Traits**

Henrique A. Mulim ¹, Gabriel Campos ², Fernando Cardose ³, Hinayah Rojas de Oliveira ¹

¹Purdue University, ²Interbull Centre, ³Embrapa South Livestock

10:30 a.m. 240 **Approximation of the logarithm of the determinant of high-dimensional matrices applied to animal breeding and genetics computations**

Alejandra Álvarez Múnera ¹, Matias Bermann ², Andres Legarra ³, Ignacio Aguilar ⁴, Ignacy Misztal ⁵, Daniela Lourenco ⁵

¹Department of Animal and Dairy Science, University of Georgia, ²Research Scientist, University of Georgia, ³CDCB, ⁴Instituto Nacional de Investigación Agropecuaria (INIA),

⁵University of Georgia

10:45 a.m. 241 **Validating available genomic predictions marketed for commercial crossbred cattle**

Clint T. Bailey ¹, Jared E. Decker ¹, Jamie Courter ¹

¹University of Missouri-Columbia

**Forages and Pastures Symposium:
Utility of forage systems for carbon capture and flux**

Chair: S. Leanne Dillard, Auburn University

8:30 AM - 12:00 PM

Diplomat Ballroom 2

8:30 a.m. **Forages and Pastures Symposium Introduction**

8:35 a.m. 159 **Grazing management effects on nitrogen utilization and carbon cycling in pasture-based systems**

Sara K. Linneen¹

¹Elanco Animal Health

9:20 a.m. 160 **The role of grazing lands in climate change mitigation**

Maria L. Silveira¹, Joao M. B. Vendramini², Rosvel Bracho³, Elizabeth Boughton⁴

¹Noble Research Institute, ²Texas A&M AgriLife Research, ³University of Florida, ⁴Archbold Biological Station

10:05 a.m. **Forages and Pastures Symposium Break**

10:20 a.m. 161 **Use of Life Cycle Assessments for carbon monitoring in Beef Cattle Systems**

Jasmine A. Dillon¹

¹Colorado State University

11:05 a.m. 162 **Grazing land management and soil texture as determinants of soil organic carbon storage**

Alan J. Franzluebbers¹

¹USDA-Agricultural Research Service

Ruminant Nutrition III: Nutritional Physiology

Chair: Matheus Ferreira, Eastern Oregon Agricultural Research Center,
Oregon State University

8:30 AM - 12:00 PM

Great Hall 3

8:30 a.m. 172 **Award Talk: The complexities of liver abscess etiology through the lens of an experimental model**

P. Rand Broadway¹

¹United States Department of Agriculture, Agriculture Research Service, Livestock Issues Research Unit

9:00 a.m. 173 **Determination of optimal sample size for understanding the distribution of fecal starch in a fattening cattle herd using numerical simulations**

Masaya Matamura¹, Makoto Kondo¹

¹Mie University

9:15 a.m. 174 **Effects of tannin extract supplementation rate on beef cattle energy expenditure and nitrogen balance**

Jordan M. Adams¹, Clarice Francis¹, Mingyung Lee¹, Luis O. Tedeschi¹

¹Texas A&M University

9:30 a.m. 175 **Effect of ruminally protected lysine on growth and nitrogen balance of grain-finished beef cattle fed diets of decreasing protein concentration**

Donald S. Herzog¹, Lester Nolasco¹, Janghoon Jo¹, Daiki Nakajima², Kazuki Nakagawa², Jon P. Schoonmaker¹

¹Purdue University, ²Ajinomoto

9:45 a.m. 176 **Metagenomic analysis of the influence of thymol on rumen microbial metabolic pathways and enzyme profiles in beef steers**

Emily Fowler¹, Emma Fukuda¹, Merritt L. Drewery¹

¹Texas State University

10:00 a.m. 177 **Effects of Low-Dose Antimicrobial Feeding on the Ruminant Gastrointestinal tract Bile Acid and Lipidome Profile**

Lester Nolasco¹, Theresa M. Casey¹, Christina Ferreira¹, Jon P. Schoonmaker¹

¹Purdue University

10:15 a.m. **Ruminant Nutrition III: Nutritional Physiology Break**

10:30 a.m. 178 **Effect of phytogetic supplementation to primiparous Angus heifers on colostrum quality, transfer of passive immunity, and performance**

Raylee A. Ezzell¹, Chance G. G. Farmer², Clay P. Mathis¹, Alyson B. Fontenot¹, Jodi R. Cox¹, Callie J. Swaim¹, Brette D. Poliakiwski³, Tryon A. Wickersham¹

¹Texas A&M University, ²Selko, ³Department of Animal Science, Texas A&M University

10:45 a.m. 179 **Predicting Individual Beef Cattle Water Intake**

Nathan Blake¹, Eswar ArunKumar Kalaga¹, Matthew Walker¹, Tylor J. Yost¹, Deborah Ologunagba¹, Ida Holaskova¹, Jarred Yates¹, Matthew E. Wilson¹

¹West Virginia University

11:00 a.m. 180 **Identification of rumen microbiome and metabolome profiles in Angus bulls differing in residual feed intake classification**

Madison M. Dycus¹, Utsav Lamichhane¹, Katherine P. Feldmann², Christina B. Welch¹, Andrea M. Osorio-Doblado¹, Timothy D. Pringle³, Todd Callaway¹, Jeferson M. Lourenco¹

¹University of Georgia, ²University of Tennessee, ³North Florida Research and Education Center

11:15 a.m. 181 **Essential oils impact rumen kinetics but not post-ruminal digestibility in steers fed high-grain finishing diets**

Santana Hanson¹, Federico Podversich¹, Jorge Bonilla Urbina¹, Callie Coble¹, Zachary K. Smith², Warren C. Rusche¹, Rebecca O'Sullivan³, Mark Leggett³, Ana B. Clara B. Menezes¹

¹South Dakota State University, ²Department of Animal Science, South Dakota State University, Brookings, SD 57007, USA., ³Volac

11:30 a.m. 182 **Evaluating effects of an abrupt shift to varying forage qualities on E. coli and coliform shedding in beef cattle**

Hunter G. Perez¹, Andrea M. Osorio-Doblado¹, Carmen M. Burner¹, Katherine P. Feldmann², Jeferson M. Lourenco¹, Francis L. Fluharty¹, Valerie E. Ryman¹, Todd Callaway¹

¹University of Georgia, ²University of Tennessee

ASAS-CSAS Graduate Student Session I

Chair: Sara Gurule, Texas A&M University

8:45 AM - 10:00 AM

Great Hall 6

8:45 a.m. 184 **Effect of breeding season on testicular morphometrics, spermatogenesis, and sperm quality in sheep**

Razan Eldurssi ¹, Abdallah M. Shahat ¹, Ramya Sri Kolikapongu ¹, Moges Woldemeskel ², Brou Kouakou ¹, Adel R. Moawad ¹

¹Fort Valley State University, ²The University of Georgia

9:00 a.m. 185 **Effects of Short-Term Simulated Wildfire Smoke Exposure on Beef Heifer Blood Markers**

Aline Cristine Rezende dos Santos ¹, Erica Ferri de Oliveira ¹, Jocelyn Torres ¹, Matheus Fellipe Lana Ferreira ², Pedram Rezamand ³, Amy Skibiel ⁴, Katie Wollstein ¹, Jenifer Cruickshank ¹, Juliana Ranches ¹

¹Oregon State University, ²Louisiana State University, ³University of Connecticut, ⁴University of Idaho

9:15 a.m. 187 **Impact of prolonged CIDR insertion on follicular dynamics, estrus timing, and pregnancy outcomes in beef cattle submitted to estrous synchronization**

Morgan Brown ¹, Lucas C S Branco ², Genevieve VanWye ¹, Juliet Henning ², Thiago Martins ¹

¹Division of Animal Sciences, University of Missouri, ²Division of Animal Sciences, Southwest Research, Extension, and Education Center, University of Missouri

9:30 a.m. 186 **Impact of Sericea lespedeza extract on the quality of cooled and cryopreserved bull spermatozoa**

Lauren Wartley ¹, Abdallah M. Shahat ¹, Terra D. Odom ¹, Rocquel Tunner ¹, Davia Brown ¹, Janan Fareed ¹, Aftab Siddique ¹, Rabin Gyawali ¹, Ajit Mahapatra ¹, Niki C. Whitley ¹, Thomas H. Terrill ¹, Adel R. Moawad ¹

¹Fort Valley State University

9:45 a.m. 188 **Supplementation of individual heifers to target precision growth curves in developing beef heifers grazing dormant forage**

Kali-Jo Bentz ¹, Erin Dehaan ¹, Ira L. Parsons ¹, Hector M. Menendez ¹, Jameson R. Brennan ², Hadley Dotts ²

¹South Dakota State University, ²ASAS

CSAS Graduate Student Oral Competition: PhD

Chair: Renée Petri, Agriculture and Agri-Food Canada (AAFC)

9:00 AM - 11:45 AM

Diplomat Ballroom 5

9:00 a.m. **CSAS Graduate Student Oral Competition: PhD Introduction**

9:05 a.m. 189 **Effect of milk replacer and grower diet composition on intake, growth and body composition in Holstein-Angus crossbred calves from birth to the end of the growing phase.**

Titouan Chapelain ¹, Melinda Kovacs ¹, Javier Martín-Tereso ², Dave J. Seymour ³, Dave Renaud ¹, Michael A. Steele ¹

¹University of Guelph, ²Trouw Nutrition R&D, ³Trouw Nutrition R & D, University of Guelph

9:20 a.m. 190 **Impact of post-weaning feeding management during the growing phase on growth performance of Holstein steers, and beef × Holstein steers and heifers.**

Erika E. Cornand ¹, Gabriel O. Ribeiro Junior ², Murray D. Jelinski ³, Óscar López-Campos ⁴, Stephanie A. Terry ⁵, Gregory B. Penner ²

¹University of Saskatchewan/Agriculture and Agri-Food Canada - Lethbridge Research and Development Centre, ²University of Saskatchewan, ³Western College of Veterinary Medicine, ⁴Agriculture and Agri-Food Canada - Lacombe Research and Development Centre, ⁵Agriculture and Agri-Food Canada - Lethbridge Research and Development Centre, Lethbridge, Alberta, T1J4B1, Canada

9:35 a.m. 191 **Evaluating the Efficacy of Lactobacilli-Based Direct-Fed Microbials (DFM) in Reducing Shiga-toxigenic Escherichia coli (STEC) O157:H7 Colonization using Cell and Tissue Culture Models**

Yiran Ding ¹, Eduardo Cobo ¹, Tim A. McAllister ², Le Luo Guan ³, Dongyan Xu Niu ⁴

¹University of Calgary, ²Agriculture and Agri-Food Canada (AAFC), ³The University of British Columbia, ⁴Faculty of Veterinary Medicine, University of Calgary

9:50 a.m. 192 **The apparent utilization of DL-methionine and the hydroxy-analog of methionine for whole-body nitrogen retention when cysteine is supplemented in the diets of lactating sows**

Cierra Kozole ¹, Faith D. Kurtz ¹, Francis-Amann Eugenio ², Yves Mercier ², Lee-Anne Huber ³

¹University of Guelph, ²Adisseo France S.A.S. European Laboratory of Innovation Science & Expertise (ELISE), Department of R&I in Monogastric Animal Nutrition, ³Department of Animal Bioscience, University of Guelph, Guelph, ON, Canada

10:05 a.m. 193 **The impact of Fusarium mycotoxin contaminated diets on late gestation sow antibody response and passive transfer to her piglets**

Kristen Lamers ¹, Yuancheng Liu ¹, Atta Agyekum ², Umesh K. Shandilya ¹, Niel A. Karrow ¹

¹University of Guelph, ²Trouw Nutrition

10:20 a.m. **CSAS Graduate Student Oral Competition: PhD Break**

10:30 a.m. 194 **Variation in native forage chemical composition, in vitro fermentation, and methane emissions across phenological stages**

Sergio David Lasso Ramirez ¹, Arturo Macias Franco ¹, Aghata Elins Moreira da Silva ², Maria Camila Londono Mendez ¹, Vanesa Ramirez Sepulveda ², Gabriel O. Ribeiro Junior ³, Edward Bork ¹, Erick Rodrigo da Silva Santos ², Gleise da Silva ¹

¹Department of Agricultural, Food and Nutritional Science, University of Alberta, ²University of Alberta, ³University of Saskatchewan

10:45 a.m. 195 **Maternal selenium supplementation supports lamb selenium status without affecting immune function**

Nicole P. Moran ¹, Niel A. Karrow ¹, Rebecka A. Sadler ¹, Umesh K. Shandilya ¹

¹University of Guelph

11:00 a.m. 196 **Effects of thermal efficiency index on growth performance and carcass quality in grow-finish pigs**

Serge Muhizi ¹, Abigail Tillotson ², Jennifer Brown ¹, Allan Schaefer ³, Deborah I. Adewole ⁴, Jen Yun Chou ¹

¹Prairie Swine Centre Inc. / University of Saskatchewan, ²Prairie Swine Center Inc., ³Animal Inframetrics, Inc., ⁴University of Saskatchewan

11:15 a.m. 197 **Selection signatures on the X chromosome in a prolific meat sheep breed**

Julia Rodrigues ¹, Isis C. Hermisdorff ¹, Donagh P. Berry ², Marcos Buzanskas ³, Danísio Munari ⁴, Flavio S. Schenkel ¹

¹University of Guelph, ²Animal & Grassland Research and Innovation Center, Teagasc, ³São Paulo State University (UNESP) - Botucatu, ⁴São Paulo State University (UNESP) - Jaboticabal

11:30 a.m. 198 **Improving the nutritional value of wheat, canola, and flax straw to beef cattle with calcium hydroxide treatment**

Cassidy R. Ross ¹, Gabriel O. Ribeiro Junior ², Gregory B. Penner ²

¹Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon SK,

²University of Saskatchewan

Companion Animal Symposium I: Therapeutic and Personalized Nutrition for Companion Animals

Chair: James Templeman, Primal Pet Foods, Primal Pet Group, Fairfield, California

9:00 AM - 12:00 PM

Great Hall 5

9:00 a.m. **Companion Animal Symposium I Introduction**

9:15 a.m. 155 **Personalized Nutrition from Pets to Humans**

Brett R. Loman ¹

¹Department of Animal Sciences, Division of Nutritional Sciences, Microbial Systems Initiative, Personalized Nutrition Initiative, University of Illinois at Urbana-Champaign

9:45 a.m. 156 **Rationale for different diets for dogs based on their size**

Avi Deshmukh ¹

¹Royal Canin, USA

10:15 a.m. **Companion Animal Symposium I Break**

10:30 a.m. 157 **Accelerating veterinary clinical innovation through biobanking**

Sarah Moore ¹

¹BluePearl Pet Hospitals

11:00 a.m. 158 **One Health: An interdisciplinary approach to improving health and nutrition of companion animals**

Joe Bartges ¹

¹The University of Georgia

11:30 a.m. **Companion Animal Symposium I Round Table Discussion**

Poster Session III

9:45 AM - 11:00 AM

Great Hall 4

9:45 a.m. PSIII-10 **A comparison of pelleted vs extruded feed form on feeding behaviors of horses**

Lea Engelman ¹, Cierra N. Crowell ¹, Ashley Nichelson ¹, Randel H. Raub ², Erin B. B. Perry ¹

¹Southern Illinois University, ²Kent Nutrition Group / Kent Corporation

9:45 a.m. PSIII-29 **Anti-inflammatory ω -3 polyunsaturated fatty acid supplements improved insulin-to-glucose ratios in high adiposity heat-stressed finishing lambs**

Shelley A. Curry ¹, Melanie R. White ¹, Ashley A. Hahn ¹, Jessica L. Petersen ¹, Ty B. Schmidt ², Dustin T. Yates ¹

¹University of Nebraska-Lincoln, ²Department of Animal Science, University of Nebraska – Lincoln, 68588

9:45 a.m. PSIII-12 **Bacillus-based direct-fed microbials enhanced reproductive success of Bos indicus-influenced beef heifers**

Conner A. Crawford ¹, Vinicius S. Izquierdo ¹, Joao M. B. Vendramini ², Bruno Cappellozza ³, Philippe Moriel ¹

¹University of Florida, IFAS / Range Cattle Research and Education Center, ²Texas A&M AgriLife Research, ³Novonosis

9:45 a.m. PSIII-24 **Blood serum biochemistry analysis of White Leghorn chickens selected for divergent blood antibody titer response to sheep red blood cells**

Anna Luiza Facchetti Vinhaes Assumpcao ¹, Valentina Caputi ², Christopher M. Ashwell ³, Christina Honaker ⁴, Paul B. Siegel ⁴, Robert L. Taylor Jr ³, Joshua M. Lyte ²

¹University of Arkansas Division of Agriculture, ²USDA-ARS, ³West Virginia University, ⁴Virginia Tech

9:45 a.m. PSIII-6 **Comparative Performance of Florida Native Sheep and Other Breeds**

Andres Alvarado Vargas ¹, Paola P. Boscollo ¹, Castle J. Cavender ¹, Giovanni Coelho Ladeira ¹, Luana P. Alvares ¹, Brittany N. Dhier ¹, Fernanda M. Rezende ¹

¹University of Florida

9:45 a.m. PSIII-27 **Comparing Bovine Salivary Protein and Immunoglobulin Adsorption Using Three Non-Invasive Collection Methods**

Zachary K. Seekford¹, Musah Muntari¹, Brigid R. Arciero², Jim Spoonamore², Matthew R. Dunn², Ky G. Pohler¹, Cliff C. Lamb³

¹Department of Animal Sciences, Texas A&M University, ²Arkea Bio Corp, ³Texas A&M AgriLife

9:45 a.m. PSIII-4 **Does the intensity of deliberate late-gestation exercise impact body composition and milk components in dairy heifers?**

Jamy Randol¹, Timothy Rozell¹, William Brown¹, Sam Baldyga¹, Brad Hill¹

¹Kansas State University

9:45 a.m. PSIII-26 **Effect of dietary fat sources on blood metabolites of broiler chickens challenged with Salmonella**

Shijina Raj Manjankattil Rajan¹, Abigail McConnell², Matthew Hughes², Jinquan Wang², Sabin Poudel², Karla Casco Gomez², Samuel J. Rochell², Dianna Bourassa²

¹Department of Poultry Science, University of Auburn, ²Department of Poultry Science, Auburn University

9:45 a.m. PSIII-11 **Effect of grain type and processing method on in situ ruminal dry matter digestibility**

João Guilherme Petter Mittelstedt¹, Vitoria Aparecida M. Ribeiro¹, Artur G. G. Pilati¹, Juan M. Piñeiro¹, Matthew R. Beck¹, Vinícius N. Gouvêa¹, Reinaldo F. Cooke¹

¹Department of Animal Science, Texas A&M University

9:45 a.m. PSIII-1 **Effects of functional additives on performance and gut health in E. coli-challenged weaned pigs**

Hyuck Kim¹, Song Dongcheol², Kyeongho Jeon², Yang Jinmo², Jinho Cho²

¹Chungbuk National University, Department of Animal Science, ²Chungbuk National University

9:45 a.m. PSIII-5 **Effects of heat stress and citrulline and arginine supplementation on muscle-related gene expression and myotube formation in bovine myocytes**

Anna Munger¹, Donghun Kang¹, Jongkyoo Kim¹

¹Michigan State University

9:45 a.m. PSIII-20 **Evaluation of the “From Bright Leaf to Berkshires” Extension Outreach Program for Small-Scale Farmers in the Tobacco Belt**

Karla J. Branch¹, Haleigh Pettress¹, Brianna Carter¹, Douglas Jones¹, Chantel Carroll¹, Derrick J. Coble²

¹North Carolina A&T State University, ²North Carolina Agricultural and Technical State University

9:45 a.m. PSIII-22 **Good vaccine practices influence immune priming against Bovine Viral Diarrhea Virus in beef calves**

Vanessa Ramirez Sepulveda¹, Gleise da Silva², Timothy D. Schwinghamer³, Hee-Eun Yang³, Nilusha Malmuthuge⁴

¹University of Alberta, ²Department of Agricultural, Food and Nutritional Science, University of Alberta, ³Agriculture and Agri-Food Canada, ⁴Agriculture and Agri-Food Canada (AAFC)

9:45 a.m. PSIII-19 **Identification of Important Behaviors and Postures to Indicate Respiratory Distress in Pigs**

Heidi K. Rinehart ¹, Tawni N. Williams-Stroud ², Brenna Freeman ², Isabella Fonseca ³, Emma Fuentes ³, Mekali Felton ², Angela R. Green-Miller ²

¹University of Illinois Urbana-Champaign, ²University of Illinois Urbana Champaign, ³Texas A&M University

9:45 a.m. PSIII-18 **Immune Response Variation to Foreign Antigen in a Crossbred Angus-Brahman Beef Cattle Population**

Castle J. Cavender ¹, Andres Alvarado Vargas ¹, Paola P. Boscolo ¹, Giovanni Coelho Ladeira ¹, Luana P. Alvares ¹, Milerky Perdomo ¹, Corwin D. Nelson ¹, Fernanda M. Rezende ¹

¹University of Florida

9:45 a.m. PSIII-17 **Inducing trans-10-Shifted Biohydrogenation Pathways Improves Feed Conversion Efficiency and Carcass Quality in Feedlot Lambs**

Jingyi Yang ¹, Maykal Tsonov ¹, Paulo Meo-Filho ², Timothy J. Hackmann ¹, Lee Allen Pettey ¹, Payam Vahmani ¹

¹University of California, Davis, ²University of California, Davis - Department of Animal Science

9:45 a.m. PSIII-3 **Investigating the Antibacterial Properties of Terpene and Phenylpropanoid based Essential Oil Blends against Escherichia coli**

James M. Enikhuomihin ¹, Kelechi A. Ike ², Misty Thomas ², Uchenna Y. Anele ³

¹North Carolina A&T State University, ²North Carolina Agricultural & Technical state University, ³North Carolina Agricultural and Technical State University

9:45 a.m. PSIII-16 **Limit Feeding a High Concentrate Diet to Newly-Weaned Calves Does Not Negatively Affect Growth Performance**

Taylor Banks ¹, Justin J. Delver ¹, Becca B. Grimes Francis ¹, Forest L. Francis ², Riley J. Leeson ¹, Thiago Lauro L. Maia Ribeiro ¹, Grace H. Olinger ¹, Weston Peschel ¹, Federico Podversich ¹, Warren C. Rusche ¹, Zachary K. Smith ³, Erin Dehaan ¹

¹South Dakota State University, ²Texas A&M University-Kingsville, ³Department of Animal Science, South Dakota State University, Brookings, SD 57007, USA.

9:45 a.m. PSIII-2 **Machine Learning-Based Image Classification of Sericea Lespedeza: A Comparative Study**

Ramya Kota ¹, Ayani Cockrell ², Aftab Siddique ¹, Phaneendra Batchu ¹, Ajit Mahapatra ¹, Sudhanshu Panda ³, Jan Van Wyk ⁴, David Shapiro-Ilan ⁵, Thomas H. Terrill ¹

¹Fort Valley State University, ²Fort valley State University, ³University of North Georgia,

⁴University of Pretoria, ⁵USDA ARS

9:45 a.m. PSIII-14 **Pregnancy rate following fixed time AI in beef cows with or without oxytocin injection**

Venkata Pavan Tanguturi ¹, Niki C. Whitley ¹, Terra D. Odom ¹, Rocquel Tunner ¹, Ramya Sri Kolikapongu ¹, Davia Brown ¹, Lauren Wartley ¹, Abdallah M. Shahat ¹, Adel R. Moawad ¹

¹Fort Valley State University

9:45 a.m. PSIII-8 **Shearing during early mid-gestation increases umbilical blood flow and fetal size in ewes**

Mara Johnson ¹, Blake Johnson ¹, Kimberly A. Vonnahme ², Manuel Alexander Vasquez-Hidalgo ¹

¹South Dakota State University, ²North Dakota State University

9:45 a.m. PSIII-15 **The effect of partial replacement levels of steam-flaked corn with high moisture rolled sorghum grain on total tract digestibility of finishing steers**

Artur Grando Pilati ¹, João Petter Mittelsted ¹, Avianna Liuzzo ¹, Vitoria Ribeiro ¹, Matthew R. Beck ², Juan M. Piñeiro ², Vinícius N. Gouvêa ²

¹Texas A&M University, ²Department of Animal Science, Texas A&M University

9:45 a.m. PSIII-23 **The Effects of Exposure to Bisphenol A during Pregnancy on the Blood and Uterus of Mice**

Lin Yang ¹, Yongjie Wang ¹, Shilei Zhang ²

¹North Carolina Agricultural and Technical State University, ²Shihezi University

9:45 a.m. PSIII-9 **The supplementation of rumen-inert unsaturated fatty acids and rumen-protected choline modulates the uterine luminal fluid metabolome of pregnant beef cows during the peri-elongation period**

Megan Bahr ¹, Allyson McCarty ¹, Daniel H. Poole ¹, Matt H. Poore ¹, Felipe A.C.C. Silva ¹, Ky G. Pohler ², Damon Smith ³, Jose E. P. Santos ⁴, Zaeem Sarwar ⁴, Stewart F. Graham ⁵, Nadia Ashrafi ⁶, Romana Ashrafi Mimi ⁷

¹North Carolina State University, ²Department of Animal Sciences, Texas A&M University, ³Department of Animal Science, Texas A&M University, ⁴University of Florida, ⁵Oakland University-William Beaumont School of Medicine, ⁶Metabolomics Department, Beaumont Research Institute, ⁷Corewell Health Research Institute

9:45 a.m. PSIII-7 **Using automated monitoring devices to predict pregnancy by artificial insemination in grazing beef cows**

Lucas C S Branco ¹, Juliet E. Henning ¹, Genevieve VanWye ², Kim Ricardo ², Chad Duit ³, Jordan M. Thomas ², Todd R. Bilby ⁴, Cecilia C. Rocha ¹

¹Division of Animal Sciences, Southwest Research, Extension, and Education Center, University of Missouri, ²Division of Animal Sciences, University of Missouri, ³Southwest Research, Extension, and Education Center, University of Missouri, ⁴Merck Animal Health

9:45 a.m. PSIII-21 **Vaginal microbiome population and cytokines concentration associated with fertility in beef cows subjected to a 14-day implant synchronization protocol**

Riley Puck ¹, Cody Williams ¹, Silvio Andre Isler ², Kendal L. Green ¹, Felipe de Oliveira Pedro ², Hunter C. Haberman ¹, Benoit St-Pierre ¹, Jessica Nora Drum ¹

¹South Dakota State University, ²Mato Grosso do Sul State University

9:45 a.m. PSIII-28 **Veterinary Syndromic Surveillance in Africa: Challenges, Opportunities, and Strategies for Sustainable Implementation: A scoping review**

Kidist Gebrekidan ¹, Riley Elliot ¹, Kristen Mueller ¹, Kavin Chengavarayan ¹, Kate De Cardenas ¹, Thomas B. Hairgrove ¹, Karun Kaniyamattam ¹

¹Texas A&M University

9:45 a.m. PSIII-25 **Whole Blood RNA-Seq Analysis Reveals the Immunomodulatory Effects of a Supplemental Multi-Strain Direct-Fed Microbial in the Diet of Newly Weaned Beef Steers**

Adekunle O. Ajiboye ¹, Ibukun M M. Ogunade ¹, Christopher M. Ashwell ¹, Samantha R. Johnson ¹, Taylor S. Sidney ¹, Yarahy Leal ¹

¹West Virginia University

Swine Species/Nonruminant Nutrition Symposium: Antibiotic-free Pork Production

Chair: Marko Rudar, Department of Animal Sciences, Auburn University

9:30 AM - 3:30 PM

Great Hall 1

9:30 a.m. **Swine Species/Nonruminant Nutrition Symposium Introduction**

9:35 a.m. 144 **Past and present antimicrobial use in swine production: Raising pigs responsibly**

Rebecca C. Robbins ¹

¹Pig Improvement Company (PIC)

10:15 a.m. 145 **Antibiotic resistance in animal microbiomes and pathogens**

Tim A. Johnson ¹

¹Purdue University

10:55 a.m. 146 **Rethinking Fiber in Nursery Pig Nutrition - Balancing Benefits and Challenges**

Amy L. Petry ¹

¹University of Missouri

11:35 a.m. 147 **Practical application of acid-binding capacity-4 formulation strategies to improve nursery pig performance**

Katelyn N. Gaffield ¹, Ethan B. Stas ¹, Mike D. Tokach ¹, Joel M. DeRouchey ¹, Robert D. Goodband ¹, Jason C. Woodworth ¹, Jordan T. Gebhardt ¹

¹Kansas State University

12:15 p.m. **Symposium Lunch Break on your own**

1:30 p.m. 148 **Dietary gestational and lactational live yeast supplementation to sows impacts milk and colostrum proteome profiles and piglet gut development**

Kolapo M. Ajuwon ¹, Yuechi Fu ¹

¹Purdue University

2:10 p.m. 149 **Impacts of short chain fatty acid derivatives on disease resistance and gut health of weaned pigs**

Yanhong Liu ¹, Lauren L. Kovanda ¹

¹University of California, Davis

2:50 p.m. **Swine Species/Nonruminant Nutrition Symposium Panel Discussion**

Poster Session IV
11:15 AM - 12:30 PM
Great Hall 4

11:15 a.m. PSIV-12 **An assessment of heavy metal exposure via urinalysis in dogs deployed to Maui wildfires**

Erin B. B. Perry ¹, Janice Baker ², Flavia Dos Santos ³, Poliana Oliveira ³, Ashley Nicholson ¹, Jones B. Graceli ¹

¹Southern Illinois University, ²Veterinary Tactical Group, ³Federal University of Espirito Santo

11:15 a.m. PSIV-16 **Association between Gastrointestinal Nematodes and Milk Fatty Acid Profile in Katahdin Lactating Ewes**

Noah L. Wilkes ¹, Sally G. Berbery ¹, Amy N. Abrams ¹, Sunday O. Peters ¹, Aridany Suarez-Trujillo ¹

¹Berry College

11:15 a.m. PSIV-2 **Comparison of growing bull performance, carcass, and health metrics with or without the use of SenseHub® Feedlot technology**

Grace Angotti ¹, Keela Trennepohl ¹, Logan Kearns ¹

¹Western Illinois University

11:15 a.m. PSIV-1 **Distribution of kidding dates as an indicator of buck-induced estrus in cycling meat goat does**

Tessa Adamopoulos ¹, Lauren Pearson ¹, Emily G. Hayes ¹, Richard Browning ¹

¹Tennessee State University

11:15 a.m. PSIV-14 **Effects of DDGS and/or Canola Meal on Rumen Microbiome of Growing Steers**

Ean Wetzel ¹, Santana Hanson ¹, Benoit St-Pierre ¹, Jose L. Gonzalez Hernandez ¹, Ana B. Clara B. Menezes ¹

¹South Dakota State University

11:15 a.m. PSIV-6 **Enhancing Engagement and Transition in Animal Science through Animated Videos and Collaborative Note-Taking**

Sofia Henderson ¹, Aridany Suarez-Trujillo ¹, Madeline Rivera ¹

¹Berry College

11:15 a.m. PSIV-21 **Feasibility of applying genomic selection to biopsied embryos of Nellore cattle**

Edson L. A. Ribeiro ¹, Bruna S. Marestone ¹, Carolina A. S. D. Muniz ¹, Sandra M. Simonelli ¹, Roberto Carneiro ²

¹State University of Londrina, ²UNESP

11:15 a.m. PSIV-7 **Follicular dynamics and endocrine environment using variations of the 7&7 Co-Synch Protocol in beef cows**

Hunter C. Haberman ¹, Peyton E. Meyer ¹, Frank Even ², derrick goldammer ¹, Kendal L. Green ¹, Riley Puck ¹, Federico Podversich ¹, Jessica Nora Drum ¹

¹South Dakota State University, ²Virginia Tech - School of Animal Sciences

11:15 a.m. PSIV-24 **Genetic analysis of the service sire effect on survival of swine from birth to market weight**

Guoyu Hu ¹, Mohsen Jafarikia ², Laurence Maignel ², Dan Tulpan ³, Graham S. Plastow ⁴, Justin W. Holl ⁵, Brian Sullivan ², Younes Miar ⁶

¹Dalhousie University, ²Canadian Centre for Swine Improvement, ³University of Guelph, ⁴Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, ⁵The Pig Improvement Company, Genus PLC, ⁶Department of Animal Science and Aquaculture, Dalhousie University

11:15 a.m. PSIV-22 **Genome-Wide Association Studies for Binary Traits: A comparison of methods**

Milena Campos ¹, Raphael Bernal Costa ¹, Henrique A. Mulim ², Gregorio Camargo ¹, Hinayah Rojas de Oliveira ²

¹Federal University of Bahia, ²Purdue University

11:15 a.m. PSIV-27 **Genomic prediction of novel profitability traits in feedlot under different approaches in Nelore cattle**

Leticia Pereira ¹, Cláudio Ulhoa Magnabosco ², Eduardo Eifert ², Minos Carvalho ³, Tiago Albertini ³, Guilherme J M Rosa ⁴, Fernando S. Baldi ⁵

¹National Association of Breeders and Researchers (ANCP), ²Embrapa Cerrados, Planaltina, Brasília, Distrito Federal, Brazil, ³@Tech - Innovation Technology for Agriculture, Piracicaba, São Paulo, Brazil, ⁴University of Wisconsin-Madison, Department of Animal & Dairy Sciences, Madison, Wisconsin, United States, ⁵Faculdade de Zootecnia e Engenharia de Alimentos, Universidade de São Paulo, Pirassununga, SP, Brazil

11:15 a.m. PSIV-25 **Growth of beef x dairy crossbred calves sired by Angus, Charolais, Hereford, Limousin, and Simmental**

Brad J. Heins ¹, Kirsten Sharpe ¹

¹University of Minnesota

11:15 a.m. PSIV-29 **Identifying candidate genes and QTL associated with enteric methane emission-related traits in Nellore cattle using sequencing data**

Leonardo M. Arikawa ¹, Lucio F. M. Mota ¹, Larissa F. S. Fonseca ¹, Julia P. S. Valente ¹, Tainara L. S. Soares ¹, Joel A. Silva ¹, Maria Eugênia Z. Mercadante ², Flavio S. Schenkel ³, Lucia G. Albuquerque ¹

¹São Paulo State University (UNESP), School of Agricultural and Veterinarian Sciences, Department of Animal Science, Jaboticabal, SP, 14884-900, Brazil, ²Beef Cattle Research Center, Institute of Animal Science, Sertãozinho, SP, 14174-000, Brazil, ³University of Guelph

11:15 a.m. PSIV-20 **Impact of a response with measurement errors on the joint genetic evaluation with correlated noise-free responses**

Koushik Das ¹, Mahsa Zare ¹, Amanda Warner ¹, Sammy.E E. Aggrey ¹, Romdhane Rekaya ¹

¹University of Georgia

11:15 a.m. PSIV-3 **Impact of meal size & feeding frequency on working dog health & performance**

Emma L. Carl ¹, Cierra N. Crowell ², Erin B. B. Perry ², Eileen Jenkins ³, Mike Davis ⁴

¹Undergraduate, ²Southern Illinois University, ³Huntsville Veterinary Specialists & Emergency, ⁴Oklahoma State University

11:15 a.m. PSIV-17 **Impact of Vaginitis on a 14-day implant synchronization protocol and its effect on pregnancy rates in beef cattle**

Cody Williams ¹, Riley Puck ¹, Silvio Andre Isler ², Kendal L. Green ¹, Felipe de Oliveira Pedro ², Hunter C. Haberman ¹, Benoit St-Pierre ¹, Jessica Nora Drum ¹

¹South Dakota State University, ²Mato Grosso do Sul State University

11:15 a.m. PSIV-9 **Increasing standardized ileal digestible arginine to lysine ratio in starter diets promotes nursery pig growth performance**

Lillian Jeffers ¹, Paulo Azevedo ¹, Alex Outlaw ¹, Haejin Kim ¹, Keith D. Haydon ², David Clizer ³, Samuel J. Rochell ⁴, Marko Rudar ¹

¹Department of Animal Sciences, Auburn University, ²CJ Bio America, ³CJ Bio america,

⁴Department of Poultry Science, Auburn University

11:15 a.m. PSIV-13 **Influence of gossypol from cottonseed oil on semen quality in domestic boars as a model for feral hog control**

Zoe A. Turner ¹, Jordan S. Crawford ¹, Carson R. Hopkins ¹, Scott M. Pelitire ², K. T. Klasson ², Tsung Cheng Cheng Tsai ¹, Charles V. Maxwell ¹, Brittini P. Littlejohn ¹

¹University of Arkansas System Division of Agriculture, Department of Animal Science,

²Southern Regional Research Center, U.S. Department of Agriculture Agricultural Research Service

11:15 a.m. PSIV-5 **Investigating passive transfer and the effects of stress on the newborn calf receiving immunoglobulins from colostrum**

Audrey F. Dykes ¹, Beth B. Kegley ¹, Robin A. Cheek ², Kirsten Midkiff ³, Doug L. Galloway ¹, Jana L. Reynolds ¹, Alexis Harness ¹, Charles Looney ¹, Brittini P. Littlejohn ⁴, Jeremy G. Powell ¹

¹University of Arkansas, ²University of Arkansas, ³University of Arkansas System Division of Agriculture, ⁴University of Arkansas System Division of Agriculture, Department of Animal Science

11:15 a.m. PSIV-11 **Maternal nutrient restriction effects on Anti-Mullerian hormone and puberty attainment in beef heifers**

Rylee Nelson ¹, Sydni E. Borders ¹, Izabella Jansen ¹, Riley Puck ¹, Hunter C. Haberman ¹, Kendal L. Green ¹, Amanda Blair ¹, Jessica Nora Drum ¹

¹South Dakota State University

11:15 a.m. PSIV-19 **Proteomic detection of potential biomarkers for residual feed intake in Texel sheep**

Charleni Crisóstomo ¹, Letícia S. Corrêa ², Ricardo L. D. Costa ², Adibe L. Abdalla ¹, Claudia C. P Paz ³, Nedenia B. Stafuzza ³

¹Centro de Energia Nuclear na Agricultura, Universidade de São Paulo, Piracicaba, SP, Brazil, ²Instituto de Zootecnia, Nova Odessa, SP, Brazil, ³Centro de Pesquisa em Pecuária Sustentável, Instituto de Zootecnia, São José do Rio Preto, SP, Brazil

11:15 a.m. PSIV-18 **Proteomics analysis reveals potential biomarkers for tick resistance in Caracu beef cattle**

Natalya G. Abduch¹, Henrique G. Reolon², Rafael M. O. Silva³, Fernando S. Baldi⁴, Claudia C. P Paz⁵, Nedenia B. Stafuzza⁵

¹Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, SP, Brazil, ²Faculdade de Ciências Agrárias e Veterinárias, Universidade Estadual Paulista Júlio de Mesquita Filho (UNESP), Jaboticabal, SP, Brazil, ³Angus Genetics Inc., Saint Joseph, MO, ⁴Faculdade de Zootecnia e Engenharia de Alimentos, Universidade de São Paulo, Pirassununga, SP, Brazil, ⁵Centro de Pesquisa em Pecuária Sustentável, Instituto de Zootecnia, São José do Rio Preto, SP, Brazil

11:15 a.m. PSIV-15 **Sustainable Nitrogen Management: Investigating Chemical Solutions for Feedlot Emissions**

Catherine G. Wharton¹, Sara E. Place²

¹Colorado State University, AgNext, Department of Animal Sciences, Department of Chemistry, ²Colorado State University, AgNext, Department of Animal Sciences

11:15 a.m. PSIV-4 **The Effects of Source and Level of Rumen Undegradable Protein on Circulating Lipid Metabolites in Beef Heifers**

Taylor N. Andrews¹, Aria Christianson¹, Alexandria P. Snider², Robert A. Cushman², Clayton Bedke¹, Katylyn Richardson¹, Joyce Anne Cooper¹, George A. Perry³, Adam F. Summers¹, Eric J. Scholljegerdes¹

¹Animal and Range Sciences Department, New Mexico State University, ²U.S. Meat Animal Research Center, USDA-ARS, ³Texas A&M AgriLife Research

11:15 a.m. PSIV-8 **The Impact of Nutritional Planes and One-Carbon Metabolite Supplementation During Early Pregnancy on Phosphorylated p38 MAPK Abundance in the Bovine Maternal Liver**

Kelsey R. Hooker¹, Mojtaba Daneshi¹, Jessica G. Syring², Yssi L. Enztie², Layla E. King³, Muhammad Anas¹, Mara R. Hirschert¹, Matthew S. Crouse⁴, Alison K. Ward⁵, Carl Robertson Dahlen⁶, Virginia Montgomery¹, Pawel P. Borowicz¹, Joel S. Caton²

¹Department of Animal Sciences, North Dakota State University, ²North Dakota State University, ³Department of Agriculture and Natural Resources, University of Minnesota Crookston, ⁴United States Department of Agriculture, ⁵Department of Veterinary Biomedical Sciences, University of Saskatchewan, ⁶North Dakota State University Department of Animal Sciences Center for Nutrition and Pregnancy

11:15 a.m. PSIV-10 **Towards Automated Anemia Detection: AI Models for Accurate FAMACHA Classification in Outdoor Environments**

Aaron Klingler¹, Davia Brown¹, Ava Mincey¹, Rocquel Tunner¹, Aftab Siddique¹, Jan Van Wyk², Eric Morgan³, Thomas H. Terrill¹

¹Fort Valley State University, ²University of Pretoria, ³Queen's University

11:15 a.m. PSIV-26 **Tracing changes in coat color phenotype over time within the Mountain Pleasure Horse Association**

Madison Vandiver ¹, Molly Nicodemus ¹, Julius Culwell ¹, Ed North ², Asia Irons ¹, Toree Williams ³

¹Mississippi State University, ²University of Mississippi Medical Center, ³Unity Environmental University

11:15 a.m. PSIV-28 **Unveiling the genomic architecture of novel profitability phenotypes in Nelore cattle**

Leticia Pereira ¹, Fernando S. Baldi ², Eduardo Eifert ³, Nedenia B. Stafuzza ⁴, Minos Carvalho ⁵, Cláudio Ulhoa Magnabosco ³

¹National Association of Breeders and Researchers (ANCP), ²Faculdade de Zootecnia e Engenharia de Alimentos, Universidade de São Paulo, Pirassununga, SP, Brazil, ³Embrapa Cerrados, Planaltina, Brasília, Distrito Federal, Brazil, ⁴Centro de Pesquisa em Pecuária Sustentável, Instituto de Zootecnia, São José do Rio Preto, SP, Brazil, ⁵@Tech - Innovation Technology for Agriculture, Piracicaba, São Paulo, Brazil

ASAS-CSAS Sustainability Symposium: The role of livestock in a circular bioeconomy

Chair: Kim Ominski, Department of Animal Science, Faculty of Agricultural and Food Sciences, University of Manitoba

1:00 PM - 5:00 PM

Great Hall 5

1:00 p.m. **ASAS-CSAS Sustainability Symposium Introduction**

1:05 p.m. 9 **Role of livestock in a circular bioeconomy**

Tim A. McAllister ¹

¹Agriculture and Agri-Food Canada (AAFC)

1:40 p.m. 10 **Optimizing the use of human-inedible animal feeds for livestock delivering to a circular sustainable global agri-food sector**

Michael R. F Lee ¹

¹Harper Adams University

2:15 p.m. 11 **Assessing the role of livestock in a circular bioeconomy**

Clark Halpern ¹, Loekie Schreefel ¹, Barbara Amon ², Tim A. McAllister ³, Hannah van Zanten ¹

¹Wageningen University, ²Leibniz-Institute for Agricultural Engineering and Bioeconomy,

³Agriculture and Agri-Food Canada (AAFC)

2:50 p.m. **ASAS-CSAS Sustainability Symposium Break**

3:30 p.m. 12 **Quantifying Feed Ingredient Consumption for U.S. Livestock, Poultry and Aquaculture**

Paul Davis ¹, Lara Moody ², Charles Starkey ³

¹AFIA, ²IFEEDER, ³North American Renderers Association

3:45 p.m. 13 **Quantifying use of bioeconomic circular ingredients and rendered animal products consumed by livestock in the United States**

Charles Starkey¹, Paul Davis², Lara Moody³

¹North American Renderers Association, ²AFIA, ³IFEEDER

4:00 p.m. 14 **An agent-based modeling approach for balancing feed efficiency and environmental footprint of growing-finishing pig production systems**

Atefeh Rahimifar¹, Jeffrey Wiegert¹, Karun Kaniyamattam¹, Luis O. Tedeschi¹

¹Texas A&M University

4:15 p.m. 15 **Biochar additions as a catalyst for climate-smart agriculture and a sustainable solution to greenhouse gas emissions.**

Hossam Ismael¹, Byeng Ryel Min¹, Mariline Hilaire¹, Santosh Chaudhary¹, Vivian Kanyi¹, Heba Abdo¹

¹Tuskegee University

4:30 p.m. **ASAS-CSAS Sustainability Symposium Discussion**

Poster Session V

1:15 PM - 2:30 PM

Great Hall 4

1:15 p.m. PSV-22 **Characterization of the gut microbiota of horses based on two different housing conditions and parasitic load**

Gopi Yalavarthi¹, Praveen Kosuri¹, Haswitha Sabbineni², Kendra Maas¹, Kristen E. Govoni¹, Mary Anne Amalaradjou¹, Jenifer Nadeau¹

¹University of Connecticut, ²Vanderbilt University

1:15 p.m. PSV-25 **Comparative Analysis of Condensed Tannins in *Lespedeza cuneata*: Structural Composition and Relative Abundance**

Phaneendra Batchu¹, Aftab Siddique¹, Ajaya Biswal², Ajit Mahapatra¹, Jan Van Wyk³, Thomas H. Terrill¹

¹Fort Valley State University, ²UGA, ³University of Pretoria

1:15 p.m. PSV-4 **Effect of diet and sampling method on ruminal methanogen populations**

Alyson B. Fontenot¹, Laura Z. Holland², Taylor A. Falk², Matthew R. Dunn³, Brigid R. Arciero³, Lauren E. Fitch², Tryon A. Wickersham¹

¹Texas A&M University, ²Arkea Bio Corp., ³Arkea Bio Corp

1:15 p.m. PSV-1 **Effect of *Haemonchus contortus* infection on plasma metabolome of periparturient Florida Cracker ewes**

John O. Adebayo¹, Zaira M. Estrada-Reyes¹, Sola Ikuejamoye-Omotore¹, Uchenna Y. Anele¹, Ibukun M M. Ogunade², Andres Alfredo Pech Cervantes³, Thomas H. Terrill⁴

¹North Carolina Agricultural and Technical State University, ²West Virginia University,

³Prairie View A&M University, ⁴Fort Valley State University

1:15 p.m. PSV-11 **Effects of forage processing methods on rumen fermentation characteristics and greenhouse gas emissions of Italian ryegrass (*Lolium multiflorum*)**

Ji-Yoon Kim ¹, Seung-Min Jung ², ChangHyun Baeg ¹, Bu-Gil Choi ¹, Arrynda rachma Dyasti Wardani ¹, Sam-Churl kim ¹

¹Gyeongsang National University, ²Forages Production Systems Division, National Institute of Animal Science, RDA, Cheonan 31000, South Korea

1:15 p.m. PSV-2 **Effects of *Saccharomyces cerevisiae* fermentation product and *Bacillus Direct-Fed Microbials* on intake and ruminal parameters of heifers fed corn silage-based diets**

Arnaldo Limede ¹, Rodrigo Marques ², Fernando Cidrini ², Gilyard Souza ², Mariane Beline ³, Frank Even ⁴, Vitor RG Mercadante ⁵, Kelsey M. Harvey ⁶, Bruno Cappellozza ⁷

¹Virginia Polytechnic and State University, ²Virginia Tech, ³School of Animal Sciences-Virginia Tech, ⁴Virginia Tech - School of Animal Sciences, ⁵Virginia Tech - School of Animal Sciences; Large Animal Clinical Sciences, ⁶Mississippi State University, ⁷Novonesis

1:15 p.m. PSV-19 **Effects of Short Chain Fatty Acids Derivatives on Gut Morphology of Weanling Pigs Challenged with F4 and F18 Enterotoxigenic *Escherichia coli***

Shuhan Sun ¹, Sangwoo Park ¹, Yating Zhao ¹, Youngmin Park ¹, Linh Truong ¹, Maresa MacKenzie-del Toro ¹, Supatirada Wongchanla ¹, Xunde Li ¹, Peng Ji ¹, Yanhong Liu ¹

¹University of California, Davis

1:15 p.m. PSV-28 **Effects of various adaptation protocols on performance and carcass traits of Nellore bulls in a pasture-based finishing system**

Fernanda F. Alves ¹, Maria Eduarda M. Lopes ¹, Leticia M. Machado ¹, Kalista E. Loregian ¹, Ana Laura J. Lelis ², Guilherme O. Sgobbi ¹, Gabriela FL Ferreira ¹, Rodrigo J. Oliveira ¹, Pedro Henrique C. Ribeiro ¹, Daniel HM Watanabe ¹, Ariany F. Toledo ¹, Danilo D. Millen ¹

¹São Paulo State University (UNESP), School of Agricultural and Veterinary Sciences, ²São Paulo State University (UNESP), School of Veterinary Medicine and Animal Science

1:15 p.m. PSV-14 **Equine Colic and Winter Weather Changes**

Sydney L. Midler ¹, Trinet N. Jones ¹, Jessica L. Leatherwood ¹, Amanda N. Bradbery ², Kimberly B. wellmann ¹

¹Tarleton State University, ²Montana State University

1:15 p.m. PSV-17 **Estimates of variance components and genetic parameters for weight, carcass, and reproductive traits in U.S. Suffolk sheep including genomic information**

Artur O. Rocha ¹, Ali Haider Saleem ², Hilal Yazar Gunes ³, Felipe E. de Carvalho ⁴, Carrie S. Wilson ⁵, Bradley A. Freking ⁶, Thomas W. Murphy ⁶, Joan M. Burke ⁷, Ronald M. Lewis ³, Luiz F. Brito ⁸

¹Department of Animal Sciences, Purdue University, ²Department of Animal Sciences, Purdue University and Department of Animal Sciences, College of Veterinary and Animal Sciences, Jhang, ³Department of Animal Science, University of Nebraska-Lincoln, ⁴Department of Veterinary Medicine, University of São Paulo, ⁵USDA, ARS, Range Sheep Production Efficiency Research Unit, ⁶USDA, ARS, Roman L. Hruska U.S. Meat Animal Research Center, ⁷USDA, ARS, Dale Bumpers Small Farms Research Center, ⁸Purdue University

1:15 p.m. PSV-27 **Expression of genes involved in lipid metabolism and gluconeogenesis of Nellore steers fed a magnesium oxide blend combined or not with monensin**

Marcio M. Ladeira ¹, Javier Bethancourt-Garcia ², José Oliveira ², Karolina B. Nascimento ², Germán D. Ramírez-Zamudio ³, Luana Santos ², Priscilla Teixeira ⁴, Tathyane R.S. Gionbelli ², Mateus P. Gionbelli ⁵

¹UFLA, ²Universidade Federal de Lavras, ³School of Animal Science and Food Engineering FZEA; São Paulo University - USP, ⁴Universidade Federal do Mato Grosso do Sul, ⁵Federal University of Lavras

1:15 p.m. PSV-12 **Fertility following germline transplantation in sterile NANOS2 knockout surrogate bulls**

Brietta E. Latham ¹, Mariana Giassetti ¹, Michela Ciccarelli ¹, Deqiang Miao ¹, Melissa Oatley ¹, Ahmed Tibary ¹, Muhammad Salman Waqas ¹, Grace L. Tuchel ¹, Jon Oatley ¹

¹Washington State University

1:15 p.m. PSV-24 **Forage yield, land equivalent ratio of cereals and pea-cereal intercrops differing in pea to cereal ratio at two sites in western Canada**

Daalkhaijav Damiran ¹, Bill Biligetu ², Kathy A. Larson ³, Hari Poudel ⁴, Herbert A. Lardner ¹

¹Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK Canada, ²Department of Plant Sciences, University of Saskatchewan, ³Department of Agricultural and Resource Economics, University of Saskatchewan, Saskatoon, SK Canada, ⁴Agriculture and Agri-Food Canada, Lethbridge, AB, Canada

1:15 p.m. PSV-10 **Genetic parameters of disease in growing pigs under a polymicrobial natural disease challenge**

Usamah Kabuye ¹, John Harding ², Michael K. Dyck ³, Frederic Fortin ⁴, Graham S. Plastow ⁵, PigGen Canada Guelph, ON N1H 4G8, Canada ⁶, Jack C.M. Dekkers ¹

¹Iowa State University, ²University of Saskatchewan, ³University of Alberta, ⁴Centre de développement du porc du Québec inc., ⁵Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, ⁶PigGen Canada

1:15 p.m. PSV-9 **Heat stress during gestation and post-weaning impact the performance of Bos indicus-influenced beef heifers**

Vinicius S. Izquierdo ¹, Cassio Brauner ¹, Joao H. J. Bittar ², Joao M. B. Vendramini ³, Philippe Moriel ¹

¹University of Florida, IFAS / Range Cattle Research and Education Center, ²Department of Large Animal Clinical Sciences, University of Florida, ³Texas A&M AgriLife Research

1:15 p.m. PSV-18 **High dietary starch and erratic feed management impact ruminal and colonic health and pathogenic bacteria prevalence and concentration in the gastrointestinal tract and liver of feedlot steers**

Kasi N. Schneid ¹, James D. Young ¹, Ty E. Lawrence ¹, T. G. Nagaraja ², Mina Abbasi ², John T. Richeson ¹, Kendall L. Samuelson ¹

¹West Texas A&M University, ²Kansas State University

1:15 p.m. PSV-29 **Impact of the use of a blend based on organic minerals and yeasts and road transport for 48 hours on the nutrient digestibility of grass-fed beef cattle**

José Maria Cesar Neto ¹, Gabriel Santos Souza David ¹, Mateus J. I. Abreu ², Luciana Melo Sousa ³, Hiam Jardel Marcon Giacomeli ¹, Bianca Rodrigues Domingos ¹, Janayara Maria Tavares Ventura ⁴, Luiz Fernando Costa e Silva ⁵, Flávio D. Resende ⁶, Gustavo Rezende Siqueira ⁷

¹UNESP - FCAV, Jaboticabal, ²College of Agronomics and Veterinary Sciences - University of São Paulo State Júlio de Mesquita Filho, ³University of Florida, IFAS / Range Cattle Research and Education Center, ⁴Unipê - Centro Universitário de João Pessoa, ⁵Alltech do Brasil Agroindustrial Ltda, ⁶Agência Paulista de Tecnologia dos Agronegócios, Colina, SP, Brazil, ⁷São Paulo Agency for Agribusiness Technology

1:15 p.m. PSV-3 **Impacts of rotational ingredient supplementation on canine gastrointestinal microbiota upon exposure to rapid dietary change**

Cierra N. Crowell ¹, Erin B. B. Perry ¹, Daisy N. Kaplan ¹, Eileen Jenkins ², Debra Zoran ³, Tracy Darling ⁴, George Moore ⁵, Mike Davis ⁶, Jan S. Suchodolski ³

¹Southern Illinois University, ²Huntsville Veterinary Specialists & Emergency, ³Texas A&M University, ⁴Search Dog Foundation, ⁵Purdue University, ⁶Oklahoma State University

1:15 p.m. PSV-16 **Investigating the Long-Term Effects of Neonatal Castration on Gut Development in Pigs: Insights from the Gut Transcriptome**

Sydney T. Puda ¹, Carolini Schultz ², Adam J. Moeser ¹

¹Michigan State University, ²Michigan State University

1:15 p.m. PSV-6 **ISOFLAVONES IN FORAGE DIETS OF STEERS CONSUMING 'KY31' TALL FESCUE WITH DIFFERING INCLUSION RATES OF RED CLOVER**

Mason B. Henson ¹, Leanne Dillard ¹, Kimberly Kimberly Mullenix ¹, William B. Smith ¹

¹Auburn University

1:15 p.m. PSV-20 **Metabolomic and Transcriptomic Landscape of the Bovine Uterine lumen in the Second Week of the Estrous Cycle**

Abdul Waheed ¹, Cecilia C. Rocha ², Alexandra Bennett ¹, Nadia Ashrafi ³, Stewart F. Graham ⁴, Francisco Peñagaricano ⁵, Mario Binelli ¹

¹University of Florida, ²Division of Animal Sciences, Southwest Research, Extension, and Education Center, University of Missouri, ³Metabolomics Department, Beaumont Research Institute, ⁴Oakland University-William Beaumont School of Medicine, ⁵University of Wisconsin-Madison

1:15 p.m. PSV-26 **Phenotypic Plasticity of *Gliricidia sepium* Under Different Planting Densities**

Eduardo Machado ¹, Marcelo Rodrigues ², Eduardo Pereira Jr ¹, Flavio Kaneko ¹, Vanessa Galati ¹, Gervasio Pegoraro ¹, José C B Dubeux Jr ³, Evandro Muniz ⁴, Flavia van Cleef ⁵, Eric H. C. B. van Cleef ¹

¹Institute of Agricultural, Exact, and Biological Sciences of Iturama, Federal University of Triângulo Mineiro, ²Institute of Biological and Natural Sciences, Federal University of Triângulo Mineiro, ³North Florida Research and Education Center, University of Florida, ⁴Embrapa Tabuleiros Costeiros, ⁵College of Agriculture and Bioresources, University of Saskatchewan

1:15 p.m. PSV-21 **Short-term and long-term effects of beef tallow enriched with trans-vaccenic acid and rumenic acid on glucose homeostasis in mice feed a high-fat diet**

Yanqing Xu ¹, Abigail Tolentino ¹, Ming-fo Hsu ¹, Fawaz G. Haj ¹, Payam Vahmani ¹

¹University of California, Davis

1:15 p.m. PSV-5 **Single-nucleus Analysis of Intramuscular Fat Reveals Predominance of Lipid Associated Macrophages in Beef Steers with High Marbling**

Mollie M. Green ¹, Hunter Ford ¹, Oscar J. Benitez ¹, Dale R. Woerner ¹, Bradley J. Johnson ¹, Clarissa Strieder-Barboza ¹

¹Texas Tech University

1:15 p.m. PSV-7 **The Reproductive Tract Microbiota of Cyclic and Pregnant Gilts**

Kyle J. Hickman ¹, Dallas R. Soffa ¹, Molly S. Smith ¹, Brooke E. McAnally ¹, Joe Cain ¹, Heewon Seo ¹, Fuller W. Bazer ², Gregory A. Johnson ³, Jeffrey Wiegert ¹, Rebecca K. Poole ¹

¹Texas A&M University, ²Department of Animal Science, Texas A&M University, College Station, TX 77843, USA, ³Department of Veterinary Integrative Biosciences, Texas A&M University, College Station, TX 77843, USA

Physiology and Endocrinology II: Male Fertility and Semen Biology

Chair: Pedro Fontes, University of Georgia

1:30 PM - 3:00 PM

Diplomat Ballroom 2

1:30 p.m. 227 **Lactocrine programming enhances testicular growth and alters the testicular proteome in the neonatal boar**

Maddie Wegner ¹, Nicole Nordell ², Brett R. White ², Amy T. Desaulniers ²

¹School of Veterinary Medicine & Biomedical Sciences, ²University of Nebraska-Lincoln

1:45 p.m. 229 **Reproductive consequences of young sire overnutrition in the bovine: I) Systemic metabolic and endocrine profile**

Pedro Fontes ¹, Dylan B. Davis ¹, Lucas Melo Goncalves ¹, Molly Sloan Smith ¹, Samir Burato ¹, Alexander M. Stelzleni ¹, Francis L. Fluharty ¹, Lawton Stewart ¹, Reinaldo F. Cooke ², John J. Bromfield ³, Alexandra Keller ⁴, Karl Kerns ⁴, Saulo M. Zoca ⁵

¹University of Georgia, ²Department of Animal Science, Texas A&M University, ³University of Florida, ⁴Iowa State University, ⁵University of Tennessee

2:00 p.m. 230 **Reproductive consequences of young sire overnutrition in the bovine: II) Effects on semen quality and sperm functional traits**

Pedro Fontes ¹, Dylan B. Davis ¹, Lucas Melo Goncalves ¹, Molly Sloan Smith ¹, Samir Burato ¹, Alexander M. Stelzleni ¹, Francis L. Fluharty ¹, Lawton Stewart ¹, Reinaldo F. Cooke ², John J. Bromfield ³, Alexandra Keller ⁴, Karl Kerns ⁴, Saulo M. Zoca ⁵

¹University of Georgia, ²Department of Animal Science, Texas A&M University, ³University of Florida, ⁴Iowa State University, ⁵University of Tennessee

2:15 p.m. 231 **The association of the seminal microbiome to flow cytometry assays and breeding soundness exam metrics in yearling bulls**

Claire K. Stevenson ¹, Madison M. Dycus ¹, Gabriel A. Araujo ², Natalie Arias ¹, Alexis H. Rooks ¹, Abby L. Zezeski ³, Makayla A. Ogg ⁴, Todd Callaway ¹, Pedro Fontes ¹, Thomas W. Geary ³, Jeferson M. Lourenco ¹

¹University of Georgia, ²State University of Maringa, ³USDA-ARS Fort Keogh LARRL, ⁴Montana State University

2:30 p.m. 450 **Utilizing Bioelectrical Impedance Analysis to Predict the Impact of Parasitic Infestation on Testicular Morphometrics and Sperm Quality in Male Goats**

Abdallah M. Shahat ¹, Ranadheer Narlagiri ¹, Aftab Siddique ¹, Mahipal Singh ¹, Brou Kouakou ¹, Thomas H. Terrill ¹, Adel R. Moawad ¹

¹Fort Valley State University

2:45 p.m. 232 **Late-Breaking: Breed-specific lipid profiles in cryopreserved goat sperm**

Mustafa Hitit ¹, Mustafa Bodu ², Selamawit Woldesenbet ¹, Muhammet Rasit Ugur ³, Zeynep Erdogan ¹, Olivia Chika C. Greenwood ¹, Raheem Davian D. Murray ¹, Andres Alfredo Pech Cervantes ¹, Erdogan Memili ¹

¹Prairie View A&M University, ²Prairie View A&M University, Selcuk University, ³IVF Michigan Fertility Centers

Production, Management and Environment Symposium: Livestock Systems

Chairs: Obioha Durunna, Lakeland College, Vermilion, AB, Canada; Department of Animal and Poultry Science, University of Saskatchewan; Sunday Peters, Berry College

1:40 PM - 4:15 PM

Great Hall 2

1:40 p.m. **Production, Management and Environment Symposium Introduction**

1:45 p.m. 205 **Artificial Intelligence and the Internet of Things: Responsible and Sustainable Intensification of Livestock Production**

Robin R. White¹

¹Virginia Tech

2:30 p.m. 206 **What are the barriers to adopting virtual fencing technology?**

Yijie Xiong¹

¹University of Nebraska-Lincoln

3:15 p.m. **Production, Management and Environment Symposium Break**

3:30 p.m. 207 **Diversifying Dairy Farm Income Through Agrivoltaics**

Brad J. Heins¹, Kirsten Sharpe¹, Sabrina Florentino¹, Eric Buchanan¹, Michael Reese¹

¹University of Minnesota

Animal Behavior and Well-Being II

Chair: Juliana Ranches, Oregon State University

2:00 PM - 3:30 PM

Diplomat Ballroom 1

2:00 p.m. 217 **Understanding Tail-Biting in Pigs: Effects of Time of Day, Posture, and Feeder Occupancy**

Courtney A. Archer¹, Storey L. Forster², Benny E. Mote³, Ty B. Schmidt³, Jon Anderson⁴, Lee J. Johnston⁵, Yuzhi Li⁵

¹Department of Animal Science, University of Minnesota, St Paul, 55108, ²University of Nebraska-Lincoln, ³Department of Animal Science, University of Nebraska – Lincoln, 68588,

⁴Division of Science and Mathematics, University of Minnesota-Morris, 56267, ⁵West Central Research and Outreach Center, University of Minnesota, Morris, 56267

2:15 p.m. 218 **Evaluating the Scale of Resource Use by Beef Cows on Winter Range**

Noah Davis¹, Sam Wyffels¹, Craig Carr¹, Paul Nugent¹, Tim DelCurto¹

¹Montana State University

2:30 p.m. 219 **Social network analysis of tail-biting behavior in growing-finishing pigs with intact tails**

Yuzhi Li¹, Courtney A. Archer², Jon Anderson³, Ty B. Schmidt⁴, Benny E. Mote⁴, Lee J. Johnston¹

¹West Central Research and Outreach Center, University of Minnesota, Morris, 56267,

²Department of Animal Science, University of Minnesota, St Paul, 55108, ³Division of Science and Mathematics, University of Minnesota-Morris, 56267, ⁴Department of Animal Science, University of Nebraska – Lincoln, 68588

2:45 p.m. 220 **Employing AI-assisted automated monitoring system and Social Network Analysis for quantifying social structure and detecting harmful behaviors in pigs**

Lucy S. Oldham ¹, Eric Psota ², Simon P. Turner ¹, Andrea Doeschl-Wilson ³, Craig R.G. Lewis ⁴, Juan P. Steibel ⁵, Saif Agha ³

¹SRUC, ²Digital Innovation Manager at PIC, Genus PLC, ³Roslin Institute, ⁴Genus, ⁵Iowa State University

3:00 p.m. 221 **Late-Breaking: The relationship between self-reported and expert scored measures of skill in cattle handling**

Ruth Woiwode ¹, Elliott J. Dennis ¹, Heather Akin ¹

¹University of Nebraska-Lincoln

3:15 p.m. 222 **Late-Breaking: Evaluating Gilts' Toy Preference and The Effect of Their Preferred Toy On Aggressive Behaviors After Mixing**

Emily M. Webberson ¹, Arlene Garcia ², Edgar O. Aviles-Rosa ¹

¹Texas Tech University, ²Texas Tech University, School of Veterinary Medicine

Production, Management and Environment III

Chair: Zachary Carlson, IFF

2:00 PM - 4:30 PM

Regency Ballroom 1

2:00 p.m. 253 **Evaluation of 4 implant strategies on feedyard and carcass parameters in calf-fed beef x dairy calves**

Wade T. Nichols ¹, Randall Raymond ², John P. Hutcheson ¹, Scott McNeley ², Brandon L. Nuttelman ¹, Ashley Nilles ²

¹Merck Animal Health, ²Simplot Livestock Co.

2:15 p.m. 254 **Feedlot Economic Visualization Decision Support Tool for Sustainable Beef Production**

Adeolu J. Adekunle ¹, Karun Kaniyamattam ¹

¹Texas A&M University

2:30 p.m. 255 **Effect of Altosid-Infused Supplement on Fly Emergence and Supplement Intake in Grazing Cattle in Western Canada**

Somtochukwu N. Obiora ¹, Brittnay Thomas ², Janet Nowosad ², Carien Vandenberg ², Mary-Jane Orr ³, Stephanie Ullrich ⁴, Obioha N. Durunna ⁵

¹Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK, Canada; ²Lakeland College, Vermilion, AB, Canada, ³Lakeland College, Vermilion, AB, Canada, ⁴Manitoba Beef and Forage Initiatives, Brandon, MB, Canada, ⁵Lakeland college, Vermilion, AB, Canada, ⁶Lakeland College, Vermilion, AB, Canada; Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK, Canada

2:45 p.m. 256 **Characterize the predictability of high-quality semen boars from B-Ultrasound Imaging**

Shihong Yang ¹, Yijian Huang ², Jeremy T. Howard ², Vance Brown ², C.P. James Chen ¹

¹Virginia Polytechnic Institute and State University, ²Smithfield Premium Genetics

3:00 p.m. **Production, Management and Environment III Break**

3:15 p.m. 257 **Impact of *Mycoplasma hyopneumoniae* infection on key performance metrics of swine production sustainability**

Shelby Krebs ¹, Christian Ramirez-Camba ², Mark Schwartz ¹, Pedro E. Urriola ², Maria Pieters ¹

¹University of Minnesota College of Veterinary Medicine, ²University of Minnesota College of Food, Agricultural and Natural Resource Sciences

3:30 p.m. 258 **Assessment of Perceived Knowledge Gain on Bovine Reproductive Ultrasonography Among Veterinarians and Students Following Hands-On Training**

Molly Sloan Smith ¹, Lucas Melo Goncalves ¹, Samir Burato ¹, Kaleb B. Marchant ¹, Roberto Palomares ¹, Saulo M. Zoca ², Pedro Fontes ¹

¹University of Georgia, ²University of Tennessee

3:45 p.m. 259 **Non-traditional beef heifer management effect on synchronized fixed-time AI and delayed feedlot entry of non-pregnant heifers**

Songul Senturklu ¹, Douglas G. Landblom ², Lauren L. Hanna ³, Byron Parman ³, George A. Perry ⁴, Steve Paisley ⁵

¹Canakkale Onsekiz Mart University, ²NDSU Dickinson Research Extension Center, ³North Dakota State University, ⁴Texas A&M AgriLife Research, ⁵University of Wyoming

4:00 p.m. 260 **Investigating the Impacts of Poor Maternal Nutrition on Ewe Lamb Reproductive Capacity**

Julianna Messina ¹, Rachael M. Stucke ¹, Ryne D. Haggard ¹, Ellen Roberts ¹, Alexandria P. Snider ², Terry E. Engle ¹, Caitlin N. Cadaret ¹

¹Colorado State University, ²U.S. Meat Animal Research Center, USDA-ARS

4:15 p.m. 261 **Complementarity of meat and meat substitutes in human diets**

Robin R. White ¹

¹Virginia Tech

Cell Biology Symposium: Single-cell genomics of livestock animals

Chair: Susanta Behura, Division of Animal Sciences, University of Missouri, Columbia

2:00 PM - 5:00 PM

Diplomat Ballroom 4

2:00 p.m. **Cell Biology Symposium Introduction**

2:00 p.m. 213 **Comparative single-cell transcriptomics uncovers key regulatory mechanisms in bovine placental development**

Morgan L. Leavitt ¹, Avery Lyons ¹, Jocelynn Brown ¹, Wesley C. Warren ², Thomas E. E. Spencer ³, Kimberly M. Davenport ⁴

¹Department of Animal Science, Washington State University, ²Division of Animal Sciences, Department of Surgery, and Institute for Data Science and Informatics, University of Missouri, ³Division of Animal Sciences and Department of Obstetrics, Gynecology, and Women's Health, University of Missouri, ⁴Department of Animal Science, Washington State University

2:45 p.m. 214 **Single-Cell and Spatial Transcriptome Assessment of the Bovine Uterus Reveals Persistent Transcriptomic Alterations Following Postpartum Uterine Disease**

Joao G. N. Moraes ¹

¹Oklahoma State University

3:25 p.m. **Cell Biology Symposium Break**

3:40 p.m. 215 **A comparative analysis of single-cell open chromatin in the embryonic brain between chicken and turkey**

SUSANTA K. BEHURA ¹

¹Division of Animal Sciences, University of Missouri, Columbia

4:20 p.m. 216 **Community resources for discovering cell type specific functions in livestock: The pig example**

Christopher K. Tuggle ¹

¹Iowa State University

Companion Animal I - Sponsored by Bill Barr and Co.

Chairs: James Templeman, Primal Pet Foods, Primal Pet Group, Fairfield, California; Julia Guazzelli Pezzali, Kansas State University

2:00 PM - 5:00 PM

Diplomat Ballroom 3

2:00 p.m. 303 **Apparent total tract digestibility of various protein sources in Beagle dogs at different life stages**

MinYoung Lee ¹, JuLan Chun ¹, Kyoung-Min So ¹, Hyun-Woo cho ¹, Sang-Yeob Lee ¹, KiHyun Kim ²

¹National Institute of Animal Science, Rural Development Administration, ²Sunchon National University

2:15 p.m. 304 **Oral Health Indices and Microbiota Populations of Adult Cats Consuming Wet or Dry Diets**

Patrícia M. Oba ¹, Olivia Swanson ², Gene Pavlovsky ², Stephanie Keating ², Kelly S. S. Swanson ¹

¹University of Illinois Urbana-Champaign, ²University of Illinois

2:30 p.m. 305 **The battle of yeasts: ethanol or brewer's yeast? How yeast processing impacts feline food preferences and flavor enhancement**

Melina A. Bonato ¹, Marcia Villaca ¹, Marcelo Beraldo Costa ¹, Graziela Alves da Cunha Valini ¹

¹ICC Animal Nutrition

2:45 p.m. 306 **Fresh-frozen canine diets improve fecal consistency compared to extruded dry kibble**

Claire L. Timlin ¹, Fiona B. Mccracken ¹, Sarah M. Dickerson ¹, Catherine Carchedi ², Brittany White ², Craig N. Coon ¹

¹Four Rivers Kennel, LLC, ²Ollie Pets Inc.

3:00 p.m. 307 **Dietary glycine inhibits protein degradation by ubiquitin-dependent proteasomes in tissues of juvenile hybrid striped bass (*Morone chrysops* x *M. saxatilis*)**

Broderick L. Dickerson¹, Erin D. D. Connolly¹, Blaine A. Suehs², Karina L. Hissen³, Michael F. Criscitiello³, Delbert M. Gatlin III², Guoyao Wu⁴

¹Department of Animal Science, Texas A&M University, College Station, Texas 77843,

²Department of Ecology and Conservation Biology, Texas A&M University, College Station, Texas 77843, ³Department of Veterinary Pathobiology, Texas A&M University, College

Station, Texas 77843, ⁴Department of Animal Science, Texas A&M University

3:15 p.m. **Companion Animal I Break**

3:30 p.m. 308 **Influence of Spray-Dried Plasma on Fecal Metabolites, Gut Microbiota, and Inflammatory Biomarkers in Canine Nutrition**

Julio Mito¹, Patricia M. Oba¹, Joy Campbell², Maria R.C. Godoy¹

¹University of Illinois Urbana-Champaign, ²APC LLC

3:45 p.m. 309 **Are microbes and free fatty acids impacting pet food quality and shelf-life?**

Carl Frame¹, Sara Cutler¹

¹Kemin

4:00 p.m. 310 **Apparent total tract nutrient digestibility of raw, minimally processed, and retorted dog foods and their effects on fecal characteristics, metabolites, and microbiota of healthy adult dogs**

Elizabeth L. Geary¹, Tsai-Ling Wang¹, Christina L. Vogel¹, Laura L. Bauer¹, Patricia M. Oba¹, James R. Templeman², Mary-Grace Danao³, Kelly S. S. Swanson¹

¹University of Illinois Urbana-Champaign, ²Primal Pet Foods, Primal Pet Group, Fairfield, California, United States, ³University of Nebraska-Lincoln

4:15 p.m. 311 **Investigating Metabolomic Profiles Associated with Canine Fearfulness**

Scarlett Burron¹, Dave J. Seymour², Candace Croney³, Alexandra Harlander¹, Anna K. Shoveller⁴

¹University of Guelph, ²Trouw Nutrition R & D, University of Guelph, ³Purdue University College of Veterinary Medicine, ⁴Department of Animal Biosciences, University of Guelph, Guelph, Ontario, Canada

4:30 p.m. 312 **Extrusion quality and in vitro digestibility of insect-based feed blends**

Alice Luciano¹, Prebin premarajan², Eleonora Pacifico², Andrea Moradei², Matteo Ottoboni², Costanza Jucker³, Luciano Pinotti²

¹Università degli Studi di Milano - Department of Veterinary Medicine and Animal Sciences,

²Dipartimento di Medicina Veterinaria e Scienze Animali (DIVAS), via dell'Università, 6

26900 Lodi (LO) Italia, ³Dipartimento di Scienze per gli Alimenti, la Nutrizione e l'Ambiente, via Celoria, 2- 20133 Milano Italia

4:45 p.m. 313 **Does quantity equal quality? Source of protein influences American dog owner purchasing decisions more than quantity of protein in the absence of marketing claims**

Pawanpreet Singh ¹, Zhe Peng ², Sydney Banton ¹, Michael Von Massow ², Jennifer L. Saunders-Blades ³, Anna K. Shoveller ¹

¹Department of Animal Biosciences, University of Guelph, Guelph, Ontario, Canada,

²Department of Food, Agricultural and Resource Economics, University of Guelph,

³Champion Petfoods Holding Ltd., Morinville, Alberta, Canada

ASAS-CSAS Graduate Student Session II

Chair: Gabriel Ribeiro Junior, University of Saskatchewan

2:30 PM - 4:00 PM

Diplomat Ballroom 5

2:30 p.m. 199 **Breaking Language Barriers in Animal Welfare: Developing Spanish for Specific Purposes Courses and Internship Programs for Veterinary and Animal Science Students in Spanish-Speaking Farm Environments**

Allen Jimena Jimena Martinez Aguiriano ¹, Silvana Pietrosevoli ², Leonor Salazar ², Arlene Garcia ³

¹School of Veterinary Medicine, Texas Tech University, ²North Carolina State University,

³Texas Tech University, School of Veterinary Medicine

2:45 p.m. 200 **Using Canopy Structure to Improve Interpretation of Animal Responses in Pasture-Based Research**

Alexandre Fameli Mammana ¹, Marília Chiavegato ¹

¹The Ohio State University

3:00 p.m. 201 **Genetic parameters of disease in growing pigs under a polymicrobial natural disease challenge**

Usamah Kabuye ¹, John Harding ², Michael K. Dyck ³, Frederic Fortin ⁴, Graham S. Plastow ⁵, PigGen Canada Guelph, ON N1H 4G8, Canada ⁶, Jack C.M. Dekkers ¹

¹Iowa State University, ²University of Saskatchewan, ³University of Alberta, ⁴Centre de développement du porc du Québec inc., ⁵Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, ⁶PigGen Canada

3:15 p.m. 202 **Metagenomic characterization of novel candidate lipid utilizers from the rumen of beef steers reveals microbial adaptations to high-lipid diets**

Angel M. Martinez ¹, Derek W. Brake ², Benoit St-Pierre ¹

¹South Dakota State University, ²University of Missouri

3:30 p.m. 203 **Ruminal papillae characterization and ruminal metabolomics of beef on dairy heifers with abscessed or non-abscessed livers**

Beatriz Queiroz dos Reis ¹, Jhones O. Sarturi ¹, Bradley J. Johnson ¹, Reese Wilson ¹, Miles Theurer ², Harper Thaxton ¹, Barbara Rodrigues ³, Dale R. Woerner ¹

¹Texas Tech University, ²Veterinary Research and Consulting Services, LLC, ³Texas A&M University

3:45 p.m. 204 **The vaginal and uterine microbiome of beef cattle that became pregnant or remained open following artificial insemination**

Justine Kilama ¹, Devin B. Holman ², Joel S. Caton ¹, Kevin K. K. Sedivec ¹, Carl Robertson Dahlen ³, Samat Amat ¹

¹North Dakota State University, ²Lacombe Research and Development Centre, Agriculture and Agri-Food Canada, ³North Dakota State University Department of Animal Sciences Center for Nutrition and Pregnancy

Poster Session VI

2:45 PM - 4:00 PM

Great Hall 4

2:45 p.m. PSVI-1 **Additive combinations promoted nutrient metabolic efficiency of calf starter diets**

Oludotun O. Adelusi ¹, Olatunde A. Oderinwale ², Joel O. Alabi ¹, James M. Enikhuomahin ³, Ahmed E. Kholif ⁴, Uchenna Y. Anele ¹

¹North Carolina Agricultural and Technical State University, ²North Carolina Agricultural and Technical State University, Greensboro, NC 27401, USA, ³North Carolina A&T State University, ⁴Animal Sciences

2:45 p.m. PSVI-28 **Beyond the Bunk: Utilizing D2Dx to Assess Immune Health and Inform Cattle Management in a Feedlot System**

Mamie-Cate Haydon ¹, Luke Sanders ¹, Riley D. Messman ¹

¹Oklahoma State University

2:45 p.m. PSVI-25 **Bioforensics: what can be learned from near infrared spectroscopy of cattle nasal surface tissue?**

Douglas R. Tolleson ¹

¹Texas A&M AgriLife

2:45 p.m. PSVI-24 **Carnitine and polyunsaturated fatty acids alter cytokine expression in poly (I:C) infected porcine enteroids**

Lin Xi ¹, Feng Wang ¹, Jack Odle ¹

¹North Carolina State University

2:45 p.m. PSVI-23 **Comparative Transcriptomic Analysis of Chicken Immune Organs Post Marek's Disease Virus Infection at a latency phase**

Yi Ding ¹, Huanmin Zhang ², John Dunn ², Keji Zhao ³, Jiuzhou Song ¹

¹University of Maryland, ²USDA-ARS, ³NIH

2:45 p.m. PSVI-29 **Do lungs serve as a portal of entry and a source for dissemination of Salmonella enterica into the liver and lymph nodes?**

Mina Abbasi ¹, Reese Wilson ², Xiaorong Shi ¹, Leigh Ann George ¹, Farinaz Baghaei Naeini ¹, Tyler Ringel ¹, Raghavendra G. Amachawadi ¹, Dale R. Woerner ², Nikki Shariat ³, Noelle Noyes ⁴, T. G. Nagaraja ¹

¹Kansas State University, ²Texas Tech University, ³University of Georgia, ⁴University of Minnesota

2:45 p.m. PSVI-17 **Effect of an insulin bolus during intravenous glucose tolerance tests in horses**

Cheyenne S. Summers ¹, Steven A. Zinn ¹, Sarah Reed ¹

¹University of Connecticut

2:45 p.m. PSVI-12 **Effects of Betaine Supplementation and Nutrient Restriction During Gestation on Fetal Metabolism in Sheep**

Santhi Priya Voggu ¹, Nicole M. Tillquist ¹, Cheyenne S. Summers ¹, Nicholas M. barnello ¹, Amanda S. Reiter ¹, Mia Y. Kawaida ¹, Sarah Reed ¹, Steven A. Zinn ¹, Kristen E. Govoni ¹

¹University of Connecticut

2:45 p.m. PSVI-16 **Effects of dietary supplementation of illite and bentonite in weaned piglets challenged with Escherichia coli**

Song Dongcheol ¹, Kyeongho Jeon ¹, Hyuck Kim ², Yang Jinmo ¹, Jinho Cho ¹

¹Chungbuk National University, ²Chungbuk National University, Department of Animal Science

2:45 p.m. PSVI-21 **Effects of L-glutamate and L-aspartate supplementation on immune responses of weaned piglets challenged with F18 ETEC**

Supatirada Wongchanla ¹, Sangwoo Park ¹, Shuhan Sun ¹, Xunde Li ¹, Yanhong Liu ¹

¹University of California, Davis

2:45 p.m. PSVI-6 **Effects of progesterone and matrix metalloproteinase inhibition on milk component synthesis in bovine mammary epithelial cells**

Hyun-Su Jung ¹, Jong Hyeon Han ², Hyuk Cheol Kwon ², Sung Gu Han ²

¹Konkuk University, ²Konkuk university

2:45 p.m. PSVI-22 **Effects on physiological parameters and peripheral thermoregulation in beef steers rotational grazing toxic endophyte-infected tall fescue under fall conditions**

Ignacio Mariano Llada ¹, Jeferson M. Lourenco ¹, Madison M. Dycus ¹, Utsav Lamichhane ¹, Garret Suen ², Dean P Jones ³, Nicholas S Hill ¹, Nikolay M Filipov ¹

¹University of Georgia, ²University of Wisconsin, ³Emory University

2:45 p.m. PSVI-5 **Efficacy of Fan and Sprinkler Cooling Strategies in Alleviating Heat Stress in Lactating Dairy Cattle**

Himani Joshi ¹, Brandon Bernard ², Abigail McBride ², Lindsey J. Reon ², Caleb O. Lemley ², Amelia Woolums ², James Brett ², Isaac Isaac Jumper ², Marcus McGee ², Peixin Fan ²

¹MISSISSIPPI STATE UNIVERSITY, ²Mississippi State University

2:45 p.m. PSVI-8 **Endometrial and Conceptus Transcriptomes are Altered After Resolution of Induced Uterine Infection in Dairy Cows**

Nicholas C. Kertz ¹, Zachary K. Seekford ², Arslan Tariq ¹, Gabriela A. Macay ¹, Yuting Zhai ¹, Kwangcheol C. Jeong ¹, Jose E. P. Santos ¹, John J. Bromfield ¹

¹University of Florida, ²Department of Animal Sciences, Texas A&M University

2:45 p.m. PSVI-7 **Evaluation of Humoral Immune Response and Serum Biochemical Changes in Broiler Chickens Colonized with Campylobacter jejuni.**

Tanmaie Kalapala ¹, Anna Luiza Facchetti Vinhaes Assumpcao ², Geetha Philips ³, annie Donoghue ⁴, tomi Obe ¹, Palmy Jesudhasan ⁴, Komala Arsi ⁴

¹University of Arkansas at Fayetteville, ²University of Arkansas Division of Agriculture, ³division of Agriculture, ⁴USDA-ARS

2:45 p.m. PSVI-27 **Evaluation of the D2Dx Immunity Test™ for Monitoring Castration and Arrival Stress on Immune Function in Newly Received Feedlot Cattle**

Luke Sanders ¹, Mamie-Cate Haydon ¹, Riley D. Messman ¹

¹Oklahoma State University

2:45 p.m. PSVI-10 **Genome-wide Association Study of Mature Cow Weight in American Angus Cattle**

Ayooluwa O. Ojo ¹, Milena A. F Campos ¹, Henrique A. Mulim ¹, Andre Garcia ², Kelli J. Retallick-Riley ², Hinayah Rojas de Oliveira ¹

¹Purdue University, ²Angus Genetics Inc.

2:45 p.m. PSVI-13 **Genomic Analysis of Pregnancy Outcome in Brangus Heifers**

Camila Santos Rojas ¹, Giovanni Coelho Ladeira ², Gabriel A. Zayas ², Raluca Mateescu ¹

¹Department of Animal Sciences, University of Florida, ²University of Florida

2:45 p.m. PSVI-4 **Harvest yields and carcass performance data association with increasing finished weights of market hogs**

Megan E. Eckhardt ¹, Jenna Mayer ¹, Travis Tennant ¹, Loni W. Lucher ¹, Ty E. Lawrence ¹

¹West Texas A&M University

2:45 p.m. PSVI-20 **Heat Stress-Induced Inflammation Was Mitigated by Daily Oral Supplementation of ω -3 Polyunsaturated Fatty Acids in Finishing Lambs, which In Turn Improved Circulating Adiponectin but not IGF-1**

Melanie R. White ¹, Rachel L. Gibbs ², Shelley A. Curry ¹, Pablo C. Grijalva ¹, Jessica L. Petersen ¹, Ty B. Schmidt ³, Dustin T. Yates ¹

¹University of Nebraska-Lincoln, ²North Dakota State University, ³Department of Animal Science, University of Nebraska – Lincoln, 68588

2:45 p.m. PSVI-15 **Influences on Bacterial Diversity of the Beef Cow Uterine Microbiome**

Dallas R. Soffa ¹, Michael F. Smith ², Julie A. Walker ³, Thomas W. Geary ⁴, Gregory A. Johnson ⁵, George A. Perry ⁶, Rebecca K. Poole ¹

¹Texas A&M University, ²University of Missouri, ³South Dakota State University, ⁴USDA-ARS Fort Keogh LARRL, ⁵Department of Veterinary Integrative Biosciences, Texas A&M University, College Station, TX 77843, USA, ⁶Texas A&M AgriLife Research

2:45 p.m. PSVI-14 **Inhibition of Escherichia Coli Growth by a Unique Essential Oil Blend: A Potential Natural Antimicrobial Strategy**

Yasmine Shaw ¹, Kelechi A. Ike ², Uchenna Y. Anele ³

¹NCATSU, ²North Carolina Agricultural & Technical state University, ³North Carolina Agricultural and Technical State University

2:45 p.m. PSVI-2 **Purebred and Crossbred Herds: Economic Values for Fertility, Growth, and Carcass Traits**

Paola P. Boscollo¹, Jesse D. Savell¹, Fernanda M. Rezende¹

¹University of Florida

2:45 p.m. PSVI-11 **Role of Differentially Expressed and Imprinted Genes in High and Low Fertility Produced Cattle Pregnancies**

Odile Polanco¹, Gabriela Dalmaso De Melo², Sofia Ortega³, Ramiro V. Oliveira², Gessica Franco², Amanda Bega⁴, Ronaldo Cerri⁵, Ky G. Pohler⁶, Jose M. Vasconcelos⁷

¹Department of Animal Science, Texas A&M University, ²Texas A&M University, ³University of Wisconsin-Madison, ⁴São Paulo State University, ⁵University of British Columbia,

⁶Department of Animal Sciences, Texas A&M University, ⁷Faculdade de Medicina Veterinária e Zootecnia, Universidade Estadual Paulista

2:45 p.m. PSVI-19 **Survey Data Eliciting Barriers and Challenges of Farm Workers at Feedlots and Dairies across the Texas Panhandle: Increasing Adherence to Postmortem Procedures**

Nathaly B. Vargas Arroyo¹, Michael J. Cruz Penn¹, Clinton Roof¹, Linda Dascanio¹, Sara Hooper², Gizem Levent³, Stephanie L. Myers¹, Guy Loneragan¹, Howard Rodriguez Mori¹, Marcelo Schmidt¹, Blaine Johnson¹, Elpida Artemiou¹

¹Texas Tech University School of Veterinary Medicine, ²Arkansas State University College of Veterinary Medicine, ³Texas A&M University Veterinary Integrative Sciences

2:45 p.m. PSVI-9 **Temporal Transcriptional and Functional Dynamics of Small Intestine Mucosal Response to Early Weaning in Piglets**

Ty M. Mitchell¹, Heather A. Moeser¹, Adam J. Moeser¹

¹Michigan State University

2:45 p.m. PSVI-18 **Water intake analysis of high-risk beef calves**

Federico Tarnonsky¹, Araceli B. Maderal¹, Ignacio Fernandez-Marenchino¹, Tomas Andres Soto¹, Macarena Gomez-Salmoral¹, Andres Lacherre¹, Georgia J. Dubeux¹, Camila Gomez-Lopez¹, Andres Fernandez-Lehmann¹, Daniella C. Heredia², Tessa M. Schulmeister¹, Nicolas DiLorenzo³

¹University of Florida, ²UNIVERSITY OF FLORIDA, ³Florida University

Animal Breeding and Genetics IV: Reproductive Efficiency

Chair: Fernanda Rezende, University of Florida

3:30 PM - 4:45 PM

Diplomat Ballroom 2

3:30 p.m. 243 **Genetic parameters for calving ease on beef-on-dairy**

Arielly Oliveira Garcia¹, John B. Cole², Ashley A. Mikush³, Shogo Tsuruta¹, Simone E. F. Guimarães⁴, Ignacy Misztal¹, Daniela Lourenco¹

¹University of Georgia, ²Council on Dairy Cattle Breeding, ³PEAK, ⁴Universidade Federal de Vicos

3:45 p.m. 244 **Genomic prediction of farrowing duration in pigs**

Marcos Lopes¹, Eli Grindflek¹

¹Topigs Norsvin

4:00 p.m. 245 **Genetic parameters for reproductive performance traits before, during, and after Porcine Reproductive and Respiratory Syndrome outbreaks in a purebred maternal line**

Leticia F. Oliveira ¹, Jenelle Dunkelberger ², Claudia Sevillano ³, Saranya Arirangan ¹, Robbee Wedow ¹, Matthew Tegtmeyer ¹, Mitchell Tuinstra ¹, Luiz F. Brito ¹

¹Purdue University, ²Topigs Norsvin USA, ³Topigs Norsvin Research Center

4:15 p.m. 246 **Incorporation of chorionic gonadotropin (hCG) into the presynchronization portion of the 7 & 7 Synch protocol for postpartum beef cows**

Genevieve VanWye ¹, Kim Ricardo ¹, Samantha R. Roberts ², Adella B. Lonas ², Saulo Menegatti Zoca ², Matthew C. Lucy ³, Jordan M. Thomas ¹

¹Division of Animal Sciences, University of Missouri, ²University of Tennessee, ³University of Missouri

4:30 p.m. 247 **Unraveling molecular functions underlying age at puberty in a composite beef cattle population**

Breno O. Fragomeni ¹, Wellison JS Diniz ², Bruno Valente ³, ElHamidi Hay ⁴

¹University of Connecticut, ²Auburn University, ³Genus-PIC, ⁴USDA/ARS/LARRL

Horse Species - Sponsored by Pack Pride Racing

Chair: Robert Jacobs, Zinpro

3:45 PM - 5:00 PM

Diplomat Ballroom 1

3:45 p.m. 223 **Award Talk: The role of immunoglobulin G in horses: past, present and future**

Carolyn J. Hammer ¹

¹College of Agriculture, Food Systems & Natural Resources, North Dakota State University

4:15 p.m. 224 **Unraveling Inbreeding Depression in Peruvian Paso Horses: Implications for Functional Traits and Genetic Improvement Strategies**

Jorge L. Vilela ¹, Paola D. Quintana ², Maria Lourdes L. Velarde ², Jose Dextre ²

¹Universidad Científica del Sur, ²Universidad Científica del Sur, Grupo de Investigación Ciencia Equina y Animales Autóctonos

4:30 p.m. 225 **Effect of increased hemicellulose-bound nitrogen and extended incubation time on in vitro fiber digestibility in horses**

Ryon W. Springer ¹, Michaela R. Plowman ¹, Haley M. Saur ¹, Gabrielle A. Wirtz ¹, Nichole M. Cherry ², James P. Muir ³, Walter F. Owsley ¹, Trinetta N. Jones ¹

¹Tarleton State University, ²Texas A&M AgriLife Research, ³Tarleton State University; Texas A&M AgriLife Research

4:45 p.m. 226 **In vitro digestibility of acid detergent soluble crude protein by equine fecal microbes is decreased with diet lignification**

Ryon W. Springer ¹, Michaela R. Plowman ¹, Paxton L. Turner ¹, Nichole M. Cherry ², James P. Muir ³, Walter F. Owsley ¹, Trinetta N. Jones ¹

¹Tarleton State University, ²Texas A&M AgriLife Research, ³Tarleton State University; Texas A&M AgriLife Research

Poster Session VII

4:15 PM - 5:15 PM

Great Hall 4

4:15 p.m. PSVII-10 **Assessment of carcass, meat quality and lipidome of Nellore bulls with high and low residual feed intake**

Daniela A. Vesga ¹, Irene A. Reis ¹, Rafaela C. Rodrigues ¹, Alexandre S. Losi Filho ², Christina Ferreira ³, Juliana Torrecilhas ², Pedro H.V. Carvalho ⁴, Otavio Machado-Neto ⁵, Luis Artur L. Chardulo ², Welder A. Baldassini ²

¹School of Agricultural and Veterinary Sciences (FCAV), São Paulo State University (UNESP), ²School of Veterinary Medicine and Animal Science (FMVZ), São Paulo State University (UNESP), ³Purdue University, ⁴Colorado State University, AgNext, Department of Animal Sciences, ⁵School of Agricultural and Veterinarian Science, São Paulo State University

4:15 p.m. PSVII-6 **Comparative Fatty Acid Profiling of Australian White and F1 Australian White × Rideau Muscle**

Thais C. Costa ¹, Mariana Lopes ¹, Emily Knapper ², Mingjia Jiang ², Zitling K. Li ², Mariana Gastaldo ², Walmir Silva ², Lucas L. Verado ³, Nick Seroa ⁴, Marcio S. Duarte ²

¹Federal University of Viçosa, ²University of Guelph, ³Federal University of Vales do Jequitinhonha e Mucuri, ⁴Federal University of Lavras

4:15 p.m. PSVII-17 **Correlation Between Loin Depth and Eye Area in Pigs: Development of an Efficient Prediction Model Using Ultrasound Measurements**

Ji-Won Kim ¹, Mun-Hye Kang ¹, Sung Woon Choi ², Chang-gwon Dang ³, Sang Min Lee ³, Byoung-ho Park ³, Han-Sul Yang ¹, Sang-Hyon OH ¹

¹Gyeongsang National University, ²Nonghyup Agribusiness Group Pigbreeding Center, ³National Institute of Animal Science, RDA

4:15 p.m. PSVII-23 **Developing future agricultural extensionists: Enhancing undergraduate students' skills and competencies**

Abner A. Rodriguez-Carias ¹, Anasofia Torres ¹, John Fernandez-Van Cleve ¹

¹University of Puerto Rico

4:15 p.m. PSVII-14 **Dietary supplementation with Yeast Cell Wall preparations reduces the deposition of aflatoxins in the liver of pigs fed diets contaminated with low levels of aflatoxin B1**

Alexandros Yiannikouris ¹, Colm Moran ², Jason D. Keegan ³, Suvi Vartiainen ⁴, Ursula Fox ¹, Juha Apajalahti ⁵

¹Alltech Inc., ²Alltech-France, ³Alltech European Bioscience Centre, ⁴Alimetrics research Ltd, ⁵Alimetrics Research Ltd

4:15 p.m. PSVII-15 **Effect of birth weight on the performance of hyperprolific sows at the first service**

Javier A. Romo-Rubio ¹, Laura Espinoza-Aguirre ¹, Jesús Portillo-Loera ¹, Ana Romo-Valdez ¹, Ulises López-Arroyo ¹, Juan Romo-Valdez ¹, Juan Manuel Uriarte ¹

¹Facultad de Medicina Veterinaria y Zootecnia de la Universidad Autónoma de Sinaloa

4:15 p.m. PSVII-16 **Effect of electronically controlled floor cooling pads on daily thermoregulatory pattern and floor surface cleanliness of Duroc boars during the summer season**

Daphne A. Licuan ¹, Allan P. Schinckel ², Ashley DeDecker ³, Matt Robins ⁴, Chris Grant ⁴, Kara A. Stewart ¹

¹Purdue University Department of Animal Sciences, ²Purdue University, ³Smithfield Foods, ⁴Innovative Heating Technology

4:15 p.m. PSVII-11 **Effect of exogenous fatty acids on bovine fibro-adipogenic progenitor cell proliferation and adipogenic differentiation.**

Perri Gish ¹, Maykal Tsonov ¹, Madison Stewart ¹, Lucas Smith ¹, Payam Vahmani ¹

¹University of California, Davis

4:15 p.m. PSVII-2 **Effect of vitamin A administration in pregnant cows or newborn calves on beef quality and skeletal muscle gene expression**

Marcio M. Ladeira ¹, Sara Laura ², Jose Maria Oliveira ², Tathiane R.S. Gionbelli ², Artur Horta ², Marcela M. Souza ², Paloma Souza ²

¹UFLA, ²Universidade Federal de Lavras

4:15 p.m. PSVII-5 **Effects of the inclusion of canola oil in pork Chorizo on the sensory attributes during 12 days of refrigeration.**

Edgar Fernando Peña Torres ¹, Ana Victoria Flores Vega ¹, Elena Xitlali Gamarra Hernández ¹, Juan Manuel Carvajal Sánchez ¹, Asahel Benitez Hernández ²

¹Universidad del Caribe, ²Universidad Autónoma de Sinaloa

4:15 p.m. PSVII-21 **Functional requirement of niacinamide for intestinal health and growth performance of nursery pigs**

Qinyu Tan ¹, Fangli Tang ¹, Qingxin Ju ¹, Yunlong Shi ¹, Ziyi Yang ¹, Sung Woo Kim ², Yan Zhao ¹

¹Shanxi Agricultural University, ²North Carolina State University

4:15 p.m. PSVII-20 **Functional requirement of nicotinamide for growth performance, blood profiles, and gut health of finishing pigs**

Fangli Tang ¹, Qinyu Tan ¹, Ziyi Yang ¹, Dong Xu ¹, Qingxin Ju ¹, Sung Woo Kim ², Yan Zhao ¹

¹Shanxi Agricultural University, ²North Carolina State University

4:15 p.m. PSVII-28 **Hiring expectations for new and future workers in animal STEM careers**

Meghan C. Wulster-Radcliffe ¹, Steven A. Zinn ², John S. Radcliffe ¹, James C. MacLeod ¹, Rebekah C. Epps ¹, Robert C. Coleman ¹, Carol C. Hanley ¹, Sarah Reed ²

¹University of Kentucky, ²University of Connecticut

4:15 p.m. PSVII-26 **Integrating hands-on animal behavior experience into an undergraduate animal science course**

Morgan Marquardt ¹, Ruth Woiwode ¹

¹University of Nebraska-Lincoln

4:15 p.m. PSVII-3 **Japanese quality and yield grades predictions using Computer Vision Systems at the Canadian beef grading site**

Nuria Prieto ¹, Jose Segura ², Tawanda Tayengwa ¹, Haley Attema ¹, Óscar López-Campos ³

¹Agriculture and Agri-Food Canada, ²Complutense University of Madrid, ³Agriculture and Agri-Food Canada - Lacombe Research and Development Centre

4:15 p.m. PSVII-9 **Microbial characterization of liver abscesses in beef carcasses from the Texas Panhandle using 16S rRNA sequencing**

Kwesi Bofo ¹, Cristian Cabrales Arellano ¹, Francine Mezzomo Giotto ²

¹Eastern New Mexico University, ²New Mexico State University

4:15 p.m. PSVII-12 **Microbial evaluation of inoculated fresh meat utilizing imaging and computer vision**

Keshauna A. Davis ¹, Clarissa Harris ²

¹ASAS, ²Tuskegee University

4:15 p.m. PSVII-4 **Mid-gestational nutrient restriction in the Goat reduces muscle fiber number and induces collagen accumulation in the skeletal muscles of Offspring**

Adel Ghnenis ¹, Jerome C. Peel II ¹, Gemechu Dinegdie ¹

¹Langston University

4:15 p.m. PSVII-1 **Milk lactose digestion and a potential role of intestinal carbohydrates in dairy calves**

Rupert M. Bruckmaier ¹, Sara M. Derighetti ², Anna Lena M. Freihofer ², Josef M. Gross ²

¹Vetsuisse Faculty, University of Bern, ²Veterinary Physiology

4:15 p.m. PSVII-29 **Perceptions of undergraduate students regarding animal use**

Kacie Leonard ¹, Morgan Marquardt ², Ruth Woiwode ²

¹University of Nebraska - Lincoln, ²University of Nebraska-Lincoln

4:15 p.m. PSVII-13 **Prediction of Feed Efficiency in Finishing Pigs Using Different Machine Learning Algorithms and Growth Time Intervals**

Duy Ngoc Do ¹, Mohsen Jafarikia ², Dan Tulpan ³, Laurence Maignel ², Deborah I. Adewole ⁴, Graham S. Plastow ⁵, Justin W. Holl ⁶, Brian Sullivan ², Younes Miar ¹

¹Department of Animal Science and Aquaculture, Dalhousie University, ²Canadian Centre for Swine Improvement, ³University of Guelph, ⁴University of Saskatchewan, ⁵Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, ⁶The Pig Improvement Company, Genus PLC

4:15 p.m. PSVII-18 **Standardization Method for Ultrasound Device Measurements of Pig Loin Area: Compatibility Study Between A-mode and B-mode Devices**

Ji-Won Kim ¹, Mun-Hye Kang ¹, Sung Woon Choi ², Chang-gwon Dang ³, Sang Min Lee ³, Byoung-ho Park ³, Han-Sul Yang ¹, Sang-Hyon OH ¹

¹Gyeongsang National University, ²Nonghyup Agribusiness Group Pigbreeding Center,

³National Institute of Animal Science, RDA

4:15 p.m. PSVII-22 **Student stress reduction through equine interaction led with and without a mental health professional within a campus-based mental health program: A preliminary study**

Emma Farnlacher ¹, Molly Nicodemus ¹, Molly Friend ², Caleb O. Lemley ¹, Clay A. Cavinder ¹

¹Mississippi State University, ²The Pennsylvania State University

4:15 p.m. PSVII-19 **Substandard jujube meal as a functional feed: effects on growth, systemic health, and meat quality in growing-finishing pigs**

Yunlong Shi ¹, Zhiling Dong ¹, Dong Xu ¹, Jiali Wang ¹, Yawen Zhang ¹, Sung Woo Kim ², Yan Zhao ¹

¹Shanxi Agricultural University, ²North Carolina State University

4:15 p.m. PSVII-27 **The Re-establishment of a Competitive Meat Judging Team at Auburn University: Strategies and Challenges**

Tessa L. Barrett ¹, Aerial D. Belk ¹

¹Auburn University

4:15 p.m. PSVII-24 **Training university undergraduates in online educational resources to strengthen school students' understanding of animal-origin foods**

Anasofia Torres ¹, Abner A. Rodriguez-Carias ¹, John Fernandez-Van Cleve ¹

¹University of Puerto Rico

4:15 p.m. PSVII-25 **Undergraduate students' knowledge and perception of welfare and ethical issues in animal agriculture**

Victoria A. Uyanga ¹, Sakil Mahmud ¹, Kimberly Cash ¹, Jessica Epple-Farmer ¹, Adrian Andrei ¹

¹Lincoln University of Missouri

Wednesday, July 9, 2025

Poster Session VIII

7:15 AM - 8:15 AM

Great Hall 4

7:15 a.m. PSVIII-3 **Alternative Nutritional Evaluation of Black Soldier Fly by Substrate in Cat Diets and Its Effect on Fecal Microbiota**

Kyeongho Jeon ¹, Song Dongcheol ¹, Hyuck Kim ², Yang Jinmo ¹, Jinho Cho ¹

¹Chungbuk National University, ²Chungbuk National University, Department of Animal Science

7:15 a.m. PSVIII-14 **An investigation of relationship between self-reported measures of skill and occupational injuries**

Morgan Marquardt ¹, Ruth Woiwode ¹

¹University of Nebraska-Lincoln

7:15 a.m. PSVIII-6 **Analysis of potential biomarkers in dogs diagnosed with three common cancer types shows association with B cell functions**

Madison D. Amundson¹, Rachel A. Eichman¹, Mary O. Odubote², Laura A. Motsinger¹, Leslie B. Hancock¹

¹Hill's Pet Nutrition, ²Eastern Illinois University

7:15 a.m. PSVIII-24 **Bacterial and fungal communities during ensiling and aerobic exposure of whole corn silage treated with a bacterial inoculant or a propionic acid-based additive**

Michael Undi¹, Samat Amat², Godson Aryee³, Kevin K. Sedivec²

¹NDSU, ²North Dakota State University, ³Microbiological Sciences

7:15 a.m. PSVIII-2 **Baked biscuits utilizing spray dried plasma products**

Joy Campbell¹, Angela Smith¹

¹APC LLC

7:15 a.m. PSVIII-13 **Behavior of beef × dairy crossbred calves when transported at 2, 4, 8 and 14 d of age**

Gwinyai E. Chibisa¹, Denise Konetchy¹, Mireille Chahine¹, Gordon K. Murdoch², Lauren Christensen¹, Amber Adams-Progar³

¹University of Idaho, ²Washington State University, ³A.T. Still University

7:15 a.m. PSVIII-4 **Changes in Microbial Metabolic Pathways are Associated with History of Calcium Oxalate Stone Formation in a National Survey of Older Dogs**

Regina L. Hollar¹, Emily L. Hudson¹, Dayakar L. Badri¹, Susan L. Wernimont¹

¹Hills Pet Nutrition

7:15 a.m. PSVIII-23 **Devising a plant-animal interface model for simulating the daily gain of grazing stockers in the southeastern United States**

Prem Woli¹, Monte Rouquette², Charles R. Long³, Luis O. Tedeschi², Kenneth Boote⁴, Gerrit Hoogenboom⁴

¹Texas A&M AgriLife Research, ²Texas A&M University, ³Texas A&M AgriLife, Overton,

⁴University of Florida

7:15 a.m. PSVIII-11 **Effects of *Bacillus pumilus* SG154 or a *Lactobacillus paracasei* 327 Postbiotic on Nutrient Digestibility and the Immune Function and Fecal Characteristics, Metabolites and Microbiota of Adult Dogs**

Jocelyn F. Wren¹, Sofia M. Wilson², Yifei Kang¹, Patricia M. Oba¹, John F. Menton³, Elena Vinay³, Mathieu Millette⁴, Melissa R. Kelly⁵, Kelly S. S. Swanson¹

¹University of Illinois Urbana-Champaign, ²Trouw Nutrition, ³Kerry Group, ⁴Kerry (Canada),

⁵Science Made Simple

7:15 a.m. PSVIII-17 **Effects of managing mature beef bulls on divergent planes of nutrition on eating and activity behavior characteristics**

Roberta B. Dahlen¹, Sarah R R. Underdahl¹, Matthew S. Crouse², Kacie L. McCarthy³, Joel S. Caton¹, Carl Robertson Dahlen⁴

¹North Dakota State University, ²United States Department of Agriculture, ³University of Nebraska - Lincoln, ⁴North Dakota State University Department of Animal Sciences Center for Nutrition and Pregnancy

7:15 a.m. PSVIII-16 **Evaluating navel disinfection practices and health outcomes in newborn beef calves in Canada: a pilot-study**

Abbey Kramer ¹, Madelyn Boychuk ¹, Sarah Kirby ¹, Erica Hamilton ¹, Grace Ward ¹, Desiree Gellatly ¹, Lyndsey Smith ¹, Emilie Edgar ¹, Brittany Bloomfield ¹, Sean Thompson ¹

¹Olds College of Agriculture & Technology

7:15 a.m. PSVIII-8 **Evaluation of Barley Protein in Adult Dog Diets and the Impact on Digestibility, Stool Quality, and Palatability**

Angela M. Gajda ¹, Ping Ren ¹, Nolan Frantz ², Leighann Daristotle ²

¹General Mills, ²General Mills, Inc.

7:15 a.m. PSVIII-28 **Influence of dietary copper concentration on rumen fermentation characteristics in beef steers**

Julia Travassos da Silva ¹, Huey Yi Loh ¹, Tyler A. Thomas ¹, Julia Gabriela Baroni Alves ¹, Arturo Gomez Rodezno ¹, Natasha B. Petrenko ¹, Terry E. Engle ¹

¹Colorado State University

7:15 a.m. PSVIII-29 **Influence of oral drench and free-choice supplementation of organic-complexed trace minerals compared to inorganic trace mineral supplementation on pregnancy rates and calf performance**

Jacy L. Riddle ¹, Jeremy G. Powell ¹, Beth B. Kegley ¹, Charles Looney ¹, Elizabeth Backes-Belew ², Chris Ashworth ³, Bryan Bacher ¹, Bernard W. Krumpelman ¹, Jason Sewell ²

¹University of Arkansas, ²Land O'Lakes, ³Zinpro Corporation

7:15 a.m. PSVIII-9 **Longitudinal characterization of lymphocyte subsets and humoral immune markers in growing Labrador retrievers**

Fiona B. Mccracken ¹, Claire L. Timlin ², Sarah M. Dickerson ², Jason W. Fowler ², Patrick M. Skaggs ¹, Craig N. Coon ²

¹Four Rivers Kennel, ²Four Rivers Kennel, LLC

7:15 a.m. PSVIII-25 **Microclimate in Monoculture Pastures and Pasture-Legume Integration under Different Nitrogen Sources and Gypsum Applications in the Amazon-Cerrado Ecotone, Brazil**

Thaís Lima Figueiredo ¹, Jarilson de Sousa Silva ¹, Maria Helena Silva Santos ¹, Lucas Henrique Mendonça Alves ¹, Luiz Jorge Bezerra da Silva Dias ¹, Diana Valadares Pessoa ¹, Janerson José Coelho ², Erick Rodrigo da Silva Santos ³, Valéria Xavier de Oliveira Apolinário ¹

¹State University of Maranhão, ²State University of Ceará, ³University of Alberta

7:15 a.m. PSVIII-18 **Nebraska State Livestock Management Career Development Event Includes Animal Welfare in 2025**

Kacie Leonard ¹, Morgan Marquardt ², Ruth Woiwode ²

¹University of Nebraska - Lincoln, ²University of Nebraska-Lincoln

7:15 a.m. PSVIII-5 **New Insights Into Feline UTI Prevention: Anti-Adhesion Effects of Mannose, Glucosamine, and Xyloglucans**

Marina Tortadès¹, Rocio Sanchez-Gallardo¹, Kizkitza Busca¹, Eurídice Castañeda-Gutiérrez¹, Jonathan A. Lane¹, Alina Kondrashina¹

¹H&H Research

7:15 a.m. PSVIII-22 **Non-Destructive Estimation of Crude Protein in Mombasa Grass Using Morphometry, Colorimetry, and Spectrophotometry**

Rafael M. Amaral¹, Berman Valverde¹, Floridalma Francisco¹, Oswaldo Carreño¹, Carlomagno Soto¹

¹EARTH University

7:15 a.m. PSVIII-7 **Performance of blood meal as secondary protein sources in extruded dog and cat diets.**

Katherine R. Kerr¹, Nolan Frantz²

¹General Mills, ²General Mills, Inc.

7:15 a.m. PSVIII-12 **Phytate and mineral accessibility in commercial vegetarian and vegan extruded dog foods**

Yunhan Zhang¹, Jeremy Zhu², Mariëlle Koks-van Zelst³, Leon Marchal⁴, Geert Janssens¹, Guido Bosch⁵

¹Ghent University, ²WestSac Petcare Research Institute, ³Vobra Special Petfoods, ⁴IFF Health & Bioscience, ⁵Wageningen University & Research

7:15 a.m. PSVIII-20 **Regrowth interval, forage species, and propionic acid effects on DM and NDF digestibility of warm-season perennial grass silage**

Joao M. B. Vendramini¹, Debora Siniscalchi², Andre Miranda³, Philippe Moriel⁴, Joao Lazarin⁴, Vinicius S. Izquierdo⁴, Hiran Silva³

¹Texas A&M AgriLife Research, ²Sao Paulo State University - UNESP, ³UF/IFAS Range Cattle Research and Education Center, ⁴University of Florida, IFAS / Range Cattle Research and Education Center

7:15 a.m. PSVIII-15 **The effect of heat stress on the eating, ruminating and activity behaviour of dairy cows in early, mid, and late Lactation**

Wisseem Baccouri¹, George Wanjala², Violetta Tóth², István Komlósi³, Edit Mikó²

¹1-Doctoral School of Animal Science, University of Debrecen, 4032 Debrecen, Hungary; 2-Department of Animal Science, Institute of Animal Science, Biotechnology and Natural Conservation, Faculty of Agricultural and Food Sciences and Environmental Management, University of Debrecen, 4032 Debrecen, Böszörményi út 138., Hungary; 3- Institute of Animal Sciences and Wildlife Management, Faculty of Agriculture, University of Szeged, 6800 Hódmezővásárhely, Hungary, ²Institute of Animal Sciences and Wildlife Management, Faculty of Agriculture, University of Szeged, 6800 Hódmezővásárhely, Hungary, ³Doctoral School of Animal Science, University of Debrecen, 4032 Debrecen, Hungary

7:15 a.m. PSVIII-10 **The Impact of PROFORMIX|PET on Gastrointestinal and Metabolic Health in Puppies**

Ashley L. Wagner ¹, Olivia A. Martin ¹, Heidi Armbrust ², Claire L. Timlin ³, Fiona B. Mccracken ⁴, Jason W. Fowler ³, Craig N. Coon ³, Ivan D. Girard ¹

¹Probiotech International Inc., ²KLN Family Brands, ³Four Rivers Kennel, LLC, ⁴Four Rivers Kennel

7:15 a.m. PSVIII-1 **Up-regulation of genes involved in oxidative stress and a potential antioxidant response in aging canines**

Selena K. Tavener ¹, Kiran S. Panickar ¹

¹Science and Technology Center, Hill's Pet Nutrition

Beef Species Symposium: Heavier carcass weights: Strategies to maximize efficiency in current market signal - Sponsored by the Cundiff, Dickerson, Gregory, Koch, Van Vleck (CDGKV) Appreciation Club

Chair: Jhones Sarturi, Texas Tech University

8:00 AM - 11:45 AM

Diplomat Ballroom 2

8:00 a.m. **Beef Species Symposium Introduction**

8:05 a.m. 283 **Managing Carcass Outcomes Through Lifetime Energy Supply in Beef Cattle**

Zachary K. Smith ¹, Federico Podversich ², Warren C. Rusche ², Erin Dehaan ²

¹Department of Animal Science, South Dakota State University, Brookings, SD 57007, USA.,

²South Dakota State University

8:45 a.m. 284 **Nutrient density on arrival and phase-feeding effects on economic returns of feedlot cattle**

Kendall L. Samuelson ¹, Hannah R. Turner ¹, Taylee A. Velasquez ¹

¹West Texas A&M University

9:25 a.m. 285 **How to reconcile the demand for heavy carcass weights with a sustainable cow body size?**

Daniel W. Shike ¹

¹University of Illinois at Urbana-Champaign

10:05 a.m. **Beef Species Symposium Break**

10:20 a.m. 286 **Considerations that impact carcass premiums and discounts of commercial cattle**

Mike Brown ¹

¹Elanco Animal Health

11:00 a.m. 287 **Updated modeling for empty body fat to better represent current larger carcass weights**

Blake Foraker ¹

¹Texas Tech University

Animal Behavior and Well-Being Symposium: Precision Feeding for Improving Livestock Health and Well-Being - Sponsored by Temple Grandin Appreciation Club

Chair: Christopher Byrd, North Dakota State University

8:00 AM - 12:15 PM

Great Hall 1

8:00 a.m. **Animal Behavior and Well-Being Symposium Introduction**

8:05 a.m. 262 **Precision feeding technologies for health and welfare: practice, promise, and pie-in-the-sky**

Robin R. White ¹

¹Virginia Tech

8:50 a.m. 263 **Precision livestock feeding for improving animal welfare**

Courtney L. Daigle ¹

¹Texas A&M University

9:35 a.m. 264 **Precision Feeding for Programming Brain Development and Reproductive Performance of Beef Heifers**

Rodolfo C. Cardoso ¹

¹Texas A&M University

10:20 a.m. **Animal Behavior and Well-Being Symposium Break**

10:35 a.m. 266 **Feeding Regulation and Body Weight in Rodents**

Qingchun Tong ¹

¹University of Texas Health Science Center at Houston

11:20 a.m. 267 **Tailoring Nutrition with AI: Behavioral Insights for Precision Feeding and Livestock Welfare**

Isabella C. F. S Condotta ¹

¹University of Illinois Urbana-Champaign

CSAS Symposium I: Livestock Microbiomes: Innovations and Impacts on Animal Health and Agriculture - Sponsored by the Canadian Society of Animal Science

Chair: Robert Gruninger, Agriculture and Agri-Food Canada

8:15 AM - 11:00 AM

Diplomat Ballroom 4

8:15 a.m. **CSAS Symposium I Introduction**

8:20 a.m. 288 **Fueling the Microbiome: How Dietary Energy and Protein Influence Rumen and Milk Microbial Communities in Transition Dairy Cattle**

Renée M. Petri ¹, Céline Ster ¹

¹Agriculture and Agri-Food Canada (AAFC)

8:55 a.m. 289 **Enhancing Swine Health, Production, and Sustainability through Microbiome Research**

Devin B. Holman ¹

¹Lacombe Research and Development Centre, Agriculture and Agri-Food Canada

9:30 a.m. **CSAS Symposium I Break**

9:45 a.m. 290 **Impact of Altering Maternal Gut Microbiome via High-Forage or High-Concentrate Diets on Offspring Microbiome Development, Methane Emissions and Animal Performance in Cattle**

Samat Amat ¹, Godson Aryee ², Justine Kilama ¹, Kell Helmuth ¹, Brooklyn M. Kuzel ³, Christy Finck ¹, Devin B. Holman ⁴, Sarah Underdahl ¹, Joel S. Caton ¹, Kevin K. K. Sedivec ¹, Kendall C. Swanson ¹, Carl Robertson Dahlen ³

¹North Dakota State University, ²Microbiological Sciences, ³North Dakota State University Department of Animal Sciences Center for Nutrition and Pregnancy, ⁴Lacombe Research and Development Centre, Agriculture and Agri-Food Canada

10:20 a.m. **Invited Speaker Dr. Robert Gruninger**

Robert J. Gruninger ¹

¹Agriculture and Agri-Food Canada

Poster Session IX

8:30 AM - 9:30 AM

Great Hall 4

8:30 a.m. PSIX-21 **Assessment of multiple mycotoxins in total mixed rations for beef cattle feedlots in Brazil**

Carlos H. Corassin ¹, Rogério Pires ², Cristina Cortinhas ³, Aline Borowsky ², Victor V. Carvalho ³, Tobias Alves e Silva ²

¹School of Animal Science and Food Engineering - University of São Paulo, ²Luiz de Queiroz College of Agriculture - University of São Paulo, ³dsm-firmenich, Innovation & Applied Science Department, SP, Brazil

8:30 a.m. PSIX-1 **Biofilm Formation and Anti-Inflammatory Response of a Probiotic Blend**

Mandy Horn ¹, Nicholas L.F. Gallina ², Nicole Irizarry Tardi ², Xilin Li ², Alvin Cai ², Bruce M. Applegate ², Lavanya Reddivari ², Arun K. Bhunia ²

¹CH2 Animal Solutions, ²Purdue University

8:30 a.m. PSIX-5 **Changes in abundance of potential genes involved in cardiac disease progression in dogs with moderate and severe heart murmurs**

Madison D. Amundson ¹, Laura A. Motsinger ¹, Selena K. Tavener ², Leslie B. Hancock ¹

¹Hill's Pet Nutrition, ²Science and Technology Center, Hill's Pet Nutrition

8:30 a.m. PSIX-7 **Changes in circulating immune markers in aging canines indicate a modest Th1 bias**

Selena K. Tavener ¹, Kiran S. Panickar ¹

¹Science and Technology Center, Hill's Pet Nutrition

8:30 a.m. PSIX-17 **Characterization of goat production systems in Arkansas**

Dan Quadros ¹, Andrew Milsom ¹

¹University of Arkansas System Division of Agriculture

8:30 a.m. PSIX-9 **Digestibility assessment of various carbohydrate sources in dry cat food**

Hyun-Jun Jang ¹, Eun Ryul Oh ¹, Young Bin Park ², Sung Ho Lee ²

¹Center for Industrialization of Agricultural and Livestock Microorganisms, ²WOOGENE B&G Co., Ltd.

8:30 a.m. PSIX-20 **Effect of Mepron on the reproductive performance of precocious Nellore heifers in a grazing system**

Tales L. Resende ¹, Fabiano Alvim Barbosa ², Anderson Di Pietro ², Jose Mauro Diogo ³, Ivo Pivato ³, Tiago Souza ³, Rodrigo J. Oliveira ⁴, Sergio Lucio Salomon Cabral Filho ³, Gilberto Leite ³, Jacob Goelema ²

¹Evonik Animal Nutrition, ²De Heus Animal Nutrition B.V., ³University of Brasilia, ⁴São Paulo State University (UNESP), School of Agricultural and Veterinary Sciences

8:30 a.m. PSIX-23 **Effect of restricted forage intake and protein supplementation on low-quality forage digestibility and rumen fermentation in Brahman steers**

Alyson B. Fontenot ¹, Raylee A. Ezzell ¹, Kaitlyn E. Kempen ¹, Clay P. Mathis ¹, Tryon A. Wickersham ¹

¹Texas A&M University

8:30 a.m. PSIX-18 **Effects of Ascorbic Acid and Artemisia absinthium Supplementation on Heat Stress Responses in Spanish Goats During Summer in Oklahoma**

Sonibare O. Adekayode ¹, Ryszard Puchala ¹, Hirut Y. Yirga ², Dereje T. Gulich ³, Ignacio Tovar-Luna ¹, Maxine Brown ⁴, Amlan K. Patra ¹

¹American Institute for Goat Research, Sherman Lewis School of Agriculture and Applied Sciences, Langston University, Langston OK 73050, ²American Institute for Goat Research, Sherman Lewis School of Agriculture and Applied Sciences, Langston University, ³Langston University, ⁴Rural Agricultural Development Authority

8:30 a.m. PSIX-19 **Effects of Natural Sources of Brackish Water on Milk Yield and Composition of Alpine Dairy Goats**

Hirut Y. Yirga ¹, Woldemariam Dawit ², Ryszard Puchala ³, Dereje T. Gulich ², carlos alvarado ⁴, Amlan K. Patra ³

¹American Institute for Goat Research, Sherman Lewis School of Agriculture and Applied Sciences, Langston University, ²Langston University, ³American Institute for Goat Research, Sherman Lewis School of Agriculture and Applied Sciences, Langston University, Langston OK 73050, ⁴langston university

8:30 a.m. PSIX-13 **Enhancing Livestock Health Monitoring: AI Driven Approaches for Anemia Detection in Small Ruminants**

Priyanka Gurrapu ¹, Aftab Siddique ¹, Phaneendra Batchu ¹, Ramya Kota ¹, Goutham Isai ², Jan Van Wyk ³, Eric Morgan ⁴, Thomas H. Terrill ¹

¹Fort Valley State University, ²Fort valley State University, ³University of Pretoria, ⁴Queen's University

8:30 a.m. PSIX-10 **Evaluation of a Probiotic With Psyllium Using Canine and Feline-Specific Intestinal In Vitro Fermentation Assays**

Alison N. Beloshapka ¹, Julie K. Spears ¹

¹Nestle Purina PetCare Company

8:30 a.m. PSIX-11 **From vat to bowl: ethanol vs. brewer's yeast in dog food palatability**

Melina A. Bonato ¹, Marcia Villaca ¹, Marcelo Beraldo Costa ¹, Graziela Alves da Cunha Valini ¹

¹ICC Animal Nutrition

8:30 a.m. PSIX-14 **Genome-Wide Association Study for PTC Sensitivity in Rangeland Rams**

Katie A. Shira ¹, Gabrielle M. Becker ¹, Sarem Khilji ¹, Lucelia Moura Pereira ¹, Daniel Schaub ¹, Joshua Bret B. Taylor ², Brenda M. Murdoch ¹

¹University of Idaho, ²USDA, ARS, Range Sheep Production Efficiency Research Unit

8:30 a.m. PSIX-29 **Impact of the use of a blend based on organic minerals and yeasts and road transport for 48 hours on the intake of Nellore cattle fed with forage**

José Maria Cesar Neto ¹, Mateus J. I. Abreu ², Gabriel Santos Souza David ¹, Luciana Melo Sousa ³, Bianca Rodrigues Domingos ¹, Luiz Fernando Costa e Silva ⁴, Gustavo Henrique Maciel Henrique Maciel Bisio ⁵, Flávio D. Resende ⁶, Gustavo Rezende Siqueira ⁷

¹UNESP - FCAV, Jaboticabal, ²College of Agronomics and Veterinary Sciences - University of São Paulo State Júlio de Mesquita Filho, ³University of Florida, IFAS / Range Cattle Research and Education Center, ⁴Alltech do Brasil Agroindustrial Ltda, ⁵Centro Universitário da Fundação Educacional de Barretos, ⁶Agência Paulista de Tecnologia dos Agronegócios, Colina, SP, Brazil, ⁷São Paulo Agency for Agribusiness Technology

8:30 a.m. PSIX-12 **In Vitro Fermentation Characteristics of Acacia Fiber Using Feline Fecal Inoculum**

Vanessa M. M. De La Guardia-Hidrogo ¹, Patrícia M. Oba ¹, Olivia R. Swanson ¹, Laura L. Bauer ¹, Elena Vinay ², John F. Menton ², Mathieu Millette ³, Melissa R. Kelly ⁴, Ryan N. N. Dilger ¹, Kelly S. S. Swanson ¹

¹University of Illinois Urbana-Champaign, ²Kerry Group, ³Kerry (Canada), ⁴Science Made Simple

8:30 a.m. PSIX-25 **Interaction Between Maternal Parity and Creep Feeding Supplementation on the Productive Performance and Metabolism of Grazing Nellore Cow-Calf Pairs**

Iris Costa ¹, Leticia Z. Pistillo ², José Augusto Godinho ¹, Mozart Fonseca ², Edenio Detmann ¹, Sidnei Antonio Lopes ¹, Claudia B. Sampaio ¹

¹Federal University of Viçosa, ²New Mexico State University

8:30 a.m. PSIX-4 **Interlaboratory Comparison of Vitamin D Analysis in Canned Pet Food**

Katherine R. Kerr ¹, Nolan Frantz ²

¹General Mills, ²General Mills, Inc.

8:30 a.m. PSIX-8 **Lickable pet product texture containing spray dried plasma products**

Joy Campbell ¹, Carmen Rodriguez ¹, Paola Oller ¹, Javier Polo ¹

¹APC LLC

8:30 a.m. PSIX-3 **Microbial Protein Inclusion in Adult Dog Diets and the Impact on Digestibility, Stool Quality, and Palatability**

Angela M. Gajda ¹, Ping Ren ¹, Nolan Frantz ², Leighann Daristotle ²

¹General Mills, ²General Mills, Inc.

8:30 a.m. PSIX-26 **Performance and Body Composition of Early-Maturing Zebu Heifers Under Different Supplementation Levels on Pasture During Pre-Puberty**

Gabrielle Machado ¹, Luanna Coelho ¹, José Augusto Godinho ¹, Pedro Veiga ², Edenio Detmann ¹, Márcio Souza Duarte ¹, Claudia B. Sampaio ¹

¹Federal University of Viçosa, ²Cargill Animal Nutrition and Health, Innovation Center

8:30 a.m. PSIX-15 **Performance, and carcass, and retail cuts yield of genetically improved lambs weaned and slaughtered at two body weights and fed total rations during the growing and finishing periods**

Sherly A. Garcia-Rivera ¹, Abner A. Rodriguez-Carias ², Katherine Domenech ², John Fernandez-Van Cleve ²

¹Universidad de Puerto Rico, Mayaguez, ²University of Puerto Rico

8:30 a.m. PSIX-16 **Relationship between Gastrointestinal Nematodes and Milk Somatic Cells in Katahdin ewes**

Alexis H. Rooks ¹, Noah L. Wilkes ², Amy N. Abrams ², Sunday O. Peters ², Aridany Suarez-Trujillo ²

¹University of Georgia, ²Berry College

8:30 a.m. PSIX-27 **Supplementing a Bacillus-based probiotic improves rumen digestibility and fermentation responses in growing beef heifers**

Izadora de Souza ¹, Reinaldo F. Cooke ², Camila Prado ¹, Shea Mackey ¹, Bruno Cappelozza ³

¹Texas A&M University, ²Department of Animal Science, Texas A&M University, ³Novonesis

8:30 a.m. PSIX-24 **The effects of camelina meal in western Canadian winter-feeding diets on feed intake and growth performance of replacement beef heifers**

Stephanie A. Terry ¹, Melissa S. Williams ¹, Gabriel O. Ribeiro Junior ², Gleise da Silva ³, Katharine M. Wood ⁴

¹Agriculture and Agri-Food Canada - Lethbridge Research and Development Centre, Lethbridge, Alberta, T1J4B1, Canada, ²University of Saskatchewan, ³Department of Agricultural, Food and Nutritional Science, University of Alberta, ⁴University of Guelph

8:30 a.m. PSIX-2 **The Long-term Effect of Cannabidiol on the circulating Metabolome of Healthy Adult Dogs**

Isabella Corsato Alvarenga ¹, Kim Wilson ², Stephanie McGrath ³

¹International Flavors and Fragrances (IFF), ²Hill's Pet Nutrition, ³Colorado State University

8:30 a.m. PSIX-6 **TXB2, a Marker of Inflammation, Increases with Aging and Chronic Disease, and Decreases when Cats and Dogs are Fed Omega-3 Fats**

Regina L. Hollar ¹, Kiran S. Panickar ², Matthew I. Jackson ¹

¹Hill's Pet Nutrition, ²Science and Technology Center, Hill's Pet Nutrition

8:30 a.m. PSIX-22 **Use of Programmed Gain on Backgrounding Beef Steers**

Logan R. Thompson ¹, Zachary K. Smith ², Jonn Frey ¹, Haley E. Larson ³, Carlee M. Salisbury ¹, Matthew R. Beck ⁴, Dale A. Blasi ¹

¹Kansas State University, ²Department of Animal Science, South Dakota State University, Brookings, SD 57007, USA., ³Kansas State University - Olathe, ⁴Department of Animal Science, Texas A&M University

Physiology and Endocrinology III: Nutrition, Stress, and Fetal Programming

Chair: Rodrigo Marques, Virginia Tech

8:30 AM - 10:30 AM

Diplomat Ballroom 5

8:30 a.m. 314 **Award Talk: Is mitigating heat stress in beef cattle adapted to tropical/subtropical environments necessary?**

Vinicius de Souza Izquierdo ¹, Joao M. B. Vendramini ², Philippe Moriel ³

¹University of Florida, ²Texas A&M AgriLife Research, ³University of Florida, IFAS / Range Cattle Research and Education Center

9:00 a.m. 315 **Inadequate body condition at calving negatively affects perinatal nutrient availability in beef calves**

Allison M. Meyer ¹, Abigail R. Rathert-Williams ¹, Lauren C. Crutsinger ¹, Colby A. Redifer ¹

¹Division of Animal Sciences, University of Missouri

9:15 a.m. 316 **Maternal Citrulline Supplementation Increases Fetal Growth and Programs Postnatal Pancreatic Development in the Lamb**

Alissa Herring ¹, Kyle Herron ¹, London G. Lemcke ², Gregory A. Johnson ³, Guoyao Wu ⁴, M. Carey Satterfield ¹

¹Texas A&M University, ²texas A&M University, ³Department of Veterinary Integrative Biosciences, Texas A&M University, College Station, TX 77843, USA, ⁴Department of Animal Science, Texas A&M University

9:30 a.m. 317 **Maternal Citrulline Supplementation to Nutrient-Restricted Ewes During Gestation Programs Glycine Metabolism in the Postnatal Lamb**

London G. Lemcke ¹, Alissa Herring ², Kyle Herron ², Guoyao Wu ³, M. Carey Satterfield ²

¹texas A&M University, ²Texas A&M University, ³Department of Animal Science, Texas A&M University

9:45 a.m. 318 **Award Talk: The Evaluation of Source and Level of Rumen Undegradable Protein on Growth Performance, Follicular Parameters, and Embryonic Development in Developing Beef Heifers**

Taylor N. Andrews ¹, Clayton Bedke ¹, Joyce Anne Cooper ¹, Katylyn Richardson ¹, Craig A. Gifford ¹, Richard L. Dunlap ², Shad H. Cox ², George A. Perry ³, Esteban Mesen ⁴, Eric J. Scholljegerdes ¹, Adam F. Summers ¹

¹Animal and Range Sciences Department, New Mexico State University, ²Corona Range and Livestock Research Center, New Mexico State University, ³Texas A&M AgriLife Research,

⁴Reprologix Reproductive Technologies

10:15 a.m. 319 **Single-cell Profiling Reveals Impaired Mitochondrial Function in Mature β -cell Population from Growth Restricted Sheep Fetuses**

Rosa Icela Luna Ramirez ¹, Sean W. Limesand ¹, Miranda J. Anderson ¹

¹The University of Arizona

ASAS Publications Committee Symposium

Chair: Sarah Reed, University of Connecticut

8:30 AM - 10:45 AM

Great Hall 2

8:30 a.m. **ASAS Publications Committee Symposium Introduction**

8:35 a.m. 277 **Building Trust in Science: How Editors and Reviewers Uphold Scientific Integrity**

Elisabeth Huff Huff-Lonergan ¹

¹Iowa State University

9:05 a.m. 278 **Building Trust in Science: How authors build confidence in scientific integrity during the review process**

Dustin D. Boler ¹

¹University of Illinois

9:35 a.m. 279 **Building Trust in Science: Considerations from a Reviewer's Perspective**

Sarah Reed ¹

¹University of Connecticut

10:05 a.m. **ASAS Publications Committee Symposium Round Table Discussion**

**Animal Breeding and Genetics V:
Sustainability, Environmental Adaptation, Health, and Welfare**

Chair: Breno Fragomeni, University of Connecticut

8:30 AM - 11:00 AM

Regency Ballroom 1

**8:30 a.m. 320 Can We Define Production Environments More Effectively by
Combining Climate and Management Data?**

Hilal Yazar Gunes ¹, Réka Howard ², Carrie S. Wilson ³, Thomas W. Murphy ⁴, Bradley A. Freking ⁴, Joan M. Burke ⁵, Joshua Bret B. Taylor ³, Luiz F. Brito ⁶, Ronald M. Lewis ⁷

¹University of Nebraska-Lincoln, ²UNIVERSITY OF NEBRASKA - LINCOLN, ³USDA, ARS, Range Sheep Production Efficiency Research Unit, ⁴USDA, ARS, Roman L. Hruska U.S. Meat Animal Research Center, ⁵USDA, ARS, Dale Bumpers Small Farms Research Center, ⁶Purdue University, ⁷Department of Animal Science, University of Nebraska-Lincoln

**8:45 a.m. 321 Genetic Parameters for Blood Urea Nitrogen, Methane Emissions,
and Feed Intake in Angus Beef Cattle**

MacKenzie L. Griffin ¹, Scott E. Speidel ¹, R. Mark Mark Enns ¹, Sara E. Place ², Kimberly R. Stackhouse-Lawson ²

¹Colorado State University, ²Colorado State University, AgNext, Department of Animal Sciences

**9:00 a.m. 322 Mid-Finishing Pulmonary Arterial Pressure Compared to Late-
Finishing Pulmonary Arterial Pressure as Indicators of Heart Score**

Paige A. Autry ¹, R. Mark Mark Enns ¹, Isabella Kukor ¹, Timothy N. Holt ¹, Matthew Cleveland ², Ben P. Holland ³, Alyssa B. Word ³, Guy Ellis ³, Miles Theurer ⁴, Scott E. Speidel ¹

¹Colorado State University, ²Genus PLC, ABS, ³Cactus Research, ⁴Veterinary Research and Consulting Services, LLC

**9:15 a.m. 323 Assessing the economic injury threshold and decay of performance
after onset due to Horn Fly abundance in Beef Cattle**

Mahsa Zare ¹, Koushik Das ², Amanda M. Warner ³, Sammy.E E. Aggrey ², Romdhane Rekaya ²

¹university of Georgia, ²University of Georgia, ³university of georgia

**9:30 a.m. 324 Genetic parameters for sow longevity traits in purebred and
crossbred maternal line pig populations**

Maria Rita G. Silva ¹, Hinayah Rojas de Oliveira ², Ching-Yi Chen ³, Adria Bhatnagar ⁴, Justin W. Holl ⁵, Luiz F. Brito ²

¹Department of Animal Sciences, Purdue University, West Lafayette, IN, USA, ²Purdue University, ³Research Scientist Manager at PIC, Genus PLC, ⁴Genus PIC, Hendersonville, TN, 37075, USA, ⁵The Pig Improvement Company, Genus PLC

9:45 a.m. Animal Breeding and Genetics V Break

10:00 a.m. 325 **Genetic Parameters and Genomic Predictions for Milk Yield by Season in US Holsteins: Assessing Genotype by Environment Interactions Under Heat Stress in Texas and Wisconsin**

Gaurav Dutta ¹, Henry Schober ², Taylor McWhorter ³, Francesco Tiezzi ⁴, Asha Miles ⁵, Breno O. Fragomeni ²

¹University Of Connecticut, ²University of Connecticut, ³Council on Dairy Cattle Breeding,

⁴University of Florence, ⁵USDA-AGIL

10:15 a.m. 326 **Genetic Evaluation of Lamb Survival in Canadian Sheep Using a Random Regression Model**

Sirlene F. Lazaro ¹, Hinayah Rojas de Oliveira ², Flavio S. Schenkel ¹

¹University of Guelph, ²Purdue University

10:30 a.m. 327 **Beating the Heat: Gene Network Analysis Reveal the Genetics of Thermotolerance in Brangus Cattle**

Gabriel A. Zayas ¹, Camila Santos Rojas ², Eduardo E. Rodriguez ², Fahad Rafiq ², Raluca Mateescu ²

¹University of Florida, ²Department of Animal Sciences, University of Florida

10:45 a.m. 328 **Late-Breaking: Transfer Learning for Improving Dairy Cattle Body Weight Prediction in Small Farms Using Depth Images and Point Cloud Data**

Jin Wang ¹, Angelo De Castro ¹, Lucas Basolli Borsatto ¹, Yuechen Guo ¹, Victoria Bastos Primo ², Ana Beatriz Montevecchio Bernardino ², Gota Morota ³, Ricardo C Chebel ², Haipeng Yu ¹

¹Department of Animal Sciences, University of Florida, ²Department of Large Animal Clinical Sciences, University of Florida, ³Department of Agricultural and Environmental Biology, Graduate School of Agricultural and Life Sciences, The University of Tokyo

Horse Species Symposium: Current and Future Outlook on Equine Industry, Research Trends, and Opportunities: How to promote a sustainable field into the future

Chair: Robert Jacobs, Zinpro

8:30 AM - 11:30 AM

Diplomat Ballroom 1

8:30 a.m. **Horse Species Symposium Introduction**

8:35 a.m. 280 **Invited Speaker Sarah White-Springer**

Sarah H. White-Springer ¹

¹Texas A&M University and AgriLife Research

9:20 a.m. 281 **Invited Speaker Dr. Jason Bruemmer**

Jason Bruemmer ¹

¹USDA, National Wildlife Research Center

10:05 a.m. **Horse Species Symposium Break**

10:20 a.m. 282 **One Health Concept for All Creatures Great and Small**

Ted S. Yoho ¹

¹Capitol Concepts Consulting

11:05 a.m. **Horse Species Symposium Round Table Discussion**

Nonruminant Nutrition III

Chair: Brad Lawrence, Novus International Inc

9:15 AM - 11:00 AM

Great Hall 5

9:15 a.m. 297 **Less Plasma, same growth performance? Sugar cane yeast extract as an animal-free protein source alternative in weaned piglet diets**

Melina A. Bonato ¹, Graziela Alves da Cunha Valini ¹, Fernando Augusto de Souza ¹, Caio Abercio Abercio da Silva ²

¹ICC Animal Nutrition, ²Universidade Estadual de Londrina

9:30 a.m. 298 **Effect of dietary S-abscisic Acid (S-ABA) supplementation on the growth performance and antioxidant status of nursery pigs**

Ron Aldwin S. Navales ¹, Mike D. Tokach ², Jamil Faccin ², Jordan T. Gebhardt ², Theresa J. Rathbun ², Joel M. DeRouchey ², Katelyn N. Gaffield ², Robert D. Goodband ², Jason C. Woodworth ², Izuru Shinzato ³, Tsuyoshi Tonoue ³, Daisuke Matsui ³, Hiraoka Tetsuya ⁴

¹KSU, ²Kansas State University, ³Sumitomo Chemical Co., Ltd., ⁴Valent BioSciences

9:45 a.m. 299 **Effect of the inclusion of Aextra® Pro on the ileal and total tract digestibility of energy and nutrients, concentrations of metabolizable energy, and N retention in a commercial diet fed to swine**

Diego A. Lopez Diaz ¹, Matt D. Miesner ², Jordan T. Gebhardt ¹, Zhong Rao ³, Chad B. Paulk ¹

¹Kansas State University, ²KANSAS STATE UNIVERSITY, ³IFF-Danisco

10:00 a.m. **Nonruminant Nutrition III Break**

10:15 a.m. 300 **Protease improves feed conversion of weaned pigs recovering from experimental F18 E. coli challenge and fed soybean meal with different trypsin inhibitor levels**

Jesus A. Acosta ¹, Brad V. Lawrence ¹, Rasha Qudsieh ¹, Deana Hancock ¹

¹Novus International Inc

10:30 a.m. 301 **Effect of the addition of fermented components with feed enzymes to pig diets on metabolic processes, including regulation of gut-brain axis activity**

Karol Pachciński ¹

¹Department of Biochemistry and Toxicology, University of Life Sciences in Lublin

10:45 a.m. 302 **Late-Breaking: Improving the porcine in vitro digestibility of maize using xylanase and cellulase alone or in combination with debranching enzymes**

Harriet A. Njeru ¹, Knud Erik A. Bach Knudsen ¹, Tofuko A. Woyengo ¹

¹Aarhus university

Ruminant Nutrition IV: Environmental Impact Studies

Chair: Ibukun M Ogunade, West Virginia University

9:30 AM - 11:15 AM

Great Hall 3

9:30 a.m. 288 Impact of Brahman genetics on feed efficiency and methane emissions of heifers with implications for the Florida cow-calf producers

Andres Fernandez-Lehmann ¹, Araceli B. Maderal ¹, Camila Gomez-Lopez ¹, Ignacio Fernandez-Marenchino ¹, Liza Garcia ¹, Andres Lacherre ¹, Federico Podversich ¹, Federico Tarnonsky ¹, Daniella C. Heredia ², Mauro Venturini ¹, Georgia J. Dubeux ¹, Mariana Larrauri ¹, Macarena Gomez-Salmoral ¹, Tomas Andres Soto ¹, Tessa M. Schulmeister ¹, Nicolas DiLorenzo ¹

¹University of Florida, ²UNIVERSITY OF FLORIDA

9:45 a.m. 289 Efficacy of increasing levels of a urea-biuret mixture on beef cattle performance and enteric methane emissions.

Araceli B. Maderal ¹, Ignacio Fernandez-Marenchino ¹, Federico Tarnonsky ¹, Camila Gomez-Lopez ¹, Andres Lacherre ¹, Federico Podversich ², Tomas Andres Soto ¹, Andres Fernandez-Lehmann ¹, Mariana Larrauri ¹, Georgia J. Dubeux ¹, Wilmer Cuervo ³, Liza Garcia ¹, Tessa M. Schulmeister ¹, Isabel Ruiz ⁴, Ignacio R. Ipharaguerre ⁵, Nicolas DiLorenzo ¹

¹University of Florida, ²South Dakota State University, ³Clemson University, ⁴Yara Industrial Solutions, ⁵Institute of Human Nutrition and Food Science Christian-Albrechts-University

10:00 a.m. 290 Novel Medium-Chain Fatty Acid Products Derived from Agriculture and Food Production Systems Decrease Cattle Greenhouse Gas Emissions in Vitro

Natalie Arias ¹, Kalliroi Simeonidis ², Alexis H. Rooks ¹, Madison M. Dycus ¹, Joseph Usack ¹, Jeferson M. Lourenco ¹

¹University of Georgia, ²University of Milano

10:15 a.m. Ruminant Nutrition IV: Beak

10:30 a.m. 294 Pelleted Seaweed (*Asparagopsis taxiformis*) Effectively Reduces Enteric Methane Emissions in Grazing Beef Cattle

Paulo Meo-Filho ¹, John F. Ramirez-Agudelo ², Ermias Kebreab ²

¹University of California, Davis - Department of Animal Science, ²University of California, Davis - Department of Animal Science

10:45 a.m. 292 Characterizing methane emissions through In vivo and Ex vivo models during a transition from a high-forage to a high-grain diet.

Macarena Gomez-Salmoral ¹, Ignacio Fernandez-Marenchino ¹, Araceli B. Maderal ¹, Camila Gomez-Lopez ¹, Federico Tarnonsky ¹, Andres Fernandez-Lehmann ¹, Samuel Gomez-Sierra ¹, Guillermo Szopko ¹, Mariana Larrauri ¹, Georgia J. Dubeux ¹, Mauro Venturini ¹, Martin Ruiz-Moreno ¹, Tessa M. Schulmeister ¹, A. R. Castillo ², Nicolas DiLorenzo ¹

¹University of Florida, ²University of California, Davis

11:00 a.m. 293 **Effects of restricted feeding on enteric methane production and energy and nitrogen balance in growing steers**

Madeline S. Grant¹, Landon G. Canterbury¹, Aubrey C. Thompson-Smith¹, Colten W. Dornbach¹, Kallie D. Childress¹, P. Rand Broadway², Nicole C. Burdick Sanchez², Bryan W. Neville³, Michael L. Galyean⁴, Kristin E. Hales¹

¹Department of Animal and Food Sciences, Texas Tech University, ²United States Department of Agriculture, Agriculture Research Service, Livestock Issues Research Unit, ³USDA-ARS, U.S. Meat Animal Research Center, ⁴Department of Veterinary Sciences, Texas Tech University

Companion Animal II - Sponsored by Trouw Nutrition

Chair: James Templeman, Primal Pet Foods, Primal Pet Group, Fairfield, California; Julia Guazzelli Pezzali, Kansas State University
9:30 AM - 12:30 PM
Diplomat Ballroom 3

9:30 a.m. 243 **Award Talk: Ecological factors influencing dog and cat biology**

Guido Bosch¹

¹Wageningen University & Research

10:00 a.m. 244 **Gait Changes in the Aging Canine**

Claire L. Timlin¹, Sarah M. Dickerson¹, Fiona B. Mcracken¹, Craig N. Coon¹

¹Four Rivers Kennel, LLC

10:15 a.m. 245 **Safety, Gastrointestinal Tolerance, and Digestibility of Brewed Chicken Protein in Healthy Adult Dogs**

Meredith Smola¹, Kelly S. S. Swanson¹, Patrícia M. Oba¹, Tomas Belloso², Julio Mito¹, Pernilla Audibert²

¹University of Illinois Urbana-Champaign, ²Bond Pet Foods

10:30 a.m. 246 **Serum Metabolomics of Senior Dogs Fed A Fresh, Human-Grade Food or an Extruded Kibble Diet**

Rae Sires¹, Ryan M. Yamka¹, Joe J. Wakshlag¹, Heather J. Huson²

¹The Farmer's Dog, ²Cornell University

10:45 a.m. 247 **Effects of dietary and fecal microbial transplant treatments on fecal characteristics, metabolites, and microbiota of adult cats treated with metronidazole**

Sara E. Martini¹, Patrícia M. Oba¹, Jan S. Suchodolski², Kelly S. S. Swanson¹

¹University of Illinois Urbana-Champaign, ²Texas A&M University

11:00 a.m. **Companion Animal II Break**

11:15 a.m. 248 **Retrospective investigation of the relationship between nutrition support plan and outcome in hospitalized cats at a veterinary teaching hospital**

Sophia E. Willis¹, Reed E. Wixon², John M. Gonzalez¹, Jorge Hidalgo¹, Sara E. Gonzalez², Jacqueline M. Parr²

¹University of Georgia Department of Animal and Dairy Sciences, ²University of Georgia College of Veterinary Medicine

11:30 a.m. 249 **Effects of spray-dried plasma and fructo-oligosaccharides consumption on feed digestibility and microbiome modulation in dogs: From in vitro testing to real world study**

Marina Tortadès¹, Kizkitza Busca¹, Clodagh Walsh¹, Reuben O'Hea¹, Eurídice Castañeda-Gutiérrez¹, Carlota Carvajal-Esteve¹, Jonathan A. Lane¹, Alina Kondrashina¹

¹H&H Research

11:45 a.m. 250 **Quantifying feed ingredient consumption for U.S. pet food**

Charles Starkey¹, Paul Davis², Lara Moody³, Betsy Flores⁴

¹North American Renderers Association, ²AFIA, ³IFEEDER, ⁴Pet Food Institute

12:00 p.m. 251 **Effects of red sorghum bran inclusion in extruded diet on apparent total tract digestibility of macronutrients and gross energy, fecal quality, hematology, and serum biochemistry profile of adult dogs**

Nayara Mota Miranda Soares¹, Katelyn Bailey-Wisnieski¹, Cody Robertson¹, Yonghui Li¹, Julia Guazzelli Pezzali¹

¹Kansas State University

12:15 p.m. 252 **Late-Breaking: Determining the Total Daily Water Intake in Dogs Fed a Fresh, Human-Grade Food Compared to an Extruded, Dry Kibble Diet.**

Rae Sires¹, Joe J. Wakshlag¹, Ryan M. Yamka¹

¹The Farmer's Dog

Poster Session X

9:45 AM - 10:45 AM

Great Hall 4

9:45 a.m. PSX-22 **A survey of North American Yak Owners with a Focus on Meat Production**

Jeffrey W. Lehmkuhler¹, Darrh Bullock¹, Katie VanValin¹, Leslie H. Anderson¹, Kevin Laurent¹

¹University of Kentucky

9:45 a.m. PSX-29 **Application of substandard jujube meal in pig diets: energy value and nutrient availability**

Dong Xu¹, Jianqin Ding¹, Jiali Wang¹, Yawen Zhang¹, Wenjie Wang¹, Sung Woo Kim², Yan Zhao¹

¹Shanxi Agricultural University, ²North Carolina State University

9:45 a.m. PSX-20 **Cluster Analysis to Identify Bone Quality Patterns in Broilers Fed with Trisetum Flavescens Extract**

Cleverson Souza¹, Dimitri Freitas¹, Rafael Martins¹, Ricardo Vianna Nunes², Nilton Rohloff Junior²

¹Phytobiotics, ²UNIOESTE

9:45 a.m. PSX-19 **Critical points for optimizing timed AI outcomes in beef cattle**
Myarisnette Vega Sepulveda ¹, Joao H. J. Bittar ¹, Sahar A. Kandeel ¹, Beatriz S. Nemoto ²,
Samuel Castro ², Kristi L. Jones ¹, Pedro L. J. Monteiro ¹
¹Department of Large Animal Clinical Sciences, University of Florida, ²Department of Large
Animal Clinical Sciences, University of Florida

9:45 a.m. PSX-15 **Diet-, Breed-, and Sex-Dependent Effects in Taxonomic and
Functional Signatures of the Rumen Microbiome in Meat Goats**
Amlan K. Patra ¹, Ryszard Puchala ¹, Ignacio Tovar-Luna ¹
¹American Institute for Goat Research, Sherman Lewis School of Agriculture and Applied
Sciences, Langston University, Langston OK 73050

9:45 a.m. PSX-26 **Effect of physically effective neutral detergent fiber and starch
inclusion on ruminal motility for feedlot cattle**
Murillo C S Pereira ¹, Robson Dinardi ¹, Gabriela Fogaça ¹, Cainã Carvalho ¹, Júlia Ferreira ¹,
Pedro Tonelli ¹, Danilo D. Millen ², Gregory B. Penner ³, Zachary K. Smith ⁴
¹São Paulo State University (UNESP), College of Agricultural and Technological Sciences,
Dracena, SP 17915-899, Brazil., ²São Paulo State University (UNESP), School of
Agricultural and Veterinary Sciences, ³University of Saskatchewan, ⁴Department of Animal
Science, South Dakota State University, Brookings, SD 57007, USA.

9:45 a.m. PSX-6 **Effects of administration of a non-specific immunostimulant prior
to timed artificial insemination on pregnancy per artificial insemination in mature beef
cows**
Jeremy Block ¹, Susan Reil ², Abby L. Zezeski ², Thomas W. Geary ²
¹Department of Animal Science, University of Wyoming, ²USDA-ARS Fort Keogh LARRL

9:45 a.m. PSX-17 **Effects of Hair Shedding and Mashona Service Sires on the
Performance of Spring-calving Dexter Cows**
Cevat Tartan ¹, Richard Browning ¹, Emily G. Hayes ¹, Heather Riggs ¹, Maria L. Leite-
Browning ¹
¹Tennessee State University

9:45 a.m. PSX-1 **Effects of Maternal Stressors on Testicular Development in Utero
in Beef Cattle**
Ridwan Olamide Sanni ¹, John Kastelic ¹, Nilusha Malmuthuge ², Juan Hernandez-Medrano ³
¹University of Calgary, ²Agriculture and Agri-Food Canada (AAFC), ³University of Calgary,
Faculty of Veterinary Medicine

9:45 a.m. PSX-29 **Effects of Probiotic and Xylanase Supplementation in DDGS
Feeds on Metabolism of Berkshire Pigs Finished in Hoop Structures**
Ashlee C. Robinson ¹, Ayanna Harrison ¹, Brianna Carter ¹, Daisha Peele-Kendrick ¹, Karla
J. Branch ¹, Haleigh Pettress ¹, Derrick J. Coble ²
¹North Carolina A&T State University, ²North Carolina Agricultural and Technical State
University

9:45 a.m. PSX-8 **Effects of synthetic eCG-like glycoprotein on follicular and luteal characteristics in primiparous beef cows with or without postpartum supplementation**

Alejandro M. Rodriguez ¹, Sebastian Maresca ¹, sebastian O. Lopez Valiente ¹, Agustín Tiberio ¹, Santiago Perez-Wallace ², Guillermina G. Bilbao ³, Nathan Long ⁴, Ana Meikle ⁵, Julián A. Bartolomé ⁶

¹INTA, ²Syntex S.A., ³Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina. Facultad de Ciencias Veterinarias Universidad Nacional de La Pampa, Argentina., ⁴Clemson University, ⁵Facultad de Veterinaria, Universidad de la República, ⁶Facultad de Ciencias Veterinarias, Universidad Nacional de La Pampa

9:45 a.m. PSX-13 **Effects of the dietary concentrate level and harvest weight on growth performance and harvest traits of Boer and Kiko growing kids**

Ignacio Tovar-Luna ¹, Ryszard Puchala ¹, Amlan K. Patra ¹, Dereje T. Gulich ², Hirut Y. Yirga ³, Sonibare O. Adekayode ¹, Fabiola L. Encinas ¹, Arthur L. Goetsch ¹

¹American Institute for Goat Research, Sherman Lewis School of Agriculture and Applied Sciences, Langston University, Langston OK 73050, ²Langston University, ³American Institute for Goat Research, Sherman Lewis School of Agriculture and Applied Sciences, Langston University

9:45 a.m. PSX-12 **Effects of the dietary hempseed meal on feed intake, digestion, methane emission, and heat production in Boer does during late gestation**

Ignacio Tovar-Luna ¹, Ryszard Puchala ¹, Amlan K. Patra ¹, Dereje T. Gulich ², Hirut Y. Yirga ³, Sonibare O. Adekayode ¹, Fabiola L. Encinas ¹, Nar K. Gurung ⁴, Arthur L. Goetsch ¹

¹American Institute for Goat Research, Sherman Lewis School of Agriculture and Applied Sciences, Langston University, Langston OK 73050, ²Langston University, ³American Institute for Goat Research, Sherman Lewis School of Agriculture and Applied Sciences, Langston University, ⁴Tuskegee University

9:45 a.m. PSX-11 **Evaluation of a Laser Methane Detector for Measuring Methane Emissions in Growing Spanish Goats Fed Different Diets**

Dereje T. Gulich ¹, Ryszard Puchala ², Sonibare O. Adekayode ², Hirut Y. Yirga ³, Amlan K. Patra ², Ignacio Tovar-Luna ², Terry A. Gipson ², Lionel J. Dawson ², Byeng Ryel Min ⁴, Arthur L. Goetsch ²

¹Langston University, ²American Institute for Goat Research, Sherman Lewis School of Agriculture and Applied Sciences, Langston University, Langston OK 73050, ³American Institute for Goat Research, Sherman Lewis School of Agriculture and Applied Sciences, Langston University, ⁴Tuskegee University

9:45 a.m. PSX-24 **Evaluation of termite frass as broiler chicken beddings with different heat treatments on the chemical properties, viable bacterial counts, and ammonia production in vitro**

Yoko Tsukahara ¹, Satoshi Egawa ¹, Hajime Kumagai ¹, Hiroyuki Hirooka ¹, Kenji Matsuura ¹
¹Kyoto University

9:45 a.m. PSX-3 **Fatty acids supplementation alters prostaglandin synthesis in bovine trophoblast cells and embryos produced in vitro**

Claudia Maria Bertan Membrive¹, Lucas Bezerra², Laura Rolniche³, Maria Pinto³, Catarina Prestes³, Eduardo Bernardo³, Isabela Feltrin², Amanda Guimarães da Silva⁴, Alan Ealy⁵, Guilherme Pugliesi⁴

¹São Paulo State University (UNESP), College of Technology and Agricultural Sciences, Dracena Campus, ²São Paulo State University (UNESP), Institute of Bioscience, Botucatu, SP 18618-688, Brazil., ³São Paulo State University (UNESP), College of Agricultural and Technological Sciences, Dracena, SP 17915-899, Brazil., ⁴University of São Paulo (USP), College of Veterinary Medicine and Animal Science, ⁵Virginia Polytechnic Institute and State University, Animal and Poultry Sciences, Blacksburg, VA 24061, USA.

9:45 a.m. PSX-10 **High protein and energy feed supplementation enhance gastrointestinal parasite resilience in organic farming sheep**

Tumen Wuliji¹, Chao Ke², Kaitlyn Adams², Lindsey Fischer³

¹Lincoln university, ²University of Missouri, ³Lincoln University

9:45 a.m. PSX-21 **Impact of Shade and Chromium Supplementation on Performance and Blood Metabolites of Finishing Steers Under Heat Stress Conditions**

Barbara Roqueto do Reis¹, Geovanne Silva¹, Hiam Marcon², Kelsey R. Mazeres¹, Matheus Felliipe Lana Ferreira³, Sabrina T. Amorim⁴, Marcelo Vedovatto², Mariane Beline⁵

¹CREC-White Sand Beef Unit, Mississippi State University, ²Louisiana State University Agricultural Center, ³Louisiana State University, ⁴Oklahoma State University, ⁵School of Animal Sciences- Virginia Tech

9:45 a.m. PSX-25 **In situ ruminal degradation of feedstuffs in beef cattle fed finishing diets with varying starch levels**

André L N Rigueiro¹, Alan R C Carvalho², Robson Dinardi³, Gabriela Fogaça³, Cainã Carvalho³, Jéssica Gusmão¹, Renan Santos¹, Gabriel O. Ribeiro Junior⁴, Murillo C S Pereira³

¹Campanelli Innovation Center, Agro-Pastoril Paschoal Campanelli, Altair, 15430-000, São Paulo, Brazil., ²São Paulo State University (UNESP), College of Technology and Agricultural Sciences, Dracena, 17900-000, São Paulo, Brazil., ³São Paulo State University (UNESP), College of Agricultural and Technological Sciences, Dracena, SP 17915-899, Brazil.,

⁴University of Saskatchewan

9:45 a.m. PSX-5 **Influence of sperm viability on the morphological status of boar sperm**

Bradley A. Didion¹, Gary C. Althouse²

¹Genus plc, ²University of Pennsylvania

9:45 a.m. PSX-2 **Investigation of body condition and metabolic health and their role in the reproductive success of managed southern white rhinoceros**

Emily Bach¹, Shana Lavin¹, Mandi Schook¹, Andrew Alba¹, Gina Ferrie², Catharine Wheaton¹, Jess Rivera¹, Allie Richardson¹, Parker Pennington³, Louisa Rispoli³, Elizabeth Donelan³, Kelly MacLeod⁴, Drew Arbogast⁴, Michele Miller⁵, Marieke Jones⁶, Lori K. Warren⁷

¹Animals, Science and Environment, Disney's Animal Kingdom, ²Zoo Atlanta, Animal Collections and Conservation, ³Center for Conservation and Research of Endangered Wildlife, Cincinnati Zoo & Botanical Garden, ⁴Department of Environmental Science and Policy, George Mason University, ⁵SAMRC Centre for Tuberculosis Research, Division of Molecular Biology and Human Genetics, Faculty of Medicine and Health Sciences, Stellenbosch University, ⁶Department of Public Health Sciences, University of Virginia, ⁷Department of Animal Sciences, University of Florida

9:45 a.m. PSX-27 **Machine Learning Prediction of Individual Beef Cattle Grazing Dry Matter Intake**

Nathan Blake¹, Eswar ArunKumar Kalaga¹, Matthew Walker¹, Tylor J. Yost¹, Deborah Ologunagba¹, Ida Holaskova¹, Jarred Yates¹, Matthew E. Wilson¹

¹West Virginia University

9:45 a.m. PSX-9 **Quality parameters of goat meat as influenced by dried distillers grains with solubles**

Dream Valles¹, Donielle Pannelle¹, Brou Kouakou¹, Jung H. Lee¹

¹Fort Valley State University

9:45 a.m. PSX-4 **Reproductive outcomes in Nelore beef heifers submitted to different protocols using injectable progesterone to induce ovulation prior to the timed-AI protocol**

Amanda Guimarães da Silva¹, Pedro Antônio de Pádua Andrade², Samuel Volpe Souza³, Otacilio Jarcem Escobar Junior⁴, Rogério Fonseca Guimarães Peres⁴, Igor Garcia Motta⁵, Isabella Rio Feltrin³, Guilherme Pugliesi¹

¹University of São Paulo (USP), College of Veterinary Medicine and Animal Science, ²Unip - Swift Campinas, ³University of Sao Paulo, ⁴Agropecuaria Nelore Parana, ⁵Ourofino Saude Animal

9:45 a.m. PSX-14 **Supplementation with Carbo-amino-phospho-chelates Minerals alters Muscle Proteome and improves Cellular Health and Metabolism in Feedlot Cattle**

Daniel I. C. G. Gouvêa¹, Maria B. Niehues¹, Alexandre Perdigão², Victor Valério de Carvalho³, Tiago S. Acedo⁴, Mirele Daiana D. Poletti⁵, Heidge Fukumasu⁵, Gustavo F. Souza¹, Mário B. B. Arrigoni¹, Cyntia L. L. Martins¹

¹College of Veterinary Medicine and Animal Science (FMVZ), São Paulo State University – UNESP, Botucatu, Brazil, ²DSM-Firmenich, Department of Innovation and Applied Science, São Paulo, Brazil, ³dsm-firmenich, Department of Innovation, São Paulo, Brazil, ⁴dsm-firmenich, ⁵College of Animal Science and Food Engineering (FZEA), University of São Paulo – USP, Pirassununga, Brazil

9:45 a.m. PSX-16 **The impact of free-choice diet selection on feed efficiency and oxidative stress in growing sheep**

Jonh Frey ¹, Carlee M. Salisbury ¹, Logan R. Thompson ¹

¹Kansas State University

9:45 a.m. PSX-23 **Use of unmanned aerial vehicle technologies to assess nutrient landscape of cattle pens managed with energy dense vs. low energy feeding programs**

Logan E. Diller ¹, Haley E. Larson ², Logan R. Thompson ¹, Dale A. Blasi ¹

¹Kansas State University, ²Kansas State University - Olathe

9:45 a.m. PSX-7 **Validation of a rapid hand-held device for the quantification of glucose in bovine follicular fluid.**

Damon Smith ¹, Brette D. Poliakiwski ¹, Zachary K. Seekford ², Thaina Minela ¹, Cliff C.

Lamb ³, Ky G. Pohler ²

¹Department of Animal Science, Texas A&M University, ²Department of Animal Sciences, Texas A&M University, ³Texas A&M AgriLife

Poster Session XI

11:00 AM - 12:00 PM

Great Hall 4

11:00 a.m. PSXI-21 **A survey of management practices implemented on Kentucky beef cattle operations: Guiding program development and quality improvement.**

Katie VanValin ¹, Jeffrey W. Lehmkuhler ¹, Leslie H. Anderson ¹, Darrah Bullock ¹, Kevin

Laurent ¹, Tyler A. Purvis ¹, Maggie Ginn ¹

¹University of Kentucky

11:00 a.m. PSXI-25 **An evaluation of plasma folate and vitamin B12 concentrations of newly received feedlot heifers**

M. Duplessis ¹, M. M. M. Smithyman ², Glenn C. Duff ², D. H. Kleinschmit ³, M. E. E. Branine ³

¹Agriculture and Agri-Food Canada, ²New Mexico State University, Clayton Livestock Research Center, ³Zinpro Corporation

11:00 a.m. PSXI-14 **Characterization of lineage-specific small non-coding RNA expression between embryonic layers of porcine conceptuses during peri-implantation development.**

Ty Montgomery ¹, Mary York ², Hong An ², Kiho Lee ³

¹Division of Animal Sciences, University of Missouri, ²Bioinformatics and Analytics Core, University of Missouri, ³National Swine Resource and Research Center, University of Missouri

11:00 a.m. PSXI-3 **Comparing the heritability of methane emission traits in cattle and sheep: A Meta-analysis**

Timothy Houghton ¹, Emily M. Leishman ², Natalee T. Richardson ¹, Jennifer L. Ellis ¹, Filippo Miglior ³, Flavio S. Schenkel ¹, Christine F. Baes ¹, Ricarda E. Jahnel ¹

¹University of Guelph, ²Aarhus University, ³Lactanet

11:00 a.m. PSXI-18 **Effect of beef bull fertility on conceptus attachment and pregnancy loss in multiparous lactating dairy cows**

Amanda Silva ¹, Megan Tobias ¹, Alisson Santos ¹, James R. Pursley ¹

¹Michigan State University

11:00 a.m. PSXI-15 **Effect of daily low doses of hCG in the luteal and follicular dynamic of bos indicus Nelore beef heifers**

Joao Paulo Andrade ¹, Bruno Carvalho ², Victor Gomez-Leon ³, Rafael Domingues ⁴, Roberto Sartori ⁵, Milo C. Wiltbank ⁶

¹Department of Agricultural Science, West Texas A&M University, ²Empresa Brasileira de Pesquisa Agropecuaria (Embrapa-Acre), ³Department of Animal Sciences & Industry, Kansas State University, ⁴Department of Animal Sciences, Ohio State University,

⁵Department of Animal Science, Luiz de Queiroz College of Agriculture, University of São Paulo (ESALQ/USP), ⁶Department of Animal and Dairy Sciences, University of Wisconsin-Madison

11:00 a.m. PSXI-26 **Effect of ViandiPlus on the performance and carcass characteristics of Nelore bulls**

Fabiano Alvim Barbosa ¹, Jean Philippe Ricaud ², Renata Helena Branco Arnandes ³, Juliano José de Resende Fernandes ⁴, Eduardo Marostegan de Paula ⁵, Elaine Magnani ⁶, Thiago Henrique da Silva ³, Izadora Mazagão Veloso ⁴, Matheus Pereira dos Santos ⁴, Anderson Di Pietro ¹, Jacob Goelema ¹

¹De Heus Animal Nutrition B.V., ²Idena Animal Nutrition, ³IZ Institute of Animal Science, Beef Cattle Research Center, ⁴University Federal of Goiás, ⁵Colorado State University, ⁶Institute of Animal Science, Sustainable Livestock Center

11:00 a.m. PSXI-20 **Effects of dietary inclusion of omega-3 fatty acid-based supplement on biological parameters and sperm motility and morphology of developing beef bulls**

Allen G. Schwartz ¹, Brandon J. Fraser ¹, Danielle M. Stock ¹, Jordana Zimmermann ², Eduarda M. Bortoluzzi ², Adam Bassett ², Saulo M. Zoca ³, Nicholas Dias ², Jason M. Warner ²

¹Kansas State University - Department of Animal Sciences & Industry, ²Kansas State, ³University of Tennessee

11:00 a.m. PSXI-11 **Effects of dietary threonine and arginine levels on stress response, animal welfare score, antioxidant capacity, and jejunal morphology of broiler chickens raised under multiple stress conditions**

Yeong Bin Kim ¹, Ju Yeong Park ¹, Gyu Lim Yeom ¹, Ha Neul Lee ¹, Geun Yong Park ¹, Ji Won Shin ¹, Jong Hyuk Kim ¹

¹Chungbuk National University

11:00 a.m. PSXI-27 **Effects of managing mature beef bulls on divergent planes of nutrition on sperm transcriptome**

Wellison JS Diniz¹, Cierrah J. J. Kassetas², Sheri T. Dorsam², Sarah R R. Underdahl², Kacie L. McCarthy³, Friederike Baumgaertner², James D. D. Kirsch², Kevin K. K. Sedivec², Joel S. Caton², Alison K. Ward⁴, Carl Robertson Dahlen⁵

¹Auburn University, ²North Dakota State University, ³University of Nebraska - Lincoln,

⁴Department of Veterinary Biomedical Sciences, University of Saskatchewan, ⁵North Dakota State University Department of Animal Sciences Center for Nutrition and Pregnancy

11:00 a.m. PSXI-4 **Effects of maternal chromium propionate supplementation for beef cows at late gestation on skeletal muscle metabolism in the offspring**

Emily Knapper¹, Luiza Vitarelli Kladt², Ivan Avalos-Rosario¹, Sarah E. Dean¹, Walimir Silva¹, Nick Serao³, Jerilyn Hergenreder⁴, Elliot Neto⁴, Katharine M. Wood¹, Michael A. Steele¹, Marcio S. Duarte¹

¹University of Guelph, ²Federal University of Viçosa, ³Federal University of Lavras, ⁴Kemin Industries, Inc

11:00 a.m. PSXI-12 **Effects of pen dimension and group size on growth, physiological responses, and puberty attainment of beef heifers reared in drylots at a high stocking density**

Shea Mackey¹, Reinaldo F. Cooke², Camila Prado¹, Izadora de Souza¹, Kelsey M. Harvey³

¹Texas A&M University, ²Department of Animal Science, Texas A&M University, ³Mississippi State University

11:00 a.m. PSXI-13 **Effects of stocking density on growth, physiological responses, and puberty attainment of beef heifers reared in drylots**

Camila Prado¹, Reinaldo F. Cooke², Izadora de Souza¹, Shea Mackey¹, Kelsey M. Harvey³

¹Texas A&M University, ²Department of Animal Science, Texas A&M University, ³Mississippi State University

11:00 a.m. PSXI-22 **Efficacy of estrus detection by an ear-tag activity monitoring system for beef females**

Frank Even¹, Nikki Tabatabai¹, Trinity Vidlund¹, Camille Mitchell¹, Arnaldo Limede², Vinicius Alves Cruz¹, Rodrigo Marques³, Vitor RG Mercadante⁴

¹Virginia Tech - School of Animal Sciences, ²Virginia Polytechnic and State University,

³Virginia Tech, ⁴Virginia Tech - School of Animal Sciences; Large Animal Clinical Sciences

11:00 a.m. PSXI-2 **Evaluating the Relationship Between Rumen Microbial Composition and Divergent Digestible Fibre Intake in Beef Heifers**

Megan M. Dubois¹, Eóin O'Hara², Gregory B. Penner¹, Herbert A. Lardner³, Wade Abbott², Robert J. Gruninger², Gabriel O. Ribeiro Junior¹

¹University of Saskatchewan, ²Agriculture and Agri-Food Canada, ³Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK Canada

11:00 a.m. PSXI-5 **Evaluation of behavioral traits of beef calves inoculated with a bovine-derived blend of Lactic Acid Bacteria.**

Vanessa Ramirez Sepulveda ¹, Arturo Macias Franco ¹, Maria Camila Londono Mendez ¹, Sergio David Lasso Ramirez ¹, Tim A. McAllister ², Karen S. Schwartzkopf-Genswein ², Maria C Ceballos ³, Nilusha Malmuthuge ², Le Luo Guan ⁴, Gleise da Silva ¹

¹Department of Agricultural, Food and Nutritional Science, University of Alberta, ²Agriculture and Agri-Food Canada (AAFC), ³University of Calgary, ⁴The University of British Columbia

11:00 a.m. PSXI-28 **Gene signature patterns in endometrium through co-expression network analysis associated with fertility in beef heifers**

Priyanka Banerjee ¹, Nicholas C. Kertz ², Paul W. Dyce ¹, Wellison JS Diniz ¹

¹Auburn University, ²University of Florida

11:00 a.m. PSXI-6 **Genetic analysis of hip and elbow dysplasia in guide dogs**

Victoria F. Storing ¹, Ricarda E. Jahnel ¹, Flavio S. Schenkel ¹, Christine F. Baes ¹, Andy B. Robinson ¹

¹University of Guelph

11:00 a.m. PSXI-1 **Identifying genomic regions linked to novel reproductive traits in Holstein cattle**

Sakshi Ashar ¹, Gabriella Dodd ¹, Filippo Miglior ², Flavio S. Schenkel ¹, Ricarda E. Jahnel ¹, Christine F. Baes ¹, Lucas SF Lopes ³, C. Machefert ¹, Ronaldo Cerri ⁴

¹University of Guelph, ²Lactanet, ³Ontario Veterinary College, ⁴University of British Columbia

11:00 a.m. PSXI-8 **Increasing Dietary Copper Sulfate Does Not Improve Copper Status of Beef Heifers Consuming High-Sulfate Water**

Jordan A. Johnson ¹, Natacha S. Hogan ¹, Emily R. Snyder ¹, Gabriel O. Ribeiro Junior ¹, Koryn S. Hare ¹, Gregory B. Penner ¹

¹University of Saskatchewan

11:00 a.m. PSXI-16 **Intercaruncular lipidome is affected by form of Se at maternal recognition of pregnancy in beef heifers**

Sarah N. Carr ¹, Olufemi Oyewo ¹, Benjamin Crites ², Phillip Bridges ³

¹Kentucky State University, ²STGenetics, ³University of Kentucky

11:00 a.m. PSXI-17 **In-vitro culture of bovine endometrial epithelial cells: a comparative analysis between virgin heifers and postpartum Holstein cows**

Diana Canaveral Restrepo ¹, Scott E. Pooch ¹, Michael F. Smith ¹, Julia M. Vieira Dada ², Matthew C. Lucy ¹

¹University of Missouri, ²Universidade Tecnológica Federal do Paraná

11:00 a.m. PSXI-23 **Modelling environmental impacts associated with use of implants in pre-weaned calves**

Kim H. Ominski ¹, Deanne H. Fulawka ², Megan Donnelly ², Karin H. Wittenberg ², Tim A. McAllister ³, Getahun Legesse ⁴, Marcos Cordeiro ², Kelly W. Bruns ⁵

¹Department of Animal Science, Faculty of Agricultural and Food Sciences, University of Manitoba, Winnipeg, Manitoba, Canada, R3T 2N2, ²University of Manitoba, ³Agriculture and Agri-Food Canada (AAFC), ⁴Manitoba Agriculture, ⁵University of Nebraska

11:00 a.m. PSXI-10 **Movement patterns and water source seeking in grazing lactating first-calf beef cows with different residual feed intake**

Maria Camila Londono Mendez ¹, Sergio David Lasso Ramirez ¹, Arturo Macias Franco ¹, Alexandra Harland ¹, Edward Bork ¹, Carolyn J. Fitzsimmons ², John A. Basarab ¹, Graham S. Plastow ³, Francisco José Novais ¹, Gleise da Silva ¹

¹Department of Agricultural, Food and Nutritional Science, University of Alberta, ²Department of Agricultural, Food and Nutritional Science, University of Alberta and Agriculture and Agri-Food Canada, ³Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta

11:00 a.m. PSXI-7 **Rumen degradation kinetics of chicory forage as a monoculture and in mixture with meadow bromegrass and sainfoin.**

Brooke A. Tindal ¹, Aklilu W. Alemu ², Bill Biligetu ³, Breeanna Kelln ⁴, Daalkhaijav Damiran ⁵, Isaac Aboagye ², Herbert A. Lardner ⁵

¹Department of Animal and Poultry Science, University of Saskatchewan, ²Agriculture Canada, ³Department of Plant Sciences, University of Saskatchewan, ⁴University of Saskatchewan, ⁵Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK Canada

11:00 a.m. PSXI-29 **Rumen microbiome and in vitro digestibility of goats divergent in feed efficiency**

Chai Ju ¹, Yu Chen ¹, Yani Wu ¹, Haitao Shi ¹, Yaqiu Lin ¹, Falong Yang ¹, Xi Wang ¹

¹Southwest Minzu University

11:00 a.m. PSXI-19 **Selenium-specific lipidome in the liver of beef heifers at maternal recognition of pregnancy**

Sarah N. Carr ¹, Happiness Ajayi ², Benjamin Crites ³, Phillip Bridges ⁴

¹Kentucky State University, ²College of Agriculture, Health Science, and Natural Resources, Kentucky State University, Frankfort, KY, 40601, USA, ³STGenetics, ⁴University of Kentucky

11:00 a.m. PSXI-9 **Using growth implants in suckling beef calves enhances their growth performance and hematological responses**

Sergio David Lasso Ramirez ¹, Herbert A. Lardner ², Maria Camila Londono Mendez ¹, Gleise da Silva ¹

¹Department of Agricultural, Food and Nutritional Science, University of Alberta, ²Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK Canada

11:00 a.m. PSXI-24 **Vaginal microbiome is associated with breed and pregnancy status in beef cattle**

Breno O. Fragomeni ¹, Emma Forster ², Sarah Hird ², Abby L. Zezeski ³, Thomas W. Geary ³, ElHamidi Hay ⁴

¹University of Connecticut, ²UConn, ³USDA-ARS Fort Keogh LARRL, ⁴USDA/ARS/LARRL

**Physiology and Endocrinology Symposium: Advances in Reproductive Physiology:
Unraveling the High Fertility Cycle in Cattle**

Chair: Victor Gomez-Leon, Department of Animal Sciences & Industry,
Kansas State University
12:30 PM - 5:00 PM
Great Hall 1

12:30 p.m. **Physiology and Endocrinology Symposium Introduction**

12:35 p.m. 329 **Ovarian Reserve and Fertility: Bridging Basic Science and
Reproductive Management**

Jessica C. L. Motta ¹, Alvaro Garcia-Guerra ²

¹The University of Maine, ²The Ohio State University

1:15 p.m. 330 **Mechanisms of Luteal Formation and Maintenance**

Cecily V. Bishop ¹, Fredrick Stormshak ¹

¹Oregon State University

1:55 p.m. 331 **Importance of sex-steroids to uterine receptivity for pregnancy in
beef cattle**

Mario Binelli ¹, Cecilia Constantino Rocha ², Alexandra Bennett ¹, ABDUL WAHEED ¹, Felipe
A C C da Silva ³, Thiago Martins ⁴, Guilherme Pugliesi ⁵

¹University of Florida, ²University of Missouri, ³North Dakota State University, ⁴Division of
Animal Sciences, University of Missouri, ⁵University of São Paulo (USP), College of
Veterinary Medicine and Animal Science

2:35 p.m. **Physiology and Endocrinology Symposium Break**

2:55 p.m. 332 **Pregnancy loss following transfer of in vitro-produced embryos**

Pat Lonergan ¹

¹School of Agriculture and Food Science, University College Dublin, Belfield, Dublin 4,
Ireland

3:35 p.m. 333 **Bull management: From sperm quality to herd fertility**

Saulo M. Zoca ¹, George A. Perry ², Pedro Fontes ³

¹University of Tennessee, ²Texas A&M AgriLife Research, ³University of Georgia

4:15 p.m. 334 **The impacts of temperament and stress on reproductive efficiency in
beef females**

Nicholas Wege Dias ¹, Sydney H. Flax ¹, Danielle M. Stock ¹, Allen G. Schwartz ¹, Sandy
Johnson ², Vitor RG Mercadante ³

¹Kansas State University - Department of Animal Sciences & Industry, ²Kansas State
University - Department of Animal Sciences & Industry; Northwest Research and Extension
Center, ³Virginia Tech - School of Animal Sciences; Large Animal Clinical Sciences

Poster Session XII

1:15 PM - 2:15 PM

Great Hall 4

1:15 p.m. PSXII-16 **A Full-Stack Web Application for Swine Growth Simulation and Decision Support for the Growing Finishing Production Phase**

Ramaraju Muppalla ¹, Atefeh Rahimifar ¹, Karun Kaniyamattam ¹, Jeffrey Wiegert ¹, Luis O. Tedeschi ¹

¹Texas A&M University

1:15 p.m. PSXII-13 **A proteomics characterization of the effects of growth-promoting technologies on muscle metabolism and carcass traits in Angus Steers**

Irene Alexandre Reis ¹, Ashley K. Schilling-Hazlett ², Edilane C. Martins ², Erin N. Burke ², Willian Souza ³, Welder A. Baldassini ⁴, Otavio Machado-Neto ⁵, Mohammed Gagaoua ⁶, Kimberly R. Stackhouse-Lawson ², Pedro H.V. Carvalho ²

¹Colorado State University - AgNext, Department of Animal Sciences, ²Colorado State University, AgNext, Department of Animal Sciences, ³São Paulo State University, ⁴School of Veterinary Medicine and Animal Science (FMVZ), São Paulo State University (UNESP), ⁵School of Agricultural and Veterinarian Science, São Paulo State University, ⁶PEGASE, INRAE, Institut Agro

1:15 p.m. PSXII-27 **Adaptive Dry Matter Intake Prediction in Grazing Cattle Using GPBoost machine learning model.**

Eswar ArunKumar Kalaga ¹, Nathan Blake ¹, Tylor J. Yost ¹, Deborah Ologunagba ¹, Matthew Walker ¹, Ida Holaskova ¹, Jarred Yates ¹, Matthew E. Wilson ¹

¹West Virginia University

1:15 p.m. PSXII-20 **Digestible amino acid and phosphorus contents in oat groats fed to growing pigs**

Jinyoung Lee ¹, Bonjin Koo ¹, Martin Martin Nyachoti ¹

¹University of Manitoba

1:15 p.m. PSXII-9 **Effect of different levels of supplementation on the ingestive behavior of Nellore bulls raised on pasture during the dry season**

Stéfany Oliveira de Souza ¹, Amanda dos Santos ¹, Mateus J. I. Abreu ², Rafael Neiva Assunção ¹, Leandro Mendes de Paula ¹, Hiam Jardel Marcon Giacomelli ¹, Flávio Dutra de Resende ³, Gustavo Rezende Siqueira ⁴

¹FCAV - UNESP Jaboticabal, ²College of Agronomics and Veterinary Sciences - University of São Paulo State Júlio de Mesquita Filho, ³Bolsista de Pesquisa, Agência Paulista de Tecnologia dos Agronegócios, ⁴São Paulo Agency for Agribusiness Technology

1:15 p.m. PSXII-6 **Effect of ractopamine-HCl on the release of myokine FGF-21 in cultured primary bovine muscle cells**

Katie A. Shira ¹, Brenda M. Murdoch ¹, Kara J. Thornton ², Gordon K. Murdoch ³

¹University of Idaho, ²Utah State University, ³Washington State University

1:15 p.m. PSXII-15 **Effect of supplementation in diet with essential oils and butyric acid glycerides on the qualitative characteristics of broilers meat**

Valquíria Cação da Cruz¹, Caroline Gomes Azevedo¹, Bárbara Fernanda da Silva Barbosa¹, Isabele Lanza Meidas¹, Layra Araújo Ferreira¹, Luana Albuquerque da Silva¹, Igor Henrique Pepi Cotrim¹, Gustavo do Valle Polycarpo¹, Ramon Diniz Malheiros²

¹São Paulo State University (UNESP), College of Agricultural and Technological Sciences, Dracena, SP, Brazil, ²Prestage Department of Poultry Science, North Carolina State University, Raleigh, NC, USA

1:15 p.m. PSXII-24 **Effects of a phytogetic mixture with or without direct-fed microbials on ruminal fermentation in an artificial rumen system (Rusitec)**

Yuxi Wang¹, Brooke Humphrey², Tim A. McAllister³

¹AAFC, ²nutriquest, ³Agriculture and Agri-Food Canada (AAFC)

1:15 p.m. PSXII-25 **Effects of Aspergillus oryzae-derived prebiotics on ruminal fermentation and the microbiome in an artificial rumen system (Rusitec)**

Yuxi Wang¹, Fernando Bargo², Ignacio Ipharraguerre³, Chunli Li¹, Trevor Alexander⁴, Tim A. McAllister⁵

¹AAFC, ²Biozyme Inc., ³Institute of Human Nutrition and Food Science, University of Kiel, ⁴Agriculture and Agri-Food Canada, ⁵Agriculture and Agri-Food Canada (AAFC)

1:15 p.m. PSXII-22 **Effects of branched-chain volatile fatty acids and protein-energy supplementation on rumen fermentation and digestive kinetics in dairy × beef steers grazing native or cultivated pasture**

Lucas G. Mota¹, M. M. M. Smithyman², Cassie L. Smithyman¹, Nelcino Francisco De Paula³, Leticia Z. Pistillo¹, D. H. Kleinschmit⁴, Mike T. Socha⁴, M. E. E. Branine⁴, Mozart Fonseca¹, Clint A. Löest¹, Glenn C. Duff²

¹New Mexico State University, ²New Mexico State University, Clayton Livestock Research Center, ³Federal University of Mato Grosso / New Mexico State University, ⁴Zinpro Corporation

1:15 p.m. PSXII-29 **Effects of Enogen flint and dent corn versus Brazilian Flint on fermentation parameters and methane in vitro**

Daiana Dos Santos dos Santos de Oliveira¹, Pedro Souto Lamas¹, Barbara DOS SANTOS Martins Brixner², Adibe L. Abdalla³, Daniel Montanher Polizel⁴, James S. Drouillard⁵, Flavio Augusto Portela Santos¹

¹Escola Superior de Agricultura Luiz de Queiroz, ²Escola Superior de Agricultura "Luiz de Queiroz", ³Centro de Energia Nuclear na Agricultura, Universidade de São Paulo, Piracicaba, SP, Brazil, ⁴Universidade Estadual Paulista "Júlio de Mesquita Filho" - Unesp, ⁵Kansas State University

1:15 p.m. PSXII-7 **Effects of maternal supplementation of guanidinoacetic acid at late gestation on skeletal muscle growth and metabolism in beef offspring**

Luiza Vitarelli Kladt¹, Emily Knapper², Jenifer Varizi¹, Luiz Sousa¹, Marta Maria Santos¹, Luiz Jardel Motta¹, Nick Seroa³, Claudia B. Sampaio¹, Mateus P. Gionbelli³, Marcio S. Duarte²

¹Federal University of Viçosa, ²University of Guelph, ³Federal University of Lavras

1:15 p.m. PSXII-19 **Effects of monoglycerides supplementation in drinking water on serum and colon digesta metabolomic profiles in weaned pigs challenged with F18 enterotoxigenic Escherichia coli**

Sangwoo Park ¹, Yanhong Liu ¹

¹University of California, Davis

1:15 p.m. PSXII-23 **Effects of reconstitution of high amylase corn flint on fermentation parameters and in vitro methane**

Daiana Dos Santos dos Santos de Oliveira ¹, Pedro Souto Lamas ¹, Barbara DOS SANTOS Martins Brixner ², Adibe L. Abdalla ³, Daniel Montanher Polizel ⁴, James S. Drouillard ⁵, Flavio Augusto Portela Santos ¹

¹Escola Superior de Agricultura Luiz de Queiroz, ²Escola Superior de Agricultura "Luiz de Queiroz", ³Centro de Energia Nuclear na Agricultura, Universidade de São Paulo, Piracicaba, SP, Brazil, ⁴Universidade Estadual Paulista "Júlio de Mesquita Filho" - Unesp,

⁵Kansas State University

1:15 p.m. PSXII-21 **Evaluation of Varium® on growth performance and health of postweaning-finishing pigs**

San Ching ¹, Cesar Coto ¹, Andres Soto ¹, Aldo Rossi ¹, Gabriela Vega ¹

¹Amlan International

1:15 p.m. PSXII-1 **Exploring the Link Between Vertical Acceleration and Thermographic Temperature Variations in Peruvian Paso Horses: Implications for Gait Efficiency and Performance**

Paola Quintana ¹, Jorge L. Vilela ², Maria Lourdes L. Velarde ³, Jose Dextre ³

¹UNIVERSIDAD CIENTIFICA DEL SUR, ²Universidad Científica del Sur, ³Universidad Científica del Sur, Grupo de Investigación Ciencia Equina y Animales Autóctonos

1:15 p.m. PSXII-26 **Identifying the core features required for accurately predicting dry matter intake in cattle using machine learning.**

Eswar ArunKumar Kalaga ¹, Nathan Blake ¹, Tylor J. Yost ¹, Deborah Ologunagba ¹, Matthew Walker ¹, Ida Holaskova ¹, Jarred Yates ¹, Matthew E. Wilson ¹

¹West Virginia University

1:15 p.m. PSXII-28 **Impacts of ground red clover on nutrient intake and digestibility in lambs fed with novel endophyte-infected fescue.**

Ronelson Stinfil ¹, Christine Nieman ², Ken B. Coffey ¹

¹University of Arkansas, ²REE-ARS

1:15 p.m. PSXII-5 **In vitro digestibility of dry matter and fiber components and gas production of hays used in equine diets and incubated in equine cecal inoculum**

Carol Vasco ¹, Diwakar Vyas ², Mohammad Malekhhahi ³, Kathy Arriola ⁴, Carlos NinoDeGuzman ², Samia Farooq ², Tyler Gilliam ², Nicolas DiLorenzo ⁵, Tessa M. Schulmeister ², Ignacio Fernandez-Marenchino ², Lori K. Warren ⁶, Carissa Wickens ²

¹Midway University, ²University of Florida, ³University of Idaho, ⁴Research Coordinator,

⁵Florida University, ⁶Department of Animal Sciences, University of Florida

1:15 p.m. PSXII-11 **Maternal supplementation with guanidinoacetic acid and methionine: effects on arginine sparing, placental blood flow, and cow-calf performance**

Luiz Jardel Motta ¹, Marta Maria Santos ¹, Luiza Vitarelli Kladt ¹, Thais C. Costa ¹, Lilian Yukie Pacheco Toma ¹, Luthesco Chalfun ², Claudia B. Sampaio ¹, Mateus P. Gionbelli ³, Marcio S. Duarte ⁴

¹Federal University of Viçosa, ²Unilavras, ³Federal University of Lavras, ⁴University of Guelph

1:15 p.m. PSXII-12 **Preliminary Study: Effects of hen dietary saccharomyces yeast postbiotic supplementation on progeny growth performance, body morphometrics, and carcass cutout and yield**

Siara Zedonek ¹, Mathew A. Vaughn ², Xiaohan Li ¹, Sophia Willis ¹, Daniela A. Alambarrio ¹, Jordan Proctor ¹, McKenna Doran ¹, Edgar Miller ², John M. Gonzalez ³

¹University of Georgia, ²Puretein Bioscience, LLC, ³University of Georgia Department of Animal and Dairy Sciences

1:15 p.m. PSXII-2 **Relationship between heart rate and unmounted equine interaction in-person compared to virtual for addressing perceived stress within college students**

Emma Farnlacher ¹, Molly Nicodemus ¹, Emily Curran ¹, Madison Vandiver ¹, Clay A. Cavinder ¹, Marcus McGee ¹

¹Mississippi State University

1:15 p.m. PSXII-18 **The impact of maternal fermented feed on the gut health of sows and piglets during lactation**

Siyu Wei ¹, Cheng Wang ², Yizhen Wang ³, Mingliang Jin ³

¹Zhejiang University, College of Animal Science, ²Xianghu laboratory, ³Zhejiang University

1:15 p.m. PSXII-3 **The value of community service activities offered through horse breed associations for youth participants**

Robert Culwell ¹, Molly Nicodemus ², Dean Jousan ², Camisha Robinson ², Lori Irvin ², Toree Williams ³

¹East Central Community College, ²Mississippi State University, ³Unity Environmental University

1:15 p.m. PSXII-4 **Using deep learning to evaluate the relationship between gait and dressage performance in sport horses**

Alexandra G. Cooper ¹, Samantha A. Brooks ¹, Kyle Allen ¹, Lauren S. Dewberry ², Cecelia Minner ¹

¹University of Florida, ²Duke University

Ruminant Nutrition V: Application of in vitro methods

Chair: Jon Schoonmaker, Purdue University

1:30 PM - 2:30 PM

Diplomat Ballroom 3

1:30 p.m. 353 Award Talk: From omics networks to targets of opportunity in ruminant nutritional physiology

Juan Loo¹

¹University of Illinois Urbana Champaign

2:00 p.m. 354 Increasing biochanin A inclusion influences in vitro ruminal fermentation and microbial populations of tall fescue hay

Happiness Ajayi¹, Brittany E. Davis², Jennifer Weinert-Nelson², Ronald J. Trotta³

¹College of Agriculture, Health Science, and Natural Resources, Kentucky State University, Frankfort, KY, 40601, USA, ²USDA-ARS Forage-Animal Production Research Unit,

³University of Kentucky

2:15 p.m. 356 Effects of Rumen Fluid Preservation Methods on In Vitro True Digestibility

Diva N. Rigney¹, Kimberly Kimberly Mullenix¹, William B. Smith¹

¹Auburn University

CSAS Symposium II: Building Bridges for Sustainable Livestock: Developing Global Collaborations and Partnership - Sponsored by the Canadian Society of Animal Science

Chair: Gleise Medeiros da Silva, University of Alberta

1:30 PM - 4:15 PM

Diplomat Ballroom 4

1:30 p.m. CSAS Symposium II Introduction

1:35 p.m. 364 Forging Global Connections to Advance Sustainable Forage and Ruminant Systems

José C. B Dubeux¹

¹University of Florida IFSA North Florida Research and Education Center

2:10 p.m. 365 Building Bridges for Sustainable Livestock: The 10-year+ learnings from the Global Farm Platform

Michael R. F Lee¹, Jordana M. Rivero², Gleise da Silva³

¹Harper Adams University, ²Promar, ³Department of Agricultural, Food and Nutritional Science, University of Alberta

2:45 p.m. CSAS Symposium II Break

3:00 p.m. 366 Strengthening Dairy Genetics for a Sustainable Future: The Power of International Partnerships

Christine F. Baes¹

¹University of Guelph

3:35 p.m. 367 **Advancing global partnerships in augmented beef grading**

Óscar López-Campos ¹

¹Agriculture and Agri-Food Canada

Beef Species I: Virtual Engagement and Consumer Perceptions

Chair: Jhones Sarturi, Texas Tech University

1:45 PM - 2:15 PM

Diplomat Ballroom 5

1:45 p.m. 368 **Demographic Insights and Virtual Engagement in Extension**

Programming: Evidence from the Texas A&M Beef Cattle Short Course

Victoria E. Benavides ¹, Jason J. Cleere ¹, Alice P. Brandao ¹

¹Texas A&M University

2:00 p.m. 369 **Use of Infographics to Influence Consumer Perceptions of Sustainability within the U.S. Beef Industry**

Gabriella Johnson ¹, David Martin ², Jason T. Sawyer ¹, Don Mulvaney ¹

¹Department of Animal Sciences, Auburn University, ²School of Hospitality Management, Auburn University

Small Ruminant Symposium: Technology/precision ag transforming the sheep industry

Chair: Melinda Ellison, University of Idaho, Moscow; Nancy M. Cummings Research, Extension and Education Center

1:45 PM - 3:30 PM

Diplomat Ballroom 1

1:45 p.m. **Small Ruminant Symposium Introduction**

1:50 p.m. 339 **PLF-Derived Behavioral and Physiological Traits as Indicators of Resilience in Rangeland Sheep**

Andrew S. Hess ¹, Scott S. Huber ¹, John S. Bergeron ¹, Melanie Hess ², Tracy S. Shance ¹, Mike Cox ³, Robert S. Washington-Allen ¹

¹University of Nevada, Reno, ²ABS Global, ³Nevada Department of Wildlife

2:35 p.m. **Invited Speaker Dr. Jonathan Spiess**

Jonathan Spiess ¹

¹USDA-ARS

Meat Science and Muscle Biology

Chair: Sarah White-Springer, Texas A&M University and AgriLife Research

1:45 PM - 4:30 PM

Diplomat Ballroom 2

1:45 p.m. 346 **Anchor Talk: Meat, meet AI**

Phillip D. Bass ¹

¹University of Idaho

2:15 p.m. 347 **Fatty acid metabolism in lambs supplemented with different levels of almond skin by-product**

Fabrizio Mangano ¹, Rui JB Bessa ², Susana P. Alves ², Martino Musati ¹, Guido Mangione ¹, Antonino Bertino ¹, Alessandro Priolo ¹, Antonio Natalello ¹, Giuseppe Luciano ¹

¹Department of Agriculture, Food and Environment (Di3A), University of Catania, Via Santa Sofia 100, 95123, Catania, Italy, ²Faculdade de Medicina Veterinária, Universidade de Lisboa, Avenida da Universidade Técnica, 1300-477 Lisboa, Portugal

2:30 p.m. 348 **Dietary almond skin to lambs: effect on meat oxidative stability**

Antonino Bertino ¹, Antonio Natalello ¹, Martino Musati ¹, Fabrizio Mangano ¹, Guido Mangione ¹, Marco Sebastiano Cannone ¹, Alessandro Priolo ¹, Giuseppe Luciano ¹

¹Department of Agriculture, Food and Environment (Di3A), University of Catania, Via Santa Sofia 100, 95123, Catania, Italy

2:45 p.m. 349 **Preliminary Analysis of Large Dose Nicotinamide Riboside Supplementation Effect on Barrow Muscle Performance Weakness**

Daniela A. Alambarrio ¹, Xiaohan Li ¹, Siara Zedonek ¹, Sophia E. Willis ², Jordan Proctor ¹, John M. Gonzalez ²

¹University of Georgia, ²University of Georgia Department of Animal and Dairy Sciences

3:00 p.m. **Meat Science and Muscle Biology Break**

3:15 p.m. 350 **Award Talk: Developing a smart-aging strategy to improve meat quality and value**

Brad Kim ¹

¹Purdue Univ.

3:45 p.m. 351 **Effects of sorghum-based finishing diet on semitendinosus and infraspinatus objective and subjective color-stability**

Xiaohan Li ¹, James S. Drouillard ², Jaymelynn K. Farney ², Jordan Proctor ¹, Daniela A. Alambarrio ¹, Siara Zedonek ¹, John M. Gonzalez ³, Sarah Sexton-Bowser ², Dmitriy Smolensky ⁴, Jaymi Peterson ⁴, Adina Santana ², Harleigh Johnson ²

¹University of Georgia, ²Kansas State University, ³University of Georgia Department of Animal and Dairy Sciences, ⁴Grain Quality and Structure Research Unit

4:00 p.m. 352 **Award Talk: Evaluation of longissimus lumborum muscle fiber type from beef carcasses of four color categories**

Thomas W. Dobbins ¹, Nicholas C. Hardcastle ², Bradley J. Johnson ¹, Ranjith Ramanathan ³, Dale R. Woerner ¹, Jerrad F. Legako ¹

¹Texas Tech University, ²Cargill Protein, ³Oklahoma State University

Animal Health

Chair: Jiuzhou Song, University of Maryland

1:45 PM - 4:45 PM

Regency Ballroom 1

1:45 p.m. 380 **Award Talk: Antimicrobial alternatives in swine and cattle production systems: Do they contribute to or mitigate antimicrobial resistance?**

Raghavendra G. Amachawadi ¹

¹Kansas State University

2:15 p.m. 382 **Lipopolysaccharide-induced changes in the hepatic transcriptome revealed differential response between St. Croix and Suffolk sheep**

Samanthia R. Johnson ¹, Kelsey L Bentley ¹, Scott A A. Bowdridge ¹, Ibukun M M. Ogunade ¹

¹West Virginia University

2:30 p.m. 383 **PBMC transcriptome changes in beef steers with negative or positive residual feed intake following in vitro LPS stimulation**

Yarahy Leal ¹, Samanthia R. Johnson ¹, Modoluwamu Idowu ¹, Godstime Taiwo ¹, Taylor S. Sidney ¹, Emily Treon ¹, Deborah Ologunagba ¹, Olanrewaju Morenikeji ², Ibukun M M. Ogunade ¹

¹West Virginia University, ²University of Pittsburgh

2:45 p.m. 384 **Variability in bovine liver abscess frequency, proportional mass, and location within abscess severity scores**

Macy T. Lawrence ¹, Jay W. Johnson ², Trent Schwartz ¹, Loni W. Lucher ¹, Ty E. Lawrence ¹

¹West Texas A&M University, ²Huvepharma

3:00 p.m. **Animal Health Break**

3:15 p.m. 385 **Unraveling the Gut-Liver Axis in Bovine Liver Abscesses: Isolation and Characterization of Bacteroides from Hepatic Lesions**

Robert J. Gruninger ¹, Marissa J. McCormack ², Nora Chomistek ², Rahat Zaheer ², Tim A. McAllister ²

¹Agriculture and Agri-Food Canada, ²Agriculture and Agri-Food Canada (AAFC)

3:30 p.m. 386 **Decoding poultry threats: unveiling sequencing types, serogroups, and antimicrobial resistance of avian pathogenic Escherichia coli in Alberta, Canada**

Yanqi Wang ¹, Mawra Gohar ¹, Beverly Morriso ¹, Frank Marshall ², Teryn Girard ³, Matthew Waldner ⁴, Matthew Walker ⁵, Trevor Alexander ⁴, Maud de Lagarde ⁶, John Fairbrother ⁶, M. Faizal Abdul Abdul Careem ¹, Dongyan Xu Niu ¹

¹Faculty of Veterinary Medicine, University of Calgary, ²Marshall Swine & Poultry Health Services, ³Prairie Swine Health Services, ⁴Agriculture and Agri-Food Canada, ⁵Public Health Agency of Canada, ⁶Faculty of Veterinary Medicine, Université de Montréal

3:45 p.m. 387 **Genome-wide association for chronic passive congestive livers associated with Bovine Congestive Heart Failure for fed cattle in the Texas Panhandle**
Megan E. Eckhardt ¹, Trent Schwartz ¹, Loni W. Lucherk ¹, Ty E. Lawrence ¹, Emilie C. Baker ¹

¹West Texas A&M University

4:00 p.m. 388 **Epidemiological Risk Factor Dynamics of Bovine Respiratory Disease in U.S. Beef Production Systems**

Adeolu J. Adekunle ¹, Karun Kaniyamattam ¹, Reinaldo F. Cooke ²

¹Texas A&M University, ²Department of Animal Science, Texas A&M University

4:15 p.m. 389 **Proportionate mass of bovine heart, lung, and liver in response to animal mass**

Ambri Harrigal ¹, Loni W. Lucherk ¹, Trent Schwartz ¹, Ty E. Lawrence ¹

¹West Texas A&M University

4:30 p.m. 391 **Late-Breaking: DHA alleviates hepatic lipidosis in dairy cows through PPAR α -PLIN2 signaling**

Xinyue Zhang ¹, Xiaojing Liu ¹, Weixuan Tang ¹, Wei Wang ¹, Shengli Li ¹

¹China Agricultural University

Companion Animal Symposium II: Longevity and Quality of Life: A Comparative Assessment - Sponsored by Zinpro

Chair: Julia Guazzelli Pezzali, Kansas State University

2:00 PM - 5:00 PM

Great Hall 5

2:00 p.m. **Companion Animal Symposium II Introduction**

2:15 p.m. 335 **The Dog Aging Project: An open science study of aging in companion dogs**

Matt Kaeberlein ¹

¹Dog Aging Project, CEO, Optispan

2:45 p.m. 336 **Molecular mechanisms of longevity in mammals**

Alexander Tyshkovskiy ¹

¹Harvard Medical School

3:15 p.m. **Companion Animal Symposium II Break**

3:30 p.m. 337 **Unleashing the Power of Trace Minerals for Healthier Pets**

Allison A. Millican ¹

¹Zinpro Corporation

4:00 p.m. 338 **Elephants as a Comparative Species for Aging Research: From Longevity and Social Complexity to Unique Biological Mechanisms**

Daniella Chusyd ¹

¹Indiana University-Bloomington

4:30 p.m. **Companion Animal Symposium II Round Table Discussion**

Beef Species II: Enteric methane influenced by genetics, feed additives, and measurements

Chair: Jhones Sarturi, Texas Tech University

2:15 PM - 2:45 PM

Diplomat Ballroom 5

2:15 p.m. 372 **Genetic parameters for methane emissions and residual feed intake in Nellore cattle**

Roberto D. Sainz ¹, Fernando S. Baldi ², Larissa B. Temp ³, Eduarda Oliveira ³, Leticia Pereira ⁴, Luciano B. Ribeiro ⁵

¹University of California, Davis, ²Faculdade de Zootecnia e Engenharia de Alimentos, Universidade de São Paulo, Pirassununga, SP, Brazil, ³Animal Science Department, State University of São Paulo, ⁴National Association of Breeders and Researchers (ANCP),

⁵Rancho da Matinha

2:30 p.m. 370 **Liquid supplement with pure molasses and essential oils reduced daily CH₄ emissions by 10% in beef steers**

Katerina Stasinopoulou ¹, Alex V. Chaves ¹, Gamaliel Simanungkalit ¹, Luciano A. Gonzalez ¹

¹The University of Sydney

Poster Session XIII

2:30 PM - 3:30 PM

Great Hall 4

2:30 p.m. PSXIII-29 **A meta-analysis on the effect of growth-promoting implants on growth performance and carcass characteristics of feedlot beef cattle**

Irene Alexandre Reis ¹, Cesar Velasquez ², Edilane C. Martins ², Daniela Vesga ², Rodrigo Torres ³, Otavio Machado-Neto ³, Welder A. Baldassini ⁴, Diego Manriquez ⁵, Sara E. Place ², Kimberly R. Stackhouse-Lawson ², Pedro H.V. Carvalho ²

¹Colorado State University - AgNext, Department of Animal Sciences, ²Colorado State University, AgNext, Department of Animal Sciences, ³School of Agricultural and Veterinarian Science, São Paulo State University, ⁴School of Veterinary Medicine and Animal Science (FMVZ), São Paulo State University (UNESP), ⁵Colorado State University

2:30 p.m. PSXIII-11 **A Systematic Review and Meta-analysis of Efficacy of Exogenous Fibre Enzymes in Modulating Growth Performances and Nutrient Digestibility in Weanling Pigs**

Laurence Cheng ¹, Jiali Chen ¹, Min Wang ¹, Ming Z. Fan ¹

¹University of Guelph

2:30 p.m. PSXIII-21 **Animal performance and reproductive development in heifers fed with r-zeta® in high-concentrate diets**

Juan Sebastian Vittone ¹, Maria Eugenia Munilla ¹

¹National Agricultural Technology Institute

2:30 p.m. PSXIII-7 **Assessing rabbit diets chemical composition compared to animal nutrient requirements**

Natasha McGarry ¹, Alex V. Chaves ¹, Katerina Stasinopoulou ¹

¹The University of Sydney

2:30 p.m. PSXIII-8 **Assessment of additive used to formulate molasses lick blocks to reduce beef cattle methane emissions**

Maria Nikoloric ¹, Gamaliel Simanungkalit ¹, Malcolm Possell ¹, Luciano A. Gonzalez ¹, Alex V. Chaves ¹, Katerina Stasinopoulou ¹

¹The University of Sydney

2:30 p.m. PSXIII-5 **Combination of Scutellaria baicalensis and Lonicera japonica herbal extracts enhance the growth performance and respiratory rate of grow-finishing by combating heat stress in summer**

Kye Jin Lee ¹, Se Yeon Jang ¹, Vetriselvi Sampath ¹, In Ho Kim ²

¹Dankook University,, ²Dankook University

2:30 p.m. PSXIII-20 **Comparing the nutritive value of corn stover, corn silage and Pleurotus ostreatus spent mushroom substrate using rumen simulation technique (RUSITEC) as a ruminant feed**

Michael Wuaku ¹, Uchenna Y. Anele ², Ahmed E. Kholif ³, Omoanghe S. S. Isikhuemhen ¹, Peter A. Dele ⁴

¹North Carolina Agricultural & Technical State University - Greensboro, NC, ²North Carolina Agricultural and Technical State University, ³Animal Sciences, ⁴Federal University of Agriculture, Abeokuta

2:30 p.m. PSXIII-6 **Dietary Scutellaria baicalensis and Lonicera japonica extracts enhance the growth performance of broilers by reducing heat stress in summer**

Se Yeon Jang ¹, Kye Jin Lee ¹, Vetriselvi Sampath ¹, In Ho Kim ²

¹Dankook University, ²Dankook University

2:30 p.m. PSXIII-13 **Digestibility of amino acids, energy, and minerals in ahiflower seed and ahiflower press cake for broiler chickens**

Deborah I. Adewole ¹, Xinping Liu ¹, Juan Juan de Dios Ibarra Castaneda ¹

¹University of Saskatchewan

2:30 p.m. PSXIII-19 **Effect of a Soluble Trace-Mineral Based Supplement on Water Intake, Growth Performance, and Mineral Status of Newly Weaned Beef Calves.**

Sebastian Maresca ¹, Agustín Vera ², sebastian O. Lopez Valiente ¹, Alejandro M. Rodriguez ¹, Nicolas DiLorenzo ³

¹INTA, ²UNICEN, ³Florida University

2:30 p.m. PSXIII-27 **Effect of diet physically effective neutral detergent fiber and starch levels on ruminal fermentation of finishing beef cattle**

Robson Dinardi ¹, Thiago Santana ², Anabelle Barbosa ², Jandir Santos Junior ², Gabriela Ribeiro ², Anna Martins ², Maria Santos ², Gabriel O. Ribeiro Junior ³, Murillo C S Pereira ¹

¹São Paulo State University (UNESP), College of Agricultural and Technological Sciences, Dracena, SP 17915-899, Brazil., ²São Paulo State University (UNESP), College of Technology and Agricultural Sciences, Dracena 17900-000 São Paulo, Brazil., ³University of Saskatchewan

2:30 p.m. PSXIII-26 **Effects of a Bacillus-Based Probiotics, Ionophores, and Non-Ionophore Additives on in Vitro Gas Production Kinetics of Forage-Based Diets**

Amanda Vitória Ribeiro Rodrigues ¹, Edjane Pereira da Silva ¹, Bruno Cappellozza ², Rafaela Juliana Jardim Cunha ¹, Luciano da Silva Cabral ¹, Raysson Rodrigues Lisboa Fernandes ¹, Tayane Barbosa Pereira ¹, Rafael Bonfim Fernandes ¹, Mozart Fonseca ³, Nelcino Francisco De Paula ⁴

¹Federal University of Mato Grosso, ²Novonesis, ³New Mexico State University, ⁴Federal University of Mato Grosso / New Mexico State University

2:30 p.m. PSXIII-15 **Effects of a Phytogetic Feed Additive on Ruminal Fermentation Parameters in Grazing Beef Cattle**

Isabelle E. Matos ¹, Victor Valério de Carvalho ², Tiago S. Acedo ³, Alexandre Perdigão ⁴, Aline G. Silva ¹, Henrique J. Fernandes ⁵

¹Federal University of Mato Grosso do Sul, Brazil, ²dsm-firmenich, Department of Innovation, São Paulo, Brazil, ³dsm-firmenich, ⁴DSM-Firmenich, Department of Innovation and Applied Science, São Paulo, Brazil, ⁵State University of Mato Grosso do Sul, Brazil

2:30 p.m. PSXIII-16 **EFFECTS OF DIFFERENT FEED ADDITIVES ON SERUM HEPATIC ENZYMES, FECAL pH AND CECAL MOPHOMETRY IN FEEDLOT BEEF CATTLE**

Daniel I. C. G. Gouvêa ¹, André F. Francischinelli ¹, Vitória M. Ribeiro ¹, Victor Valério de Carvalho ², Alexandre Perdigão ³, Tiago S. Acedo ⁴, Murillo C S Pereira ⁵, Mário B. B. Arrigoni ¹, Cyntia L. L. Martins ¹

¹College of Veterinary Medicine and Animal Science (FMVZ), São Paulo State University – UNESP, Botucatu, Brazil, ²dsm-firmenich, Department of Innovation, São Paulo, Brazil, ³DSM-Firmenich, Department of Innovation and Applied Science, São Paulo, Brazil, ⁴dsm-firmenich, ⁵São Paulo State University (UNESP), College of Agricultural and Technological Sciences, Dracena, SP 17915-899, Brazil.

2:30 p.m. PSXIII-9 **Effects of particle size and multi-enzyme supplementation on ileal digestibility of amino acids in roasted full-fat soybean and dry extruded soybean meal fed to growing pigs**

Jinyoung Lee ¹, Bonjin Koo ¹, Martin Martin Nyachoti ¹

¹University of Manitoba

2:30 p.m. PSXIII-10 **Effects of plant essential oil supplementation in low zinc, antibiotic-free diet on growth performance, blood parameters, and intestinal health of weaned piglets**

Yan Zhao ¹, Jin Niu ¹, Dong Xu ¹, Yunlong Shi ¹, Sung Woo Kim ², Xiaohong Guo ¹, Guoqing Cao ¹

¹Shanxi Agricultural University, ²North Carolina State University

2:30 p.m. PSXIII-1 **Effects of supplementation of probiotic *Lactocaseibacillus rhamnosus* on growth performance, rectal temperature, respiratory rate, and blood parameters of heat-stressed growing pigs**

Jinmu Ahn ¹, Yonggu Kang ¹, Ikcheol Shin ¹, Minhong Song ¹, Hyunjin Kyoung ¹

¹Chungnam National University

2:30 p.m. PSXIII-3 **Effects of supplementing threonine above the nutritional requirements in diets with soybean hulls on growth performance and digesta transit of growing pigs**

Mariana G. Lacerda ¹, Valesca R. Lima ¹, Saimon S. Souza ¹, Mariana V. Holanda ¹, Kallita L. S. Cardoso ¹, Giovanna H. A. Santana ¹, Paloma A. C. Santos ¹, Gabriela R. Silva ¹, Vanessa P. Abreu ¹, Amoracyr J. C. Nuñez ¹, Allan P. Schinckel ², Luiz F. Brito ², Aline S. M. Cesar ³, Marcos L. P. Tse ⁴, Luciano Hauschild ⁴, Cesar A. P. Garbosa ³, José Henrique Stringhini ¹, Vivian V. Almeida ¹

¹Federal University of Goiás, ²Purdue University, ³University of São Paulo, ⁴São Paulo State University "Julio de Mesquita Filho" (UNESP)

2:30 p.m. PSXIII-12 **Estimation of zinc response in terms of growth performance and plasma zinc in pigs by meta-analysis**

Julien Labarre ¹, Patrick Schlegel ², Marie-Pierre Létourneau Montminy ³

¹Laval University, ²Agroscope, ³Université Laval

2:30 p.m. PSXIII-17 **Evaluation of supplementation of an extruded dried distillers grains plus solubles cube provided three times weekly versus daily on performance of steers grazing Bermudagrass pastures**

Miriam A. Snider ¹, Cody Shelton ¹, Clyde C. Jones ¹, Grayson Gourley ¹, Henry Hilscher ², Cody Welchons ², Travis Whitney ², Daniel Rivera ¹

¹Southwest Research and Extension Center, University of Arkansas System Division of Agriculture, ²Livestock Nutrition Center LLC

2:30 p.m. PSXIII-14 **Evaluation of two levels of 3-nitrooxypropanol (3-NOP) as feed additive on methane emission, rumen microbiome, animal performance, dry matter intake and digestibility, of Nellore cattle in a feedlot**

Bruna R. Amancio ¹, Thiago H. da Silva ¹, Cristina Cortinhas ², Victor V. Carvalho ², Luis Fernando Tamassia ³, Renata H. branco ¹, Eduardo Marostegan de Paula ⁴

¹Institute of Animal Science, Sustainable Livestock Center, ²dsm-firmenich, Innovation & Applied Science Department, SP, Brazil, ³dsm-firmenich Nutritional Products Ltd., ⁴Colorado State University

2:30 p.m. PSXIII-28 **Hepatic transcriptome analysis of beef steers with divergent Residual body weight gain**

Modoluwamu Idowu¹, Godstime A. Taiwo², Taylor S. Sidney², Yarahy Leal², Samantha R. Johnson², Deborah Ologunagba², Ibukun M M. Ogunade²

¹Tennessee Technological University, ²West Virginia University

2:30 p.m. PSXIII-22 **Impact of Feed Additives on in Vitro Dry Matter and Fiber Digestibility of Forage-based Diets**

Jhonny Queiroz Otomura¹, Edjane Pereira da Silva¹, Bruno Cappellozza², Joanis Tilemahos Zervoudakis¹, Filipe Araújo Canêdo Mendonça³, Thiago Campos de Arruda¹, Victória Curvo Ormond¹, Rosemary Lais Galati¹, Mozart Fonseca⁴, Nelcino Francisco De Paula⁵

¹Federal University of Mato Grosso, ²Novonesis, ³Phibro Animal Health Corporation, ⁴New Mexico State University, ⁵Federal University of Mato Grosso / New Mexico State University

2:30 p.m. PSXIII-23 **Increasing levels of a tannin-based product on performance, rumen microbiome and enteric methane emission of Nellore cattle finished in feedlot**

Eduardo Marostegan de Paula¹, Edson Furlan Jr², Elaine Magnani², João P. Ludwig³, Bruna R. Amancio², Thiago H. da Silva², Marcelo Q. Manella⁴, Althieres J. J. Furtado⁵, Alexandre Berndt⁵, Pedro D. B. Benedeti³, Renata H. branco²

¹Colorado State University, ²Institute of Animal Science, Sustainable Livestock Center, ³Department of Animal Science, Universidade do Estado de Santa Catarina, ⁴Division of Research and Development, Silva Team Brazil, ⁵Research and Development, EMBRAPA Southeast Livestock

2:30 p.m. PSXIII-4 **Inosine-5'-monophosphate in reduced metabolizable energy diets fed to finishing gilts subjected to immune stimulation**

Lucas Pimentel Bonagurio¹, Paulo Cesar Pozza², Tatiana Carlesso Santos², Magali Santos Pozza², Ricardo Vianna Nunes³, Alice Eiko Murakami²

¹Polinutri, ²State University of Maringá, ³UNIOESTE

2:30 p.m. PSXIII-24 **Performance and blood characteristics of beef heifers supplemented with yeast during the prepubertal period**

Leticia Z. Pistillo¹, José Augusto Godinho², Pedro Borba², Lucas G. Mota¹, Mozart Fonseca¹, Edenio Detmann², Pedro Veiga³, Claudia B. Sampaio²

¹New Mexico State University, ²Federal University of Viçosa, ³Cargill Animal Nutrition and Health, Innovation Center

2:30 p.m. PSXIII-2 **The effect of feeding *Bacillus subtilis* on gut microbiome functional pathways of weaned pigs**

Yating Zhao¹, Anneliek ter Horst¹, Shuhan Sun¹, C. Titus Brown¹, Yanhong Liu¹

¹University of California, Davis

2:30 p.m. PSXIII-25 **The influence of bromoform dose on in vitro rumen fermentation characteristics in rumen fluid obtained from cannulated steers fed a medium quality grass hay**

Natasha B. Petrenko ¹, George Reeves ², Wendela Wapenaar ³, Kirsty Bardoul ², Genevieve M. D'Souza ⁴, Terry E. Engle ¹

¹Colorado State University, ²Ruminant Biotech Corp Limited, ³Elanco Animal Health, ⁴Brown Loam Branch Experiment Station,

2:30 p.m. PSXIII-18 **The Use of Proteomic Analysis to Understand Copper Trafficking Proteins in Sheep**

Julia Gabriela Baroni Alves ¹, Huey Yi Loh ¹, Terry E. Engle ¹

¹Colorado State University

Ruminant Nutrition VI

Chair: Zachary Smith, South Dakota State University

3:15 PM - 5:00 PM

Diplomat Ballroom 3

3:15 p.m. 357 **Late-Breaking: An Evaluation of Computer-Based 3-dimensional Images and Weight Based Calculations of Maintenance Energy Requirements to Measures of Fasting Heat Production in Growing Beef Cattle**

Emily Petzel ¹, Tiffany Hagemann ², Gbenga Omotara ², Clint T. Bailey ³, Guilherme DeSouza ², Jared E. Decker ³, Derek W. Brake ²

¹USDA-ARS, Oklahoma and Central Plains Agricultural Research Center, ²University of Missouri, ³University of Missouri-Columbia

3:30 p.m. 358 **Late-Breaking: Growth Performance and Enteric Gas Emissions in Grazing Beef Heifers fed Agolin®**

Logan E. Diller ¹, Vaughn Holder ², Cody Schneider ³, Logan R. Thompson ¹, Haley E. Larson ⁴

¹Kansas State University, ²Alltech Inc., ³Cornbelt Livestock Services, ⁴Kansas State University - Olathe

3:45 p.m. 359 **Late-Breaking: Individual Variation in Free-Choice Mineral Intake Among Beef Cows**

Tanner K. Wansing ¹, Matthew S. Crouse ², Bailey N. Engle ³, William T. Oliver ³, Bryan W. Neville ⁴, Amanda K. Lindholm-Perry ³, Kacie L. McCarthy ¹, Mary E. Drewnoski ⁵

¹University of Nebraska - Lincoln, ²United States Department of Agriculture, ³USMARC, ⁴USDA-ARS, U.S. Meat Animal Research Center, ⁵University of Nebraska-Lincoln

4:00 p.m. 360 **Late-Breaking: Maternal chromium supplementation during late gestation alters the plasma metabolomic profile of Brangus beef calves**

Hiam Marcon ¹, Wellison JS Diniz ², Mariana Santos ³, Mariana Santos ³, Joao V. Chinaglia ³, Gilmar P. Leite ³, Barbara Roqueto do Reis ⁴, Matheus Felliipe Lana Ferreira ³, Gustavo Rezende Siqueira ⁵, Priyanka Banerjee ², Marcelo Vedovatto ¹

¹Louisiana State University Agricultural Center, ²Auburn University, ³Louisiana State University, ⁴CREC-White Sand Beef Unit, Mississippi State University, ⁵São Paulo Agency for Agribusiness Technology

4:15 p.m. 361 **Late-Breaking: Nitrogen Utilization in Cattle Fed Low-Protein Hay: Effects of Protein Supplementation, Source, and Processing**

Pauliane Pucetti ¹, Christy Finck ¹, Julia Travassos da Silva ¹, Zachary Carlson ², Kendall C. Swanson ³

¹North Dakota State University, ²IFF, ³Department of Animal Sciences, Center for Nutrition and Pregnancy, North Dakota State University

4:30 p.m. 362 **Late-Breaking: Use of Wheat Straw and Oilseed Fines in Diets for Gestating Beef Cows**

Kylie Grimes ¹, Kathy A. Larson ², Herbert A. Lardner ³, Gabriel O. Ribeiro Junior ¹, Gregory B. Penner ¹

¹University of Saskatchewan, ²Department of Agricultural and Resource Economics, University of Saskatchewan, Saskatoon, SK Canada, ³Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK Canada

4:45 p.m. 363 **Late-Breaking: Validation of an algorithm to quantify grazing behavior in beef heifers using data acquired from an integrated GPS and accelerometer activity monitoring system**

Zoe Adcock ¹, Keara O'Reilly ², Cortland Smith ¹, William E. Pinchak ¹, Ryon S. Walker ¹, Gordon E. Carstens ¹

¹Texas A&M University, ²University of Nebraska-Lincoln

Beef Species III: Dietary and animal management strategies to impact growth and carcass performance - Sponsored by Selko

Chair: Jhones Sarturi, Texas Tech University

3:30 PM - 5:00 PM

Diplomat Ballroom 5

3:30 p.m. 374 **Effects of breed and trace mineral source on performance of beef heifers during nutrient restriction and grazing forage at early vegetative stage**

Philippe Moriel ¹, Davi Brito De Araujo ², Joao M. B. Vendramini ³, Karolina Augusto ⁴, Marco de Felício Porcionato ⁴, Reinaldo F. Cooke ⁵, Jose M. Vasconcelos ⁶

¹University of Florida, IFAS / Range Cattle Research and Education Center, ²Nutreco Nederland, Selko Feed Additives, ³Texas A&M AgriLife Research, ⁴Trouw Nutrition Brazil, ⁵Department of Animal Science, Texas A&M University, ⁶Faculdade de Medicina Veterinária e Zootecnia, Universidade Estadual Paulista

3:45 p.m. 375 **Effect of natural additives as an alternative to monensin on the performance of Nelore males in a grazing system**

Fabiano Alvim Barbosa ¹, Anderson Di Pietro ¹, Jose Mauro Diogo ², Sergio Lucio Salomon Cabral Filho ², Gilberto Goncalves Leite ², Jacob Goelema ¹

¹De Heus Animal Nutrition B.V., ²University of Brasilia

4:00 p.m. 376 **Effects of slaughter age on growth and carcass traits of grazing Nellore young bulls**

Luciana Melo Sousa ¹, Philippe Moriel ¹, Marco de Felício Porcionato ², Mateus J. I. Abreu ³, Juliana A. Torrecilhas ⁴, Guilherme Pereira ⁵, Rogerio Curi ³, Flávio D. Resende ⁶, Gustavo Rezende Siqueira ⁷

¹University of Florida, IFAS / Range Cattle Research and Education Center, ²Trouw Nutrition Brazil, ³College of Agronomics and Veterinary Sciences - University of São Paulo State Júlio de Mesquita Filho, ⁴University of Guelph, ⁵College of Veterinary and Animal Science - University of São Paulo State Júlio de Mesquita Filho, ⁶Agência Paulista de Tecnologia dos Agronegócios, Colina, SP, Brazil, ⁷São Paulo Agency for Agribusiness Technology

4:15 p.m. 377 **Effects of corn silage inclusion rate in the finishing diet on performance, carcass characteristics, and liver abscess incidence of Holstein and Beef × Holstein steers**

Melanie Pimentel Concepción ¹, Daniel Buskirk ¹, Andrea Garmyn ¹, Jongkyoo Kim ¹, Jerad Jaborek ¹

¹Michigan State University

4:30 p.m. 378 **Effects of dietary inclusion of an omega-3 fatty acid-based supplement to developing beef bulls on growth and performance**

Brandon J. Fraser ¹, Allen G. Schwartz ¹, Danielle M. Stock ¹, Nicholas Wege Dias ¹, Jason M. Warner ¹

¹Kansas State University - Department of Animal Sciences & Industry

4:45 p.m. 379 **Effect of trace mineral source and dietary starch level on copper, manganese, and zinc concentrations in ruminal digesta of Nellore feedlot steers**

Fernando P. de Paula Leonel ¹, Davi Brito De Araujo ², Julia Gabriela Baroni Alves ³, Jéssica Gusmão ⁴, Karolina Augusto ⁵, Rodrigo Dias Lauritano Pacheco ⁶, Antonio Ignacio dos Santos Junior ⁷, Rafael Cervieri ⁸, Guilherme Campos Leitão ¹, Luís Felipe C. Castro de Lacerda e Souza ¹, Cícero M. de Moura Vieira Neto ¹, Tiago de Oliveira Simoes ¹, Terry E. Engle ³

¹Federal University of São João del Rei - UFSJ, ²Nutreco Nederland, Selko Feed Additives, ³Colorado State University, ⁴Campanelli Innovation Center, Agro-Pastoril Paschoal Campanelli, Altair, 15430-000, São Paulo, Brazil., ⁵Trouw Nutrition Brazil, ⁶Campanelli Innovation Center, ⁷A/Z Pecuaria, ⁸Nutribeef Consultoria

Poster Session XIV

3:45 PM - 4:45 PM

Great Hall 4

3:45 p.m. PSXIV-2 **A novel non-protein nitrogen source supports productivity in Holstein cows**

Agustin G. Rius ¹, Gabriella Ponce ¹, Reshma Nair ¹, Ignacio R. Ipharaguerre ², Isabel Ruiz ³

¹The University of Tennessee, ²Institute of Human Nutrition and Food Science Christian-Albrechts-University, ³Yara Industrial Solutions

3:45 p.m. PSXIV-5 **Dietary replacement of soybean meal with heat-treated soybean meal to reduce dietary crude protein on milk production and rumen and blood parameters in lactating cows**

Myunggi Baik ¹, Junsung Kyung ¹, Jaesung Lee ¹, Jinwoo Jeong ¹, Junseok Oh ¹, Kamburawala Kankanamge Tharindu Namal Ranaweera ¹, Seyun Im ¹, Sang Yeob Kim ¹, Hyun Jin Kim ¹

¹Department of Agricultural Biotechnology, Seoul National University

3:45 p.m. PSXIV-29 **Differential placental gene expression in response to winter feeding high-forage and high-concentrate diets in beef cows**

Megan A. Wehrbein ¹, Hector M. Menendez ¹, Ana B. Clara B. Menezes ¹, Wellison JS Diniz ², Priyanka Banerjee ²

¹South Dakota State University, ²Auburn University

3:45 p.m. PSXIV-9 **Effect of Fiber Level on the Performance of Nelore and ½ Angus-Nelore Cattle**

Mailza G. Gonçalves de Souza ¹, Jonas Gabriel Dantas ¹, Bianca Lombardi Soares ¹, Matheus Prestes Barros ¹, Filipe Araújo Canêdo Canêdo Mendonça ², João Pedro Azevedo Pedro Azevedo Ventorin ¹, Guilherme Ortega Ortega Zulim ¹, Rafael Rodrigues Rodrigues Afonso ¹, Dante G. Pazzanese Duarte Lanna ¹

¹Escola Superior de Agricultura Luiz de Queiroz- Universidade de São Paulo, ²Phibro Saúde Animal

3:45 p.m. PSXIV-27 **Effects of an Immunomodulatory Feeding Program on Performance for Bos Indicus-influenced Cattle in a Commercial Feedlot**

Filipe Araújo Canêdo Mendonça ¹, Maryele Rodrigues ², Adriano Umezaki ², Vagner Lopes ², Danilo Grandini ¹, Pedro Mamede ¹, Arquimedes Júnior ¹, Lucas Ghedin Ghizzi ¹, Josiane Lage ¹, Timothy Buysker ³, Kari Saddoris-Clemons ¹

¹Phibro Animal Health Corporation, ²MFG Agropecuária, ³Smart Data Science Solutions

3:45 p.m. PSXIV-23 **Effects of Protein/Energy Supplementation to Beef Heifers Grazing Fall Native Range on Growth Performance and Blood Metabolites During Mid-Gestation**

Jennifer L. Hurlbert ¹, Brooklyn M. Kuzel ¹, Matheus Carlis ¹, Francisco Scremini ¹, Michael Undi ², Kevin K. K. Sedivec ³, Carl Robertson Dahlen ¹

¹North Dakota State University Department of Animal Sciences Center for Nutrition and Pregnancy, ²NDSU, ³North Dakota State University

3:45 p.m. PSXIV-15 **Effects of rotation of ionophores on rumen fermentation of growing phase beef x dairy steers using ex vivo techniques in a commercial feedlot**

Madison L. Bemisderfer ¹, Logan R. Thompson ¹, Haley E. Larson ²

¹Kansas State University, ²Kansas State University - Olathe

3:45 p.m. PSXIV-19 **Effects of rotational feeding of monensin and laidlomycin propionate on enteric gas emissions and growth performance in limit-fed beef x dairy steers**

Madison L. Bemisderfer ¹, Cody Schneider ², Logan R. Thompson ¹, Haley E. Larson ³

¹Kansas State University, ²Cornbelt Livestock Services, ³Kansas State University - Olathe

3:45 p.m. PSXIV-13 **Effects of supplementation of Natural Zeolite on digestibility and rumen fermentation characteristics of finishing Bos indicus**

Bárbara Martins Brixner ¹, Daiana Dos Santos dos Santos de Oliveira ¹, Livia M. Benez ¹, Gustavo Mandonça ², Pedro Souto Lamas ¹, Larissa M. Coelho ¹, Daniel Montanher Polizel ³, Flavio Augusto Portela Santos ¹, Dayana Faria ⁴

¹Escola Superior de Agricultura Luiz de Queiroz, ²"Luiz de Queiroz" College of Agriculture,

³Universidade Estadual Paulista "Júlio de Mesquita Filho" - Unesp, ⁴Verde Agritech Company

3:45 p.m. PSXIV-14 **Effects of supplementation of Natural Zeolite on performance and carcass characteristics of feedlot beef cattle**

Bárbara Martins Brixner ¹, ALECSANDER ALVES ALMEIDA ², MIGUEL ANGEL CHASE LLORET ², Pedro Souto Lamas ¹, José Renato Silva Gonçalves ³, Laísse Garcia de Lima ⁴, Flavio Augusto Portela Santos ¹, Daniel Montanher Polizel ⁵, Dayana Faria ⁶

¹Escola Superior de Agricultura Luiz de Queiroz, ²"Luiz de Queiroz" College of Agriculture,

³Experimental Station Hildegard Georgina Von Pritzelwitz, Fazenda Figueira, ⁴Hildegard Georgina Von Pritzelwitz", Experimental Station, ⁵Universidade Estadual Paulista "Júlio de Mesquita Filho" - Unesp, ⁶Verde Agritech Company

3:45 p.m. PSXIV-4 **Effects of various sampling condition on CH4 emission measurement by the CO2 method in Hanwoo steers**

Myunggi Baik ¹, Jaesung Lee ¹, Junseok Oh ¹, Rajaraman Bharanidharan ², Jinwoo Jeong ¹, Junsung Kyung ¹, Kamburawala Kankanamge Tharindu Namal Ranaweera ¹, Seyun Im ¹, Sang Yeob Kim ¹, Kyoung Hoon Kim ³

¹Department of Agricultural Biotechnology, Seoul National University, ²Institutes of Green Bio Science and Technology, Seoul National University, ³Graduate School of International Agricultural Technology, Seoul National University

3:45 p.m. PSXIV-6 **Evaluating the Relationship Between Residual Feed Intake and Residual Water Intake in Beef Cattle Across Two Locations**

Deborah Ologunagba ¹, Nathan Blake ¹, Tylor J. Yost ¹, Matthew Walker ¹, Eswar Arunkumar Kalaga ¹, Ida Holaskova ¹, Jarred Yates ¹, Ibukun M M. Ogunade ¹, Matthew E. Wilson ¹

¹West Virginia University

3:45 p.m. PSXIV-16 **Evaluation of Alternative Titanium Dioxide Dosing Method to Predict Dry Matter Intake**

Carlee M. Salisbury ¹, Jason M. Warner ², Logan R. Thompson ¹

¹Kansas State University, ²Kansas State

3:45 p.m. PSXIV-26 **Evaluation of restricted maximum intake on visceral organ mass and carcass characteristics of finishing lambs fed a concentrate-based diet**

Justin J. Delver ¹, Zachary K. Smith ², Thiago Lauro L. Maia Ribeiro ¹, Grace H. Olinger ¹, Riley J. Leeson ¹, Forest L. Francis ³, Becca B. Grimes Francis ¹, Warren C. Rusche ¹

¹South Dakota State University, ²Department of Animal Science, South Dakota State University, Brookings, SD 57007, USA., ³Texas A&M University-Kingsville

3:45 p.m. PSXIV-18 **Impact of stocking method on heifer performance and reproductive outcomes**

Emma Briggs ¹, Mindy King ², Keith R. Harmony ¹

¹Kansas State University, ²Oklahoma State University

3:45 p.m. PSXIV-12 **In vitro gas production and fermentation parameters in diets with increasing levels of natural zeolites for feedlot cattle**

Bárbara Martins Brixner ¹, Daiana Dos Santos dos Santos de Oliveira ¹, Livia M. Benez ¹, Pedro Souto Lamas ¹, Daniel Montanher Polizel ², Flavio Augusto Portela Santos ¹, Dayana Faria ³

¹Escola Superior de Agricultura Luiz de Queiroz, ²Universidade Estadual Paulista "Júlio de Mesquita Filho" - Unesp, ³Verde Agritech Company

3:45 p.m. PSXIV-20 **In vivo evaluation of enteric methane production in sheep fed diets composed of agro-industrial by-products**

Marya Fernanda Santos da Silva ¹, Laura B. De Vecchi ², Vivian Evangelista ¹, Jeraldine Bastidas ¹, Vagner Ovani ², Simón Perez-Marquez ¹, Rogério Martins Maurício ³, Helder Louvandini ⁴, Adibe L. Abdalla ⁵

¹Center for Nuclear Energy in Agriculture (CENA), University of São Paulo (USP), ²Center for Carbon Research in Tropical Agriculture (CCARBON) - University of São Paulo, ³,

⁴Center for Nuclear Energy in Agriculture, University of São Paulo, ⁵Centro de Energia Nuclear na Agricultura, Universidade de São Paulo, Piracicaba, SP, Brazil

3:45 p.m. PSXIV-21 **Metabolic and hormonal response to abomasal and ruminal propionate infusion**

Andrew P. Foote ¹, Mindy King ¹, Mallory LeDoux ¹

¹Oklahoma State University

3:45 p.m. PSXIV-25 **Monensin and immunomodulator additive in intensive pasture finishing of Nellore bulls**

Luan de Oliveira Moura Silva ¹, Juliano José de Resende Fernandes ², Alana M. Maria Menezes de Calça ³, Amoracyr J. C. Nuñez ³, Fernando Pitaluga de Castro Polveiro ³, Carla Daniela Suguimoto Leite ³, Nilvaldo Moreira da Silva Junior ³, Bruna Giovanna Falcini Girrach ³, Açucena Batista Neves ³, Maria Eduarda Teixeira Passos ³, Leonice Ferreira da Silva ³, NATÁLIA Vieira Castro e Silva ³, Carlos Emanuell Xavier Lopes ³, Victor R. Rezende Moreira Couto ³

¹Eastern Colorado Research Center - CSU, ²University Federal of Goiás, ³Federal University of Goiás

3:45 p.m. PSXIV-10 **Performance of ½ Angus-Nelore Cattle in Feedlot Receiving Diets with Different Fiber Levels**

Mailza G. Gonçalves de Souza ¹, Bianca Lombardi Soares ¹, Jonas Gabriel Dantas ¹, Matheus Prestes Barros ¹, Raquel Gomes do Amaral ², Matheus Copeli Copeli Garcia ³, Paulo César Bortoleto Júnior ³, Dante G. Pazzanese Duarte Lanna ¹

¹Escola Superior de Agricultura Luiz de Queiroz- Universidade de São Paulo,

²UNIVERSIDADE FEDERAL DO OESTE DA BAHIA, ³Universidade de São Paulo, Campus de Pirassununga, Faculdade de Zootecnia e Engenharia de Alimentos

3:45 p.m. PSXIV-11 **Predictive Modeling of Dry Matter Intake, Feed, and Water Efficiency in Pasture-Based Cattle Systems**

Tylor J. Yost¹, Nathan Blake¹, Eswar ArunKumar Kalaga¹, Deborah Ologunagba¹, Matthew Walker¹, Ida Holaskova¹, Jarred Yates¹, Matthew E. Wilson¹

¹West Virginia University

3:45 p.m. PSXIV-17 **Red seaweed *Gracilaria* spp. can mitigate enteric methane emissions in beef cattle**

Georgia J. Dubeux¹, Andres Fernandez-Lehmann¹, Araceli B. Maderal¹, Camila Gomez-Lopez¹, Federico Tarnonsky¹, Federico Podversich², Ignacio Fernandez-Marenchino¹, Juan J. Vargas³, Wilmer Cuervo⁴, Tessa M. Schulmeister¹, Martin Ruiz-Moreno¹, Liza Garcia¹, Nicolas DiLorenzo⁵

¹University of Florida, ²South Dakota State University, ³Colorado State University, AgNext, Department of Animal Sciences, ⁴Clemson University, ⁵Florida University

3:45 p.m. PSXIV-3 **Reproductive performance of *Bos indicus* cows supplemented with a low dose of Rumen-Protected Methionine**

Kauani Borges Cardoso¹, Vinicius S. Izquierdo², Jordani Borges Cardoso¹, Matheus Wrege Meireles¹, Fernanda Lopes³, Philippe Moriel², José Renato Silva Gonçalves⁴, Roberto Sartori⁵, Cassio Brauner², Eduardo Schmitt¹

¹University of Pelotas, ²University of Florida, IFAS / Range Cattle Research and Education Center, ³Adisseo Latin America Adisseo Brasil Nutrição Animal Ltda., ⁴Experimental Station Hildegard Georgina Von Pritzelwitz, Fazenda Figueira, ⁵Department of Animal Science, Luiz de Queiroz College of Agriculture, University of São Paulo (ESALQ/USP)

3:45 p.m. PSXIV-28 **Supplementation of ruminal bypass protein (RUP) in racing camels**

Grace Handlos¹, Amer AbuGhazaleh¹, Muhammed Namseed Ismail², Fouad Lamghari², Nabil Mansour²

¹Southern Illinois University Carbondale, ²Fujairah Research Centre

3:45 p.m. PSXIV-22 **The effect of adding different levels of Bromoform on enteric methane and rumen fermentation using continuous culture system in vitro**

Mohamed Embaby¹, Grace Handlos², Amer AbuGhazaleh²

¹SIUC, ²Southern Illinois University Carbondale

3:45 p.m. PSXIV-1 **Trace mineral supplementation of beef cows**

Ruth M. Garcia Fuerte¹, Maximino Huerta Bravo¹

¹Universidad Autónoma Chapingo

Small Ruminant

Chair: Artur Rocha, Department of Animal Sciences, Purdue University

3:45 PM - 5:00 PM

Diplomat Ballroom 1

3:45 p.m. 341 **Determining the optimum duration of performance testing for daily feed intake, growth rate, and residual feed intake in growing goats using Grow Safe Feeding System**

Negusse F. Kidane ¹, Merric E. Irvin ², Gordon E. Carstens ²

¹Prairie View A&M University, ²Texas A&M University

4:00 p.m. 342 **Dietary pecan shell supplementation on feedlot lambs' meat traits: pH, color, water holding capacity, shear force, and cooking loss**

Mariana Huerta-Jimenez ¹, Alejandra Y Montana-Salmerón ¹, Martha M. Arévalos-Sánchez ¹, Mayra D. Herrera-Ortega ¹, Lenin A. Magdaleno-Del Rio ¹, Josue J. Magdaleno-Meraz ¹, Jesus R. Gamez-Piñon ¹, Lorenzo Buenabad ¹

¹Facultad de Zootecnia y Ecología/ Universidad Autónoma de Chihuahua

4:15 p.m. 343 **Frequency of semen collection impacts semen quality and physiological parameters in yearling Rambouillet Rams**

Ragan Whitley ¹, Carly Hoffmann ¹, Kyle Stutts ¹, Jake W. Thorne ², Scott Flanagan ³, Citlally Covarrubias ¹

¹Sam Houston State University, ²Texas A&M AgriLife Research Center, ³Reproduction Specialty Group

4:30 p.m. 344 **Bergamot by-products for lamb feeding: effects on growth performance and meat quality**

Martino Musati ¹, Marco Sebastiano Cannone ¹, Fabrizio Mangano ¹, Antonino Bertino ¹, Giuseppe Luciano ¹, Alessandro Priolo ¹, Guido Mangione ¹, Francesco Foti ², Manuel Scerra ², Antonio Natalello ¹

¹Department of Agriculture, Food and Environment (Di3A), University of Catania, Via Santa Sofia 100, 95123, Catania, Italy, ²Departement of Agriculture, Animal Production, University of Reggio Calabria

4:45 p.m. 345 **Insights into Gut Microbiome Changes from Birth to Peri Weaning Period in Pastured Goat Kids**

Eunice Ndegwa ¹, Chyer Kim ¹

¹Virginia State University

Thursday, July 10, 2025

Physiology and Endocrinology IV: Embryo Development and Fertility

Chair: Jessica Nora Drum, South Dakota State University

8:00 AM - 10:30 AM

Diplomat Ballroom 5

8:00 a.m. 421 Award Talk: Estrus Improved Pregnancy Success but not Embryo Growth or Uterine Attachment

George A. Perry ¹, Michael F. Smith ², Robert A. Cushman ³, Julie A. Walker ⁴, Thomas W. Geary ⁵

¹Texas A&M AgriLife Research, ²University of Missouri, ³U.S. Meat Animal Research Center, USDA-ARS, ⁴South Dakota State University, ⁵USDA-ARS Fort Keogh LARRL

8:30 a.m. 422 Evaluating the relationship between anogenital distance, reproductive tract score, and fertility to timed-artificial insemination in commercial Bos taurus beef heifers

Allen G. Schwartz ¹, Danielle M. Stock ¹, Sydney H. Flax ¹, Saulo M. Zoca ², Sandy Johnson ³, Nicholas Wege Dias ¹

¹Kansas State University - Department of Animal Sciences & Industry, ²University of Tennessee, ³Kansas State University - Department of Animal Sciences & Industry; Northwest Research and Extension Center

8:45 a.m. 423 Impact of sire overnutrition on preimplantation conceptus transcriptome profile in the bovine

Lucas Melo Goncalves ¹, Samir Burato ¹, Molly Sloan Smith ¹, Arslan Tariq ², Saulo M. Zoca ³, Lawton Stewart ¹, John J. Bromfield ², Pedro Fontes ¹

¹University of Georgia, ²University of Florida, ³University of Tennessee

9:00 a.m. 424 The influence of hCG on cyclicity status of beef cows bred via natural service

Brette D. Poliakiwski ¹, Damon Smith ¹, Zachary K. Seekford ², Odile Polanco ¹, Thaina Minela ¹, Musah Muntari ², Todd R. Bilby ³, Cliff C. Lamb ⁴, Ky G. Pohler ²

¹Department of Animal Science, Texas A&M University, ²Department of Animal Sciences, Texas A&M University, ³Merck Animal Health, ⁴Texas A&M AgriLife

9:15 a.m. Physiology and Endocrinology IV Break

9:30 a.m. 425 Award Talk: The importance of estrus expression and endometrial function for the pregnancy success in beef cattle

Cecilia Constantino Rocha ¹

¹University of Missouri

10:00 a.m. 426 Late-Breaking: Effect of lycopene supplementation to in vitro maturation media on developmental competence of bovine oocytes after IVF

Hanuman Balagoni ¹, Ramya Sri Kolikapongu ¹, Abdallah M. Shahat ¹, Adel R. Moawad ¹

¹Fort Valley State University

10:15 a.m. 427 **Late-Breaking: Milk extracellular vesicles endogenously labeled with ZsGreen1 are bioavailable to the testis in vivo**

Nicole Nordell ¹, Brett R. White ¹, Amy T. Desaulniers ¹

¹University of Nebraska-Lincoln

Production, Management and Environment IV

Chair: Obioha Durunna, Lakeland College, Vermilion, AB, Canada; Department of Animal and Poultry Science, University of Saskatchewan

8:00 AM - 10:30 AM

Diplomat Ballroom 4

8:00 a.m. 412 **A model generalization study in localizing indoor cows with COW Localization (COLO) dataset**

C.P. James Chen ¹, Mautushi Das ¹, Gonzalo Ferreira ¹

¹Virginia Polytechnic Institute and State University

8:15 a.m. 413 **Evaluating the Effect of Lighting Conditions on YOLOv5-Based Estrus Detection and Animal Identification in Dairy Cattle**

Cierra Clayton ¹, Kaitlyn Wilson ¹, Allison L. Griffin ¹, Kenneth Graves ¹, Christopher Hudson ¹, Marcus McGee ¹

¹Mississippi State University

8:30 a.m. 414 **Enhancing Estrus Detection in Group-Housed Dairy Cattle: Evaluating Computer Vision Against Traditional and Sensor-Based Methods**

Cierra Clayton ¹, Malena Heck ¹, Kenneth Graves ¹, Christopher Hudson ¹, Marcus McGee ¹

¹Mississippi State University

8:45 a.m. 415 **A machine learning approach for price prediction and decision support in United States (U.S.) cow-calf operations**

Vishnudas Kulangara Veetil ¹, Mohammed Zayan Tariq ², Karun Kaniyamattam ²

¹Texas A&M University, Department of Animal Science, ²Texas A&M University

9:00 a.m. 416 **GPS Precision and Data Acquisition Efficiency of Solar-Powered Collars and Tags for Beef Cattle Monitoring**

Egleu D. M. Mendes ¹, Dylan G. Stewart ², Andy D. Herring ³, Marcus Blum ⁴, Stephen L. Webb ², Luis O. Tedeschi ⁵

¹TEXAS A&M UNIVERSITY, ²Department of Rangeland, Wildlife and Fisheries Management, Texas A&M University, ³Department of Animal Science, Texas A&M University, ⁴Texas A&M Natural Resources Institute, ⁵Texas A&M University

9:15 a.m. **Production, Management and Environment IV Break**

9:30 a.m. 417 **A data-driven approach for near real-time calving detection in extensive cattle systems**

Manuel J. García García ¹, Eseró Padrón Tejera ¹, M. Pilar Torralbo Muñoz ¹, Dolores C. Pérez Marín ¹, Francisco Maroto Molina ¹

¹Department of Animal Production, School of Agricultural and Forestry Engineering, University of Cordoba, Cordoba, Spain

9:45 a.m. 418 **GNSS tracking to assess site selection of calving cows in relation to herdmates**

M. Pilar Torralbo Muñoz ¹, Manuel J. García García ¹, Eseró Padrón Tejera ¹, Dolores C. Pérez Marín ¹, Francisco Maroto Molina ¹

¹Department of Animal Production, School of Agricultural and Forestry Engineering, University of Cordoba, Cordoba, Spain

10:00 a.m. 419 **Comparative analyses of caliper models for body condition assessment in reproductive females across physiological stages**

Ron Aldwin S. Navales ¹, Weasley A. Orlando ², Vitor Moita ², Carine M. Vier ², Jiyao Guo ², Ning Lu ², Wayne R. Cast ², Steve Dritz ², Jordi Montoro ², Jeremy Robertson ³

¹KSU, ²Genus PIC, ³Brenneman Pork

10:15 a.m. 420 **Both elevated lipopolysaccharide and D-lactic acid concentrations in blood contribute to systemic inflammation in acute ruminal acidosis**

Binod Pokhrel ¹, Zhendong Tan ¹, Gabriela Perez-Hernandez ¹, Tatiane Fernandes ¹, Benjamin A. Corl ¹, Scott P. Greiner ¹, Honglin Jiang ¹

¹Virginia Tech

Ruminant Nutrition VII: Production Systems

Chair: Todd Callaway, University of Georgia

8:00 AM - 11:00 AM

Diplomat Ballroom 3

8:00 a.m. 402 **Award Talk: The role of liquid feeds in the beef cattle nutrition in the U.S.: A 50-year journey**

Nicolas DiLorenzo ¹

¹University of Florida

8:30 a.m. 403 **Whole blood immune gene expression in Angus bulls with divergent residual feed intake expected progeny differences**

Yarahy Leal ¹, Samantha R. Johnson ¹, Modoluwamu Idowu ¹, Taylor S. Sidney ¹, Deborah Ologunagba ¹, Ibukun M M. Ogunade ¹

¹West Virginia University

8:45 a.m. 404 **Energy Balance and Net Energy for Maintenance of Beef × Dairy Crossbred Steers**

Landon G. Canterbury ¹, Michael L. Galyean ², Colten W. Dornbach ¹, Kallie D. Childress ¹, Aubrey C. Thompson-Smith ¹, Madelynn Baker ¹, Blake Sitka ¹, Taylor Loeffler ¹, Madeline S. Grant ¹, Nicole C. Burdick Sanchez ³, P. Rand Broadway ³, Kristin E. Hales ¹

¹Department of Animal and Food Sciences, Texas Tech University, ²Department of Veterinary Sciences, Texas Tech University, ³United States Department of Agriculture, Agriculture Research Service, Livestock Issues Research Unit

9:00 a.m. 405 **Supplementation of high-producing dairy cows with a standardised rumen-protected grape extract supports milk production in early lactation during heat stress conditions**

Paul Engler ¹, Amélie Roques ¹, Amine Benarbia ¹

¹Nor-Feed

9:15 a.m. 406 **Bridging the Gap Between Feedlot and Pasture: Comparing Production Phenotypes of Cattle in both Dry Lot and Grazing Systems.**

Tylor J. Yost ¹, Nathan Blake ¹, Eswar ArunKumar Kalaga ¹, Deborah Ologunagba ¹, Matthew Walker ¹, Ida Holaskova ¹, Jarred Yates ¹, Matthew E. Wilson ¹

¹West Virginia University

9:30 a.m. **Ruminant Nutrition VII: Break**

9:45 a.m. 407 **Performance, digestion, and passage of whole cottonseed offered either ad libitum or under restriction to beef cows nursing calves.**

Chandler Kyle ¹, Diva N. Rigney ¹, Duncan McSorley ¹, Mason B. Henson ¹, Paul W. Dyce ¹, Kimberly Kimberly Mullenix ¹, S. Leanne Dillard ¹, William B. Smith ¹

¹Auburn University

10:00 a.m. 408 **The effect of melatonin supplementation during mid-late gestation in dams grazing toxic, endophyte-infected tall fescue on stocker phase growth performance and feed efficiency of offspring.**

Robin A. Cheek ¹, Beth B. Kegley ², Ken B. Coffey ², Jeremy G. Powell ², Shane Shane Gadberry ³, Caleb O. Lemley ⁴, Nathaniel Moss ³, Cody Bright ², Jana L. Reynolds ², Alexis Harness ², Carson R. Hopkins ⁵, Brittini P. Littlejohn ⁵

¹University of Arkansas, ²University of Arkansas, ³University of Arkansas System Division of Agriculture, ⁴Mississippi State University, ⁵University of Arkansas System Division of Agriculture, Department of Animal Science

10:15 a.m. 409 **Impact of late-gestation chromium propionate supplementation of Brangus cows on the physiology of the offspring**

Hiam Marcon ¹, Matheus Fellipe Lana Ferreira ², Ashley K. Edwards ¹, Barbara Roqueto do Reis ³, Gustavo Rezende Siqueira ⁴, Wellison JS Diniz ⁵, Marcelo Vedovatto ¹

¹Louisiana State University Agricultural Center, ²Louisiana State University, ³CREC-White Sand Beef Unit, Mississippi State University, ⁴São Paulo Agency for Agribusiness Technology, ⁵Auburn University

10:30 a.m. 410 **Utilizing By-Products to Replace High Moisture Corn in a Large Pen Trial: A Circular Economy Strategy for Finishing Nellore Bulls in a Tropical Feedlot System**

Jéssica Gusmão ¹, Rodrigo D L Pacheco ², Victor Campanelli ², Izabela Farias ², Renan Santos ², Rafael Cervieri ³, Pedro Terencio ², Thiago Silva ²

¹Campanelli Innovation Center, Agro-Pastoril Paschoal Campanelli, Altair, 15430-000, São Paulo, Brazil., ²Campanelli Innovation Center, ³Nutribeef Consultoria

10:45 a.m. 411 **Evaluating Feeding Protocols for Optimal Performance and Efficiency in Large Beef Cattle Feedyard Systems**

Jéssica Gusmão ¹, Rodrigo D L Pacheco ², Victor Campanelli ², Izabela Farias ², Renan Santos ², Rafael Cervieri ³, Pedro Terencio ², Thiago Silva ²

¹Campanelli Innovation Center, Agro-Pastoril Paschoal Campanelli, Altair, 15430-000, São Paulo, Brazil., ²Campanelli Innovation Center, ³Nutribeef Consultoria

**Artificial Intelligence Symposium: Animal Science and Animal Agriculture
Opportunities and Challenges**

Chair: Stephanie Hansen, Iowa State University

8:00 AM - 11:30 AM

Diplomat Ballroom 2

8:00 a.m. **Artificial Intelligence Symposium Introduction**

8:05 a.m. 399 **Generative AI in Data Analysis for Animal Science**

Michael Robben ¹

¹University of Illinois Urbana-Champaign

8:50 a.m. 400 **Design and Development of Artificial Intelligence Driven Decision
Support Systems for Sustainable Livestock Systems in United States**

Karun Kaniyamattam ¹, Adeolu Adekule ¹, Vishnudas Kulangara Vettil ¹, Serinmary Pulikkottil
Rejimon ¹, Yalong Pi ², Jian Tao ¹, Egleu D. M. Mendes ³, Luis O. Tedeschi ¹

¹Texas A&M University, ²Texas A&M Institute of Data Science, ³TEXAS A&M UNIVERSITY

9:35 a.m. **Artificial Intelligence Symposium Break**

9:50 a.m. 401 **Ethical Considerations and AI Education in Animal Science**

Stephanie L. Hansen ¹

¹Iowa State University

**Growth and Development Symposium: Muscle and Adipose Tissue Development in
Meat Species: Genetic and Physiological Responses to Thermal Challenges -**

Sponsored by the Rodney L. Preston Appreciation Club

Chair: Marcio Duarte, University of Guelph, Guelph, ON, Canada

8:30 AM - 12:30 PM

Diplomat Ballroom 1

8:30 a.m. **Growth and Development Symposium Introduction**

8:35 a.m. 395 **Impact of Thermal Load on Muscle and Fat Metabolism in Meat
Animals**

Jongkyoo Kim ¹

¹Michigan State University

9:30 a.m. 396 **Heat Stress and Bioenergetics in Sows and Their Offspring:
Implications for Growth and Development**

Jay S. Johnson ¹

¹University of Missouri

10:25 a.m. **Growth and Development Symposium Break**

10:40 a.m. 397 **Nutritional Requirements related to thermal conditions and modulation muscle and adipocyte development in modern broilers**

Melissa Izabel Hannas ¹, Kaique I. Gomes ², Gabriel Ribeiro Braga ², Filipe Antônio Monteiro ², Arele Calderano ², Horácio Santiago Rostagno ²

¹UFV, ²Universidade Federal de Viçosa

11:35 a.m. 398 **Characterizing the genomic background of climatic resilience in pigs through quantitative epigenetic models, novel traits, and biological validation studies**

Luiz F. Brito ¹, Francesco Tiezzi ², Christian Maltecca ³, Jay S. Johnson ⁴

¹Purdue University, ²University of Florence, ³North Carolina State University, ⁴University of Missouri