



Thursday, July 5, 2018

WCAP Registration

3:00 PM – 5:30 PM

WAAP Council Meetings

3:30 PM – 4:30 PM

WCAP Keynote

Chair: Steven A. Zinn, Department of Animal Science, University of Connecticut
5:30 PM– 6:20 PM

5:30 PM 528 **WCAP Keynote: The next genomic revolution through vets and animal scientists**

Jennie E. Pryce ¹

¹Department of Economic Development, Jobs, Transport and Resources

WCAP Opening Reception

6:15 PM – 7:00 PM

Friday, July 6, 2018

WCAP Registration

WCAP Session I: Precision Livestock Farming to increase producers' profitability

Chair: Philippe Chemineau, Directeur de Recherches, INRA

8:30 AM – 12:15 PM

8:30 AM 530 **Precision livestock farming**

Ilan Halachmi ¹

¹Institute of Agricultural Engineering, Agricultural Research Organization (A.R.O.) - The Volcani Centre

9:15 AM 503 **Machine learning process for real-time decision-making in animal husbandry**

Irenilza de Alencar Nääs ¹

¹Paulista University

10:00 AM **Break**

10:45 AM 504 **The presence of bacterial species in boar semen and their impact on the sperm quality and oxidative balance**

Michal Ďuračka¹, Eva Tvrda²

¹Slovak University of Agriculture in Nitra, Faculty of Biotechnology and Food Sciences, Department of Animal Physiology, ²Department of Animal Physiology, Slovak University of Agriculture

11:00 AM 505 **Transformation of traditional pastoral livestock systems of Egypt**

Helmy Rashad. Metawi¹

¹Animal Production Research Institute-Agriculture Research Center

11:15 AM 506 **Mid-infrared spectroscopy of milk as a tool to predict subacute ruminal acidosis**

Tim Luke¹, Victoria Russo², Simone Rochfort², Bill Wales², Jennie E. Pryce³

¹Agriculture Victoria & La Trobe University, ², ³Department of Economic Development, Jobs, Transport and Resources

11:30 AM 507 **Challenges and opportunities in precision health monitoring of dairy cattle**

Trevor DeVries¹

¹University of Guelph

WCAP Session II: Higher food safety to enhance consumer confidence

Chair: Deb Hamernik, University of Nebraska–Lincoln

2:00 PM – 5:30 PM

2:00 PM 508 **Effect of the use of antibiotics in food animals on antibiotic resistance in food animals and humans**

Herman W. Barkema¹, Diego B. Nobrega², Karen L. Tang², Niamh Caffrey², Paul Ronksley², James Kellner², Javier Sanchez², William Ghali², Susan C. Cork²

¹University of Calgary, ²

2:45 PM 509 **Critical Control Points for preventing the spread of antibiotic resistance associated with cattle manure to fresh produce**

Authors:

Amy Pruden¹

¹Virginia Tech

3:30 PM **Break**

4:00 PM 510 **To treat or not to treat: Public attitudes on the therapeutic use of antibiotics in the dairy industry**

Katharine Knowlton¹, Marina A G. von Keyserlingk²

¹Virginia Tech, ²Animal Welfare Program, University of British Columbia, Vancouver - Canada

4:30 PM 511 **Managing antibiotics use: case the Netherlands**

Abele Kuipers¹

¹Expertise Center for Farm Management and Knowledge Transfer WUR

4:45 PM 512 **The challenge of Antimicrobial resistance on the animal-human-environment interface.**

Uwe H. Roesler¹

¹Institute for Animal Hygiene and Environmental Health

WAAP 1st General Assembly

5:30 PM – 6:30 PM

Saturday, July 7, 2018

WCAP Registration

7:00 AM – 5:15 PM

WCAP Poster Session I

7:30 AM – 8:30 AM

WCAP: Precision Livestock Farming to increase producers' profitability

7:30 AM WPSI-1 **Application of Climatic Algorithm for Prediction of Regional Whole-Crop Barley Productivity**

Jinglun Peng¹, Moonju Kim¹, Kyungdae Kim², Muhwan Jo³, Kunjun Han⁴, Kyungil Sung¹

¹Kangwon National University, ²Gangwon-do Agricultural Research and Extension Services,

³Foundation for the Rural Youth, ⁴Louisiana State University

WCAP: Precision Livestock Farming to increase producers' profitability

7:30 AM WPSI-2 **Calcium salts of medium-chain fatty acids supplementation increased milk production and changed plasma hormone concentration in mid-lactating cows**

Saki Ishimaru¹, Toshiya Haunuma², Kenji Kawashima³, Tsuneko Yamaguchi³, Sadaki Asakuma⁴, Shiro Kushibiki⁵, Taketo Obitsu¹, Toshihisa Sugino¹

¹The Research Center for Animal Science, Graduate School of Biosphere Science, Hiroshima University, ²Toyama Prefectural Agricultural, Forestry & Fisheries Research Center, ³Chiba Prefectural Livestock Research Center, ⁴Hokkaido Agricultural Research center, ⁵National Institute of Livestock and Grassland Science

WCAP: Precision Livestock Farming to increase producers' profitability

7:30 AM WPSI-3 **Characteristics of the feather developing pattern of early-feathering chicks and late-feathering chicks**

Sea H. Sohn¹, Min Bang¹, Eun Cho¹

¹Gyeongnam National University of Science and Technology

WCAP: Precision Livestock Farming to increase producers' profitability

7:30 AM WPSI-4 **Effect of sodium stearoyl-2-lactylate supplementation on lactation performance, health biomarkers in serum, and economic efficacy of mid-lactation Holstein cows**

Sung Sill Lee¹, Shin Ja Lee², Eun Tae Kim³, Ji Hoon Lee², Ha Yeon Jung⁴, Kwang Seok Ki³

¹Graduate School of Applied Life Sciences, Gyeongsang National University, ²GyeongSang National University, ³National Livestock Research Institute, RDA, ⁴National Livestock Research Institute, RDA

WCAP: Genetic improvement in developing countries: mission impossible?

7:30 AM WPSI-5 **A study of productive and reproductive parameters in goat breeds of Northern Areas of Pakistan**

Ghulam Bilal ¹, Muhammad Moaeen-ud-Din ², Muhammad Sajjad. Khan ³, James Reecy ⁴
¹PMA-Arid Agriculture University, Rawalpindi, ²PMAS-Arid Agriculture University, ³Institute of Animal & Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Pakistan, ⁴Iowa State University

WCAP: Genetic improvement in developing countries: mission impossible?

WPSI-6 **Chicken resource population as the source of study genetic improvement of indigenous breeds**

Natalia V. Dementiva ¹, Andrei A. Kudinov ¹, Olga V. Mitrofanova ², Arina I. Mishina ³, Michael G. Smaragdo ¹, Alexandr F. Yakovlev ¹
¹, ²Russian Research Institute of Farm Animal Genetics and Breeding - Branch of the L.K. Ernst Federal Science Center for Animal Husbandry, ³Federal Research Center for Animal Husbandry named after Academy Member L.K. Ernst

WCAP: Challenges and opportunities in animal health

WPSI-7 **Retrospective evaluation of clinical outcomes among cattle evaluated with a computer-aided lung auscultation system at the time of bovine respiratory disease diagnosis**

Jason Nickell ¹, Brent Woodward ², Dave Renter ³
¹Allflex Livestock Intelligence, ²Merck Animal Health, ³Kansas State University

WCAP: Challenges and opportunities in animal health

WPSI-8 **Biosynthesis of milk components and vitality of cows with high and low-fat milk**

Roman Nekrasov ¹, Eugeniy Kharitonov ², Zinoviy Makar ², Vasiliy Duborezov ², Alexander Golovin ²
¹L.K. Ernst Federal Science Center for Animal Husbandry, ²

WCAP: Challenges and opportunities in animal health

WPSI-9 **Dietary DL-methionine supplementation alleviates early liver injury of intra-uterine growth retarded suckling piglets**

John K. Htoo ¹, Zhang Hao ², Li Y ², Chen Y ², Ying Z ², Su W ², Zhang Tao ², Dong Yan ², Zhang L ², Wang Tian ²
¹Evonik Operations GmbH, ²

WCAP Session III: Challenges and opportunities in animal health

Chair: Norman Casey, University of Pretoria

8:30 AM – 12:30 PM

8:30 AM 513 Food safety and animal health and production: one health, many challenges, no silver bullets

Andres Perez ¹, Julio Alvarez ², Irene Iglesias ³, Kim VanderWaal ⁴, Fernando Mardones ⁵, Moh Alkhamis ⁶, Elizabeth Rieder ⁷

¹Center for Animal Health and Food Safety, University of Minnesota, ²VISAVET - Universidad Complutense de Madrid, Spain, ³Center for Animal Health Research of the National Institute for Agricultural and Food Research and Technology (INIA-CISA), ⁴University of Minnesota, ⁵Universidad Andres Bello, ⁶School of Public Health, Kuwait University, ⁷USDA:ARS, Plum Island Animal Disease Center

9:15 AM 514 Emerging health issues in swine in Brazil

Janice R. Ciacci-Zanella ¹

¹EMBRAPA, Brazilian Agricultural Research Corporation

10:00 AM Break

11:00 AM 515 CHRONIC ADMINISTRATION OF PINE BARK EXTRACT (FLAVANGENOL) ATTENUATES HEAT SHOCK PROTEIN mRNA EXPRESSION IN THE CHICKEN BRAIN

Hui Yang ¹, Vishwajit S. Chowdhury ¹, Mohammad A. Bahry ¹, Phuong V. Tran ¹, Phong H. Do ¹, Guofeng Han ¹, Rong Zhang ², Mitsuhiro Furuse ³

¹Kyushu university, ²Harvard Medical School, ³Kyushu University

11:15 Am 516 Contribution of pastoral systems to global food security, trends and challenges

Gregorio Velasco Gil ¹

¹Food and agriculture Organization of the United Nations

WCAP Poster Session II

10:00 AM – 11:00 AM

WCAP: Challenges and opportunities in animal health

10:00 AM WPSII-1 Environmental Effects of High Temperatures on Sperm of Rams of Different Breeds

Baylar S. Iolchiev ¹, Pavel Klenovitskiy ¹, Anastasia N. Vetokh ¹, Fatima Borunova ²

¹L.K. Ernst Federal Science Center for Animal Husbandry, ²

WCAP: Animal well-being challenges for today, opportunities for tomorrow

10:00 AM WPSII-2 Factors that determine cortisol level in hair of lactating dairy cows

Katsuji Uetake ¹, Shigeru Morita ², Nobutada Sakagami ³, Kazuaki Yamamoto ³, Shinji Hashimura ³, Toshio Tanaka ¹

¹Azabu University, ²Rakuno Gakuen University, ³Kanagawa Prefectural Livestock Industry Technology Center

WCAP: Animal well-being challenges for today, opportunities for tomorrow

10:00 AM WPSII-3 **Is gene edition of male pigs an acceptable alternative to surgical castration?**

Maria Cristina Yunes¹, Clarissa Silva Cardoso¹, Dayane Lemos Teixeira², Marina A G. von Keyserlingk³, Maria J. Hötzel¹

¹Universidade Federal de Santa Catarina, ²Pontificia Universidad Católica de Chile, ³Animal Welfare Program, University of British Columbia, Vancouver - Canada

WCAP: Genetic improvement in developing countries: mission impossible?

10:00 AM WPSII-4 **Population structure and Holstein ancestry analysis of modern Russian Black and White cattle for accurate genetic evaluation in Leningrad region**

Andrei A. Kudinov¹, Arina I. Mishina², Michael G. Smaragdov¹

¹, ²Federal Research Center for Animal Husbandry named after Academy Member L.K. Ernst

WCAP: Genetic improvement in developing countries: mission impossible?

10:00 AM WPSII-5 **Genome-wide association analysis to identify QTL for carcass traits in Korean native cattle**

Sung-Jin Lee¹, Hong Min-Wook¹, Choi So-Young¹, Jong-Bok Kim¹

¹Kangwon National University

WCAP: Genetic improvement in developing countries: mission impossible?

10:00 AM WPSII-6 **Production statistics for performance traits in fifteen different genotypes**

Georgette M. Pyoos¹, Michiel M. Scholtz¹, Michael D. MacNeil², Annette Theunissen³, Frederick WC. Naser⁴

¹Agricultural Research Council, ²Delta G, ³Northern Cape Department of Agriculture, ⁴University Of The Free State

WCAP: Challenges and opportunities in animal health

10:00 AM WPSII-7 **New approach to modelling diseases: Temporal patterns of African Swine Fever in the European Union (2014-2017)**

Irene Iglesias¹, Marta Martinez¹, Cristina Linares², Ana de la Torre¹, Andres Perez³

¹Center for Animal Health Research of the National Institute for Agricultural and Food Research and Technology (INIA-CISA), ²Department of Epidemiology and Biostatistics. National School of Public Health. Carlos III Institute of Health, ³Center for Animal Health and Food Safety, University of Minnesota

WCAP: Precision Livestock Farming to increase producers' profitability

10:00 AM WPSII-8 **Forage yield, pasture quality and economic performance after pasture rejuvenation in an organic beef cattle farm**

Tunde Omokanye¹, Calvin Yoder², Lekshmi Sreekumar¹, Liisa Vihvelin¹, Monika Benoit¹

¹Peace Country Beef & Forage Association, ²Alberta Agriculture & Forestry

WCAP: Precision Livestock Farming to increase producers' profitability

10:00 AM WPSII-9 **In Vitro Effects of Two Selected Flavonoids on the Vitality of Stored Boar Spermatozoa**

Michal Ďuračka¹, Eva Tvrda²

¹Slovak University of Agriculture in Nitra, Faculty of Biotechnology and Food Sciences, Department of Animal Physiology, ²Department of Animal Physiology, Slovak University of Agriculture

WCAP Lunch Break

12:15 PM – 2:00 PM

ASAS Pre-Registration Open (badge/material pickup only)

2:00 PM – 5:00 PM

ASAS Upload Room

2:00 PM – 5:00 PM

WCAP Session IV: Animal well-being challenges for today, opportunities for tomorrow

Chair: Christine F. Baes, Centre for Genetic Improvement of Livestock, University of Guelph, Ontario, Canada & Institute of Genetics, Vetsuisse Faculty, University of Bern, Bern, Switzerland

2:00 PM – 5:45 PM

2:00 PM 517 **Intractable animal welfare challenges continue to ramp up pressure on the animal industries. Progress and Opportunities**

Donald C. Lay ¹

¹USDA-Agricultural Research Service

2:45 PM 518 **The impact of prenatal and neonatal environments for animal welfare**

Adroaldo Zanella ¹

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4:30 PM 519 **Optimizing chick quality as one of the way backs in Africa's poultry revival**

Jacob Hamidu ¹

¹Kwame Nkrumah University of Science and Technology

4:45 PM 520 **Male dairy calf transportation welfare and market value in British Columbia**

Devon J. Wilson ¹, Jane Stojkov ², David Fraser ²

¹University of British Columbia, ²Animal Welfare Program, Faculty of Land and Food Systems, The University of British Columbia, Vancouver, BC, Canada

5:00 PM 521 **Farm animal welfare: Maintaining public trust and social acceptability**

Marina A G. von Keyserlingk ¹, Daniel M. Weary ²

¹Animal Welfare Program, University of British Columbia, Vancouver - Canada, ²UBC

WCAP Poster Session III

3:30 PM – 4:30 PM

WCAP: Precision Livestock Farming to increase producers' profitability

3:30 PM WPSIII-1 **Ultrastructure and elementary composition of the eggshell according to hen age**

Sea H. Sohn ¹, Ji Park ¹

¹Gyeongnam National University of Science and Technology

WCAP: Precision Livestock Farming to increase producers' profitability

3:30 PM WPSIII-2 **Utilization of optical flow to monitor development of tail biting outbreaks in pigs**

Yuzhi Li ¹, Haifeng Zhang ¹, Lee J. Johnston ¹, Marian Dawkins ²

¹West Central Research and Outreach Center, University of Minnesota, ²Dept. of Zoology, University of Oxford

WCAP: Challenges and opportunities in animal health

3:30 PM WPSIII-3 **Screening of traditional Chinese medicinal plants with antiviral potential**

Tsung-Hsuan Rau ¹, Je-Ruei Liu ¹

¹National Taiwan University

WCAP: Challenges and opportunities in animal health

3:30 PM WPSIII-4 **Supplementation of high-grain diet with ADY either as-is or encapsulated reduces fecal E. coli counts of finishing beef steers**

Tao Ran ¹, Yizhao Shen ², Atef Saleem ³, Burim N. Ametaj ⁴, Ousama Alzahal ⁵, Karen A. Beauchemin ⁶, WenZhu Yang ⁶

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada; Institute of Subtropical Agriculture, the Chinese Academy of Sciences, Changsha, Hunan 410125, China,

²College of Animal Science and Technology, Hebei Agricultural University, ³South Valley University, ⁴University of Alberta, ⁵AB Vista, ⁶Agriculture and Agri-Food Canada

WCAP: Genetic improvement in developing countries: mission impossible?

3:30 PM WPSIII-6 **Retrospect evaluation of cow productivity in the South African landrace breeds and its environmental impact.**

Motshabi C. Mokolobate ¹, Michiel M. Scholtz ¹, Fransie Jordaan ¹, Frederick WC. Nesoer ²

¹Agricultural Research Council, ²University Of The Free State

WCAP: Genetic improvement in developing countries: mission impossible?

3:30 PM WPSIII-7 **The effect of climate on the pre- and post-weaning performance of different beef cattle genotypes**

Michiel M. Scholtz ¹, Georgette M. Pyoos ¹, Mokgadi M. Seshoka ², Annette Theunissen ²

¹Agricultural Research Council, ²Northern Cape Department of Agriculture

WCAP: Animal well-being challenges for today, opportunities for tomorrow

3:30 PM WPSIII-8 **The effectiveness of the using bulls evaluated by different methods**

Ekaterina Saksa ¹, Kirill Plemyashov ², Polina Anipchenko ³

¹, ²Saint-Petersburg State University, ³St. Petersburg State University of Veterinary Medicine

3:30 PM WPSIII-9 **Late-Breaking: Effect of butyrate and/or tannin extract on the consequences, namely the production results, of a coccidiostatic or a vaccination against coccidiosis in male broilers**

Saskia Leleu ¹, Beatrice Wegge ¹, Luc Goethals ¹, Marta Lourenco ¹, Evelyne Delezie ¹

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WCAP Gala

6:15 PM – 9:00 PM

Sunday, July 8, 2018

WCAP Session V: Genetic improvement in developing countries: mission impossible?

Chair: Filippo Miglior, Scientific Researcher, Canadian Dairy Network

8:00 AM – 11:45 AM

8:00 AM 522 **Developing innovative digital technology and genomic approaches to livestock genetic improvement in developing countries**

Raphael Mrode ¹, Julie Ojango ¹, Mwai Okeyo ¹

¹ILRI

8:45 AM 523 **Challenges and opportunities for genetic improvement of cattle production in China**

Yachun Wang ¹, Junya Li ², Shengli Zhang ³, Qin Zhang ³, Yuan Zhang ³

¹College of Animal Science and Technology, China Agricultural University, ²Institute of Animal Science, China Academy of Agricultural Sciences, ³China Agricultural University

10:00 AM 524 **Performance of different genetic group of cows under village condition in Bangladesh**

MA Samad Khan ¹

¹Bangladesh Agricultural University, Mymensingh

10:15 AM 525 **Use of AFLP markers to ascertain Red Sindhi cattle identity for genetic improvement program**

Muhammad Moaeen-ud-Din ¹, Ghulam Bilal ², Abdul Ghaffar ³

¹PMAS-Arid Agriculture University, ²PMA-Arid Agriculture University, Rawalpindi, ³Animal Science Institute, National Agriculture Research Council, Islamabad, Pakistan

10:30 AM 526 **Effect of G×E on Breeding Cooperation Using Genomic Selection**

Lu Cao ¹

¹Aarhus University, Denmark

10:45 AM 527 **Genomics for farm animal adaptation in developing countries**

Alessandra Stella ¹

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WAAP General Assembly

9:30 AM – 10:30 AM

WCAP Lunch Break

11:45 AM – 1:00 PM

WAAP Council Meetings

12:00 PM – 1:00 PM

WCAP Session VI: A picture is worth a thousand words—challenges in communication between agriculture and the public

Chair: Matthias Gauly, Free University of Bozen-Bolzano
1:00 PM – 4:00 PM

1:00 PM 531 **From acceptance to acceptability – Opportunities in communication between livestock farming and the public**

Gesa Busch¹

¹Freie Universität Bozen

1:45 PM 532 **The importance of animal welfare in emerging countries, Brazil as an example**

Maria J. Hötzel¹

¹Universidade Federal de Santa Catarina

2:30 PM **Break**

3:00 PM 533 **Challenges in communication between agriculture and the public**

Glynn T. Tonsor¹

¹Kansas State University

Sunday, July 8, 2018

ASAS Academic Quadrathlon (AQ) Breakfast

7:00 AM – 8:00 AM

ASAS Upload Room

7:00 AM – 6:00 PM

ASAS Registration Open

7:30 AM – 5:00 PM

ASAS Academic Quadrathlon Oral Presentation Prep 1-3

8:00 AM – 11:00 AM

ASAS Academic Quadrathlon Oral Presentations

8:00 AM – 11:00 AM

ASAS Academic Quadrathlon Quiz Bowl

8:00 AM – 4:00 PM

ASAS Board of Directors Meeting

8:00 AM – 12:00 PM

ASN-ASAS Symposium: Future of data analytics in nutrition: Knowledge gaps, data collection and quality, and the role of supporting tools for sustainable development

Chair: Antonello Cannas, Professor, Dipartimento di Agraria, Università di Sassari, Italy;
Candido Pomar, Senior Research Scientist AAFC

8:30 AM – 5:30 PM

- 8:30 AM **ASN-ASAS Symposium Introductory Remarks**
- 8:35 AM **Introduction to NANP/NRSP**
- 8:45 AM **Introduction to USDA/NIFA FACT Program**
- 8:50 AM 208 **The evolution of mathematical models for animal nutrition: what to expect next?**
Luis O. Tedeschi ¹
¹Department of Animal Science/Texas A&M University
- 9:40 AM **Break**
- 10:00 AM 209 **Combining simplicity and complexity: creating user-applications from mechanistic nutritional models**
Jaap van Milgen ¹
¹INRA
- 10:50 AM 210 **Modeling the impact of climate change on whole farm systems**
Andrew D. Moore ¹
¹CSIRO
- 11:40 AM **Roundtable Discussion**
- 12:10 PM **ASN-ASAS Symposium Lunch**
- 1:10 PM 211 **Decision support for emergency preparedness: the use of computer modeling and visual analytical tools to evaluate disease control strategies**
Lindsey Holmstrom ¹, Columb Rigney ¹, Tim Boyer ¹, Kelly Patyk ¹, Melissa Schoenbaum ¹, Amy Hagerman ¹, Ann Seitzinger ¹, Amy Delgado ¹
¹USDA APHIS VS Center for Epidemiology and Animal Health
- 2:00 PM **Break**
- 2:15 PM 212 **Modeling Complex Problems with System Dynamics: Applications in Animal Agriculture**
Charles F. Nicholson ¹, Andre Simões ², Andrew LaPierre ³, Michael Van Amburgh ³
¹Dyson School, Cornell University, ²Universidade Estadual de Mato Grosso do Sul, ³Cornell University
- 3:05 PM 213 **Innovative ways to see data**
John C. Hart ¹
¹University of Illinois at Urbana-Champaign
- 3:55 PM **Roundtable Discussion**

4:25 PM **ASN-ASAS Symposium Closing Remarks**

4:30 PM **ASN-ASAS Symposium Hors d'oeuvre**

CSAS Executive Meeting

10:00 AM – 5:00 PM

ASAS Academic Quadrathlon (AQ) Lunch

11:00 AM – 12:00 PM

Student Welcome Mixer

Chair: Bailey N. Engle, Texas A&M University, Department of Animal Science;

Kelsey J. Phelps, Food Scientist, Cargill Protein

4:30 PM – 5:30 PM

ASAS-CSAS Annual Meeting and Trade Show Opening Session/WCAP Closing Session

5:30 PM – 6:20 PM

ASAS-CSAS Annual Meeting and Trade Show Opening BBQ

6:20 PM – 8:30 PM

Monday, July 9, 2018

Registration Open

7:00 AM – 5:15 PM

Upload Room

7:00 AM – 6:00 PM

Poster Session I

ASAS Graduate Student Poster Competition: PHD Division

7:00 AM – 9:15 AM

7:00 AM **PSI-1 Evaluating genetic parameters and trends of weight traits for the Hays Converter beef breed by multiple-trait and random regression models**

Razie Khorshidi ¹, Michael D. MacNeil ², Daniel Hays ³, Mohammed Abo-Ismael ⁴, John J. Crowley ⁵, Everestus Chima. Akanno ⁶, Zhiquan Wang ⁷, Graham Plastow ¹

¹University of Alberta, ²Delta G, ³Red Bow Ranching Ltd, ⁴Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Canada, T6G 2P5 /Department of Animal and Poultry Production, Damanhour University, Damanhour, Egypt,

⁵Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta. Canadian Beef Breeds Council, Calgary, AB, Canada, ⁶Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Canada, T6G 2P5, ⁷Livestock Gentec, University of Alberta

7:00 AM PSI-2 **Weight change affects mineral excretion and markers of bone turnover in horses**

Ashley Fowler¹, Morgan B. Pyles¹, Susan Hayes¹, Andrea Crum¹, Veronica Bill¹, Pat Harris², Amber Krotky³, Laurie Lawrence¹

¹University of Kentucky, ²Mars Horsecare UK, ³Mars Horsecare US

7:00 AM PSI-3 **The relationship between preweaning creep feeder appearance on postweaning calf intake and carcass characteristics**

Kacie L. McCarthy¹, Leonardo G. Sitorski², Kendall C. Swanson², Sarah R. Underdahl², Trent C. Gilbery², Kevin K. Sedivec², Bryan W. W. Neville³, Carl R. Dahlen²

¹University of Nebraska-Lincoln, ²North Dakota State University, ³U.S. DEPARTMENT OF AGRICULTURE

7:00 AM PSI-4 **Biogeography of Respiratory Microbiome in Beef Cattle**

Jianmin Chai¹, Sarah Capik², John T. Richeson³, Elizabeth B. Kegley⁴, Jeremy G. Powell⁴, Paul A. Beck⁵, Xiaofan Wang⁶, Xiaoyuan Wei⁷, Robert Story⁸, Jiangchao Zhao¹

¹Department of Animal Science, University of Arkansas, Fayetteville, AR, 72701, ²Texas A&M AgriLife Research and Department of Veterinary Pathobiology at Texas A&M College of Veterinary Medicine, ³West Texas A&M University, ⁴University of Arkansas System, Division of Agriculture, Department of Animal Science, ⁵University of Arkansas Southwest Research & Extension Center, ⁶University of Arkansas, ⁷Department of Animal Science, Division of Agriculture, ⁸university of arkansas

7:00 AM PSI-5 **Biweekly administration of recombinant bovine somatotropin during the first trimester of pregnancy failed to alter uterine hemodynamics in suckled beef cows**

Carla D. Sanford¹, Megan P. Owen², Keelee J. McCarty³, Luara B. Canal⁴, Pedro L.P. Fontes⁵, Nicky Oosthuizen⁶, Francine M. Ciriaco⁴, Darren D. Henry⁷, Tessa M. Schulmeister⁸, Nicolas DiLorenzo⁸, Caleb O. Lemley⁹, Graham C. Lamb¹⁰

¹University of Florida, NFREC, ²Texas A&M University Commerce, ³Mississippi State University, ⁴University of Florida - North Florida Research and Education Center, ⁵Texas A&M University, Department of Animal Science, ⁶ABS Global, ⁷Texas Tech University, ⁸University of Florida, ⁹Department of Animal and Dairy Sciences, College of Agriculture and Life Sciences, Mississippi State University, Starkville, ¹⁰Department of Animal Science, Texas A & M University

7:00 AM PSI-6 **Carbohydrate-utilizing bacteria in foal feces**

Morgan B. Pyles¹, Ashley Fowler¹, Andrea Crum¹, Susan Hayes¹, Gloria Gellin², MICHAEL Flythe³, Laurie Lawrence¹

¹University of Kentucky, ²USDA ARS Forage Animal Production Research Unit, ³USDA/ARS

7:00 AM PSI-7 **Characterization of Bile Induced Damage in *Listeria monocytogenes***

Oindrila Paul¹, Janet Donaldson¹

¹University of Southern Mississippi

7:00 AM PSI-8 **Characterizing biological functions of *Lactobacillus brevis* 1E1 in porcine jejunal epithelial cell line (IPEC-J2)**

Xiaofan Wang¹, Tsungcheng Cheng Tsai¹, Jeffrey Chewning², Charles V. Maxwell¹

¹University of Arkansas, ²Swine Research Services, Inc.,

7:00 AM **PSI-9 The Impact of Maternal Nutrition on Offspring Carcass Composition and Quality**

Alexis M. Siomka ¹, Jennifer M. Young ², Eric P. Berg ¹

¹North Dakota State University, ²Department of Animal Sciences, North Dakota State University

7:00 AM **PSI-10 Pathway analyses revealed up-regulation of calcium-dependent genes in the cardiac right ventricle of Angus steers fed at high altitude**

Natalie F. Crawford ¹, Stephen J. Coloman ¹, R. Mark Enns ¹, Scott E. Speidel ¹, Franklyn B. Garry ², Timothy N. Holt ¹, Milton G. G. Thomas ¹

¹Colorado State University, ²Department of Clinical Sciences, Colorado State University

7:00 AM **PSI-11 Maternal nutrition and stage of early pregnancy in beef heifers: Influence on glutamine transporter SLC38A7 in utero-placental tissues from d 16 to 50 of gestation**

Matthew S. Crouse ¹, Nathaniel P. Greseth ², Kyle J. McLean ³, Mellissa Crosswhite ⁴, Nicolas Negrin-Pereira ¹, Alison K. Ward ¹, Lawrence P. Reynolds ⁵, Carl R. Dahlen ¹, Bryan W. W. Neville ⁶, Pawel P. Borowicz ⁵, Joel S. Caton ¹

¹North Dakota State University, ²University of Wisconsin Madison, ³University of Kentucky, ⁴Oklahoma State University, ⁵NDSU, ⁶U.S. DEPARTMENT OF AGRICULTURE

7:00 AM **PSI-12 Inclusion of dried corn gluten feed in a concentrate supplement for grass silage-fed steers improves the fatty acid profile of beef**

Saheed A. Salami ¹, Michael N. O'Grady ¹, Giuseppe Luciano ², Alessandro Priolo ³, Stephen Onakuse ⁴, Mark McGee ⁵, Aidan P. Moloney ⁵, Joseph Kerry ¹

¹Food Packaging Group, School of Food and Nutritional Sciences, College of Science, Engineering and Food Science, University College Cork, Cork, Ireland, ²Animal Production Science, University of Perugia, Perugia, Italy, ³Animal Production Science, University of Catania, Catania, Italy, ⁴Department of Food Business and Development, University College Cork, Cork, Ireland, ⁵Teagasc

7:00 AM **PSI-13 In vitro digestibility and gas production of diets containing different levels of soybean molasses for feedlot sheep**

Flavia O. S. van Cleef ¹, Eric H. C. B. van Cleef ², Marco Tulio Costa. Almeida ³, Josimari R. Paschoaloto ³, Edvilson S. Castro ³, Robson S. Barducci ³, Guilherme P. Soragni ³, Escalfiar A. Zampieri ³, Jane M. B. Ezequiel ³

¹University of Florida, North Florida Research and Education Center, Marianna, United States, ²Federal University of Triangulo Mineiro, ³Sao Paulo State University

7:00 AM **PSI-14 Humic substances alter ammonia production and the microbial populations within a RUSITEC fed a mixed hay – concentrate diet**

Stephanie A. Terry ¹, Aline F. Ramos ², Devin B. Holman ³, Tim A. McAllister ³, Gerhard Breves ⁴, Alex Chaves ⁵

¹The University of Sydney, School of Life and Environmental Sciences, ²Universidade Federal do Pará, ³Agriculture and Agri-Food Canada, ⁴University of Veterinary Medicine Hannover, Foundation, ⁵University of Sydney, Sydney, Australia

7:00 AM **PSI-15 Effect of L-tryptophan on aggression, aberrant behaviour and growth in growing pigs**

Maggie Henry ¹, Robert Friendship ¹, Anna K. Shoveller ¹, Anita Tucker ¹

¹University of Guelph

7:00 AM PSI-16 **Exploring the relationship between digesta retention time in the equine gastrointestinal tract and compartment models**

Taylor L. Hansen ¹, Jillian M. Bobel ², Ellen M. Rankins ², Carol M. Vasco ³, Linda C. Sanchez ⁴, Lori K. Warren ²

¹Trouw Nutrition, ²University of Florida, ³Auburn University, ⁴Large Animal Clinical Sciences University of Florida

7:00 AM PSI-17 **Evaluation of selected buffer agents in their buffering capacity in an in vitro rumen fermentation**

Sonny C. Ramos ¹, Lovelia Mamuad ¹, Chang-Dae Jeong ¹, Yong-Hun Jeong ¹, Sang-Suk Lee ¹

¹Department of Animal Science and Technology, College of Bio-industry Science, Suncheon National University, Suncheon, Jeonnam, Republic of Korea

7:00 AM PSI-18 **Adiponectin serum concentrations in late pregnancy and early lactation in primiparous and multiparous Holstein dairy cows**

Christiane Urh ¹, Jana Denißen ², Imke Harder ³, Christian Koch ⁴, Eckhard Stamer ⁵, Hubert Spiekers ⁶, Helga Sauerwein ¹

¹University of Bonn, Institute for Animal Science, Physiology and Hygiene, ²Chamber of Agriculture North-Rhine-Westphalia, Center of Agriculture Haus Riswick, ³Christian-Albrechts-University Kiel, Institute of Animal Breeding and Husbandry, ⁴Educational and Research Centre for Animal Husbandry, Hofgut Neumühle, ⁵TiDa Tier und Daten GmbH, ⁶Bavarian State Research Center for Agriculture, Institute for Animal Nutrition and Feed Management

Exhibits Open

7:30 AM – 6:00 PM

Job Resource Center

7:30 AM – 6:00 PM

Beef Species Symposium: Cactus Beef Symposium

Chair: Glenn Duff, New Mexico State University

8:30 AM – 5:00 PM

8:30 AM **Introductory Remarks**

8:40 AM 279 **Nutritional and environmental impacts of removing beef cattle from US agriculture**

Robin R. White ¹

¹Department of Animal and Poultry Sciences, Virginia Tech

9:10 AM 278 **Stewardship of energy use by beef cows: Maintenance requirements of the U.S. cowherd**

Paul A. Beck ¹, Claire Anderson ¹

¹Oklahoma State University

9:40 AM **Break**

10:10 AM 277 **Can intensively managed cows improve efficiency of converting human-inedible feedstuffs to high-quality human edible food?**

Tryon A. Wickersham ¹
¹Texas A&M University

10:40 AM 276 **Systems approaches to beef cattle production: maximizing use of alternative forages to optimize agricultural ecosystems**

James C. MacDonald ¹, Mary E. Drewnoski ², Zac Carlson ²
¹University of Nebraska, ²University of Nebraska-Lincoln

11:10 AM 275 **Opportunities for enhancing reproductive success and cow longevity through heifer development**

Adam F. Summers ¹, Shelby L. Rosasco ², Eric J. Scholljegerdes ¹
¹New Mexico State University, ²University of Wyoming

12:45 PM 274 **Sustainable and economically viable management options for cow/calf production through enhanced beef cow metabolic efficiency**

J. T. Mulliniks ¹, Joslyn K. Beard ¹
¹University of Nebraska-Lincoln

1:15 PM 271 **Managing the immune system for reproductive success in beef cattle**

Craig A. Gifford ¹, Bahaa Aloqaily ¹, Jennifer A. Hernandez Gifford ¹
¹New Mexico State University

1:45 PM 281 **Productivity, human edible feed conversion, and sustainability in beef production**

Sara E. Place ¹
¹National Cattlemen's Beef Association

2:15 PM 272 **Forage use in stocker programs as part of a sustainable beef production system**

J. D. Rivera ¹, Ryan R. Reuter ², Alejandro LaManna ³, Paul A. Beck ⁴, Stacey Gunter ⁵
¹Mississippi Agricultural and Forestry Experiment Station-White Sand Branch, Mississippi State University, ²Oklahoma State University, ³Instituto Nacional de Investigacion Agropecuaria, Uruguay, ⁴University of Arkansas Southwest Research & Extension Center, ⁵USDA-ARS, Southern Plains Range Research Station

2:45 PM **Break**

3:00 PM 273 **Roughage levels in receiving diets and impacts on animal health and transition to a high-grain diet**

John T. Richeson ¹, Kendall L. Samuelson ², Dexter J. Tomczak ¹, Taylor M. Smock ¹, Hannah A. Seiver ¹

¹West Texas A&M University, ²Department of Animal and Range Sciences -New Mexico State University

3:30 PM 280 **Changes and current trends in commodity use and cattle management in commercial feedlots in the Great Plains**

Kurt M. Landis ¹
¹Cargill Premix and Nutrition

4:00 PM 269 **Sustainability defined and practiced in a modern cattle feeding enterprise**

Ben P. Holland ¹
¹Cactus Research

4:30 PM 270 **Welfare practices to increase beef production and sustainability: Consumer expectations for 2050**

Karen S. Schwartzkopf-Genswein ¹
¹Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, Lethbridge, AB Canada

Meat Science and Muscle Biology Symposium: Biological influencers of meat palatability

Chair: John M. Gonzalez, Associate Professor, Kansas State University

8:30 AM – 12:45 PM

8:30 AM **Introductory Remarks**

8:35 AM 493 **The Influence of Muscle Fiber Structure on Meat Palatability**

John M. Gonzalez ¹, James Drouillard ¹, Travis O'Quinn ¹, Kelsey J. Phelps ²
¹Kansas State University, ²Cargill Protein

9:15 AM 488 **Postmortem muscle protein degradation and meat quality**

Kasey Maddock Carlin ¹
¹North Dakota State University

9:55 AM 492 **Examining the capability and culpability of fat in influencing consumer perception and preference for meat products**

Derris D. Burnett ¹
¹PhD

10:30 AM **Break**

10:45 AM 490 **Accelerating Marbling Deposition in Ruminants**

Susan K. Duckett ¹
¹Clemson University

11:25 AM 491 **Production factors affecting the contribution of collagen to meat toughness**

Heather L. Bruce ¹, Bimol Roy ¹
¹Department of Agricultural, Food and Nutritional Science, University of Alberta

12:05 PM 489 **Understanding the role of connective tissue in the heat-induced changes of meat palatability**

Peter P. Purslow ¹, Maria Emilia Latorre ²
¹Universidad Nacional del Centro de la Provincia de Buenos Aires (UNCPBA), ²Universidad Nacional del Centro de la Provincia de Buenos Aires

Animal Frontiers Board Meeting

9:00 AM – 11:00 AM

Animal Health I

Chair: Jiangchao Zhao, Associate Professor, Department of Animal Science,
University of Arkansas, Fayetteville

9:00 AM – 11:15 AM

9:00 AM 238 **Transcriptome profiling of primary bovine macrophages from cows with Johne's disease suggests a tolerance state induced by convergent signalling via NF- κ B and its synergistic tolerized genes**

Nathalie Bissonnette ¹, Daniel Gendron ², Olivier Ariel ², Pier-Luc Dudemaine ¹, Eveline M. Ibeagha-Awemu ¹

¹Sherbrooke Research and Development Centre, Agriculture and Agri-Food Canada,

²Agriculture and Agri-Food Canada

9:15 AM 237 **Jejunum lymph node transcriptome reveals the importance of genes of phagosome and T cell receptor signalling pathways in Mycobacterium avium ssp. paratuberculosis infection**

Duy N. Do ¹, Pier-Luc Dudemaine ², Nathalie Bissonnette ², Eveline M. Ibeagha-Awemu ²

¹Agriculture and Agri-Food Canada, ²Sherbrooke Research and Development Centre, Agriculture and Agri-Food Canada

9:30 AM 236 **Influence of gut microbiota on appetite in postpartum cows**

Shoukun Ji ¹, Hui Yan ², George Nhamo Gozho ³, Shengli Li ⁴, Ya Jing Wang ⁵

¹Hebei Agricultural University, ²China Agricultural University, ³Department of Animal Science,

University of Manitoba, ⁴China agricultural university, ⁵Department of Animal Science,

University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2 / College of Animal Science and Technology, China Agricultural University, Beijing, China, 100193

9:45 AM 235 **Milk metabotyping by DI/LC-MS/MS demonstrated major alterations in metabolites related to lipid and amino acid metabolism in dairy cows affected by subclinical mastitis**

Burim N. Ametaj ¹, Guanshi Zhang ¹, Elda Dervishi ², David S. Wishart ¹

¹University of Alberta, ²Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta

10:00 AM **Break**

10:15 AM 231 **Urinary metabotyping around parturition indicates consistent metabolite signatures that can be used for monitoring and diagnosing of subclinical mastitis in dairy cows**

Burim N. Ametaj ¹, Guanshi Zhang ¹, Elda Dervishi ², David S. Wishart ¹

¹University of Alberta, ²Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta

10:30 AM 234 **Alterations of cecum microbiome and kidney injuries associated with high protein diet induced gout in goslings**

Yumeng Xi ¹, Zhendan Shi ¹

¹Jiangsu Academy of Agricultural Sciences

10:45 AM 233 **Late-Breaking: Alternative polyadenylation events in epithelial cells serve as decisive sensors for endometritis progression in organic dairy cows**
Martin G. Maquivar ¹, Meagan J. Stotts ², Yangzi Zhang ², Zhang Shuwen ², Jennifer J. Michal ³, Juan Velez ², Hans Bothe ², Zhihua Jiang ³
¹Washington State University. Department of Animal Sciences, ², ³Washington State University

11:00 AM 232 **Ameliorative effect of selenium-enriched Bacillus Paralicheniformis SR14 against H2O2-induced oxidative damage in IPEC-J2 cells via MAPKs pathway**
Xiao Xiao ¹, Yuanzhi Cheng ², Deguang Song ², Yizhen Wang ³
¹College of Animal science, Institution of Animal Nutrition and Feed Science, Zhejiang University, ²College of Animal Science, Institution of Animal Nutrition and Feed Science, Zhejiang University, ³Institute of Feed Science, Zhejiang University

Breeding and Genetics I: Beef Cattle I

Chair: Clare A. Gill, Professor, Texas A&M University
9:00 AM – 10:45 AM

9:00 AM 288 **Genetic architecture of new breed formation**
Tiago Paim ¹, Harvey D. Blackburn ², EL Hamidi Hay ³, Carrie S. Wilson ⁴, Milton G. G. Thomas ¹, Larry A. Kuehn ⁵, Samuel R. Paiva ⁶, Concepta McManus ⁷
¹Colorado State University, ²USDA ARS National Animal Germplasm Program, ³USDA Agricultural Research Service, Fort Keogh Livestock and Range Research Laboratory, ⁴USDA-ARS National Animal Germplasm Program, ⁵USDA ARS U.S. Meat Animal Research Center, ⁶Embrapa Recursos Geneticos e Biotecnologia, ⁷Universidade de Brasilia, Instituto de Biologia

9:15 AM 287 **Genomic prediction for residual feed intake and its component traits based on 50K and imputed 7.8 million whole genome sequence SNPs in multiple breed populations of Canadian beef cattle**
Yining Wang ¹, Feng Zhang ², Lihong Chen ³, Mike Vinsky ⁴, John J. Crowley ⁵, Graham Plastow ⁶, John Basarab ⁷, Paul Stothard ⁸, Changxi Li ⁹
¹Agriculture and Agri-Food Canada, Lacombe Research and Development Centre. Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, ²Livestock Gentec, Department of Agricultural, Food and Nutritional Sciences, University of Alberta. Agriculture and Agri-Food Canada, Lacombe Research and Development Centre. Institute of Translational Medicine, Nanchang University, ³Zoetis, 333 Portage Street, Kalamazoo, MI 49007, USA, ⁴Agriculture and Agri-Food Canada, Lacombe Research and Development Centre, ⁵Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta. Canadian Beef Breeds Council, Calgary, AB, Canada, ⁶University of Alberta, ⁷Alberta Agriculture and Forestry/University of Alberta, ⁸California Polytechnic State University San Luis Obispo, ⁹University of Alberta/Agriculture and Agri-Food Canada

9:30 AM 286 **Gestation length as a weak predictor of yearling pulmonary arterial pressure and risk of developing high altitude disease in Angus cattle at high elevation**
Heather M. Foxworthy ¹, R. Mark Enns ¹, Scott E. Speidel ¹, Milton G. G. Thomas ¹, Timothy N. Holt ¹
¹Colorado State University

9:45 AM 285 **Effects of maternal behavior of crossbred beef cows at calving on adjusted 205-day calf weaning weights**

Cobie Rutherford¹, Jane A. Parish², Trent Smith¹, Rhonda C. Vann³, Bronson K. Strickland⁴
¹Mississippi State University, ²North Mississippi Research and Extension Center, Mississippi State University, ³Mississippi Agricultural and Forestry Experiment Station, Mississippi State University, Raymond, MS, ⁴Wildlife, Fisheries and Aquaculture, Mississippi State University

10:00 AM 284 **Feed intake of progeny of contrasting sire and dam breed and dam origin**

Robert Prendiville¹, Maeve Williams²
¹Teagasc, ²Teagasc and Munster Technological University

10:15 AM 283 **Validation of Quantitative Trait Loci Associated with Grazing Distribution Traits in Beef Cattle Using Bayes C**

Courtney Pierce¹, Derek Bailey², Juan F. F. Medrano³, Angela Cánovas⁴, Scott E. Speidel¹, Stephen J. Coloman¹, R. Mark Enns¹, Milton G. G. Thomas¹
¹Colorado State University, ²New Mexico State University, ³Department of Animal Science, University of California-Davis, 95616, Davis, California, United States of America., ⁴Department of Animal Biosciences, Centre for Genetic Improvement of Livestock, University of Guelph, N1G 2W1, Guelph, Ontario, Canada

10:30 AM 282 **Accuracy of multi-trait genomic predictions for age at puberty in Northern Australian beef heifers**

Bailey N. Engle¹, Nicholas J. Corbet², Jack M. Allen³, Alan R. Laing⁴, Geoffry Fordyce⁵, Michael R. McGowan⁶, Brian M. Burns⁴, Ben J. Hayes⁵
¹Texas A&M University, Department of Animal Science, ²Central Queensland University, School of Health, Medical and Applied Sciences, ³Agricultural Business Research Institute, University of New England, ⁴Department of Agriculture and Fisheries, ⁵Queensland Alliance for Agriculture and Food Innovation, Centre for Animal Science, University of Queensland, ⁶University of Queensland, School of Veterinary Science

Nonruminant Nutrition Symposium: Biomedical models

Chair: Xingen Lei, Professor, Cornell University College of Agricultural and Life Science;
John Scott Radcliffe, Professor and Assistant Head, Purdue University

9:00 AM – 12:05 PM

9:00 AM **Introductory Remarks**

9:10 AM 163 **Microbial Invaders of our Environment ~ A Nobel Laureate's Perspective**

Luc Montagnier¹

¹

10:00 AM 162 **Lysine free pig/other EAA free pigs as well**

Kevin Wells¹

¹University of Missouri

10:30 AM **Break**

10:35 AM 161 **Comparative nutrigenomics of the pig, mouse and human; linking phenotype to genotype for improved models of human and swine nutrition**

Harry Dawson¹

¹USDA-ARS

11:05 AM 160 **The pig model project of China**

Sen Wu¹

¹China Agricultural University

11:35 AM 159 **Balancing selection for lethal recessive variants in commercial pig populations**

Martien A.M. Groenen¹

¹Wageningen University & Research

Small Ruminant I

Chair: Guoyao Wu, Professor, Department of Animal Science, Texas A&M University

9:00 AM – 10:45 AM

9:00 AM 45 **Net macromineral requirements for maintenance in male and female Saanen goats: A meta-analytical approach**

Izabelle A.M.A. Teixeira¹, Julian Andrés C. Vargas², Amelia K. Almeida¹, Anaiane P. Souza¹, Carla J. Harter¹, Marcia H.M.R. Fernandes¹, Kleber T. Resende¹

¹Unesp, ²Federal Rural University of Amazon

9:15 AM 50 **Voluntary feed intake and activity by goats in a protected and open rangeland, North Kordofan, Sudan**

Mohammed Fatur. Mohammed¹, Babo Fadlalla²

¹College of animal production, University of Bahri, ²Sudan University of Science and Technology, College of Forestry and Range Science, Department of Range Science

9:30 AM 44 **Effects of Water Restriction on Feed Intake and Digestion by St. Croix Sheep**

Ali H. Hussein¹, Ryszard Puchala², Terry Gipson², Dereje Tadesse³, Blake K. Wilson⁴, Arthur L. Goetsch²

¹American Institute for Goat Research, Langston University; Department of Animal Science, Oklahoma State University, ²American Institute for Goat Research, Langston University, ³American Institute for Goat Research Langston University; College of Agriculture, Debre Berhan University, Debre Berhan, Ethiopia, ⁴Department of Animal Science, Oklahoma State University

9:45 AM 46 **The effects of forage-based and a concentrate feeding system on lamb production**

Serkan Ates¹, Gurhan Keles², Ugur Demirci³, Sukru Dogan³, Gazi Ozcan³

¹Oregon State University, ²Department of Animal Science, Faculty of Agriculture, Adnan Menderes University, 09100 Aydin, Turkey, ³Bahri Dagdas International Agricultural Research Institute, 42020, Konya, Turkey

10:00 AM 47 **Oral administration of L-citrulline, but not L-glutamine, to adult sheep increases the concentrations of L-citrulline and L-arginine in plasma**

Guoyao Wu¹, Kyler R. Gilbreath², Fuller W. Bazer², Michael C. Satterfield², Jason J Cleere²
¹Department of Animal Science, Texas A&M University, ²Texas A&M University

10:15 AM 48 **Effects of Cellulose residue supplementation level on performance, nutrient digestibility and carcass characteristics of lambs**

Andres Flores¹, Hjelmar Morejon¹, Adriana Racines¹, Diego Vela¹, Nicolas DiLorenzo², Christian H. Ponce³

¹Universidad de las Fuerzas Armadas-ESPE, ²University of Florida, ³Universidad San Francisco de Quito

10:30 AM 49 **Performance, Carcass Characteristics, and Meat Quality of Kiko Wethers Finished on Pasture and Browse**

Uma Karki¹, Sanjok Poudel¹, Shailes Bhattarai¹, Lila B. Karki¹, Anil Singh²

¹Tuskegee University, ²Fort Valley State University

Animal Behavior and Well-being

Chair: Amanda Mathias, Texas A&M University

9:30 AM – 11:15 AM

9:30 AM 228 **Relationship between biomarkers of stress, inflammation and pain, and lameness in feedlot cattle**

Sonia Marti¹, Eugene Janzen², Edmond Pajor³, Karin Orsel⁴, Michael Jelinski⁵, Craig Dorin⁵, Daniel U. Thomson⁶, Johann F. Coetzee⁷, Jan Shearer⁸, Suzanne Millman⁸, Karen S. Schwartzkopf-Genswein⁹

¹IRTA- Ruminant Production, ²University of Calgary, Faculty of Veterinary Medicine, ³University of Calgary, ⁴Faculty of Veterinary Medicine, University of Calgary, ⁵Veterinary Agri-Health Services Ltd, ⁶Kansas State University, ⁷Kansas State University College of Veterinary Medicine, Department of Anatomy and Physiology, Manhattan, KS, ⁸Iowa State University, ⁹Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, Lethbridge, AB Canada

9:45 AM 229 **Can baseline heart rate variability be used as a predictor of the swine behavioral and febrile response to a sickness challenge?**

Christopher J. Byrd¹, Donald C. Lay²

¹Purdue University, ²USDA-Agricultural Research Service

10:00 AM 230 **Assessing Thermal Preference of Piglets Exposed to Early Life Thermal Stress**

Lindsey Robbins¹, Angela R. Green-Miller², Jay S. Johnson³, Brianna N. Gaskill⁴

¹Purdue University, ²University of Illinois Urbana - Champaign, ³USDA-ARS Livestock Behavior Research Unit, ⁴Purdue University

10:15 AM 226 **Geospatial analysis of cattle maternal behavior during fenceline weaning as influenced by dam age and maternal behavior at calving**

Cobie Rutherford¹, Jane A. Parish², Trent Smith¹, Rhonda C. Vann³, Bronson K. Strickland⁴

¹Mississippi State University, ²North Mississippi Research and Extension Center, Mississippi State University, ³Mississippi Agricultural and Forestry Experiment Station, Mississippi State University, Raymond, MS, ⁴Wildlife, Fisheries and Aquaculture, Mississippi State University

10:30 AM 224. **Acclimating cattle: Effects on stress and production**
Rebecca Parsons¹, Grant Dewell¹, Renee D. Dewell¹, Johann F. Coetzee², Tom Noffsinger³,
Anna K. Johnson¹, Suzanne Millman¹
¹Iowa State University, ²Kansas State University College of Veterinary Medicine, Department of
Anatomy and Physiology, Manhattan, KS, ³Production Animal Consultation

10:45 AM 225 **Raising the bar: Feed intake and competitive behavior of dairy goats
when offered different feed bunk heights**
Heather Neave¹, Jim Webster², Gosia Zobel²
¹AgResearch, Hamilton, New Zealand, ²Animal Welfare Team, AgResearch Ltd.

11:00 AM 227 **Late-Breaking: Temperament influences mitochondrial capacity in
skeletal muscle from 8 through 18 months of age in Brahman heifers**
Randi N. Owen¹, Sarah H. White-Springer², Christine Latham¹, Charles R. Long³, Ronald D.
Randel⁴, Thomas H. Welsh⁵
¹Texas A&M University, ²Department of Animal Science, Texas A&M University; Texas A&M
AgriLife Research, ³Texas A&M AgriLife Research and Extension Center, ⁴Texas A&M AgriLife
Research, ⁵Department of Animal Science, Texas A&M University, College Station

CSAS Graduate Student Oral Competition - MS I

Chair: Michael Steele, University of Alberta, University of Guelph
9:30 AM – 11:30 AM

9:30 AM 335 **Beef production on novel legume-grass summer pasture mixtures in
western Canada**
Samuel Peprah¹, Paul Jefferson², Alan Iwaasa³, Herbert A. Lardner⁴, Bill Biligetu⁵
¹University of Saskatchewan, ²Western Beef Development Centre, ³Swift Current Research and
Development Centre, Agriculture and Agri-Food Canada, ⁴Dept. of Animal and Poultry Science,
University of Saskatchewan and Western Beef Development Centre, ⁵Department of Plant
Sciences, University of Saskatchewan, Saskatoon, SK, Canada, S7N 5A8

9:45 AM 334 **Clostridium tyrobutyricum protect intestinal barrier function from
LPS-induced apoptosis via p38/JNK signaling pathway in IPEC-J2 cells**
Zhiping Xiao¹, Lujie liu², Wenjing Tao¹, xun pei², geng wang², minqi wang²
¹College of Animal Science. Zhejiang University, ²College of Animal Science Zhejiang
University

10:00 AM 333 **Comparison of Carinata Meal and Canola Meal with or without Wheat
Dried Distiller's Grains with Solubles on Rumen Fermentation, Omasal Nutrient Flow,
Microbial Protein Synthesis and Total Tract Digestibility.**
Elisabeth Guidotti¹, Gregory B. Penner², David A. Christensen¹, X. Feng³, John J. McKinnon¹
¹University of Saskatchewan, ²Department of Animal and Poultry Science, College of
Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada S7N 5A8,
³ASAS, CSAS, ADSA

10:15 AM 332 **Development of low melting point fat microparticles with incorporation of polysaccharides for effective delivery of an antimicrobial essential oil to pig intestinal tract**

Faith Omonijo ¹, Charles Martin Nyachoti ¹, Song Liu ¹, Chengbo Yang ²

¹University of Manitoba, ²University of Manitoba, Department of Animal Science

10:30 AM **Break**

10:45 AM 338 **Effect of Calcium Oxide Treatment of Barley Straw on In Vitro & In Situ Digestibility**

Katelyn Stehr ¹, Laize Santos ², Gabriel O. Ribeiro Jr ³, John J. McKinnon ¹, Darryl Gibb ⁴, Tim A. McAllister ⁵

¹University of Saskatchewan, ²Universidade Estadual de Sudoeste da Bahia, Itapetinga, Bahia, Brazil, ³Agriculture and Agri-Food Canada; Lethbridge Research and Development Centre, ⁴Gowans Feed Consulting, Raymond, AB, T0K 2S0., ⁵Agriculture and Agri-Food Canada

11:00 AM 337 **Effect of the quantity of concentrate offered in an automated milking system on dry matter intake, milking frequency, milk and milk component yield, and ruminal fermentation when provided isocaloric diets**

Authors:

Keshia S. Paddick ¹, Trevor DeVries ², Karen S. Schwartzkopf-Genswein ³, Michael Steele ⁴, Timothy Mutsvangwa ¹, Gregory B. Penner ⁵

¹University of Saskatchewan, ²University of Guelph, ³Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, Lethbridge, AB Canada, ⁴University of Alberta, University of Guelph, ⁵Department of Animal and Poultry Science, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada S7N 5A8

11:15 AM 336 **Effect of canola meal supplementation to AAC Mountainview sainfoin, alone or in combination with grass mixtures, on in vitro DMD, methane production and ruminal fermentation**

Angela A. Cerilli-Stankevicius ¹, Emma J. McGeough ¹, Bill Biliget ²

¹University of Manitoba, ²Department of Plant Sciences, University of Saskatchewan, Saskatoon, SK, Canada, S7N 5A8

**Growth and Development Symposium:
Stem/progenitor cells in animal growth and development**

Chair: Min Du, Professor, Washington State University

9:30 AM – 12:15 PM

9:30 AM **Introductory Remarks**

9:35 AM 454 **Regulation of satellite cell activity during livestock skeletal muscle growth**

Sally Johnson ¹

¹Virginia Polytechnic and State Institution

10:05 AM 458 **Identification and Characterization of Bovine Skeletal muscle FAP cells**

Xing Fu ¹

¹Louisiana State University

10:35 AM **Break**

10:45 AM 457 **The mammary stem cell secretome: from basic biology to therapeutic potential.**

Gerlinde Van de Walle ¹

¹Cornell University

11:15 AM 456 **Pluripotent stem cell differentiation to osteogenic and chondrogenic precursor cells**

Steve Stice ¹

¹University of Georgia

11:45 AM 455 **A Novel Anti-sense LncRNA of CEBPA Inhibits Bovine Adipogenic Differentiation**

Min Du ¹

¹Washington State University

Lactation Biology

Chair: Chantal Farmer, Research Scientist, Agriculture and Agri-Food Canada

9:30 AM – 11:15 AM

9:30 AM 475 **mTORC1 controls glucose metabolism in bovine mammary epithelial cells**

Marc-Antoine Guesthier ¹, Jianhui Huang ¹, Xin Zhao ², Sergio.A. Burgos ¹

¹Department of Animal Science, McGill University, ²McGill University

9:45 AM 478 **Ultrasound teat wall diameter and cutimeter teat tissue thickness before, during, and after machine milking**

Rupert M. Bruckmaier ¹, Jenny Löfstrand ²

¹Veterinary Physiology, Vetsuisse Faculty, University of Bern, ²Swedish University of Agricultural Sciences, Uppsala, Sweden

10:00 AM 477 **Oligosaccharide and IgG concentrations throughout the first week of lactation in multiparous and primiparous Holstein dairy cattle**

Amanda J. Fischer ¹, Karolien Hertogs ², Bayissa Hatew-Chuko ³, Michael Steele ⁴

¹University of Alberta, ²Wageningen University Research, ³Department of Agricultural, Food and Nutritional Science, University of Alberta, ⁴University of Alberta, University of Guelph

10:15 AM **Break**

10:30 AM 480 **Feeding a rumen-degradable amino acid impacts T3 and T4 concentrations**

Kayla Hultquist ¹, Carl Kass ², Jeff Clapper ³, David P. Casper ¹

¹Furst-McNess Company, ²Standard Nutriton Company, ³Animal Science Dept., South Dakota State University

10:45 AM 476 **Metabolic status and performance at the onset of lactation in dairy cows are associated with circulating serotonin**

Evelyne C. Kessler¹, Samantha Wall¹, Laura Hernandez², Rupert M. Bruckmaier¹, Josef J. Gross¹

¹Veterinary Physiology, Vetsuisse Faculty, University of Bern, ²Department of Dairy Science, University of Wisconsin-Madison, Wisconsin

11:00 AM 479 **Recovery of milk somatic cell count and performance after an intramammary LPS challenge is dependent on the metabolic status of dairy cows**

Josef J. Gross¹, Linda Grossen-Rösti¹, Samantha Wall¹, Olga Wellnitz¹, Rupert M. Bruckmaier¹

¹Veterinary Physiology, Vetsuisse Faculty, University of Bern

Production, Management and the Environment Symposium: Epigenomics and non-coding RNA regulation of livestock production and health traits - Sponsored by CSAS

Chair: Eveline M. Ibeagha-Awemu, Research Scientist, Sherbrooke Research and Development Centre, Agriculture and Agri-Food Canada

9:30 AM – 12:15 PM

9:30 AM 116 **ART (Assisted Reproduction Technologies) and epigenetic programming**

Marc-André A. Sirard¹

¹Department of Animal Science, Laval University

10:00 AM 114 **Non-coding RNAs in bovine mammary glands**

Xin Zhao¹, Duy N. Do², Eveline M. Ibeagha-Awemu³

¹McGill University, ²Agriculture and Agri-Food Canada, ³Sherbrooke Research and Development Centre, Agriculture and Agri-Food Canada

10:30 AM **Break**

10:45 AM 117 **A rapid-evolving small RNA based immune system targeting avian leukosis virus in chickens**

Xin Zhiguo Li¹

¹University of Rochester

11:15 AM 118 **Contribution of sperm methylome to bull fertility and interactions with DNA polymorphism**

Hélène Kiefer¹, Jean-Philippe Perrier¹, Eli Sellem², Audrey Prézélin¹, Maxime Gasselín¹, Luc Jouneau¹, François Piumi¹, Hala Al Adhami¹, Michaël Weber³, Sébastien Fritz², Didier Boichard¹, Chrystelle Le Danvic², Laurent Schibler², Hélène Jammes¹

¹INRA, ²ALLICE, ³CNRS, Université de Strasbourg

11:45 AM 115 **Profiling Conservation of DNA Methylation in Cattle**

Stephanie D. McKay¹, Fernando Betancourt², Suraj Bhattarai², Thomm Buttolph², Sheryl White², Hannah Lachance², Darla Quijada², Sydney Friedman², Sarah Perlee², Bonnie Cantrell², Brenda M. Murdoch³

¹Department of Animal and Veterinary Sciences, University of Vermont, United States of America., ²University of Vermont, ³University of Idaho

Swine Species

Chair: Crystal L. Levesque, Associate Professor, South Dakota State University
9:30 AM – 12:00 PM

9:30 AM 25 **Effect of particle size of wheat on nutrient digestibility, growth performance, and gut microbiota in growing pigs**

Tongxin Wang¹, Weilei Yao¹, Feiruo Huang¹

¹Department of Animal Nutrition and Feed Science, College of Animal Science and Technology, Huazhong Agricultural University

9:45 AM 26 **A 6-phytase, Natuphos E, target dosing energy release compared with fat in corn soy diets fed to pigs**

Michael Coelho¹, Robert Jones², Frank Parks²

¹BASF, ²Integrated Farm Research, Inc,

10:00 AM 27 **L-leucine stimulates glutamate dehydrogenase activity and glutamate synthesis by regulating mTORC1/SIRT4 pathway in pig liver**

Weilei Yao¹, Tongxin Wang¹, Feiruo Huang¹

¹Department of Animal Nutrition and Feed Science, College of Animal Science and Technology, Huazhong Agricultural University

10:15 AM 31 **Effect of gestation dietary Methionine/Lysine ratio on placental angiogenesis and reproductive performance of sows**

Mao Xia¹, Hongkui Wei², Jian Peng²

¹Huazhong Agricultural University, ²Huazhong Agricultural University

10:30 AM **Break**

10:45 AM 23 **Response of newly weaned pigs to commercial eubiotic acid product or zinc oxide supplementation following enterotoxigenic Escherichia coli (K88) challenge**

Md. Manik Hossain¹, Augustine Owusu-Asiedu², Heidi Hall³, Ahmed Al-Juobori⁴, Charles Martin Nyachoti⁴

¹J&R Livestock Consultants Co., ²Anpario, ³Anpario plc, ⁴University of Manitoba

11:00 AM 30 **Expression of AQP 1, 3, 5, and 9 in the porcine placenta and uterine endometrium during the estrous cycle and gestation**

Cui Zhu¹, Zongyong Jiang², Fuller W. Bazer³, Greg Johnson³, Robert Burghardt⁴, Guoyao Wu⁵

¹Agro-biological Gene Research Center, Guangdong Academy of Agricultural Sciences,

²Institute of Animal Science, Guangdong Academy of Agricultural Sciences; Ministry of Agriculture Key Laboratory of Animal Nutrition and Feed Science in South China, ³Texas A&M University, ⁴Department of Veterinary Integrative Biosciences, Texas A&M University,

⁵Department of Animal Science, Texas A&M University

11:15 AM 29 **Late-Breaking: Genetic and phenotypic analysis of testis size in boars and reproductive traits in sows**

Leticia P. Sanglard¹, Richard J. Leach², Nick V. Serao¹

¹Iowa State University, ²Fast Genetics

11:30 AM 28 **Late-Breaking: Standardized ileal digestible histidine to lysine ratio requirement for 7- to 11-kg pigs**

Henrique S. Cemin¹, Carine M. Vier², Rebecca M. Karns³, Michael D. Tokach³, Kevin J. Touchette⁴, Steve S. Dritz⁵, Jason Woodworth¹, Joel M. DeRouchey³, Robert Goodband⁶
¹Kansas State University, ²Genus PIC, ³, ⁴AJINOMOTO ANIMAL NUTRITION NORTH AMERICA, INC., ⁵Department of Diagnostic Medicine & Pathobiology, College of Veterinary Medicine, Kansas State University, ⁶Department of Animal Sciences & Industry, College of Agriculture, Manhattan, KS 66506

11:45 AM 24 **Late-Breaking: ZFP217 regulate 3T3-L1 Adipogenesis through m6A transmethylase METTL3 and reader YTHDF2**

Qing Liu¹, Yizhen Wang²
¹Zhejiang university, ²Institute of Feed Science, Zhejiang University

ARPAS Exams Session I

10:30 AM – 12:30 PM

Spouse Event I: Capilano Suspension Bridge Park

10:30 AM – 3:00 PM

Breeding and Genetics II: Beef Cattle II

Chair: Clare A. Gill, Professor, Texas A&M University

11:00 AM – 12:45 PM

11:00 AM 295 **Genes regulated by eQTLs affect biological pathways involved in carcass and meat quality traits in Nelore**

Camila Urbano Braz¹, Fernando S. Baldi², Lucia Galvão de Albuquerque³, Henrique Nunes de Oliveira³

¹São Paulo State University (Unesp), School of Agricultural and Veterinarian Science (FCAV), Jaboticabal, Brazil, ²State University of São Paulo - Jaboticabal, Brazil, ³São Paulo State University (Unesp), School of Agricultural and Veterinarian Science (FCAV), Jaboticabal, Brazil

11:15 AM 293 **Use of reaction norms to evaluate high altitude disease susceptibility in Angus sires**

Miguel A. Sánchez-Castro¹, Timothy N. Holt¹, Milton G. G. Thomas¹, R. Mark Enns¹, Scott E. Speidel¹

¹Colorado State University

11:30 AM 292 **Genetic trend for feed efficiency, growth and carcass traits in three Canadian beef cattle populations involved in the Kinsella breeding project**

Chinyere Ekine-Dzivenu¹, Everestus Chima. Akanno¹, Liuhong Chen², Lisa McKeown³, Barry Irving¹, Lynda Baker⁴, Michael Vinsky⁴, Stephen P. Miller⁵, Zhiquan Wang⁶, John J. Crowley⁷, Marcos G. Colazo⁸, Divakar J. Ambrose⁸, Manuel Juarez⁴, Heather L. Bruce⁹, Michael D. MacNeil¹⁰, Graham Plastow¹¹, John Basarab¹², Changxi Li¹³, Carolyn J. Fitzsimmons¹³

¹Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Canada, T6G 2P5, ²Zoetis, 333 Portage Street, Kalamazoo, MI 49007, USA, ³Alberta Agriculture and Forestry, ⁴Agriculture and Agri-Food Canada, Lacombe Research and Development Centre, 6000 C&E Trail, Lacombe, AB, Canada T4L 1W1, ⁵Angus Genetics Inc., ⁶Livestock Gentec, University of Alberta, ⁷Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta. Canadian Beef Breeds Council, Calgary, AB, Canada, ⁸Alberta Agriculture and Forestry, 7000 - 113 Street, Edmonton, AB, Canada T6H 5T6, ⁹Department of Agricultural, Food and Nutritional Science, University of Alberta, ¹⁰Delta G, ¹¹University of Alberta, ¹²Alberta Agriculture and Forestry/University of Alberta, ¹³University of Alberta/Agriculture and Agri-Food Canada

11:45 AM 291 **Segregation of a triple nucleotide insertion/deletion polymorphism in Activin receptor II B-promoter and a transversion in the Myostatin promoter in Senepol cows**

Carolina L. Gonzalez-Berrios¹, Américo Casas-Guérnica², Tad Sonstegard³, Melvin Pagan-Morales²

¹Colorado State University, ²University of Puerto Rico-Mayaguez Campus, ³Acceligen, Recombinetics, inc.

12:00 PM 290 **Estimation of variance components due to direct and maternal effects for feed intake for Gelbvieh cattle**

Miranda M. Culbertson¹, R. Mark Enns², Scott E. Speidel²

¹American Simmental Association, International Genetic Solutions, ²Colorado State University

12:30 PM 294 **Evaluation of production efficiencies among lactating beef and dairy crossbred suckler cows of diverse genetic merit**

Simone McCabe¹, Noirin McHugh¹, Niamh O'Connell², Robert Prendiville¹

¹Teagasc, ²Queens University Belfast

12:15 PM 289 **Genome-wide association study and expression quantitative trait loci analysis identifies a single nucleotide polymorphism associated with both residual feed intake and GFRA2 expression in beef cattle**

Marc Higgins¹, Claire Fitzsimons², Matthew McClure³, Clare McKenna⁴, Stephen B. Conroy⁵, David A. Kenny⁶, Mark McGee⁴, Sinead Waters⁴, Derek Morris⁷

¹NUI Galway/Teagasc, ²Department of Agriculture, Ireland, ³Genus PLC, ⁴Teagasc, ⁵Irish Cattle Breeding Federation, ⁶Teagasc Animal and Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath, Ireland, ⁷NUI Galway

ASAS Past Presidents' Lunch

11:30 AM – 1:00 PM

ASAS Undergraduate Student Lunch and Learn: Communicating Animal Science

12:00 PM – 2:00 PM

Poster Session II
ASAS Graduate Student Poster Competition: PHD Division
12:00 PM – 2:00 PM

12:00 PM PSII-1 **A comparison of fatty acid attributes and edible meat yield percentage in different species of deer meat**

DeMetris Reed ¹, Eric P. Berg ¹, Xin (Rex) Sun ¹, Paul Berg ¹
¹North Dakota State University

12:00 PM PSII-2 **Effects of Replacing Supplemental Sucrose with Beef on Maternal Health and Fetal Growth and Development Using a Sow Biomedical Model**

Megan A. Nelson ¹, Alison K. Ward ¹, Kendall C. Swanson ¹, Kimberly A. Vonnahme ², Eric P. Berg ¹
¹North Dakota State University, ²Zoetis

12:00 PM PSII-3 **Effects of carvacrol essential oils on intestine barrier function in broilers**

Shudong Liu ¹, Jinho Cho ², Won Yun ¹, Jihwan Lee ¹, Changhee Lee ², Woogi Kwak ², Hanjin Oh ³, Donghoon Lee ²
¹Division of Food and Animal Science, Chungbuk National University, ²Chungbuk national university, ³Department of Animal Science, Chungbuk National University

12:00 PM PSII-4 **Changes in rumen microbial community composition due to increasing concentrate diet of dairy cows**

Chang-Dae Jeong ¹, Sonny C. Ramos ¹, Lovelia Mamuad ¹, Yong-Hun Jeong ¹, Sang-Suk Lee ¹
¹Department of Animal Science and Technology, College of Bio-industry Science, Suncheon National University, Suncheon, Jeonnam, Republic of Korea

12:00 PM PSII-5 **Characterization of feeding behavior, ruminal motility, and rumen environment of beef heifers during a moderate transition to a 90% concentrate diet**

Amanda M. Egert-McLean ¹, David L. Harmon ¹, James L. Klotz ², Niels B. Kristensen ³
¹University of Kentucky, ²Forage-Animal Production Research Unit, USDA-ARS, ³SEGES, Danish Agriculture & Food Council F.m.b.A., Aarhus, Denmark

12:00 PM PSII-6 **Lysine-induced stimulation of proliferation, differentiation and migration in swine satellite cells is mediated by the mTORC1 and FAK pathways**

Cheng-long Jin ¹, Chun-qi Gao ¹, Zong-ming Zhang ¹, Hui-chao Yan ¹, Xiu-qi Wang ²
¹College of Animal Science, South China Agricultural University, ²College of Animal Science, South China Agricultural University

12:00 PM PSII-7 **Tucumã oil results in a favourable shift in fermentation characteristics, reducing methane production and altering the microbiome using the Rumen Simulation Technique (RUSITEC)**

Aline F. Ramos ¹, Stephanie A. Terry ², Devin B. Holman ³, Luiz Gustavo Ribeiro Pereira ⁴, André G. M. Silva ¹, Gerhard Breves ⁵, Alex Chaves ⁶
¹Universidade Federal do Pará, ²The University of Sydney, School of Life and Environmental Sciences, ³Agriculture and Agri-Food Canada, ⁴Embrapa Dairy Cattle, ⁵University of Veterinary Medicine Hannover, Foundation, ⁶University of Sydney, Sydney, Australia

12:00 PM PSII-8 **The effects of supplementing olive pomace on serum and tissue fatty acid composition in spanish goats**

Philip M. Urso¹, Jongkyoo Kim², Jerrad A. Legako¹, Marcy M. Beverly³, Stanley F. Kelley³, Mark Anderson³, Kimberly B. Wellmann¹, Bradley J. Johnson¹

¹Texas Tech University, ²Michigan State University, ³Sam Houston State University

12:00 PM PSII-9 **The effects of Chinese cabbage by-product and total mixed rations on in vitro rumen fermentation, growth performance and blood profile of Holstein steers**

ARang Son¹, Chang-Dae Jeong¹, Sonny C. Ramos¹, Michelle Miguel¹, Lovelia Mamuad¹, Yong-Hun Jeong¹, Sang-Suk Lee¹

¹Department of Animal Science and Technology, College of Bio-industry Science, Suncheon National University, Suncheon, Jeonnam, Republic of Korea

12:00 PM PSII-10 **The effects of an intra-articular inflammatory insult on synovial fluid trace mineral concentrations in growing horses fed inorganic or complexed trace minerals**

Allison Millican¹, Jessica L. Leatherwood¹, Josie A. Coverdale¹, Amanda N. Bradbery¹, Carolyn E. Arnold², Connie K. Larson³, Tryon A. Wickersham¹

¹Texas A&M University, ²Department of Large Animal Clinical Sciences, Texas A&M University, ³Zinpro Corporation

12:00 PM PSII-11 **The cellular immune system in Bos indicus cattle is not altered by short-duration transport**

Brooklyn Wagner¹, Anthony J. Parker¹

¹The Ohio State University

12:00 PM PSII-12 **Effect of Maternal Supplementation with an Injectable Trace Mineral on Pre-Weaning Beef Calf Performance and Mineral Status**

Rebecca Stokes¹, Frank Ireland¹, Daniel W. Shike²

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

12:00 PM PSII-13 **Stability of chondrogenic differentiation potential in cultured equine primary cells as a function of passage number**

Chan Hee Mok¹, Emma N. Adam¹, James N. MacLeod²

¹University of Kentucky, Department of Veterinary Sciences, ²University of Kentucky

12:00 PM PSII-14 **Ruminal in situ degradability of warm-season forages under different incubation times with calcium oxide**

Francine M. Ciriaco¹, Darren D. Henry², Romina Beierbach³, Sebastian E. Mejia³, Federico Podversich³, Gonzalo Barreneche⁴, Ana C. G. Luna¹, Tessa M. Schulmeister⁵, Jose C. Dubeux⁵, Nicolas DiLorenzo⁵

¹University of Florida - North Florida Research and Education Center, ²Texas Tech University, ³North Florida Research and Education Center, University of Florida, ⁴University of Florida, NFREC, ⁵University of Florida

12:00 PM PSII-15 **Profiling behavioral changes during the transition period in clinically healthy grazing dairy cows**

Stacey J. Hendriks¹, Claire Phyn², Sally-Anne Turner², Kristina Mueller¹, Daniel Donaghy¹, Barbara Kuhn-Shelock², Julie Huzzey³, John Roche⁴

¹Massey University, ²DairyNZ Ltd., ³California Polytechnic State University, ⁴University of Auckland

12:00 PM PSII-16 **Physiological response of grazing horses to seasonal fluctuations in pasture nonstructural carbohydrates**

Katelyn Kaufman ¹, Pat Harris ², Shayan Ghajar ¹, Kristine M. Ely ³, Katlyn M. DeLano ⁴, Bridgett J. McIntosh ⁴

¹Virginia Tech University, ²Mars Horsecare UK, ³Virginia Tech, ⁴Virginia Polytechnic Institute and State University

12:00 PM PSII-17 **Glucose and insulin response to feed processing method and meal time of day in horses**

Kristine M. Ely ¹, Katelyn Kaufman ², Amber Krotky ³, Nettie Liburt ⁴, Jeff Flenniken ⁴, Pat Harris ⁵, Bridgett J. McIntosh ⁶

¹Virginia Tech, ²Virginia Tech University, ³Mars Horsecare US, ⁴MARS Horsecare US, ⁵Mars Horsecare UK, ⁶Virginia Polytechnic Institute and State University

12:00 PM PSII-18 **Effects of protein level and lysine: net energy ratio in growing-finishing pigs**

Shudong Liu ¹, Jinho Cho ², Won Yun ¹, Changhee Lee ², Jihwan Lee ¹, Woogi Kwak ², Hanjin Oh ³, Donghoon Lee ²

¹Division of Food and Animal Science, Chungbuk National University, ²Chungbuk national university, ³Department of Animal Science, Chungbuk National University

12:00 PM PSII-19 **Effects of supplementation with molasses and by-pass methionine or fishmeal in beef cows during early gestation, on offspring postnatal growth and nutrient digestibility**

Gleise Medeiros da Silva ¹, Phillip A. Lancaster ², Philippe Moriel ³, Juliana Ranches ⁴, Tessa M. Schulmeister ⁵, Darren D. Henry ⁶, Nicolas DiLorenzo ⁵

¹ASAS, ²College of Agriculture, Missouri State University, ³University of Florida - Range Cattle Research & Education Center, ⁴UF/IFAS - Range Cattle Research & Education Center, ⁵University of Florida, ⁶Texas Tech University

12:00 PM PSII-20 **A high correlation between conventional and mini pigs in feed energy utilization**

Hyunwoong Jo ¹, Beob G. Kim ¹

¹Konkuk University

12:00 PM PSII-21 **Fiber type characterization and meat quality of hair lambs supplemented with ferulic acid.**

Edgar Fernando. Peña ¹, Humberto Gonzalez ¹, Felipe Rosales ¹, Ismael Jiménez ², Martín Valenzuela ¹, Aida Peña ¹, Araceli Pinelli ¹, Juan Pedro. Camou ¹, Leonel Avendaño ³, Jose Luis. Dávila ¹, Adriana Muhlia ¹, Candelario Castillo ⁴

¹CIAD, ²CINVESTAV, ³Universidad Autónoma de Baja California, ⁴Instituto Tecnológico de Sonora

Section Editors Lunch

12:30 PM – 2:00 PM

Poster Session III

1:00 PM – 2:00 PM

NONRUMINANT NUTRITION

1:00 PM PSIII-22 **Fermentation characteristics of xylo- and manno-oligosaccharides and soluble and insoluble arabinoxylan studied using an in vitro model of swine**

Utsav P. Tiwari ¹, Rajesh Jha ²

¹Department of Human Nutrition Food and Animal Sciences, University of Hawaii at Manoa,

²University of Hawaii at Manoa

NONRUMINANT NUTRITION

1:00 PM PSIII-23 **Clinoptilolite in the diets of fattening pigs**

Roman Nekrasov ¹, Alyona Zelenchenkova ¹, Magomed G. Chabaev ², Elena Y. Tsis ², Cagatay Tulunay ³

¹L.K. Ernst Federal Science Center for Animal Husbandry, ²L.K. Ernst Federal Research Center for Animal Husbandry, ³Gordes Zeolit Madencilik Sanayi ve Ticaret A.Ş.

BIG DATA ANALYTICS

1:00 PM PSIII-24 **Establishment of multilevel linear model and analysis of factors affecting piglet litter performance at birth in central China**

Wang Chao ¹, Liu Zexue ², Jian Peng ¹

¹Huazhong Agricultural University, ²COFCO Wuhan Meat Product Co., Ltd

BIG DATA ANALYTICS

1:00 PM PSIII-25 **Dairy Data: Challenges and Opportunities**

Jared Schenkels ¹, Tarfa Hamed ¹, Nathan Laundry ¹, Bill Szkotnicki ¹, Christine F. Baes ²

¹University of Guelph, ²University of Guelph and University of Bern

NONRUMINANT NUTRITION

1:00 PM PSIII-26 **Effect of Yea-Sacc® yeast culture on growth performance, nutrient digestibility and fecal score in weanling pigs**

Yi Yang ¹, Yanjiao Li ², Xiang Xue Liang ¹, In Ho Kim ³

¹421-1 Department of Animal Resources Science Dankook University, ²Dankook university,

³Dankook University

BIG DATA ANALYTICS

1:00 PM PSIII-27 **Factors that condition semen quality of bulls in Lima, Peru**

Jorge Luis Luis Vilela ¹, Lidia Tania. Castro Smith ²

¹Universidad Científica del Sur, Grupo de Investigación Ciencia Equina y Animales Autóctonos,

²Banco Nacional de Semen

NONRUMINANT NUTRITION

1:00 PM PSIII-28 **Assessment of insect meal as a protein supplement for young monogastric animals**

Hyo-Jin Kim ¹, Jae-Won Kim ², Sung-Hun Kim ², Je-Heon Kim ², Seung-Hui Lee ¹, Jong-Su Eun ¹

¹Biotechnology Research Institute, CJ CheilJedang, ²Biotechnology Research Institute / CJ

CheilJedang

NONRUMINANT NUTRITION

1:00 PM PSIII-29 **The response of weanling piglets to dietary valine**

Sam Millet ¹, Marijke Aluwé ¹, William Lambert ², Aude Simongiovanni ³, Joni De Sutter ⁴, Bart Ampe ¹, Sam De Campeneere ¹

¹Flanders research institute for agriculture, fisheries and food (ILVO), ²Ajinomoto Eurolysine S.A.S., ³Ajinomoto Animal Nutrition Europe, ⁴Orffa Belgium NV

NONRUMINANT NUTRITION

1:00 PM PSIII-30 **The standardised ileal lysine requirement for optimal performance of piglets between 4 and 9 weeks of age**

Sam Millet ¹, Marijke Aluwé ¹, Eric Le Gall ², Etienne Corrent ², William Lambert ², Joni De Sutter ³, Bart Ampe ¹, Sam De Campeneere ¹

¹Flanders research institute for agriculture, fisheries and food (ILVO), ²Ajinomoto Eurolysine S.A.S., ³Orffa Belgium NV

NONRUMINANT NUTRITION

1:00 PM PSIII-31 **Standardized ileal digestible lysine requirement of Ross 308 broilers at the age of 10 to 21 days**

Su Hyun An ¹, Changsu Kong ¹

¹Kyungpook National University

NONRUMINANT NUTRITION

1:00 PM PSIII-32 **Nutrient and amino acids digestibility of animal protein byproduct in swine, determined using an in vitro model**

Utsav P. Tiwari ¹, Brian J. Kerr ², Rajesh Jha ³

¹Department of Human Nutrition Food and Animal Sciences, University of Hawaii at Manoa,

²USDA-ARS, ³University of Hawaii at Manoa

NONRUMINANT NUTRITION

1:00 PM PSIII-33 **Nutritive value of soybean products fed to growing pigs without or with multi-enzyme**

Cuilan Zhu ¹, Ilona Parenteau ¹, Elijah Kiarie ¹

¹University of Guelph

NONRUMINANT NUTRITION

1:00 PM PSIII-34 **Comparison of fermented and unfermented flax seed cake on the nutrient values and the utilization in ducks**

Lin Yang ¹, Wence Wang ¹, Shuangshuang Zhai ¹, Hui Ye ¹, Yongwen Zhu ¹, Mengmeng Li ¹

¹South China Agricultural University

NONRUMINANT NUTRITION

1:00 PM PSIII-35 **Dietary glycine+serine and threonine effects on performance, creatine muscle content and meat lipid oxidation of broiler chickens from 21 to 42 days of age**

Iván Camilo Ospina-Rojas ¹, Alice E. Murakami ², Paulo C. Pozza ², Paschal Chukwudi Aguihe ³, Márcia Izumi Sakamoto ¹

¹Universidade Estadual de Maringá, ²State University of Maringá, ³University of Ibadan

NONRUMINANT NUTRITION

1:00 PM PSIII-36 **Dietary soybean meal level and β -mannanase supplementation affected immunoproteins in carotid artery and morphology and aquaporin water channels in small intestine of nursery pigs**

Yanrui Qiao¹, Xiaotong Zhu², Lili Zhai¹, Robert L. Payne¹, Tiejun Li³

¹Elanco Animal Health, ²Institute of Subtropical Agriculture, Chinese Academy of Sciences,

³Institute of Subtropical Agriculture, The Chinese Academy of Sciences

NONRUMINANT NUTRITION

1:00 PM PSIII-37 **Dried Black Soldier Fly larvae as a dietary supplement to the diet of growing pigs**

Roman Nekrasov¹, Alyona Zelenchenkova¹, Magomed G. Chabaev², Gennady A. Ivanov³, Alexander Antonov⁴, Nadezhda Pastukhova⁴

¹L.K. Ernst Federal Science Center for Animal Husbandry, ²L.K. Ernst Federal Research Center for Animal Husbandry, ³LLC «NordTechSad», ⁴Federal State Autonomous educational institution of higher education "Northern (Arctic) Federal University named after M.V. Lomonosov"

NONRUMINANT NUTRITION

1:00 PM PSIII-38 **Effect of Deficiency or Surplus Dietary Energy Intake on the Onset of Puberty in Gilts Investigated by Liquid Chromatography-Mass Spectrometry Based Follicular Fluid Metabolomics Analysis**

Meng Shi¹, Tiantian Li¹, Junjun Wang¹

¹China Agricultural University

NONRUMINANT NUTRITION

1:00 PM PSIII-39 **Effect of different methionine sources with or without organic acid on the performance and gastrointestinal microbial load of broiler chicken**

Osinowo A. Oluremi¹, Adebisi Olufemi.A², Olumide Martha³

¹Federal College of Education, Osiele, ²University of Ibadan, ³Department of Animal Science, Babcock University, Ilishan Remo, Ogun State, Nigeria

NONRUMINANT NUTRITION

1:00 PM PSIII-40 **Effects of arginine supplementation levels compared with increased feeding during late gestation on reproductive performance and piglet uniformity in sows**

Jin Su Hong¹, Lin Hu Fang¹, Jae Hark Jeong¹, Woo Lim Chung¹, Jun Hyung Lee¹, Young Geol Han¹, In Hyuk Kwon¹, Yoo Yong Kim¹

¹Department of Agricultural Biotechnology, Seoul National University

NONRUMINANT NUTRITION

1:00 PM PSIII-41 **Effects of dietary net energy concentration on growth performance and energy intake of weaned pigs**

Jong Woong Kim¹, Charles Martin Nyachoti²

¹Department of Animal Science, University of Manitoba, Winnipeg, MB, Canada, ²University of Manitoba

NONRUMINANT NUTRITION

1:00 PM PSIII-42 **Effects of non-genetically modified organism wheat on growth performance, nutrient digestibility, blood profile and meat quality in grower-finisher pigs**
Huan Wang¹, Dae Jun Lee², Hong Ik Jung¹, In Ho Kim³
¹Dankook university, ²Department of Animal Resources Science, Dankook University Dandae-ro 119, Cheonan 330-714, South Korea, ³Dankook University

ARPAS Exams Session II

2:00 PM – 4:00 PM

Breeding and Genetics Symposium:

Maturation of genomic selection in livestock breeding programs

Chair: Filippo Miglior, Scientific Researcher, Canadian Dairy Network

2:00 PM – 4:15 PM

2:00 PM **Introductory Remarks**

2:05 PM 311 **Genomic Selection: Historical perspective and development of methods in use today**

Matthew L. Spangler¹

¹University of Nebraska – Lincoln

2:35 PM 312 **Successful application of genomic selection in a poultry breeding program**

Rachel Hawken¹

¹Cobb-Vantress Inc.

3:00 PM **Break**

3:15 PM 310 **What's Next for Genomic Selection in Dairy Cattle?**

Michael M. Lohuis¹

¹Semex Alliance

3:45 PM 309 **Beyond predictions: managing inbreeding and variability in the genomic era**

Christian Maltecca¹, Jeremy T. Howard², Christine F. Baes³, Jennie E. Pryce⁴

¹Department of Animal Science, North Carolina State University, ²University of Nebraska Lincoln, ³University of Guelph and University of Bern, ⁴Department of Economic Development, Jobs, Transport and Resources

Cell Biology Symposium: Metabolic responses to stress: From the animal to the cell

Chair: Sarah A. Reed, Associate Professor, Department of Animal Science, University of Connecticut; Kristen E. Govoni, Associate Professor, Department of Animal Science, University of Connecticut

2:00 PM – 4:15 PM

2:00 PM **Introductory Remarks**

2:05 PM 366 **The liver is a metabolic and immunologic organ: a reconsideration of metabolic decompensation in mitochondrial hepatopathy**

Peter J. McGuire ¹

¹National Human Genome Research Institute

2:35 PM 367 **Oxidative stress and efficiency: The tightrope act of mitochondria in health and disease**

Walter Gay. Bottje ¹

¹University of Arkansas

3:15 PM 368 **Poor maternal nutrition during gestation alters whole body and cellular metabolism in offspring**

Kristen E. Govoni ¹, Sarah A. Reed ¹, Steven A. Zinn ¹

¹University of Connecticut

3:45 PM 369 **Cellular mechanisms linking metabolic stress with endometrial disease in cattle**

Martin Sheldon ¹

¹Swansea University

Companion Animal Symposium: Clinical Pet Nutrition

Chair: Kelly S. Swanson, The Kraft Heinz Company Endowed Professor in Human Nutrition, University of Illinois at Urbana-Champaign

2:00 PM – 4:30 PM

2:00 PM **Introductory Remarks**

2:15 PM 380 **Different protocols and technologies employed to help pets lose weight.**

Adronie Verbrugghe ¹

¹Department of Clinical Studies, University of Guelph, Guelph, Ontario, Canada.

2:00 PM 382 **Clinical Pet Nutrition Introductory Remarks**

Kelly S. Swanson ¹

¹University of Illinois Urbana-Champaign

2:45 PM 383 **Feeding dogs and cats with renal disease: What do we really know**

Lisa Weeth ¹

¹Weeth Nutrition Services

3:15 PM **Break**

3:30 PM 384 **Effects of glucose metabolism and carbohydrate sources on cardiometabolic health in dogs and cats**

Lynn P. Weber¹, Jennifer Adolphe², Jennifer Briens¹

¹University of Saskatchewan, ²ADM

4:00 PM 381 **Feeding the Critical Care Patient**

Sally Perea¹

¹Royal Canin

**Contemporary and Emerging Issues Symposium:
Contemporary issues that impact consumers' perceptions of animal ag**

Chair: John Vicini, Bayer CropSciences

2:00 PM – 5:15 PM

2:00 PM **Introductory Remarks**

2:05 PM 400 **Importance of animal-source foods for meeting global nutritional, educational and economic needs**

Adegbola T. Adesogan¹

¹Department of Animal Sciences and Innovation Lab for Livestock Systems, University of Florida

2:35 PM 401 **Environmental and Nutritional Implications of Agriculture without Animals**

Robin R. White¹, Mary Beth Hall²

¹Department of Animal and Poultry Sciences, Virginia Tech, ²Dairy Forage Research Center, ARS, USDA

3:05 PM **Break**

3:15 PM 403 **Methane and climate change**

Frank M. Mitloehner¹

¹UC Davis

3:45 PM 402 **Antibiotics in Food Animal Agriculture: Stakeholder Perceptions of Use, Overuse & Misuse**

Harvey M. Scott¹

¹Texas A&M University

4:15 PM 399 **Having our meat and eating it – how do we reconcile livestock efficiencies with consumer perceptions?**

Judith L. Capper¹

¹Livestock Sustainability Consultancy

4:45 PM 398 **Contemporary Issues in Animal Agriculture: Animal Welfare**

Cassandra Tucker¹

¹University of California Davis

CSAS Graduate Student Oral Competition - MS II

Chair: Michael Steele, University of Alberta, University of Guelph

2:00 PM – 4:30 PM

2:00 PM 339 **Effect of varieties and tannin levels (low and normal) on the physicochemical and nutritional characterization of faba bean grown in western Canada**

Maria E. Rodríguez ¹, Victor H. Guevara-Oquendo ¹, Rex N. Newkirk ¹, Denise A. Beaulieu ¹, Bunyamin Tar'an ¹, X. Feng ²

¹University of Saskatchewan, ²ASAS, CSAS, ADSA

2:15 PM 340 **Measuring Response to Pain Mitigation for Ovariectomy in Beef Heifers**

Jean Lauder ¹, Sonia Marti ², Karen S. Schwartzkopf-Genswein ³, Murray D. Jelinski ⁴, Eugene Janzen ⁵

¹University of Saskatchewan, ²IRTA- Ruminant Production, ³Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, Lethbridge, AB Canada, ⁴Department of Large Animal Clinical Sciences, Western College of Veterinary Medicine, ⁵University of Calgary, Faculty of Veterinary Medicine

2:30 PM 341 **Effects of different iron sources and chelators on growth in wild type and iron-uptake defective mutants of non-typhoidal Salmonella enterica serovars**

Zhigang Tan ¹, Hai Yu ², Samuel Chekabab ², Xinhua Yin ², Moussa S. Diarra ², Joshua Gong ³, Chengbo Yang ⁴

¹Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2/Guelph Research and Development Centre, Agriculture Agri-Food Canada, Guelph, Ontario, Canada N1G 5C9, ²Guelph Research and Development Centre, Agriculture Agri-Food Canada, Guelph, Ontario, Canada N1G 5C9, ³Agriculture and Agri-Food Canada, ⁴University of Manitoba, Department of Animal Science

2:45 PM 342 **The effects of extended colostrum feeding on gastrointestinal tract growth of the neonatal dairy calf**

Jade Pyo ¹, Sarah Pletts ¹, Josue M. Romao ¹, Yudai Inabu ², Zhixiong He ³, Deborah Haines ⁴, Toshihisa Sugino ², Le L. Guan ¹, Michael Steele ⁵

¹University of Alberta, ²The Research Center for Animal Science, Graduate School of Biosphere Science, Hiroshima University, ³Institute of Subtropical Agriculture, Changsha, China, ⁴Saskatoon Colostrum Co. Ltd., ⁵University of Alberta, University of Guelph

3:00 PM **Break**

3:15 PM 343 **The evolution of the nasopharyngeal bacterial community in beef steer calves from spring processing to 40 days after arrival at the feedlot**

Christopher McMullen ¹, Karin Orsel ¹, Trevor Alexander ², Frank van der Meer ¹, Graham Plastow ³, Edouard Timsit ¹

¹Faculty of Veterinary Medicine, University of Calgary, ²Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, Lethbridge, AB Canada, ³University of Alberta

3:30 PM **Withdrawn**

3:45 PM 344 **Grazing behavior and performance of bred beef heifers grazing stockpiled perennial or annual forages in western Canada**

Jordan Dahmer¹, Emma J. McGeough¹, Kim Ominski¹, Gary Crow¹, Doug Cattani¹, Karin Wittenberg¹

¹University of Manitoba

4:15 PM 345 **Energy source of milk replacer affects glucose homeostasis in neonatal calves**

Annemiek Welboren¹, Bayissa Hatew-Chuko¹, Harma Berends², Leonel Leal², Javier Martín-Tereso³, Michael Steele⁴

¹Department of Agricultural, Food and Nutritional Science, University of Alberta, ²Trouw Nutrition Research and Development, ³Trouw Nutrition R&D, ⁴University of Alberta, University of Guelph

Food Safety

2:00 PM – 2:30 PM

2:00 PM 412 **Synergism between exogenous lactoferrin and dietary Hibiscus sabdariffa extract in prevention of mastitis in dairy goats during the dry period**

Adela Mora-Gutierrez¹, L. Nuti¹, J. Kirven¹, R. Attaie², M. Nunez de Gonzalez¹

¹Prairie View A&M University, ²Prairie View A&M Uni

2:15 PM 411 **Effects of tannin treatment on pathogen control and nitrogen metabolism in composted poultry litter**

CLAUDIO ARZOLA-ALVAREZ¹, Robin Anderson², Michael E. Hume³, Byeng Min⁴, DAVID J. NISBET⁵, OSCAR RUIZ-BARRERA¹, YAMICELA CASTILLO-CASTILLO¹, JAIME SALINAS-CHAVIRA⁶, MARINA ONTIVEROS-MAGADAN⁷, Agustin Corral-Luna⁸, Ramon Copado-Garcia⁹, Martha Estrada-Gandarilla¹⁰

¹UNIVERSIDAD AUTONOMA DE CHIHUAHUA, ²ARS/USDA, ³USDA, ARS, College Station, Texas, USA, ⁴Tuskegee University, Tuskegee, Alabama, USA, ⁵USDA/ARS,

⁶UNIVERSIDAD AUTONOMA DE TAMAULIPAS, ⁷UNIVERSIDAD AUTONOMA DE CIUDAD JUAREZ, ⁸Universidad Autónoma de Chihuahua, Facultad de Zootecnia y Ecología,

⁹Autonomous University of Nuevo Leon, Mexico, ¹⁰AUTONOMOUS UNIVERSITY OF NUEVO LEON, NUEVO LEON, MEXICO

Forages and Pastures I

Chair: Ondieki J. Gekara, Associate Professor, Cal Poly Pomona

2:00 PM – 4:45 PM

2:00 PM 421 **Platform Speaker: Assessment of Pasture Supplementation Needs with Modern Computer Models**

Luis O. Tedeschi¹, Antonello Cannas², Mozart Fonseca³, Giovanni Molle⁴

¹Department of Animal Science/Texas A&M University, ²Department of Agricultural Sciences, University of Sassari, Italy, ³University of Nevada, Reno, ⁴Department of Research for Animal Production, Agris Sardegna, Olmedo, Italy

- 2:30 PM 414 **The potential use of vegetation index to estimate crude protein on natural grasslands of Southern Brazil**
 Carolina Bremm ¹, Denise Cybis Fontana ², Christian Bredemeier ², Amanda Heemann Junges ¹, Laura Pigatto Schaparini ², Paulo César. de Faccio Carvalho ², Emilio Laca ³
¹Department of Agricultural Diagnosis and Research/Secretary of Agriculture, Livestock and Irrigation, ²Federal University of Rio Grande do Sul, ³University of California - UC Davis
- 2:45 PM 415 **Evaluating the yield and nutritive value of 7 annual forage species for stockpile grazing of beef cows under western Canadian conditions**
 Emma J. McGeough ¹, Xinhui Peng ², Bill Biligetu ³, Bruce Coulman ⁴
¹University of Manitoba, ²University of Saskatchewan, ³Department of Plant Sciences, University of Saskatchewan, Saskatoon, SK, Canada, S7N 5A8, ⁴Department of Plant Science, University of Saskatchewan
- 3:00 PM 419 **Effect of Differing Rates of Quebracho (*Schinopsis balansae*) Extract provided in a Limit-Fed High Roughage Total Mixed Ration Upon Digestibility and Nitrogen Balance**
 Aaron B. Norris ¹, Whitney L. Crossland ¹, Luis O. Tedeschi ², Jamie L. Foster ³, James P. Muir ³, William Pinchak ⁴
¹Texas Tech University, ²Department of Animal Science/Texas A&M University, ³Texas A&M AgriLife Research, ⁴Texas A&M AgriLife Research, Vernon
- 3:15 PM **Break**
- 3:30 PM 420 **Exploring the Fermentation Kinetics of Medusahead Treated with Glyphosate at Different Particle Lengths**
 Casey Spackman ¹, Clint Stonecipher ², Kip Panter ², Juan J. Villalba ¹
¹Utah State University, ²USDA-ARS-PPRL
- 3:45 PM 416 **Effect of Carbohydrate Additives on the Post-ruminal Dry Matter and Protein Digestibility of Napier Grass (*Pennisetum purpureum*) Silage**
 Joseph J. Baloyi ¹, Mashudu D. Rambau ¹, Felix Fushai ¹
¹University of Venda
- 4:00 PM 417 **An Evaluation of Digestibility and Caloric Value of Different Botanical Parts of Corn Residues Fed to Cattle.**
 Emily Petzel ¹, Alexander Smart ¹, Kristin E. Hales ², Andrew P. Foote ³, Subash Acharya ¹, Cody Wright ¹, Derek Brake ¹
¹South Dakota State University, ²Meat Animal Research Center, Clay Center, NE 68933, ³USDA-ARS U.S. Meat Animal Research Center
- 4:15 PM 418 **Effects of maturity at harvest of *Eragrostis tef* (Moxie) on nutrient intake, digestibility and omasal flow in beef cattle**
 James R. Vinyard ¹, John B. Hall ², James E. Sprinkle ², Gwinyai E. Chibisa ²
¹University of Idaho, Department of Animal and Veterinary Sciences, ²University of Idaho
- 4:30 PM 413 **Effects of various concentrations of soybean hull supplementation on performance of weaned beef cattle fed ryegrass baleage**
 Paige N. Tipton ¹, J. D. Rivera ², Joseph Johnson ², Alexis Lutz ²
¹Department of Animal and Dairy Sciences, Mississippi State University, ²Mississippi Agricultural and Forestry Experiment Station-White Sand Branch, Mississippi State University

**Production, Management and the Environment I:
Effect of Management and Environment on Reproduction**

Chair: Zachary Paddock

2:00 PM – 3:00 PM

2:00 PM 121 **A controlled heat stress during late gestation affects thermoregulation, productive performance and metabolic profiles of primiparous sows**
Jianwen He¹, Weijiang Zheng², Yongqiang Xue³, Huiduo Guo³, Wen Yao¹
¹College of Animal Science and Technology, Nanjing Agricultural University, ²College of Animal Science and Technology, Nanjing Agricultural University, ³College of Animal Science and Technology, Nanjing Agricultural University

2:15 PM 120 **Evaluation of ovulation synchronization protocols and alternative pregnancy diagnosis tools in lactating dairy cows**
Abid Hussain SHAHZAD¹, Ali Abbas², Deniz Nak³, Yavuz Nak³, Iahisham Khan⁴, Ziaullah Mughal⁵
¹Clinical Sciences, ²Livestock and Dairy Development Department, Punjab, ³Uludag University, Bursa-Turkey, ⁴CVAS, Jhang, ⁵University of Veterinary and Animal Sciences, Lahore

2:30 PM 119 **Effects of temperament on growth, plasma cortisol concentrations, and puberty attainment in Bos indicus beef heifers**
Reinaldo F. Cooke¹, Philippe Moriel², Bruno I. Cappellozza³, José Luiz Vasconcelos⁴
¹Texas A&M University, ²University of Florida - Range Cattle Research & Education Center, ³Elanco Animal Health, ⁴São Paulo State University

2:45 PM 122 **Dietary supplementation with an arginine product between Days 1 and 60 of gestation enhances embryonic survival in lactating beef cows**
Guoyao Wu¹, Kyler R. Gilbreath², Fuller W. Bazer², Michael C. Satterfield², Jason J Cleere²
¹Department of Animal Science, Texas A&M University, ²Texas A&M University

International Animal Agriculture

Chair: Beth B. Kegley, Professor, University of Arkansas Division of Agriculture

2:45 PM – 3:45 PM

2:45 PM 472 **Status of goat farming in Sindh with special reference to feeding, breeding and health care**
Muhammad Sajjad. Khan¹, Ghulam Bilal², Muhammad Moaeen-ud-Din³, James Reecy⁴
¹Institute of Animal & Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Pakistan, ²PMA-Arid Agriculture University, Rawalpindi, ³PMAS-Arid Agriculture University, ⁴Iowa State University

3:00 PM 474 **Productive and reproductive performance of Goat Breeds of Sindh**
Ghulam Bilal¹, Muhammad Moaeen-ud-Din², Muhammad Sajjad. Khan³, James Reecy⁴
¹PMA-Arid Agriculture University, Rawalpindi, ²PMAS-Arid Agriculture University, ³Institute of Animal & Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Pakistan, ⁴Iowa State University

3:15 PM 471 **Feed efficiency of Holstein and Jersey dairy cows in the tropics**
Claudia G. Rios¹, Carla P. Reyes-Flores¹, Ninochka Navedo-Guzmán¹, Jaime E. Curbelo-Rodríguez¹, Guillermo Ortiz-Colón²
¹University of Puerto Rico, Mayagüez Campus, ²University of Puerto Rico-Mayaguez

3:30 PM 473 **Late-Breaking: Efficacy of L-methionine in comparison to DL-methionine in Cherry Valley ducks**
Ya Nan Zhang¹, Dong Ruan², Wei Chen², Shuang Wang³, Weiguang Xia², Chuntian zheng⁴
¹, ²Institute of Animal Science, Guangdong Academy of Agricultural Sciences, State Key Laboratory of Livestock and Poultry Breeding, Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture, China, ³Institute of Animal Science, Guangdong Academy of Agricultural Sciences, ⁴Institute of Animal Science, Guangdong Academy of Agricultural Sciences

Physiology and Endocrinology I: Physiology

Chair: Carolyn J. Fitzsimmons, Research Scientist, Agriculture and Agri-Food Canada, Edmonton, AB Canada; Department of Agriculture
3:15 PM – 5:00 PM

3:15 PM 139 **Wettemann Graduate Scholar in Physiology: Maternal nutrition alters concentrations of nutrients in fetal fluids and expression of genes impacting production efficiencies in bovine fetal liver, muscle, and cerebrum during the first 50 days of gestation**
Matthew S. Crouse¹, Joel S. Caton¹, Robert Cushman², Nathaniel P. Greseth³, Kyle J. McLean⁴, Lawrence P. Reynolds⁵, Carl R. Dahlen¹, Pawel P. Borowicz⁵, Alison K. Ward¹
¹North Dakota State University, ²USDA, ARS, U.S. Meat Animal Research Center, ³University of Wisconsin Madison, ⁴University of Kentucky, ⁵NDSU

3:45 PM 134 **Peripartum supplementation of vitamins A, D, and E improves measures of vitamins A, D and E in beef cows and their calves**
Luara B. Canal¹, Joyce Maciel², Pedro Fontes³, Carla D. Sanford⁴, Nicky Oosthuizen⁵, Leslie Blakely⁶, Madelin Pozadas⁶, Robin da Silva⁷, Gilberto Litta⁸, Mark Engstrom⁸, Nicolas DiLorenzo⁶, G. Cliff C. Lamb³, Corwin D. Nelson⁹
¹University of Florida - North Florida Research and Education Center, ²NFREC - University of Florida, ³Texas A&M University, ⁴University of Florida, NFREC, ⁵ABS Global, ⁶University of Florida, ⁷Department of Food Science and Human Nutrition, University of Florida, ⁸DMS Nutritional Products, ⁹Department of Animal Sciences, University of Florida

4:00 PM 135 **The effect of chemerin as a host-derived factor on intestinal microbial activity in calves**
Yutaka Suzuki¹, Kanako Kubota¹, Hiroto Miura¹, Satoshi Haga², Sanggun Roh³, Satoshi Koike¹, Yasuo Kobayashi¹
¹Hokkaido University, ²Institute of Livestock and Grassland Science, National Agriculture and Food Research Organization, ³Tohoku University

4:15 PM 136 **Increased pre-weaning metabolizable energy supply affects the expression of genes related to adipogenesis and lipid metabolism in the skeletal muscle of prepubertal Holstein heifers**

Koryn S. Hare¹, Josue M. Romao², Leonel Leal³, Guido Hooiveld⁴, Fernando Soberon⁵, Harma Berends³, Mark Boekschoten⁴, Michael Van Amburgh⁶, Javier Martín-Tereso⁷, Michael Steele⁸

¹Department of Agricultural, Food and Nutritional Science, Faculty of Agriculture Life and Environmental Sciences, University of Alberta, ²University of Alberta, ³Trouw Nutrition Research and Development, ⁴Wageningen University, ⁵Trouw Nutrition, ⁶Cornell University, ⁷Trouw Nutrition R&D, ⁸University of Alberta, University of Guelph

4:30 PM 137 **Prenatal transportation stress alters genome-wide DNA methylation in suckling Brahman bull calves**

Brittini P. Littlejohn¹, Debbi M. Price², Don A. Neuendorff³, Jeffery A. Carroll⁴, Rhonda C. Vann⁵, Penny K. Riggs⁶, David G. Riley⁶, Charles R. Long⁷, Thomas H. Welsh⁸, Ronald D. Randel⁹

¹Texas A&M University, ²Texas A&M AgriLife Research & Extension Center at Overton; Department of Animal Science, Texas A&M University, ³Texas A&M AgriLife Research & Extension Center at Overton, ⁴USDA-ARS Livestock Issues Research Unit, ⁵Mississippi Agricultural and Forestry Experiment Station, Mississippi State University, Raymond, MS, ⁶Texas A&M University, ⁷Texas A&M AgriLife Research and Extension Center, ⁸Department of Animal Science, Texas A&M University, College Station, ⁹Texas A&M AgriLife Research

4:45 PM 138 **Prenatal stress alters genes in signaling pathways influencing behavior and stress response by differential methylation of DNA**

Brittini P. Littlejohn¹, Debbi M. Price², Don A. Neuendorff³, Jeffery A. Carroll⁴, Rhonda C. Vann⁵, Penny K. Riggs⁶, David G. Riley⁶, Charles R. Long⁷, Thomas H. Welsh⁸, Ronald D. Randel⁹

¹Texas A&M University, ²Texas A&M AgriLife Research & Extension Center at Overton; Department of Animal Science, Texas A&M University, ³Texas A&M AgriLife Research & Extension Center at Overton, ⁴USDA-ARS Livestock Issues Research Unit, ⁵Mississippi Agricultural and Forestry Experiment Station, Mississippi State University, Raymond, MS, ⁶Texas A&M University, ⁷Texas A&M AgriLife Research and Extension Center, ⁸Department of Animal Science, Texas A&M University, College Station, ⁹Texas A&M AgriLife Research

Poster Session IV

5:00 PM – 6:00 PM

BREEDING AND GENETICS

5:00 PM PSIV-1 **microRNA-122 targets the P4HA1 mRNA and regulates its expression in chicken hepatocytes**

Zhiliang Gu¹, Xingguo Wang², Jiangfeng Yu¹, Fang Shao³, Yanping Zhang¹

¹School of Biology and Food Engineering, Changshu Institute of Technology, ²Jiangsu Institute of Poultry Science, ³The Affiliated Changzhou No.2 People's Hospital, Nanjing Medical University

NONRUMINANT NUTRITION

5:00 PM PSIV-2 **Use of protected zinc oxide in lower doses in weaned pigs in substitution for the conventional high dose zinc oxide**

Santi Devi Upadhaya ¹, Yi Yang ², Yang Jiao ³, In Ho Kim ⁴

¹Dankook University, Cheonan, South Korea, ²421-1 Department of Animal Resources Science Dankook University, ³421-1 Department of Animal Resources Science Dankook University South Korea, ⁴Dankook University

NONRUMINANT NUTRITION

5:00 PM PSIV-3 **Late-Breaking: Transcriptomic analysis in the liver of aged brown-egg laying hens with different intensity of eggshell color**

Gi Ppeum Han ¹, Dong Yong Kil ¹, Doyun Goo ², Geun Hyeon Park ¹, Jong Hyuk Kim ¹, Hyeon Seok Choi ¹, Hwan Ku Kang ³

¹Chung-Ang University, ², ³Poultry Research Institute/ Rural Development Administration National Institute of Animal Science

NONRUMINANT NUTRITION

5:00 PM PSIV-4 **The effect of peptide product and ZnO on growth performance in nursery pigs fed different levels of crude protein diets.**

J. P. Knapp ¹, Tsungcheng Cheng Tsai ², Charles V. Maxwell ², Jason Apple ³, Jeffrey Chewning ⁴

¹Department of Animal Science, Division of Agriculture, University of Arkansas, Fayetteville, ²University of Arkansas, ³University of Arkansas Division of Agriculture, ⁴Swine Research Services, Inc.,

BREEDING AND GENETICS

5:00 PM PSIV-5 **The effect of CD44 gene on triglyceride synthesis of bovine mammary epithelial cells**

Ping Jiang ¹, Xibi Fang ², Lixin Xia ¹, Xiaohui Li ², Mengyan Wang ¹, Runjun yang ³, Zhihui Zhao ⁴

¹Jilin University, ²jilin university, ³Jilin University, ⁴Guangdong Ocean University

BREEDING AND GENETICS

5:00 PM PSIV-6 **The admixed history of Kola Peninsula semi-domestic reindeer population inferred from genome-wide SNP analysis**

Arsen V. Dotsev ¹, Veronika R. Kharzinova ¹, Tatiana M. Romanenko ², Kasim A. Laishev ³, Anastasiya D. Solovieva ⁴, Henry Reyer ⁵, Klaus Wimmers ⁵, Gottfried Brem ⁶, Natalia A. Zinovieva ¹

¹L.K. Ernst Federal Research Center for Animal Husbandry, ²FCIARctic Nenets Division — Agro-Experimental Station, Federal Agency of Scientific Organizations, ³St. Petersburg Federal Research Center of Russian Academy Sciences, ⁴L.K. Ernst Federal Science Center for Animal Husbandry, ⁵Institute of Genome Biology, Leibniz Institute for Farm Animal Biology, ⁶Institute of Animal Breeding and Genetics, University of Veterinary Medicine (VMU)

BREEDING AND GENETICS

5:00 PM PSIV-7 **Targeting Variation in the Mitochondrial Genomes of Bighorn and Domestic Sheep**

Kimberly M. Davenport ¹, Margaret A. Highland ², Brenda M. Murdoch ¹

¹University of Idaho, ²Animal Disease Research Unit, United States Department of Agriculture, Pullman, WA, USA

NONRUMINANT NUTRITION

5:00 PM PSIV-8 **Silver nanoparticles as dietary additive influences the microbial digestive ecosystem in weaned piglets**

Gabriel de la Fuente ¹, Jesús Suárez-Belloch ², María Ángeles Latorre ², Manuel Fondevila ³
¹Universitat de Lleida, ²Universidad de Zaragoza, ³University of Zaragoza

NONRUMINANT NUTRITION

5:00 PM PSIV-9 **Roles of the nucleotide supplementation in nutrient digestibility, stress hormone and reducing foot-and-mouth disease vaccinated stress reaction in growing pigs**

Yang Jiao ¹, Huan Shi ², Yong min Kim ³, In Ho Kim ⁴
¹421-1 Department of Animal Resources Science Dankook University South Korea,
²Department of Animal Resource & Science, Dankook University, #29 Anseodong, Cheonan, Choongnam, 330-714, Korea, ³Dankook university, ⁴Dankook University

BREEDING AND GENETICS

5:00 PM PSIV-10 **Polymorphisms in the Prolactin and GH-IGF1 Pathways associated with a Heat Tolerance Indicator in Dairy Cows under Heat Stress in Sonora Mexico**

Guillermo Luna-Nevárez ¹, Ricardo Zamorano-Algandar ¹, Javier R. Reyna-Granados ¹, José C. Leyva-Corona ¹, Rosa I. Luna-Ramirez ², Gonzalo Rincón ³, Juan F. F. Medrano ⁴, Miguel A. Sánchez-Castro ⁵, R. Mark Enns ⁵, Scott E. Speidel ⁵, Milton G. G. Thomas ⁵, Pablo Luna-Nevárez ¹

¹Instituto Tecnológico de Sonora, ²University of Arizona, ³Zoetis Inc., ⁴Department of Animal Science, University of California-Davis, 95616, Davis, California, United States of America., ⁵Colorado State University

NONRUMINANT NUTRITION

5:00 PM PSIV-11 **Molecular distribution and localization of bitter receptor (T2R7) in different tissues including intestinal segments in weaned piglets**

Runqiang Yang ¹, Ya Jing Wang ², Brayden Schindell ³, Weiqi Li ⁴, Liju Ni ⁵, Shangxi Liu ⁶, Joshua Gong ⁷, Chengbo Yang ⁸

¹Nanjing Agricultural University, ²Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2 / College of Animal Science and Technology, China Agricultural University, Beijing, China, 100193, ³Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, R3T 2N2, Canada, ⁴Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2, ⁵Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, R3T 2N2, Canada/Shanghai Lab-Animal Research Center, Shanghai, 201203, China, ⁶University of Manitoba, ⁷Agriculture and Agri-Food Canada, ⁸University of Manitoba, Department of Animal Science

NONRUMINANT NUTRITION

5:00 PM PSIV-12 **Molecular distribution and localization of bitter receptor (T2R1) in different tissues including intestinal segments in weaned piglets**

Chongwu Yang¹, Weiqi Li², Brayden Schindell³, Liju Ni⁴, Shangxi Liu⁵, Joshua Gong⁶, Chengbo Yang⁷

¹Department of Animal Science, University of Manitoba, ²Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2, ³Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, R3T 2N2, Canada, ⁴Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, R3T 2N2, Canada/Shanghai Lab-Animal Research Center, Shanghai, 201203, China, ⁵University of Manitoba, ⁶Agriculture and Agri-Food Canada, ⁷University of Manitoba, Department of Animal Science

NONRUMINANT NUTRITION

5:00 PM PSIV-13 **Lactosed extruded wheat enriched with medium chain fatty acids monoglycerides as an alternative to ZnO and colistin in piglet diets**

Emilio Herranz¹, Rubén Miranda², Amanda Fernandes³, Enrique Taboada³, Pedro Medel⁴

¹Internacional de Comercio y Servicios, s. l. u., ²Group Digesporc, Dept. Animal Health, F. of Veterinary, U. of León, ³IMASDE AGROALIMENTARIA, S.L., ⁴INNOVABIOTICS, S.L.

BREEDING AND GENETICS

5:00 PM PSIV-14 **Late-Breaking: Investigating the population structure and differentiation of reindeer populations with high-density SNP markers**

Veronika R. Kharzinova¹, Arsen V. Dotsev¹, Tatiana E. Deniskova¹, Kasim A. Laishev², Tatiana M. Romanenko³, Innokenty Michailovich. Okhlopkov⁴, Gottfried Brem⁵, Klaus Wimmers⁶, Henry Reyer⁶

¹L.K. Ernst Federal Research Center for Animal Husbandry, ²St. Petersburg Federal Research Center of Russian Academy Sciences, ³FCIARctic Nenets Division—Agro-Experimental Station, Federal Agency of Scientific Organizations, ⁴Institute for Biological Problems of Cryolithozone, ⁵Institute of Animal Breeding and Genetics, University of Veterinary Medicine (VMU), ⁶Institute of Genome Biology, Leibniz Institute for Farm Animal Biology

BREEDING AND GENETICS

5:00 PM PSIV-15 **Interaction between E+ and Abr loci is associated with brindle coat color in Korean Hanwoo cattle**

Mina Park¹, Seung Hwan Lee², ByoungHo Park³, Seungsoo Lee⁴, Yunho Choy⁴, Jaegwan Choi⁴, Kyungtai Lee⁴, C.G. Dang⁴, H.K. Chang⁴, Youlim Choi⁴, Sidong Kim⁴

¹National Institute of Animal Science, ²Division of Animal and Dairy Science, Chungnam National University, Republic of Korea., ³National Institute of Animal Science, RDA, ⁴NIAS, RDA

NONRUMINANT NUTRITION

5:00 PM PSIV-16 **Influences of Dietary Phytogenics on the Oxidation Stress, Feed Intake of Sows, and Piglet Performance**

J.T. Ao¹, C.Q. Tan¹, H.K. Wei¹, S.W. Jiang¹, Jian Peng², L.Z. Jin³

¹College of Animal Science and Technology, Huazhong Agricultural University, Wuhan, China, ²Huazhong Agricultural University, ³Guangzhou Meritech Bioengineering Co. Ltd, Guangdong, China

BREEDING AND GENETICS

5:00 PM PSIV-17 **Identification of two stem cell types derived from porcine testicular cell culture: germline stem cells and progenitor Leydig cells**

Yinshan Bai ¹, Cui Zhu ², Meiyong Feng ³, Julang Li ⁴, Shouquan Zhang ³

¹School of Life Science and Engineering, Foshan University; Department of Animal Biosciences, University of Guelph, ²Agro-biological Gene Research Center, Guangdong Academy of Agricultural Sciences, ³College of Animal Science, South China Agricultural University, ⁴University of Guelph

BREEDING AND GENETICS

5:00 PM PSIV-18 **Identification of genes expressed in the liver transcriptome of Holstein-Friesian and Charolais steers divergent in residual feed intake across three dietary phases.**

Marc Higgins ¹, David A. Kenny ², Claire Fitzsimons ³, Gordon Blackshields ⁴, Seán Coyle ⁴, Clare McKenna ⁴, Mark McGee ⁴, Derek Morris ⁵, Sinead Waters ⁴

¹NUI Galway/Teagasc, ²Teagasc Animal and Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath, Ireland, ³Department of Agriculture, Ireland, ⁴Teagasc, ⁵NUI Galway

BREEDING AND GENETICS

5:00 PM PSIV-19 **Identification of VNN1-regulated genes involved in lipid metabolism in chicken hepatocytes**

Zhiliang Gu ¹, Jie Li ², Jiangfeng Yu ¹, Zhongliang Wang ², Lu Xu ¹, Wen Yao ²

¹School of Biology and Food Engineering, Changshu Institute of Technology, ²College of Animal Science and Technology, Nanjing Agricultural University

NONRUMINANT NUTRITION

5:00 PM PSIV-20 **Growth performance and gastrointestinal responses in Hybrid Toms fed antibiotic free corn-soybean meal diet supplemented with multiple doses of a single strain *Bacillus subtilis* probiotic**

Mohsen Mohammadigheisar ¹, Robert B. Shirley ², James Barton ³, Alissa Welsher ³, Pascal Thiery ⁴, Elijah Kiarie ¹

¹University of Guelph, ²Adisseo USA, Inc., ³Adisseo, ⁴Adisseo France

BREEDING AND GENETICS

5:00 PM PSIV-21 **Genetic diversity of Bovine Major Histocompatibility Complex Class II DRB3 locus in African, Asian and American cattle breeds**

Matthew A. Adeleke ¹, Sunday O. Peters ², Tanveer Hussain ³, Sunday A. Adenaike ⁴, Marcos De Donato ⁵, Masroor E. Babar ³, Ikhide G. Imumorin ⁶

¹University of KwaZulu-Natal, ²Department of Animal Science, Berry College, ³Virtual University of Pakistan, Lahore, Pakistan, ⁴Federal University of Agriculture, Abeokuta, ⁵Instituto Tecnológico de Estudios Superiores de Monterrey, Querétaro, Mexico, ⁶Georgia Institute of Technology, Atlanta, GA

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIV-22 **Late-Breaking: Genetic characteristic of Russian wild boar populations based on mitochondrial and nuclear markers**

Veronika R. Kharzinova ¹, Nare A. Akopyan ², Olga V. Kostyunina ¹, Ivan V. Seryodkin ², Igor Aleksandrovich. Domsy ³, Natalia A. Zinovieva ¹

¹L.K. Ernst Federal Research Center for Animal Husbandry, ², ³Russian Game Management and Fur Farming Research Institute

BREEDING AND GENETICS

5:00 PM PSIV-23 GENETIC DIVERSITY OF FRESHWATER CLAM (*Egeria radiata*) IN NIGERIA

Michael O. Ozoje¹, Ekei V. Ikpeme², Uduak U. Johnny², Samuel O Durosaro¹, Sunday O. Peters³, Ekerette Ekerette⁴

¹Federal University of Agriculture, PMB 2240, Abeokuta, Nigeria, ²University of Calabar, Calabar, Nigeria, ³Department of Animal Science, Berry College, ⁴University of Calabar

NONRUMINANT NUTRITION

5:00 PM PSIV-24 GC-FID method validation of DHA in swine feed supplemented with heterotrophically grown, dried microalgae powder (All-G-Rich®)

Gerry P. Dillon¹, Walter Brandl², Cathy Cardinall², Wendy Yuan², Paul Groenewegen³, Alexandros Yiannikouris⁴, Colm Moran⁵

¹Alltech Ireland, ²Mérieux Nutrisciences, ³Alltech Inc, ⁴Alltech Inc., ⁵Alltech SARL

NONRUMINANT NUTRITION

5:00 PM PSIV-25 Evaluation of the effects of antibiotics and synbiotics in grower-finisher pigs

Xin Jian Lei¹, Yang Jiao², Jin Young Cheong³, In Ho Kim⁴

¹Swine Nutrition and Feed Technology 421-1 Department of Animal Resources Science Dankook University #119, Dandae-ro, Dongnam-gu, Cheonan-si, Chungnam, 330-714, Korea, ²421-1 Department of Animal Resources Science Dankook University South Korea, ³Daehan Feed Company South Korea, ⁴Dankook University

BREEDING AND GENETICS

5:00 PM PSIV-26 Late-Breaking: Evaluation of a genome-based sorting system for feeder cattle

Everestus Chima. Akanno¹, Chinyere Ekine-Dzivenu¹, Lihong Chen², Lisa McKeown³, Barry Irving¹, Lynda Baker⁴, Michael Vinsky⁴, John J. Crowley⁵, Marcos G. Colazo⁶, Divakar J. Ambrose⁶, Manuel Juarez⁴, Heather L. Bruce⁷, Mohammed Abo-Ismael⁸, Michael D. MacNeil⁹, Graham Plastow¹⁰, John Basarab¹¹, Changxi Li¹², Carolyn J. Fitzsimmons¹²

¹Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Canada, T6G 2P5, ²Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, ³Alberta Agriculture and Forestry, ⁴Agriculture and Agri-Food Canada, Lacombe Research and Development Centre, 6000 C&E Trail, Lacombe, AB, Canada T4L 1W1, ⁵Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta. Canadian Beef Breeds Council, Calgary, AB, Canada, ⁶Alberta Agriculture and Forestry, 7000 - 113 Street, Edmonton, AB, Canada T6H 5T6, ⁷Department of Agricultural, Food and Nutritional Science, University of Alberta, ⁸Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Canada, T6G 2P5 /Department of Animal and Poultry Production, Damanhour University, Damanhour, Egypt, ⁹Delta G, ¹⁰University of Alberta, ¹¹Alberta Agriculture and Forestry/University of Alberta, ¹²University of Alberta/Agriculture and Agri-Food Canada

NONRUMINANT NUTRITION

5:00 PM PSIV-27 **Late-Breaking: Effects of substitution of corn with brown rice on growth performance, nutrient digestibility, and microbiota of growing-finishing pigs**

Byeonghyeon Kim¹, Sheena Kim¹, J Kim², Jeongjae Lee¹, Joowon Kang¹, Daye Mun¹, Jangryeol Baek¹, Soyun Kim³, Jeehwan Choe⁴, Minho Song¹

¹Chungnam National University, ²³Chungnam National University, ⁴Korea National College of Agriculture and Fisheries

NONRUMINANT NUTRITION

5:00 PM PSIV-28 **Effects of replacing zinc oxide and antibiotics with NeoPrime® on growth performance and plasma and fecal endotoxin concentration in nursery pigs.**

F. Chi¹, S. L. Johnston¹, X. Y. Tang², W. B. Chen³, B. Wang³, S. G. Tang¹

¹Amlan International, ²Hunan Agricultural University, Changsha, Hunan, China, ³Hunan Baiyi Group, Liuyang, Hunan, China

NONRUMINANT NUTRITION

5:00 PM PSIV-29 **Effects of dietary β -glucan on intestinal gene expression of weanling pigs experimentally infected with a pathogenic E. coli**

Kwangwook Kim¹, Rose Whelan², Adebayo Sokale³, Yanhong Liu¹

¹University of California, Davis, ²Evonik Nutrition & Care GmbH, ³Evonik Corporation, Kennesaw, GA

NONRUMINANT NUTRITION

5:00 PM PSIV-30 **Effects of dietary supplementation with ground red-osier dogwood (*Cornus stolonifera*) on growth performance, blood profile, and ileal histomorphology in weaned pigs challenged with *Escherichia coli* K88+**

Balachandar Jayaraman¹, Sirini Amarakoon², Bonjin Koo³, Karmin O⁴, Charles Martin Nyachoti³

¹Department of Animal Science, University of Manitoba, Winnipeg, MB, Canada, ²St. Boniface Hospital Research Centre, Winnipeg, MB, Canada, ³University of Manitoba, ⁴University of Manitoba

NONRUMINANT NUTRITION

5:00 PM PSIV-31 **Late-Breaking: Effects of dietary multigrain carbohydrase in lactation diets on immune responses and gut microbiota of lactating sows and their litters**

Jangryeol Baek¹, Jeongjae Lee¹, J Kim², Sheena Kim¹, Byeonghyeon Kim¹, Joowon Kang¹, Daye Mun¹, Soyun Kim³, Jeehwan Choe⁴, Minho Song¹

¹Chungnam National University, ²³Chungnam National University, ⁴Korea National College of Agriculture and Fisheries

NONRUMINANT NUTRITION

5:00 PM PSIV-32 **Effects of Viligen™ on growth performance of 6 to 13 kg nursery pigs.**

Emily Fruge¹, Amanda Gerhart¹, Ernie L. Hansen¹, Sharlie A. Hansen¹, Keith Frerichs¹

¹Hubbard Feeds

NONRUMINANT NUTRITION

5:00 PM PSIV-33 **Effects of Spirulina supplementation on growth performance, nutrient digestibility, antioxidant enzyme activity analysis, and fecal microbial in growing pigs**

Xiao Liu ¹, Haoyang Sun ², Xi Zhe Hao ³, In Ho Kim ¹

¹Dankook University, ²Dankook Univ., ³Swine Nutrition and Feed Technology 421-1 Department of Animal Resources Science Dankook University

NONRUMINANT NUTRITION

5:00 PM PSIV-34 **Effects of Ginger Root, Star Anise and Salvia Root on Growth Performance, Antioxidant Status and Serum Metabolites in Growth Pigs**

Zaibin Yang ¹, Chongwu Yang ², Xueyan Li ³, Guobin Li ⁴

¹Shandong Agricultural University, ²Department of Animal Science, University of Manitoba, ³Department of Animal science and Technology, Shandong Agricultural University, ⁴Linyi BLJ Food Co., Ltd

NONRUMINANT NUTRITION

5:00 PM PSIV-35 **Effects of Essential Oils on Nutrients and Energy Availability of Post Weaning Pigs Fed Different Energy Levels Diets**

Xuemei Zhou ¹, Guobin Li ², Chongwu Yang ³, Zaibin Yang ¹

¹Shandong Agricultural University, ²Linyi BLJ Food Co., Ltd, ³Department of Animal Science, University of Manitoba

NONRUMINANT NUTRITION

5:00 PM PSIV-36 **Late-Breaking: Effect of different levels of linoleic acid on production performance, egg quality, and yolk fatty acid profiles in 24 to 44 wk old laying ducks**

Shuang Wang ¹, Wei Chen ², Dong Ruan ², Weiguang Xia ², Xi Luo ¹, Chuntian zheng ³

¹Institute of Animal Science, Guangdong Academy of Agricultural Sciences, ²Institute of Animal Science, Guangdong Academy of Agricultural Sciences, State Key Laboratory of Livestock and Poultry Breeding, Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture, China, ³Institute of Animal Science, Guangdong Academy of Agricultural Sciences

BREEDING AND GENETICS

5:00 PM PSIV-37 **Development of a genomic selection strategy to include meat quality traits in turkeys (*Meleagris gallopavo*)**

Ryley J. Vanderhout ¹, Ben J. Wood ², Shai Barbut ¹, Christine F. Baes ³

¹University of Guelph, ²Hybrid Turkeys, ³University of Guelph and University of Bern

BREEDING AND GENETICS

5:00 PM PSIV-38 **Conjoint analysis of transcriptome and microRNA of mammary epithelial cells of Chinese holstein cow**

Lixin Xia ¹, Zhihui Zhao ², Xibi Fang ³, Chunyan Lu ¹, Runjun yang ⁴

¹Jilin University, ²Guangdong Ocean University, ³jilin university, ⁴Jilin University

BREEDING AND GENETICS

5:00 PM PSIV-39 **Comparative transcriptome profile of genes differentially expressed in longissimus dorsi muscles between Japanese black (Wagyu) and Chinese Red Steppes cattle**

Xibi Fang¹, Zhihui Zhao², Ping Jiang³, Lixin Xia³, Yanliang Ge³, Mengyan Wang³, Guangpeng Li⁴, Runjun yang⁵

¹Jilin university, ²Guangdong Ocean University, ³Jilin University, ⁴Inner Mongolia University, ⁵Jilin University

BREEDING AND GENETICS

5:00 PM PSIV-40 **Chicken interleukin-17B induces the inflammatory cytokines through the signaling pathway**

Yeong Ho Hong¹, Cong Thanh Hoang¹, Anh Duc Truong¹

¹Chung-Ang University

BREEDING AND GENETICS

5:00 PM PSIV-41 **CHARACTERIZATION OF PREGNANCY ASSOCIATED GLYCOPROTEIN-1 GENE IN WHITE FULANI, MUTURU AND N'DAMA CATTLE BREEDS IN NIGERIA**

Michael O. Ozoje¹, Johnson A. Aderoju², Ekei V. Ikpeme³, Samuel O Durosaro¹, Babatunde M Ilori¹, Sunday O. Peters⁴

¹Federal University of Agriculture, PMB 2240, Abeokuta, Nigeria, ²Federal University of Agriculture, Abeokuta Nigeria, ³University of Calabar, Calabar, Nigeria, ⁴Department of Animal Science, Berry College

BREEDING AND GENETICS

5:00 PM PSIV-42 **A novel polymorphism at the prolactin receptor may be responsible of allele heterogeneity in coat type in Senepol cattle.**

Edgar Joel Soto-Moreno¹, Jaime E. Curbelo-Rodríguez², Héctor L. Sánchez-Rodríguez³, Américo Casas-Guérnica⁴, Tad Sonstegard⁵, Melvin Pagan-Morales⁴

¹University of Puerto Rico- Mayaguez Campus, ²University of Puerto Rico, Mayagüez Campus,

³University of Puerto Rico Mayaguez, ⁴University of Puerto Rico-Mayaguez Campus,

⁵Acceligen, Recombinetics, inc.

Awards Recipient Dinner

5:30 PM – 7:00 PM

ARS Scientist Meeting with ARS National Program Leaders

6:00 PM – 7:00 PM

ASAS Awards Program

7:15 PM – 8:30 PM

ASAS Awards Celebration

8:30 PM – 11:00 PM

ASAS Graduate Student Mixer

9:00 PM – 11:55 PM

Tuesday, July 10, 2018

Registration Open
7:00 AM – 5:15 PM

Upload Room
7:00 AM – 6:00 PM

Poster Session V - A
7:15 AM – 9:15 AM

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-1 **Effects of dietary oils on nutrient digestibility in the growing pigs under heat stress condition**

Won Yun ¹, Jihwan Lee ¹, Changhee Lee ², Woogi Kwak ², Hanjin Oh ³, Shudong Liu ¹, Donghoon Lee ², Jinho Cho ²

¹Division of Food and Animal Science, Chungbuk National University, ²Chungbuk national university, ³Department of Animal Science, Chungbuk National University

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-2 **Comparison of carcass characteristics between cull Holstein and Jersey cows**

Authors:

Trenton Jones ¹, Forest L. Francis ², Ryan Herrick ³, Trent McEvers ⁴, Ty E. Lawrence ¹

¹West Texas A&M University, ²Beef Carcass Research Center, ³Beef Carcass Research Center/West Texas A&M University, ⁴Dean Cluck Feedyard

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-3 **Comparison of rumen fluid and serum metabolomes in Black Angus cows**

Brooke A. Clemmons ¹, Madison T. Henniger ², Joshua B. Powers ¹, Emily A. Melchior ³, Shawn R. Campagna ¹, Brynn H. Voy ⁴, Dallas R. Donohoe ⁵, Phillip R. Myer ⁶

¹University of Tennessee Knoxville, ²Department of Animal Science -University of Tennessee, ³New Mexico State University, ⁴University of Tennessee, ⁵Department of Nutrition, University of Tennessee, ⁶Department of Animal Science- University of Tennessee

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-4 **Confinement Influenced the Diurnal Behavior and Distribution Pattern of Katahdin Rams and Kiko Wethers in Southern-pine Silvopastures**

Sanjok Poudel ¹, Uma Karki ¹, Yubaraj Karki ¹, Asha Tillman ¹, Lila Karki ¹

¹Tuskegee University

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-5 **Effects of oleanolic acid on in vitro fermentation of bahiagrass hay and a high-grain substrate**

Lautaro Rostoll-Cangiano ¹, Francine M. Ciriaco ², Darren D. Henry ³, Sebastian E. Mejia ¹, Ignacio R. Ipharraguerre ⁴, Nicolas DiLorenzo ⁵

¹North Florida Research and Education Center, University of Florida, ²University of Florida - North Florida Research and Education Center, ³Texas Tech University, ⁴Christian Albrechts University of Kiel, ⁵University of Florida

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-6 **A survey of New England sheep producers**

Arielle Halpern¹, Miriah Kelly¹, Maria L. Hoffman², Amanda K. Jones³, Joseph Bonelli¹, Steven A. Zinn¹, Sarah A. Reed¹, Kristen E. Govoni¹

¹University of Connecticut, ²University of Rhode Island, ³University of Colorado Denver

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-7 **Effect of OmniGen-AF® supplementation on uterine involution and fertility in a murine model of endometritis**

Katriana Jorgensen-Muga¹, Derek J. McLean², James Pru¹, Cindy Pru¹

¹Washington State University, ²Phibro Animal Health Corporation

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-8 **Development of a Weaned Pig Model of Enterotoxigenic E.coli-induced Environmental Enteropathy**

Sarah R. Sprayberry¹, Justin Boeckman¹, Abby Korn¹, Anna Blick¹, Kara Dunmire¹, Raquel Rech¹, Todd R. Callaway², Kenneth Genovese³, Chad B. Paulk⁴, Jason Gill¹

¹Texas A&M University, ²University of Georgia, ³United States Department of Agriculture, ⁴Kansas State University

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-9 **Effect of ensiling period and treatment on the composition and digestibility of olive pomace in beef cattle.**

Alexis C. Ulloa¹, Juan Jose J. Romero², David B. Vagnoni³, Keela Trennepohl⁴

¹Department of Animal Science, California Polytechnic State University, San Luis Obispo, CA 93407, USA, ²Animal and Veterinary Sciences, University of Maine, ³California Polytechnic State University San Luis Obispo, ⁴Western Illinois University

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-10 **Effect of feeding a yeast supplement to transition Holstein cows on colostrum quality and calf well-being**

Briah Parchment¹, Joseph Harrison¹, Craig McConnel², Hannah Chiapetta³, Lindsey Dearmin¹, Casey Beksinski¹, Acacia Neveux¹, Veronica Martin¹, Elliot Block⁴, Amber Adams Progar²

¹Washington State University, Department of Animal Sciences, ²Washington State University, ³Washington State University. Department of Animal Sciences, ⁴Arm & Hammer Animal and Food Production

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-11 **A comparison of meiotic recombination in spermatocytes of cattle and sheep from the United States and Czech Republic**

Anna M. Rodriguez¹, Kimberly M. Davenport¹, Stephanie D. McKay², Clare A. Gill³, Brenda M. Murdoch¹

¹University of Idaho, ²Department of Animal and Veterinary Sciences, University of Vermont, United States of America., ³Texas A and M University

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-12 **Allometric growth of serially harvested calf-fed Holstein steers supplemented zilpaterol hydrochloride**

Tylo J. Kirkpatrick¹, Jake Reed², Nathan May², Lee-Anne Walter², Trent McEvers³, John P. Hutcheson⁴, Ty E. Lawrence²

¹Beef Carcass Research Center - West Texas A&M University, ²West Texas A&M University, ³Dean Cluck Feedyard, ⁴Merck Animal Health

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-13 **Evaluating Antibody and Cell-Mediated Immune Response Profiles in Beef Cattle**

Nasrin Husseini¹, Christy Barnes², Elfleda Chik², Doug C. Hodgins¹, Bonnie Mallard³

¹University of Guelph, ²University of Guelph - Ontario Veterinary College - Department of Pathobiology, ³OVC, University of Guelph

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-14 **Ergovaline acts as both an agonist and antagonist on serotonin receptor 5-HT2A in bovine ruminal and mesenteric vasculature.**

Ronald J. Trotta¹, David L. Harmon¹, James L. Klotz²

¹University of Kentucky, ²Forage-Animal Production Research Unit, USDA-ARS

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-15 **Energy concentrations and phosphorus digestibility in hatchery byproducts fed to nursery pigs**

Jung Y. Sung¹, Ah R. Son¹, Beob G. Kim¹

¹Konkuk University

7:15 AM PSV-16 **Assessment of oxidative stress and muscle damage in exercising horses in response to level and form of vitamin E**

Madison M. Fagan¹, Robert Pazdro¹, Jarrod Call¹, Alexander Abrams¹, Amber Krotky², Pat Harris³, Kylee Duberstein¹

¹University of Georgia, ²Mars Horsecare US, ³Mars Horsecare UK

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-17 **Association of post mortem lung health to blood serum chemistry and carcass characteristics in Holstein steers.**

Forest L. Francis¹, Ryan Herrick², John T. Richeson³, Ty E. Lawrence³

¹Beef Carcass Research Center, ²Beef Carcass Research Center/West Texas A&M University, ³West Texas A&M University

ASAS GRADUATE STUDENT POSTER COMPETITION: MS DIVISION

7:15 AM PSV-18 **Characterization of rumen and fecal microbiota in heifer calves supplemented yeast products prior to and after weaning**

Elizabeth Palmer¹, Elizabeth B. Kegley², Jeremy G. Powell², Xiaofan Wang¹, Jianmin Chai³, Sarah K. Chewning⁴, Maryanna W. McClure⁴, Jase Ball¹, Jiangchao Zhao³

¹University of Arkansas, ²University of Arkansas System, Division of Agriculture, Department of Animal Science, ³Department of Animal Science, University of Arkansas, Fayetteville, AR, 72701, ⁴University of Arkansas Division of Agriculture

Poster Session V - B

7:15 AM – 8:15 AM

FOOD SAFETY

7:15 AM PSV-19 **Effect of Pressure and Rotation Speed of Tumbling on Shelf-Life of Chicken Breast in Vacuum Tumbling**

Reza Jahani¹, Zohreh Hamidi¹, Hassan Ahmadi¹

¹Department of Food Science and Technology, Tarbiat Modares University, Tehran, Iran

FOOD SAFETY

7:15 AM PSV-21 **Treatment of composted poultry litter with natural hop extracts, effects on Salmonella, Escherichia coli and nitrogen.**

OSCAR RUIZ-BARRERA¹, Claudio Arzola-Alvarez², YAMICELA CASTILLO-CASTILLO¹, Agustin Corral-Luna³, Robin Anderson⁴, Michael E. Hume⁵, DAVID J. NISBET⁶, MICHAEL Flythe⁶, JAIME SALINAS-CHAVIRA⁷, MONSERRATH FELIX-PORTILLO¹

¹UNIVERSIDAD AUTONOMA DE CHIHUAHUA, ²Autonomous University of Chihuahua.

Chihuahua, Chih., Mexico, ³Universidad Autónoma de Chihuahua, Facultad de Zootecnia y Ecología, ⁴ARS/USDA, ⁵USDA,ARS, College Station, Texas, USA, ⁶USDA/ARS,

⁷UNIVERSIDAD AUTONOMA DE TAMAULIPAS

NONRUMINANT NUTRITION

7:15 AM PSV-22 **Performance and Gut Morphology of Ross 308 Broiler Chickens Fed Low Tannin Sorghum Based Diets**

Monnye Mabelebele¹, Tlou Grace Manyelo², Jones Wilfred Ngambi², David Norris³

¹University of South Africa, ²University of Limpopo, ³Botswana International University of Science and Technology, Palapye Botswana

NONRUMINANT NUTRITION

7:15 AM PSV-23 **Phosphorus and nitrogen balance in weaned piglets fed diets containing citrus pulp and exogenous enzymes**

Leonardo Filipe Malavazi. Ferreira¹, Gustavo Henrique. Araújo¹, Ana Carolina Bueno. Bravin¹, Camila Capucho. Sartori¹, Lucas Antonio Costa. Esteves¹, Paulo C. Pozza², Leandro Dalcin. Castilha¹

¹Universidade Estadual de Maringá, ²State University of Maringá

NONRUMINANT NUTRITION

7:15 AM PSV-24 **The mineral profile of GuarPro F-71, a potential protein source for swine and other agricultural animals in the United States**

Shengfa T. Liao¹, Shamimul Hasan¹, Rebecca Humphrey¹, Zhongyue Yang², Mark A. Crenshaw³, James Brett¹, Brian Rude⁴, H. B. Bubba Burch⁵

¹Mississippi State University, ²Department of Animal & Dairy Sciences, Mississippi State University, Mississippi State, MS 39762, ³Department of Animal & Dairy Sciences, Mississippi State University, ⁴Animal & Dairy Sciences, Mississippi State University, ⁵Nutrix Organics, USA, Lafayette, LA 70503

NONRUMINANT NUTRITION

7:15 AM PSV-25 **Utilization of Enzymatically Digested Food Waste in Weanling Pigs**

Cynthia N. Jinno¹, Dan Morash², Yanhong Liu¹

¹University of California, Davis, ²California Safe Soil, LLC

SMALL RUMINANT

7:15 AM PSV-26 **Late-Breaking: The Varying Relationship Between Packed Cell Volume and Fecal Egg Count in Different Breeds of Hair Sheep and Meat Goats Artificially Infected with Haemonchus Contortus**

Arthur L. Goetsch¹, Yoko Tsukahara², Terry Gipson¹, Steven P. Hart², Lionel J. Dawson³, Zaisen Wang¹, Ryszard Puchala¹, Tilahun Sahlu¹

¹American Institute for Goat Research, Langston University, ²American Institute for Goat Research Langston University, ³College of Veterinary Medicine, Oklahoma State University; American Institute for Goat Research, Langston University

SMALL RUMINANT

7:15 AM PSV-27 **Late-Breaking: Multivariate characterization of Cephalic Traits of Red Sokoto Goat Population in Nigeria**

Ademola M. Raji¹, Moshood A. Popoola¹, Aderonke Bolatito¹

¹

MEAT SCIENCE AND MUSCLE BIOLOGY

7:15 AM PSV-28 **Aging Condition and Light Source Impact Color and Lipid Oxidation Equally in Beef Biceps femoris Steaks**

Jade V. Cooper¹, Zachary D. Callahan¹, Carol L. Lorenzen²

¹University of Missouri, ²Univeristy of Missouri

Exhibits Open

7:30 AM – 8:30 PM

Job Resource Center

7:30 AM – 8:30 PM

Poster Session VI

8:15 AM – 9:15 AM

SMALL RUMINANT

8:15 AM PSVI-19 **Consistency of FAMACHA© scores to fecal egg counts and gain in meat goat kids**

Dahlia O'Brien¹, Susan Schoenian², Jeffery W. Semler³, David Gordon³, Mary Beth Bennett⁴
¹Virginia State University, ²University of Maryland, ³University of Maryland Extension, ⁴West Virginia University

SMALL RUMINANT

8:15 AM PSVI-20 **Effects of castration age on growth, carcass, and sensory characteristics of Gulf Coast Native sheep**

Jasmine Vallian¹, Thomas Shields¹, Byungkyun Chung¹, Wannee Tangkham¹, Frederick LeMieux¹

¹McNeese State University

SMALL RUMINANT

8:15 AM PSVI-21 **Coproantibodies as indicators of the periparturient rise in fecal egg counts in St Croix Sheep.**

Bertha Osei¹, Emmanuel Asiamah², Kingsley Ekwemalor³, Sarah Adjei-Fremah⁴, Mulumebet Worku⁵

¹North Carolina A&T State University, ²North Carolina Agricultural and Technical State university, ³North carolina Agricultural and Technical state university, ⁴North Carolina Agricultural and Technical State University, ⁵NC A&T State University

SMALL RUMINANT

8:15 AM PSVI-22 **Cortisol and acute-phase proteins of lambs submitted to silvopastoral systems**

Flavia O. S. van Cleef¹, Tiago S. Nascimento², Vanessa Z. Longhini³, Eric H. C. B. van Cleef⁴, Ana Claudia Ruggieri²

¹University of Florida, North Florida Research and Education Center, Marianna, United States, ²Sao Paulo State University, ³São Paulo State University, ⁴Federal University of Triangulo Mineiro

SMALL RUMINANT

8:15 AM PSVI-23 **Genetic characteristics and differentiation of four valid subspecies of snow sheep (*Ovis nivicola*) based on SNP analysis**

Arsen V. Dotsev¹, Tatiana E. Deniskova¹, Innokenty Michailovich. Okhlopkov², Dmitrii Medvedev³, Taras Sipko⁴, Henry Reyer⁵, Klaus Wimmers⁵, Gottfried Brem⁶, Natalia A. Zinovieva¹

¹L.K. Ernst Federal Research Center for Animal Husbandry, ²Institute for Biological Problems of Cryolithozone, ³Irkutsk State University of Agriculture, ⁴Severtsov Institute of Ecology and Evolution, ⁵Institute of Genome Biology, Leibniz Institute for Farm Animal Biology, ⁶Institute of Animal Breeding and Genetics, University of Veterinary Medicine (VMU)

SMALL RUMINANT

8:15 AM PSVI-24 **Comparison of two diluents upon semen quality in Dorper rams**

Leticia Gaytán Alemán¹, Francisco Gerardo Véliz-Deras¹, Viridiana Contreras-Villarreal², Guadalupe Calderón-Leyva¹, GERARDO ARELLANO RODRÍGUEZ³, Oscar Angel²

¹Universidad Autónoma Agraria Antonio Narro, ²Universidad Autonoma Agraria Antonio Narro, ³UAAAN

SMALL RUMINANT

8:15 AM PSVI-25 **Goats for Controlling Redcedar in Oklahoma and Missouri**

Raquel V. Lourencon¹, Steven P. Hart², Terry Gipson¹

¹American Institute for Goat Research, Langston University, ²American Institute for Goat Research Langston University

SMALL RUMINANT

8:15 AM PSVI-26 **Herbicide Effectiveness for Redcedar Control in Oklahoma and Missouri**

Raquel V. Lourencon¹, Steven P. Hart², Terry Gipson¹

¹American Institute for Goat Research, Langston University, ²American Institute for Goat Research Langston University

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

8:15 AM PSVI-27 **Impact of administration of rbST at different days during a timed AI protocol on fertility during the summer and winter seasons**

Augusto Mesquita L. Madureira ¹, Thiago G. Guida ², Ronaldo Cerri ³, José Luiz Vasconcelos ⁴
¹Applied Animal Biology, Faculty of Land and Food Systems, University of British Columbia,
²Sao Paulo State University, ³The University of British Columbia, ⁴São Paulo State University

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

8:15 AM PSVI-28 **Influence of ambient temperature and temperature-humidity index on a measure of semen quality in crossbreed beef bulls**

Alexandra Livernois ¹, Bonnie Mallard ², Filippo Miglior ³, Angela Cánovas ⁴
¹Food from Thought, University of Guelph, ²OVC, University of Guelph, ³Canadian Dairy Network, ⁴Department of Animal Biosciences, Centre for Genetic Improvement of Livestock, University of Guelph, N1G 2W1, Guelph, Ontario, Canada.

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

8:15 AM PSVI-29 **Increased N6-methyladenosine in LBW placentas from sows with high backfat thickness is negatively associated with FTO**

Tongxing Song ¹, Hongkui Wei ², Jian Peng ²
¹Department of Animal Nutrition and Feed Science, College of Animal Science and Technology, Huazhong Agricultural University, ²Huazhong Agricultural University

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

8:15 AM PSVI-30 **Logistic regression analysis of the related factors in discarded semen of boars in Southern China**

Wang Chao ¹, Guo Liang. liang ¹, Sun Hai. qing ², Jian Peng ¹
¹Huazhong Agricultural University, ²YangXiang Joint Stock Company

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

8:15 AM PSVI-31 **Maternal obesity aggravates the abnormality of the porcine placenta by increasing N6-methyladenosine**

Tongxing Song ¹, Hongkui Wei ², Jian Peng ²
¹Department of Animal Nutrition and Feed Science, College of Animal Science and Technology, Huazhong Agricultural University, ²Huazhong Agricultural University

SMALL RUMINANT

8:15 AM PSVI-32 **Pathogen-associated molecular patterns induce differential galectin-3 activation in Goat blood**

Kingsley Ekwemalor ¹, Emmanuel Asiamah ², Sarah Adjei-Fremah ³, Bertha Osei ⁴, Eluka-Okoludoh Eboghoye ¹, Bharath kumar Mulakala ¹, Mulumebet Worku ⁵
¹North Carolina Agricultural and Technical state university, ²North Carolina Agricultural and Technical State university, ³North Carolina Agricultural and Technical State University, ⁴North Carolina A&T State University, ⁵NC A&T State University

SMALL RUMINANT

8:15 AM PSVI-33 **Performance and meat quality of castrated and intact Santa Inês lambs slaughtered at different stages**

Edson Luis de A. Ribeiro ¹, Francisco Fernandes Jr ¹, Camila Constantino ¹, Fernando Augusto Grandis ¹, Francine Mezzomo Giotto ¹, Natália Albieri Koritiaki ¹, Filipe Alexandre B. Castro ¹
¹Universidade Estadual de Londrina

SMALL RUMINANT

8:15 AM PSVI-34 **Producing organic fall lamb using an out-of-season breeding scheme for hair sheep**

Tumen Wuliji ¹, Amy Bax ², Liga Wuri ³, Luke Wilbers ², Christopher Boeckmann ¹

¹Lincoln University of Missouri, ²Lincoln University, ³University of Missouri

SMALL RUMINANT

8:15 AM PSVI-35 **Productive and reproductive performances of goat breeds in Punjab Pakistan**

Raja Danish. Muner ¹, Ghulam Bilal ², Muhammad Moaeen-ud-Din ³, James Reecy ⁴, Muhammad Sajjad. Khan ⁵

¹Laboratories of Animal Breeding and Genetics, Faculty of Veterinary and Animal Sciences, PMAS Arid Agriculture University, Rawalpindi, 46300, Pakistan, ²PMA-Arid Agriculture University, Rawalpindi, ³PMAS-Arid Agriculture University, ⁴Iowa State University, ⁵Institute of Animal & Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Pakistan

SMALL RUMINANT

8:15 AM PSVI-36 **Recovery of progenitor cells from skin tissues stored at elevated temperatures postmortem**

Mahipal Singh ¹, Venkata Degala ¹

¹Fort Valley State University

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

8:15 AM PSVI-37 **Reproductive performance of cattle: a meta-analytical approach**

Lidiane Raquel. Eloy ¹, Luciana Pötter ², José Lobato ¹, Carolina Bremm ¹, Paulo César. de Faccio Carvalho ³, Emilio Laca ⁴

¹Universidade Federal do Rio Grande do Sul, ²Universidade Federal de Santa Maria, ³Federal University of Rio Grande do Sul, ⁴University of California - UC Davis

SMALL RUMINANT

8:15 AM PSVI-38 **Whole-genome SNP study of Kyrgyz local sheep breeds reveals two different ancestry patterns**

Tatiana E. Deniskova ¹, Arsen V. Dotsev ¹, Klaus Wimmers ², Henry Reyer ², Eugenia Lushihina ³, Asankadyr Zhunushev ³, Veronika R. Kharzinova ¹, Gottfried Brem ⁴, Natalia A. Zinovieva ¹

¹L.K. Ernst Federal Research Center for Animal Husbandry, ²Institute of Genome Biology, Leibniz Institute for Farm Animal Biology, ³Institute of Biotechnology of National Academy of Science of Kyrgyz Republic, ⁴Institute of Animal Breeding and Genetics, University of Veterinary Medicine (VMU)

SMALL RUMINANT

8:15 AM PSVI-39 **Administration of intramuscular progesterone and eCG to induce estrus activity in anovulatory goats under an intensive production system**

Santiago Zúñiga ¹, Cesar Alberto Meza-Herrera ², Julio Otal ³, Oscar Ángel-García ¹, GERARDO ARELLANO RODRÍGUEZ ⁴, Leticia Gaytán Alemán ¹, Francisco Gerardo Véliz-Deras ¹

¹Universidad Autónoma Agraria Antonio Narro, ²Universidad Autónoma Chapingo, ³Universidad de Murcia, ⁴UAAAN

SMALL RUMINANT

8:15 AM PSVI-40 **Anthelmintic Resistance Testing on Sheep Farms**

Niki C. Whitley¹, Susan Schoenian², Dahlia O'Brien³, Sue Howell⁴

¹Fort Valley State University, ²University of Maryland, ³Virginia State University, ⁴University of Georgia

SMALL RUMINANT

8:15 AM PSVI-41 **Application of Artificial Neural Network to Predict Physiological Stress Responses in Goats due to Transportation**

Govind Kannan¹, Ramana Gosukonda¹, Ajit Mahapatra¹

¹Fort Valley State University

SMALL RUMINANT

8:15 AM PSVI-42 **Assessment of genetic susceptibility to classical and atypical scrapie in five Russian locally derived sheep breeds**

Tatiana E. Deniskova¹, Olga V. Kostyunina¹, Marina I. Selionova², Sergey N. Petrov¹, Veronika R. Kharzinova¹, Gottfried Brem³, Natalia A. Zinovieva¹

¹L.K. Ernst Federal Research Center for Animal Husbandry, ²Doctor of Biological Sciences, ³Institute of Animal Breeding and Genetics, University of Veterinary Medicine (VMU)

Beef Species I: Feedlot and Stocker

Chair: Craig Gifford, Extension Beef Specialist,
New Mexico State University Cooperative Extension Service

9:00 AM – 12:30 PM

9:00 AM 258 **Jr. Platform Speaker: Nutritional and management considerations for feedlot cattle and potential interactions with beta-adrenergic agonist administration**

Kendall L. Samuelson¹

¹Department of Animal and Range Sciences -New Mexico State University

9:30 AM 249 **Effects of Heat Stress Mitigation Techniques on Feedlot Cattle Performance, Environmental, and Economical Outcomes in a Hot Climate**

Sarah C. Klopatek¹, Carlos Rivera², Alejandro Gonzalez², Al Rotz³, Frank M. Mitloehner⁴

¹Animal Science, University of California, Davis, Davis CA 95616, ²SuKarne, ³USDA-ARS, ⁴UC Davis

10:00 AM **Break**

10:15 AM 257 **Pulmonary hypertension in Angus steers: influence of finishing systems and altitudes**

Kaysie Jennings¹, Greta M. Krafur², Dale R. Brown², Timothy N. Holt¹, Stephen J. Coloman¹, Scott E. Speidel¹, R. Mark Enns¹, Kurt R. Stenmark², Milton G. G. Thomas¹

¹Colorado State University, ²University of Colorado at Denver

10:30 AM 250 **Genome wide Association analyses for meat quality traits in multibreed and crossbred beef cattle**

Mohammed Abo-Ismael¹, John J. Crowley², Everestus Chima. Akanno³, Changxi Li⁴, Paul Stothard⁵, Jennifer L. Aalhus⁶, Graham Plastow⁷, John Basarab⁸

¹Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Canada, T6G 2P5 /Department of Animal and Poultry Production, Damanhour University, Damanhour, Egypt, ²Canadian Beef Breeds Council /University of Alberta, ³Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Canada, T6G 2P5, ⁴University of Alberta/Agriculture and Agri-Food Canada, ⁵California Polytechnic State University San Luis Obispo, ⁶Agriculture and Agri-Food Canada, Lacombe Research and Development Centre, 6000 C & E Trail, Lacombe, Alberta, Canada T4L 1W1, ⁷University of Alberta, ⁸Alberta Agriculture and Forestry/University of Alberta

10:45 AM 256 **Restricting tylosin use to the final 34 days on feed is not effective for controlling liver abscesses in steers**

Hans Christian. Muller¹, Lucas Horton¹, Diogo F. A. Costa¹, Raghavendra G. Amachawadi¹, Harvey M. Scott², James Drouillard¹

¹Kansas State University, ²Texas A&M University

11:00 AM 255 **Effects of Ruminally-protected Lysine on Performance and Carcass Characteristics of Finishing Cattle**

Vanessa de Aguiar Veloso¹, Cadra L. Van Bibber-Krueger¹, Lucas Horton¹, Kip K. Karges², James Drouillard¹

¹Kansas State University, ²H.J. Baker and Bro. LLC

11:15 AM 254 **Bioavailability of Cu, Mn, and Zn from organic sources compared to sulfates**

Jase Ball¹, Elizabeth B. Kegley², Paul A. Beck³, Jeremy G. Powell²

¹University of Arkansas, ²University of Arkansas System, Division of Agriculture, Department of Animal Science, ³University of Arkansas Southwest Research & Extension Center

11:30 AM 253 **Identification of transcriptional variants in liver, rumen and jejunum tissue of cattle undergoing compensatory growth**

Yvonne Mullins¹, Kate Keogh¹, Gordon Blackshields¹, David A. Kenny², Alan K. Kelly³, Sinead Waters¹

¹Teagasc, ²Teagasc Animal and Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath, Ireland, ³University College Dublin

11:45 AM 252 **Comparison of growth-promoting implant regimens from calfhood to finishing in beef steers: stocker phase**

Jase Ball¹, Elizabeth B. Kegley², Elizabeth Palmer¹, Pete A. Hornsby³, Jana L. Reynolds², Benjamin P. Shoulders⁴, Toby D. Lester¹, Jeremy G. Powell²

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

12:00 PM 251 **Late-Breaking: Mucosal disaccharidase kinetics in the jejunum of steers with a divergent average daily gain**

Derek Brake¹, Wyatt Smith¹, William T. Oliver², H. C. Freetly³, Andrew P. Foote⁴

¹South Dakota State University, ²USDA, ARS, USMARC, ³US Meat Animal Research Center, ⁴USDA-ARS U.S. Meat Animal Research Center

12:15 PM 259 **Late-Breaking: Residual feed intake in beef cattle is associated with differences in signaling mechanisms controlling protein synthesis in ruminal epithelium**
Juan Loo¹, Emad Abdel-Hamied², Ahmed Elolimy³, Joshua C. McCann⁴, Daniel W. Shike⁵
¹University of Illinois Urbana Champaign, ², ³Arkansas Children's Nutrition Center, University of Arkansas for Medical Sciences, Little Rock, ⁴University of Illinois, ⁵University of Illinois at Urbana-Champaign

Breeding and Genetics III: Swine and Other Species I

Chair: Christine F. Baes, Professor, Centre for Genetic Improvement of Livestock, University of Guelph, Ontario, Canada & Institute of Genetics, Vetsuisse Faculty, University of Bern, Bern, Switzerland

9:00 AM – 10:45 AM

9:00 AM 298 **Gut Microbiome Provides A New Source of Variation to Improve Growth Efficiency in Crossbred Pigs**

Duc Lu¹, Francesco Tiezzi², Christian Maltecca²

¹North Carolina State University, ²Department of Animal Science, North Carolina State University

9:15 AM 299 **Validation of genomic evaluation on some economically important traits of Canadian purebred pigs**

Mohsen Jafarikia¹, Brianna Sullivan², Philippe McSween², Laurence Maignel³, Brian Sullivan³

¹Canadian Centre for Swine Improvement Inc., Ottawa, ON, Canada; Centre for Genetic Improvement of Livestock, University of Guelph, Guelph, ON, Canada, ²Canadian Centre for Swine improvement Inc., ³Canadian Centre for Swine Improvement Inc., Ottawa, ON, Canada

9:30 AM 300 **Porcine CRT3 gene clone, expression pattern, and its regulatory role in intestinal epithelial cells**

Jiaqi Liu¹

¹College of Animal Sciences, Zhejiang University

9:45 AM 301 **Inferring phenotypic causal networks of reproductive traits in Landrace pigs in Japan**

Toshihiro Okamura¹, Motohide Nishio¹, Kazuo Ishii¹, Keiji Takahashi², Jun Yoshino³, Hiroshi Kobashikawa⁴, Guilherme J. J. M. Rosa⁵, Masahiro Satoh⁶, Osamu Sasaki¹

¹Institute of Livestock and Grassland Science, NARO, ²Chiba Prefectural Livestock Research Center, ³Miyagi Livestock Experimental Station, ⁴Livestock Industry Division, Department of Agriculture Forestry and Fisheries Okinawa, ⁵Department of Animal and Dairy sciences, University of Wisconsin-Madison, ⁶Graduate School of Agricultural Sciences, Tohoku University

10:00 AM **Break**

10:15 AM 296 **Genetic and genomic analysis of vulva size in Landrace and Yorkshire gilts**

Flor Anita. Corredor¹, Richard J. Leach², Jason W. Ross¹, Aileen F. Keating¹, Nick V. Serao¹

¹Iowa State University, ²Fast Genetics

10:30 AM 297 **Exposure to high level of NEFAs slightly impairs the in vitro maturation and the in vitro fertilized embryos in porcine**

Meihong Shi ¹, Marc-André A. Sirard ²

¹Université Laval, ²Department of Animal Science, Laval University

Ruminant Nutrition I: Nitrogen metabolism

Chair: Matt Hersom, Extension Beef Cattle Specialist, University of Florida

9:00 AM – 11:15 AM

9:00 AM 97 **The effect of metabolizable protein intake in finishing diets on feeding behavior of steers**

Leonardo G. Sitorski ¹, Ananda B. P Fontoura ², Faithe E. Keomanivong ¹, Marc L. Bauer ¹, Trent C. Gilbery ¹, Sarah R. Underdahl ¹, Carl R. Dahlen ¹, Kendall C. Swanson ¹

¹North Dakota State University, ²Cornell University

9:15 AM 104 **N metabolism in ruminants supplemented with post-rationally delivered urea**

Isabela P.C.de Carvalho ¹, John Doelman ², Javier Martín-Tereso ²

¹Trouw Nutrition, ²Trouw Nutrition R&D

9:30 AM 98 **Effect of slow release nitrate and essential oil on animal performance and methane emissions from feedlot cattle fed high-grain finishing diets**

Atmir Romero-Pérez ¹, Aklilu Alemu ², Rafael C. Araujo ³, Karen A. Beauchemin ⁴

¹Universidad Nacional Autónoma de México, Facultad de Medicina Veterinaria y Zootecnia,

²Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, ³GRASP,

⁴Agriculture and Agri-Food Canada

9:45 AM 99 **Intake, digestion and nitrogen balance in beef cattle offered grass herbage supplemented with citrus pulp**

Alan O'Connor ¹, Aidan P. Moloney ², Pdraig O'Kiely ¹, Tommy Boland ³, Mark McGee ²

¹Teagasc, Grange Research Centre, Dunsany, Co. Meath, Ireland, ²Teagasc, ³UCD

10:00 AM **Break**

10:15 AM 100 **Effect of ruminally protected arginine and lysine supplementation on serum amino acids, performance and carcass traits of feedlot steers**

Jon P. P. Schoonmaker ¹, Liziana M. Rodrigues ², Priscilla D. Teixeira ³, Josey R. Pukrop ¹, Brad H. B. Kim ⁴, Jessica A. Tekippe ⁵

¹Purdue University, ²Federal University of Lavras, ³Universidade Federal de Lavras, ⁴Purdue Univ., ⁵Ajinomoto Heartland

10:30 AM 101 **The effect of supplemental leucine on protein deposition and lysine utilization in growing steers**

Kimberly A. Pearl ¹, Hannah F. Speer ¹, Matt D. Miesner ², Evan C. Titgemeyer ¹

¹Kansas State University, ²Department of Clinical Sciences, Kansas State University

10:45 AM 102 **Effect of engineered biocarbon on rumen fermentation, microbial protein synthesis and methane production in an artificial rumen (RUSITEC) fed a high forage diet**

Tim A. McAllister¹, Atef Saleem², Gabriel O. Ribeiro Jr³, WenZhu Yang¹, Tao Ran⁴, Karen A. Beauchemin¹, Emma J. McGeough⁵, Kim Ominski⁵, Erasmus Okine⁶

¹Agriculture and Agri-Food Canada, ²South Valley University, ³Agriculture and Agri-Food Canada; Lethbridge Research and Development Centre, ⁴Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada; Institute of Subtropical Agriculture, the Chinese Academy of Sciences, Changsha, Hunan 410125, China, ⁵University of Manitoba, ⁶University of Lethbridge

11:00 AM 103 **Post-rationally delivered urea improves fiber utilization in ruminants**

Isabela P.C.de Carvalho¹, John Doelman², Javier Martín-Tereso²

¹Trouw Nutrition, ²Trouw Nutrition R&D

CSAS Graduate Student Oral Competition - PhD I

9:15 AM – 12:30 PM

9:15 AM 354 **Measurement of core body temperature via implanted data loggers and development of an equation to predict core body temperature from facial surface temperature in market-weight broiler chickens**

Matthew P. Aardsma¹, Marisa A. Erasmus¹, Jay S. Johnson²

¹Purdue University, ²USDA-ARS Livestock Behavior Research Unit

9:30 AM 346 **Assessment of carcass and meat quality of Longissimus dorsi and semimembranosus muscle with Korean meat quality grading standards**

Chandima Jayanath. Gajaweera¹, Ki Yong Chung², Soo Hyun Cho³, Seung Hwan Lee⁴

¹Division of Animal and Dairy Science, Chungnam National University, Daejeon, Republic of Korea/ Department of Animal Science, Faculty of Agriculture, University of Ruhuna, Sri Lanka,

²Hanwoo Experiment Station, National Institute of Animal Science, RDA, Pyeong-Chang, Republic of Korea, ³Division of Animal Production, National Institute of animal Science, RDA, Wanju, Republic of Korea, ⁴Division of Animal and Dairy Science, Chungnam National University, Daejeon, Republic of Korea

9:45 AM 347 **Comparative effects of miR156 overexpression and silencing of SPL6 and SPL13 genes on the nutritive values and in vitro degradation of alfalfa forage**

Abdelali Hannoufa¹, Yaogeng Lei², Yuxi Wang³, X. Feng⁴

¹London Research and Development Centre, Agriculture and Agri-Food Canada, ²University of Saskatchewan, ³Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ⁴ASAS, CSAS, ADSA

10:00 AM 355 **Effects of lactation and negative energy balance on endometrial expression of selected transcripts of Holstein dairy cows at day 7 post-ovulation**

Sameer M. Alhojaily¹, Rusty Stott², Heloisa Rutigliano³, John Stevens⁴, Clay Isom²

¹Department of Animal, Dairy & Veterinary Sciences, Utah State University, ²Utah State University, ³Animal, Dairy and Veterinary Sciences Reproductive Physiology and Immunology, Developmental Biology, Utah State University, ⁴Department of Mathematics and Statistics, Utah State University

10:15 AM 356 **Intranasal administration of novel bacterial therapeutics reduces colonization of the bovine respiratory pathogen Mannheimia haemolytica in challenged calves**

Samat Amat¹, Edouard Timsit², Trevor Alexander³

¹Department of Production Animal Health, Faculty of Veterinary Medicine, University of Calgary; Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ²Faculty of Veterinary Medicine, University of Calgary, ³Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, Lethbridge, AB Canada

10:30 AM 357 **Lipopolysaccharide induces a pro-inflammatory response in isolated ruminal epithelial cells**

Coral Kent-Dennis¹, Gregory B. Penner²

¹University of Saskatchewan, ²Department of Animal and Poultry Science, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada S7N 5A8

10:45 AM 353 **Effects of Lactobacillus-fermented barley on intestinal morphology, cytokine gene expression, and fecal microbiota in weaned pigs challenged with Escherichia coli K88+**

Bonjin Koo¹, Daymara Bustamante-Garcia², Charles Martin Nyachoti¹

¹University of Manitoba, ²Department of Animal Science, University of Manitoba, Winnipeg, MB, Canada

11:00 AM 352 **Skeletal muscle transcriptional profiling of Canadian crossbred beef cattle divergent for feed efficiency traits.**

Robert Mukiibi¹, Mike Vinsky², Kate Keogh³, Carolyn J. Fitzsimmons⁴, Sinead Waters³, Paul Stothard⁵, Changxi Li⁴

¹University of Alberta, ²Agriculture and Agri-Food Canada, Lacombe Research and Development Centre, ³Teagasc, ⁴University of Alberta/Agriculture and Agri-Food Canada, ⁵California Polytechnic State University San Luis Obispo

11:15 AM **Break**

11:30 AM 351 **Effects of level and source of fat in the diet of gestating beef cows on progeny performance**

Federico Añez-Osuna¹, Gregory B. Penner², Carolyn J. Fitzsimmons³, Michael E.R. Dugan⁴, John R. Campbell⁵, Paul Jefferson⁶, Herbert A. Lardner⁷, John J. McKinnon⁸

¹Department of Animal and Poultry Science, College of Agriculture and Bioresources, University of Saskatchewan, ²Department of Animal and Poultry Science, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada S7N 5A8, ³University of Alberta/Agriculture and Agri-Food Canada, ⁴Agriculture and Agri-Food Canada, Lacombe Research and Development Centre, 6000 C & E Trail, Lacombe, Alberta, Canada T4L 1W1, ⁵Department of Large Animal Clinical Sciences, Western College of Veterinary Medicine, University of Saskatchewan, ⁶Western Beef Development Centre, ⁷Dept. of Animal and Poultry Science, University of Saskatchewan and Western Beef Development Centre, ⁸University of Saskatchewan

11:45 AM 350 **Examining the effect of a butyrate-fortified milk replacer on gastrointestinal microbiota and fermentation in dairy calves at weaning**
Eóin O'Hara ¹, Alan K. Kelly ², Matthew McCabe ³, David A. Kenny ⁴, Le L. Guan ¹, Sinead Waters ³
¹University of Alberta, ²University College Dublin, ³Teagasc, ⁴Teagasc Animal and Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath, Ireland

12:00 PM 348 **The initial gut microbial composition is a key factor driving host responses to antibiotic treatment**
Tingting Ju ¹, Yasmeen Shoblak ¹, Yanhua Gao ¹, Kaiyuan Yang ¹, Janelle M. Fohse ¹, Yee Wing So ¹, Ben Willing ¹
¹University of Alberta

12:15 PM 349 **Relationship between ruminal volatile fatty acids and microbial population with carcass and meat quality traits in beef steers**
P.B. Anusha I. K Bulumulla ¹, Meng M Li ², Yanhong Chen ³, Fuyong Li ¹, Robin R. White ⁴, Mark Hanigan ⁵, Changxi Li ⁶, Graham Plastow ⁷, Le L. Guan ⁷
¹Department of Agricultural, Food, and Nutritional Science, University of Alberta, Edmonton, Alberta, Canada, ²Department of Dairy Science, Virginia Tech, Blacksburg, Virginia, USA, ³Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Canada, ⁴Department of Animal and Poultry Sciences, Virginia Tech, ⁵Virginia Polytechnic Institute and State University, ⁶University of Alberta/Agriculture and Agri-Food Canada, ⁷University of Alberta

Companion Animal Symposium: Pet Nutrition in Canada

Chair: Katie Barry, Product Development Scientist, International Ingredient Corporation
9:30 AM – 12:00 PM

9:30 AM **Introductory Remarks**

9:45 AM 389 **Energy and macronutrient metabolism in cats and dogs using indirect calorimetry**
Anna K. Shoveller ¹
¹University of Guelph

10:15 AM 390 **Creating kibbles with unique starch, fiber, and protein profiles using Canadian ingredients**
Ruurd T. Zijlstra ¹, Thava Vasanthan ¹
¹University of Alberta

10:45 AM **Break**

11:00 PM 392 **Vitamin Stability in wet pet food Formulation and Production perspective**
Tsegaw Belay ¹, Leah K. Lambrakis ², S. D. Goodgame ¹, A. K. Price ¹, J. H. Kersey ¹, R. G. Shields ¹
¹Simmons Pet Food, Inc, ²Simmons Pet Food, Inc.

11:30 AM 391 **History of the Canadian Pet Food Industry- A Veterinarians' Point of View**

Clayton MacKay¹

¹Mackay Veterinary Consulting

**Comparative Gastrointestinal Physiology Symposium:
Taste perception throughout life and evolution - Sponsored by Pancosma**

Chair: Soraya P. Shirazi-Beechey, University of Liverpool

2:00 PM – 5:00 PM

2:00 PM **Introductory Remarks**

2:15 PM 397 **Taste perception throughout life and evolution**

Soraya P. Shirazi-Beechey¹

¹University of Liverpool

2:45 PM 395 **Human flavor perception in early life: developmental and functional significance**

Gary Beauchamp¹

¹Monell Chemical Senses Center

3:15 PM **Break**

3:30 PM 393 **The effect and management of taste disorders in later life**

Margot A. Gosney¹

¹University of Reading

4:00 PM 394 **Sweet sensing by gut bacteria**

Kristian Daly¹

¹University of Liverpool

4:30 PM 396 **Microbial Endocrinology: The intersection of microbiology and neurobiology to examine microbiome-behavior relationships including selectively bred taste phenotype**

Mark Lyte¹

¹Iowa State University

**Forages and Pastures Symposium: System Research–Discipline based perspectives:
Challenges, successes, and vision for near- and long-term improvement of
livestock production with forages**

Chair: James P.S. Neel, Research Animal Scientist, USDA-ARS-PA-GRL

9:30 AM – 11:50 AM

9:30 AM **Introductory Remarks**

9:40 AM 432 **A Systems Perspective on the Hydrological Aspects of Sustainable Livestock Production**

Douglas G. Boyer¹

¹West Virginia University, School of Public Health

10:10 AM 431 **Managing grazing land ecosystems for multiple ecosystem services**
Maria Lucia L. Silveira ¹, Elizabeth Boughton ², Hilary Swain ², Raoul Boughton ¹
¹University of Florida, ²Archbold Biological Station

10:40 AM **Break**

10:50 AM 434 **Livestock systems forage research: agronomy in and beyond the paddock**
James P. Muir ¹
¹Texas A&M AgriLife Research

11:20 AM 433 **Increased availability of livestock products through forage systems research.**
James P.S. Neel ¹
¹USDA-ARS-PA-GRL

**Meat Science and Muscle Biology Symposium:
Prediction technologies for meat characteristics**
Chair: Kelsey J. Phelps, Food Scientist, Cargill Protein
9:30 AM – 11:45 AM

9:30 AM **Introductory Remarks**

9:35 AM 495 **Prediction of pork loin quality using online computer vision system and artificial intelligence model**
Xin (Rex) Sun ¹, Jennifer M. Young ², Jenghung Liu ³, David Newman ⁴
¹North Dakota State University, ²Department of Animal Sciences, North Dakota State University, ³North Dakota State University, ⁴Arkansas State University

10:05 AM **Break**

10:15 AM 494 **Early Career Awardee: Using VOC Signatures to Characterize Beef and Sheep Meat Flavor**
Dale Woerner ¹
¹Colorado State University

10:45 AM 496 **Challenges and Technologies for Postmortem Prediction of Beef Tenderness**
Chris Calkins ¹
¹University of Nebraska-Lincoln

11:15 AM 497 **The automated and real time use of infrared thermography in the detection and correction of DFD and fevers in cattle**
Allan L. Schaefer ¹, Daniel Genho ², Ryan Clisdell ³, Hartmut von Giza ⁴, Garry DesRoches ⁵, Lou Hiemer ⁵, Greg Pelech ⁶, Bernie Grumpelt ⁷, Rob Patterson ⁸
¹University of Alberta, ²Consulting, ³Cargill, ⁴HVG Software Solutions, ⁵Annex Engineering, ⁶Frontier Valve, ⁷Country Junction Feeds, ⁸CBS Bio-Platforms Inc.

Nonruminant Nutrition I: Feed Additives I

Chairs: Xingen Lei, Professor, Cornell University College of Agricultural and Life Science;
John Scott Radcliffe, Professor and Assistant Head, Purdue University

9:30 AM – 12:15 PM

9:30 AM 197 Evaluation of a Phytogenic blend and Ractopamine HCl on growth and carcass traits in pigs housed under commercial conditions

S. Maria Mendoza¹, Gene Gourley², Erika G. Hendel³, Sabine Stelzhammer⁴, Isabel Mueller⁴, Thomas Weiland⁴, Christine Hunger⁴, G. Raj Murugesan³

¹BIOMIN America, Inc., ²Gourley Research Group, ³BIOMIN America Inc, ⁴BIOMIN Holding GmbH

9:45 AM 195 Comparison of 1,3-diacylglycerol and 1,2-diacylglycerol as exogenous emulsifiers on growth performance and nutrient digestibility in growing pigs

Yi Yang¹, Zhenyu Ding², Shuai Qi Huang¹, In Ho Kim³

¹421-1 Department of Animal Resources Science Dankook University, ²Dankook university, ³Dankook University

10:00 AM 194 Lactulose and hydrogen-rich water protect against fusarium mycotoxin-induced intestinal injury in female piglets

Xu Ji¹, Weijiang Zheng², Qing Zhang¹, Jianwen He¹, Wen Yao¹

¹College of Animal Science and Technology, Nanjing Agricultural University, ²College of Animal Science and Technology, Nanjing Agricultural University

10:15 AM 193 Nutrient digestibility of multi-enzyme supplemented low-energy and -amino acid diets for grower pigs

Jung Wook Lee¹, Rob Patterson², Tofuko A. Woyengo³

¹South Dakota State University, ²CBS Bio-Platforms Inc., ³Assistant professor

10:30 AM Break

10:45 AM 192 Dietary β -mannanase supplementation improved growth and health of nursery pigs fed high soybean meal diet

Yanrui Qiao¹, Xiaotong Zhu², Lili Zhai¹, Robert L. Payne¹, Tiejun Li³

¹Elanco Animal Health, ²Institute of Subtropical Agriculture, Chinese Academy of Sciences, ³Institute of Subtropical Agriculture, The Chinese Academy of Sciences

11:00 AM 191 The aggregation capacity of oligosaccharides from different yeast preparations to bind different pathogenic bacteria

Paul William Cardozo¹, Maria Angels Calvo Torras², John Less³, Manfred Peisker⁴

¹Andrés Pinaluba S.A. Reus-Tarragona, Spain, ²Universitat Autònoma de Barcelona, Bellaterra-Barcelona, Spain, ³ADM Animal Nutrition, Decatur, IL, ⁴ADM Specialty Ingredients (Europe) BV, Amsterdam, Netherland

11:15 AM 502 Evaluation of graded doses of a xylanase-direct-fed microbial feed additive on live performance, gut health and nutrient digestibility of wean-to-finish pigs

James Tyus¹, Duong Dong², Basheer Nusairat¹, Jeng-Jie Wang¹

¹BioResource International, Inc., ²Nong Lam University

11:30 AM 199 **Effects of dietary supplementation with ground red-osier dogwood (*Cornus stolonifera*) on oxidative status in weaned pigs challenged with *Escherichia coli* K88+**

Bonjin Koo¹, Sirini Amarakoon², Balachandar Jayaraman³, Yaw L. Siow², Suvira Prashar², Yvette Shang², Karmin O⁴, Charles Martin Nyachoti¹

¹University of Manitoba, ²St. Boniface Hospital Research Centre, Winnipeg, MB, Canada,

³Department of Animal Science, University of Manitoba, Winnipeg, MB, Canada, ⁴University of Manitoba

11:45 AM 196 **Effects of supplementing sow diets with fermented corn and soybean meal mixed feed during lactation on the performance of sows and progeny**

Cheng Wang¹, Changyou Shi¹, Zeqing Lu², Yu Zhang¹, Yizhen Wang²

¹College of Animal Science, Institution of Animal Nutrition and Feed Science, Zhejiang University, ²Institute of Feed Science, Zhejiang University

12:00 PM 198 **Effects of exogenous proteinases and carbohydrases on growth performance in pigs fed different grain-based diets: A meta-analysis**

Zhikai Zeng¹, Michaela Trudeau¹, Qingyun Li², Ding Wang³, Jae C. Jang⁴, Gerald C. Shurson⁴, Pedro E. Urriola⁴

¹Department of Animal Science, University of Minnesota, ²Cargill Animal Nutrition, ³Department of Animal Science, University of Kentucky, ⁴University of Minnesota

Physiology Symposium:

Postnatal consequences of heat stress during fetal development

Chair: Cesar A. Rosales-Nieto, Postdoctoral Fellowship, Michigan State University

9:30 AM – 11:30 AM

9:30 AM 141 **Metabolic ramifications of heat stress during late pregnancy and early gestation in dairy cows**

Björn Kuhla¹

¹Leibniz Institute for Farm Animal Biology

10:10 AM 140 **Effects of heat stress during late gestation on the dam and its calf**

Sha Tao¹, Geoff Dahl², Jimena Laporta³, John K. Bernard⁴

¹University of Georgia, ²University of Florida, ³University of Wisconsin-Madison, ⁴Department of Animal and Dairy Science, University of Georgia, Athens, USA

10:50 AM 142 **Heat stress affects piglet productivity and well-being during pre- and postnatal development**

Jay S. Johnson¹

¹USDA-ARS Livestock Behavior Research Unit

Ruminant Nutrition II: Calf Development
Chair: Jan C. Plaizier, University of Manitoba
9:30 AM – 10:45 AM

9:30 AM 92 **Enhanced early-life nutrition promotes reproductive and metabolic organ development in heifer calves**

Alan K. Kelly ¹, Colin Byrne ¹, David A. Kenny ², Patrick Lonergan ¹

¹University College Dublin, ²Teagasc Animal and Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath, Ireland

9:45 AM 93 **Dam parity affects neonatal beef calf energy-related metabolites**

Allison M. Meyer ¹, Natalie B. Duncan ¹, Andrew P. Foote ²

¹Division of Animal Sciences, University of Missouri, ²USDA-ARS U.S. Meat Animal Research Center

10:00 AM 94 **Alteration of fecal bacterial composition in pre-weaned veal calves by supplementation of *Saccharomyces cerevisiae* boulardii in milk replacer**

Tao Ma ¹, David Renaud ², Andrew Skidmore ³, Angel Aguilar ³, Eric Chevaux ⁴, Le L. Guan ¹, Michael Steele ⁵

¹University of Alberta, ²University of Guelph, ³Lallemand Animal Nutrition, ⁴Lallemand SAS, ⁵University of Alberta, University of Guelph

10:15 AM 95 **Analysis Of The Gastrointestinal Tract-Associated Microbiome Of Calves Supplemented During The Suckling Phase**

Jeferson M. Lourenco ¹, Troy Kieran ¹, Joshua C. McCann ², Travis Glenn ¹, R. Lawton Stewart ¹, Todd R. Callaway ¹

¹University of Georgia, ²University of Illinois

10:30 AM 96 **Late-Breaking: Effects of graded amounts of Leucine in milk replacer on neonatal calf growth and nutrient digestibility**

Jessica N. Reiners ¹, Kasey Maddock Carlin ¹, Kimberly A. Vonnahme ², Michael Steele ³, Kendall C. Swanson ¹

¹North Dakota State University, ²Zoetis, ³University of Alberta, University of Guelph

Small Ruminant II

Chair: Meghan Wulster-Radcliffe, ASAS
9:30 AM – 11:00 AM

9:30 AM 39 **Investigation of Ovine DRD2 Single Nucleotide Polymorphism and fescue toxicosis on subsequent lamb weight and growth**

Sarah Adams ¹, Cheryl Kojima ², Jessica Britt ¹, Markus Miller Jr ¹, Brandon Koch ¹, John G. Andrae ¹, Susan K. Duckett ¹

¹Clemson University, ²University of Tennessee

9:45 AM 40 **Relationship among gastrointestinal nematode infection indicators in meat goat kids**

Dahlia O'Brien ¹, Susan Schoenian ², Jeffery W. Semler ³, David Gordon ³, Mary Beth Bennett ⁴

¹Virginia State University, ²University of Maryland, ³University of Maryland Extension, ⁴West Virginia University

10:00 AM 41 **Use of clinic refractometer at farm, as a tool to estimate the IgG content in goat colostrum**

Noemi Castro ¹, Anastasio Arguello ¹, Lenny Gomez-Gonzalez ¹

¹University of Las Palmas de Gran Canaria

10:15 AM 42 **Extra-light-treated bucks and rams dramatically enhanced the response of ewes and goats to the “male effect”.**

Philippe Chemineau ¹, Matthieu Keller ², Alfonso Abecia ³, Jose Alberto Delgadillo ⁴

¹INRA, ²CNRS, ³University of Zaragoza, ⁴Universidad Autonoma Agraria Antonio Narro

10:30 AM 43 **Effect of addition of sodium pyruvate in extender on post-thaw quality of Beetal buck semen**

Abdul Sattar ¹, Muhammad Farooq ², Muhammad Irfan-ur-Rehman Khan ¹, Abdul Rehman ¹, Khalid Javed ³

¹Theriogenology, University of Veterinary and Animal Sciences, Lahore, Pakistan, ²Al- Haiwan Sires SPU, Sahiwal, Pakistan, ³Livestock Production, University of Veterinary and Animal Sciences, Lahore, Pakistan

10:45 AM 38 **The sustainability of grass fed lamb in the eastern United States**

Branden J. Campbell ¹, Jefferson S. McCutcheon ¹, Francis Fluharty ¹, Anthony J. Parker ¹

¹The Ohio State University

Animal Health II

Chair: Michael L. Looper, University of Arkansas System Division of Agriculture,
Department of Animal Science Fayetteville

9:30 AM – 11:15 AM

9:30 AM 245 **Herbal Nettle and STAT6 Gene Expression in Meat Goats Pasture Exposed to Haemonchus contortus**

Kaysha Davis ¹, Michelle M. Corley ¹, Laban Rutto ¹

¹Virginia State University

9:45 AM 239 **Effect of Saccharomyces cerevisiae boulardii supplementation on the health and performance of male Holstein calves**

Clothilde Villot ¹, David Renaud ², Andrew Skidmore ³, Angel Aguilar ³, Eric Chevaux ¹, Michael Steele ⁴

¹Lallemand SAS, ²University of Guelph, ³Lallemand Animal Nutrition, ⁴University of Alberta, University of Guelph

10:00 AM 240 **Prebiotic/probiotic blend attenuates the innate immune response of steers to a BRD challenge**

Paul R. Broadway ¹, Jeffery A. Carroll ², Nicole C. Burdick-Sanchez ¹, Alyssa Word ³, Brittni P. Littlejohn ⁴, Devan M. Paulus Compart ⁵

¹USDA-ARS, ²USDA-ARS Livestock Issues Research Unit, ³Cactus Feeders, ⁴Texas A&M University, ⁵PMI

10:15 AM 243 **Oral hydration therapy affects health, and performance in high-risk, newly received beef calves**

Dexter J. Tomczak¹, Kendall L. Samuelson², Jenny Jennings³, John T. Richeson¹
¹West Texas A&M University, ²Department of Animal and Range Sciences -New Mexico State University, ³Texas A&M AgriLife Research

10:30 AM 244 **Pharmacokinetics of tulathromycin following administration with remote delivery devices**

J. D. Rivera¹, Paige N. Tipton², Joseph Johnson¹, Amelia Woolums³, Steeve Giguère⁴, Alexis Lutz¹, Ivy Hice⁵, William Crosby³, Merrilee Thoresen⁵
¹Mississippi Agricultural and Forestry Experiment Station-White Sand Branch, Mississippi State University, ²Department of Animal and Dairy Sciences, Mississippi State University, ³Mississippi State University, ⁴Department of Large Animal Medicine, University of Georgia, ⁵Department of Pathobiology and Population Medicine, Mississippi State University

10:45 AM 241 **Bovine Respiratory Disease: Sex matters**

Nicole C. Burdick-Sanchez¹, Paul R. Broadway¹, Jeffery A. Carroll², Alyssa Word³, Brittini P. Littlejohn⁴, Devan M. Paulus Compart⁵
¹USDA-ARS, ²USDA-ARS Livestock Issues Research Unit, ³Cactus Feeders, ⁴Texas A&M University, ⁵PMI

11:00 AM 242 **Transdermal flunixin meglumine minimally alters neutrophil functionality in beef heifers administered a respiratory disease challenge**

Alyssa Word¹, Paul R. Broadway², Yu Liang³, Harold Newcomb⁴, Nicole C. Burdick-Sanchez², Sarah Capik⁵, Brittini P. Littlejohn⁶, Ben P. Holland⁷, Guy Ellis⁷, Jacques Fuselier⁴, John P. Hutcheson⁴, Michael A. Ballou⁸, Jeffery A. Carroll⁹
¹Cactus Feeders, ²USDA-ARS, ³Texas Tech University, ⁴Merck Animal Health, ⁵Texas A&M AgriLife Research and Department of Veterinary Pathobiology at Texas A&M College of Veterinary Medicine, ⁶Texas A&M University, ⁷Cactus Research, ⁸Texas Tech University, Department of Veterinary Sciences, ⁹USDA-ARS Livestock Issues Research Unit

Family Fun Day: Vancouver Aquarium

10:00 AM – 4:30 PM

ARPAS Exams Session III

10:30 AM – 12:30 PM

Extension Education

Chair: Matt H. Poore, Professor and Extension Ruminant Nutrition Specialist,
NC State University
10:45 AM – 12:30 PM

10:45 AM 408 **Market Opportunity for Goat and Lamb Meat in the Southeastern US**

Lila B. Karki¹, Uma Karki¹, Srinivasa Mendreddy², Sanjok Poudel¹, Shailes Bhattra¹
¹Tuskegee University, ²Alabama A&M University

11:00 Am 407 **Implementation of an Integrated Farm Management Plan to Enhance Reproductive Performance in Beef Cow-Calf Operations.**

Benjamin Crites¹, Eric Vanzant¹, Darrh Bullock¹, Jeffrey W. Lehmkuhler¹, Roy Burris¹, Les Anderson¹
¹University of Kentucky

11:15 AM 405 **Impacts of 40 Years of Research and Extension at University of Nebraska Gudmundsen Sandhills Laboratory on Beef Cattle and Range Management Systems**

Jack C. Whittier¹, Kelly W. Bruns¹, Rick N. Funston², J. D. Volesky¹, Terry J. Klopfenstein³, D. C. Adams¹

¹University of Nebraska, ²West Central Research, Extension, and Education Center, ³University of Nebraska-Lincoln

11:30 AM 406 **Animal Science Research and Education Center: Taking the Science to Those Most in Need**

Danilo G. Quadros¹

¹Texas A&M AgriLife Research

11:45 AM 410 **Nitrate Concentrations of Annual Forages Grown for Grazing in Nebraska**

Mary E. Lenz¹, Rebecca J. Kern², Mary E. Drewnoski³

¹University of Nebraska- Lincoln, ²WARD Laboratories, ³University of Nebraska-Lincoln

12:00 PM 404 **Vermont dairy calf management practices and opportunities**

Julia M. Smith¹, Mia Cosentino¹

¹University of Vermont

12:15 AM 409 **11 Years of the Western Maryland Pasture-Based Meat Goat Performance Test**

Susan Schoenian¹, Dahlia O'Brien², Jeffery W. Semler³, David Gordon³, Mary Beth Bennett⁴

¹University of Maryland, ²Virginia State University, ³University of Maryland Extension, ⁴West Virginia University

Breeding and Genetics IV: Swine and Other Species II

Chair: Christine F. Baes, Professor, Centre for Genetic Improvement of Livestock, University of Guelph, Ontario, Canada & Institute of Genetics, Vetsuisse Faculty, University of Bern, Bern, Switzerland

11:00 AM – 12:45 PM

11:00 AM 303 **Selection criteria for improving honey production in Africanized honey bees**

Fabiana Costa Maia¹, Daniela Lourenco², Shogo Tsuruta³, Elias Nunes Martins⁴

¹University of Georgia/Federal Technological University of Paraná, ²University of Georgia, ³The University of Georgia, ⁴Federal Technological University of Paraná

11:15 AM 304 **Genetic trends for reproductive traits in American mink**

Karim Karimi¹, Mehdi Sargolzaei², Zhiquan Wang³, Graham Plastow⁴, Younes Miar⁵

¹Dalhousie Univesrity, ²University of Guelph, ³Livestock Gentec, University of Alberta, ⁴University of Alberta, ⁵Department of Animal Science and Aquaculture, Dalhousie University

11:30 AM 305 **Genetic parameters of meat quality and carcass composition traits in crossbred swine**

Piush Khanal¹, Christian Maltecca², Clint Schwab³, Kent A. Gray⁴, Francesco Tiezzi²

¹North Carolina State University, ²Department of Animal Science, North Carolina State University, ³The Maschhoffs, LLC, ⁴Smithfield Premium Genetics

11:45 AM 302 **Targeted sequencing approach identifies immune loci associated to resistance to *Haemonchus contortus* in sheep and goats**

Zaira M. Estrada Reyes¹, Yoko Tsukahara², Arthur L. Goetsch³, Terry Gipson³, Zaisen Wang³, Tilahun Sahlu³, Ryszard Puchala³, Joel Leal Gutierrez¹, Raluca G. Mateescu⁴

¹UNIVERSITY OF FLORIDA, ²American Institute for Goat Research Langston University, ³American Institute for Goat Research, Langston University, ⁴University of Florida

12:00 PM 306 **Application of genomic selection for enhancing health, welfare, efficiency and production traits in turkeys**

Francesca Malchiodi¹, Ben J. Wood², Shai Barbut³, Alexandra Harlander³, Christine F. Baes⁴

¹Semex / University of Guelph, ²Hybrid Turkeys, ³University of Guelph, ⁴University of Guelph and University of Bern

12:15 AM 307 **Identification and differential expression of microRNAs in the testis of chicken with high and low sperm motility**

Yanyan Sun¹, Yifan Liu¹, Yunlei Li¹, Hao Bai¹, Aixin Ni¹, Jllan Chen²

¹Institute of Animal Science, Chinese Academy of Agricultural Sciences, ²Institute of Animal Science, Chinese Academy of Agricultural Sciences

12:30 AM 308 **Meat production potential of Beetal goat under farm and field conditions of Punjab, Pakistan**

Hafiz Muhammad. Waheed¹, Muhammad Moaeen-ud-Din², Ghulam Bilal³, James Reecy⁴, Muhammad Sajjad. Khan⁵, Muhammad Saif-ur-Rehman⁶, Muhammad Asim⁶

¹Laboratories of Animal Breeding and Genetics, Faculty of Veterinary and Animal Sciences, PMAS Arid Agriculture University, Rawalpindi, 46300, Pakistan, ²PMAS-Arid Agriculture University, ³PMA-Arid Agriculture University, Rawalpindi, ⁴Iowa State University, ⁵Institute of Animal & Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Pakistan, ⁶Institute of Animal and Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Faisalabad, 38000, Pakistan

Horse Species I

Chair: Tryon A. Wickersham, Professor, Department of Animal Science, Texas A&M University

11:15 AM – 12:30 PM

11:15 AM 462 **Effect of Dietary L-Arginine on Blood Flow Dynamics, and Placental Measurements of Mares**

Lauren B. Hodge¹, Brian Rude², Caleb O. Lemley³

¹Department of Animal and Dairy Sciences, Mississippi State University, ²Animal & Dairy Sciences, Mississippi State University, ³Department of Animal and Dairy Sciences, College of Agriculture and Life Sciences, Mississippi State University, Starkville

11:30 AM 463 **Effect of maternal overnutrition on insulin signaling in foal skeletal muscle**

Amanda N. Bradbery¹, Josie A. Coverdale¹, Carolyn J. Hammer², Tryon A. Wickersham¹, Kathrin Dunlap¹, Jessica L. Leatherwood¹, Michael C. Satterfield¹

¹Texas A&M University, ²Department of Animal Sciences, North Dakota State University

11:45 AM 461 **Effects of maternal overnutrition on cartilage metabolism in the neonatal foal**

Allison Millican¹, Jessica L. Leatherwood¹, Amanda N. Bradbery¹, Thomas H. Welsh², Michael C. Satterfield¹

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

12:00 PM 460 **Effects of maternal arginine supplementation to late gestation mares on foal growth and metabolic parameters**

Alyssa Oates¹, Dustin Gaskins¹, Ashley Hansen¹, Robert Steiner², Eric J. Scholljegerdes³, Laura M. White³

¹NMSU, ²Department of Economics, Applied Statistics, and International Business Development, New Mexico State University, ³New Mexico State University

12:15 PM 459 **Late-Breaking: Thyroid-stimulating hormone increases mitochondrial oxidative capacity in an in vitro study of equine skeletal muscle**

Christine Latham¹, Thomas H. Welsh², James D. Fluckey³, Stephen B. Smith¹, Sarah H. White-Springer⁴

¹Texas A&M University, ²Department of Animal Science, Texas A&M University, College Station, ³, ⁴Department of Animal Science, Texas A&M University; Texas A&M AgriLife Research

Purdue University Alumni Luncheon

11:30 AM – 1:00 PM

Poster Session VII – A

ASAS Graduate Student Poster Competition: MS Division

2:00 PM – 2:00 PM

2:00 PM PSVII-1 **Growth performance from 65 to 125 kg body weight, and carcass and meat composition of gilts, barrows, immunologically castrated pigs and entire males**

María Elena Santana Gutiérrez¹, Hugo Bernal Barragán¹, Fernando Sánchez Dávila¹, Adriana Morales², Miguel Cervantes-Ramírez², Nydia Corina Vásquez Aguilar¹, Gerardo Méndez-Zamora¹

¹Universidad Autónoma de Nuevo León, ²Universidad Autónoma de Baja California

2:00 PM PSVII-2 **Influence of post weaning grazing on reproductive measures in heifers**

Maggie K. Reynolds¹, Melinda J. Ellison¹, Gwinyai E. Chibisa¹, Amin Ahmadzadeh¹, John B. Hall¹

¹University of Idaho

2:00 PM PSVII-3 **Influence of Season of Birth, Gender and Paternal line in Pigs**
Jihwan Lee ¹, Won Yun ¹, Woogi Kwak ², Changhee Lee ², Shudong Liu ¹, Hanjin Oh ³, Jiseon An ¹, Donghoon Lee ², Jinho Cho ²

¹Division of Food and Animal Science, Chungbuk National University, ²Chungbuk national university, ³Department of Animal Science, Chungbuk National University

2:00 PM PSVII-4 **Live and carcass production traits for progeny of purebred sires in comparison with progeny of a Prime Yield Grade one carcass clone**

Jessica Sperber ¹, David G. Lust ¹, Dean Hawkins ¹, Trent McEvers ², Ty E. Lawrence ¹

¹West Texas A&M University, ²Dean Cluck Feedyard

2:00 PM PSVII-5 **Nutritional programming of prenatal beef heifer development and postnatal performance**

John M. Long ¹, Jason Sawyer ², Tryon A. Wickersham ¹, Charles Long ¹, Levi Trubenbach ³, Michael C. Satterfield ¹

¹Texas A&M University, ²Texas A&M University-Kingsville, ³Livestock Nutrition Center

2:00 PM PSVII-6 **Relationship between placentome location and gene expression in bovine pregnancy**

Elizabeth C. MacConnell ¹, Levi Trubenbach ², Tryon A. Wickersham ¹, Jason Sawyer ³, Michael C. Satterfield ¹

¹Texas A&M University, ²Livestock Nutrition Center, ³Texas A&M University-Kingsville

2:00 PM PSVII-7 **Relationship of slice shear force and quality grade of strip loin steaks from Brangus steers**

Heather Hamblen ¹, Sarah Flowers ¹, Joel Leal Gutierrez ², Eduardo E. Rodriguez ¹, Chad Carr ¹, Tracy L. Scheffler ³, Jason M. Scheffler ¹, Raluca G. Mateescu ¹

¹University of Florida, ²UNIVERSITY OF FLORIDA, ³Department of Animal Sciences, University of Florida

2:00 PM PSVII-8 **Relationships between muscle mitochondrial function and residual feed intake in beef steers**

Elmer E. Fernandez Guerra ¹, James W. Oltjen ², Roberto D. Sainz ³

¹UC Davis, ²Animal Science, University of California, Davis, Davis CA 95616, ³University of California, Davis

2:00 PM PSVII-9 **Ruminal papillae morphology and volatile fatty acid profile of beef feedlot steers fed *L. salivarius* L28 in replacement for tylosin**

Carly A. Hoffmann ¹, Jhones Sarturi ¹, Beatriz Q. Reis ¹, Mark F. Miller ¹, Mindy Brashears ², Danilo Millen ³, Jillian T. Milopoulos ¹, Tosha opheim ²

¹Texas Tech University, ²Texas Tech, ³São Paulo State University (UNESP), Animal Science College, Dracena, São Paulo, Brazil 17900-000

2:00 PM PSVII-10 **Small Ruminants' Preference for and Performance on Woodland Vegetation Maintained at Different Heights during Fall**

Shailes Bhattraï ¹, Uma Karki ¹, Sanjok Poudel ¹

¹Tuskegee University

2:00 PM PSVII-11 **Survey of Disease, Management and Biosecurity Practices of Hawai'i Swine Farmers**

Brittany A. Castle ¹, Jenee Odani ¹, Rajesh Jha ², Naomi Ogasawara ³, Halina M. Zaleski ¹
¹University of Hawai'i at Mānoa, Honolulu, HI, ²University of Hawaii at Manoa, ³University of Hawai'i at Mānoa, Honolulu, HI; Ross University School of Veterinary Medicine, St. Kitts, West Indies

2:00 PM PSVII-12 **The Effect of a Linear Relationship between the Dose of Peanut Skin Supplementation and Animal Performance, Ruminal Fermentation, Blood Metabolites, and Carcass Traits in Meat Goats Confined Indoor**

Frank W. Abrahamsen ¹, Byeng Min ¹, Nar K. Gurung ¹
¹Tuskegee University

2:00 PM PSVII-13 **The Effects of In Ovo Injection of Nicotinamide Riboside on Avian Myogenesis**

Stephanie R. Kruger ¹, Olivia S. Khatri ¹, Kelsey J. Phelps ², John M. Gonzalez ¹
¹Kansas State University, ²Cargill Protein

2:00 PM PSVII-14 **The Role of Supplemental Beef as a Healthy Alternative to a Sugar Snack during Pregnancy on Fetal Developmental Programming in Swine**

Ashley Hoyle ¹, Megan A. Nelson ¹, Kendall C. Swanson ¹, Kimberly Vonnahme ¹, Eric P. Berg ¹, Alison K. Ward ¹
¹North Dakota State University

2:00 PM PSVII-15 **Use of computer-assisted sperm analyses (CASA) and flow cytometry to explain Angus bull field fertility differences**

Saulo Menegatti Zoca ¹, Bahman Shafii ², William Price ³, Bo Harstine ⁴, Kristina McDonald ⁵, Matthew Utt ⁵, Leandro Cruppe ⁵, Mel DeJarnette ⁴, Lon Peters ⁵, José Luiz Vasconcelos ⁶, Joe Dalton ⁷
¹University of Idaho, Animal and Veterinary Science, ²University of Idaho, Statistical Programs, ³University of Idaho, ⁴Select Sires, Inc., ⁵Select Sires, ⁶São Paulo State University, ⁷Caldwell Research and Extension Center, University of Idaho

2:00 PM PSVII-16 **Utilization of a progesterone-based protocol prior to the breeding season failed to induce puberty in Bos indicus heifers**

Luara B. Canal ¹, Pedro L.P. Fontes ², Nicky Oosthuizen ³, Carla D. Sanford ⁴, Avelino Murta ⁵, Nicolas DiLorenzo ⁶, G. Cliff C. Lamb ⁷
¹University of Florida - North Florida Research and Education Center, ²Texas A&M University, Department of Animal Science, ³ABS Global, ⁴University of Florida, NFREC, ⁵Instituto Federal do Norte de Minas Gerais, Campos Salinas, MG, ⁶University of Florida, ⁷Texas A&M University

2:00 PM PSVII-17 **Effects of steaming or soaking hay on acute glycemic response in Standardbred racehorses**

Tiana Owens ¹, Vanessa Gargano ², Wilfredo Mansilla ², Katrina Merkies ², Anna K. Shoveller ²
¹University Of Guelph, ²University of Guelph

2:00 PM PSVII-18 **Heat exposure inhibits the proliferation and expansion of porcine intestinal epithelial cells and stem cells by down-regulating the Wnt/ β -catenin pathway**

Jia-yi Zhou¹, Xiang-guang Li², Chun-qi Gao³, Hui-chao Yan³, Xiu-qi Wang⁴

¹South China Agricultural University, ²South China Agricultural University, ³College of Animal Science, South China Agricultural University, ⁴College of Animal Science, South China Agricultural University

Poster Session VII - B

12:00 PM – 1:00 PM

PHYSIOLOGY AND ENDOCRINOLOGY

12:00 PM PSVII-19 **Characterization and Migration of Cultured Quail Primordial Germ Cells from Embryonic Blood and Gonad**

Saeed Yakhkeshi¹, Shaban Rahimi², Mohsen Sharafi¹, seyedeh Nafiseh Hassani³, Gholamhossein Shahverdi⁴, Hossein Baharvand⁵

¹Department of Poultry Science, Tarbiat Modaryes University, ²Tarbiat Modares University, ³2. Department of Stem Cells and Developmental Biology, Cell Science Research Center, Royan Institute for Stem Cell Biology and Technology, ACECR, Tehran, Iran, ⁴3. Department of Embryology, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran, ⁵4. Department of Developmental Biology, University of Science and Culture, ACECR, Tehran, Iran

PHYSIOLOGY AND ENDOCRINOLOGY

12:00 PM PSVII-20 **Differential gene expression of day 15 endometrium of pregnant Bos indicus beef cows according to expression of estrus at timed-AI**

Paulo Souto¹, Reinaldo F. Cooke², Rafael Cipriano³, Bruna Silper¹, Ronaldo Cerri⁴

¹Applied Animal Biology, Faculty of Land and Food Systems, University of British Columbia, ²Texas A&M University, ³Unisaesiano Auxilium, ⁴The University of British Columbia

PHYSIOLOGY AND ENDOCRINOLOGY

12:00 PM PSVII-21 **Effect of urea on gene expression and viability in bovine granulosa cells cultured in vitro**

Farnaz Malekjahani¹, Yuanfeng Zhao¹, Clay Isom¹

¹Utah State University

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

12:00 PM PSVII-22 **Environmental assessment of 36 intensive dairy farms in the Southwestern China based on life cycle assessment**

Lin Wang¹, Akira Setoguchi², Kazato Oishi², Yuta Sonoda², Hajime Kumagai², Chagan Irbis³, Tatsuya Inamura², Hiroyuki Hirooka²

¹Yangzhou University, ²Kyoto University, ³Kunming University of Science and Technology

PHYSIOLOGY AND ENDOCRINOLOGY

12:00 PM PSVII-23 Evaluation of Immune Modulation Effects of Probiotic Bacteria on Bovine Kidney Epithelia Cells In Vitro

Tao Ran ¹, Yizhao Shen ², Anele Uche ³, Baines Danica ⁴, Trevor Alexander ⁵, WenZhu Yang ⁶
¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada; Institute of Subtropical Agriculture, the Chinese Academy of Sciences, Changsha, Hunan 410125, China, ²College of Animal Science and Technology, Hebei Agricultural University, ³North Carolina A&T State University, ⁴Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ⁵Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, Lethbridge, AB Canada, ⁶Agriculture and Agri-Food Canada

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

12:00 PM PSVII-24 Goat production management system in ice caped northern areas of Pakistan

Ghulam Bilal ¹, Muhammad Moaeen-ud-Din ², Muhammad Sajjad. Khan ³, James Reecy ⁴
¹PMA-Arid Agriculture University, Rawalpindi, ²PMAS-Arid Agriculture University, ³Institute of Animal & Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Pakistan, ⁴Iowa State University

PHYSIOLOGY AND ENDOCRINOLOGY

12:00 PM PSVII-25 Grazing-induced transcriptomic changes in bovine biceps femoris muscle, subcutaneous fat, and liver mRNAs and plasma exosome microRNAs

Susumu Muroya ¹, Hideki Ogasawara ², Kana Nohara ², Mika Oe ³, Koichi Ojima ³, Masayuki Hojito ²
¹NARO, ²Kitasato University, ³Institute of Livestock and Grassland Science, NARO

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

12:00 PM PSVII-26 Greenhouse Gas Emission Intensities of Indonesian Livestock Sector with Accessible Indonesian Data

Eska Nugrahaeningtyas ¹, Kyu-Hyun Park ¹, Chun-youl Baek ²
¹Kangwon National University, ²Korea Institute of Industrial Technology

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

12:00 PM PSVII-27 Impact of manure storage system on odor, carbon dioxide, and methane from swine manure.

Okhwa Hwang ¹, steven trabue ², Daniel Andersen ³, kenwood Scoggin ²
¹National Institute of Animal Science, Rural Development Administration, ²USDA-Agricultural Research Service, ³Iowa State University

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

12:00 PM PSVII-28 Impact of Protein Level and Source on Manure and Air Emissions from Swine Diets

steven trabue ¹, Brian J. Kerr ², kenwood Scoggin ¹
¹USDA-Agricultural Research Service, ²USDA-ARS

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

12:00 PM PSVII-29 **Interests and Values of Dairy Producers and Consumers on Animal Welfare and Sustainability in Southern Brazil**

Andreia De Paula Vieira ¹, Raymond Anthony ², Ediane Zanin ³, Carla Barros ⁴, Jose Antonio Fregonesi ⁴

¹Universidade Positivo / Centro de Pesquisa da Universidade Positivo, ²University of Alaska Anchorage, ³Universidade Estadual de Londria, ⁴Universidade Estadual de Londrina

PHYSIOLOGY AND ENDOCRINOLOGY

12:00 PM PSVII-30 **Intracellular toll-like receptors correlates positively with interferon-stimulated genes during the peri-implantational period in beef cattle**

Albina Sanz ¹, Beatriz Serrano-Pérez ², Esther Molina ², Agustí Noya ¹, Irene López-Helguera ², Isabel Casasús ¹, Daniel Villalba ³

¹CITA de Aragón-IA2, ²Universitat de Lleida (UdL), ³Universitat de Lleida. Department de Ciència Animal

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

12:00 PM PSVII-31 **Management and production practices adopted by goat farmers in Punjab province of Pakistan**

Muhammad Moaeen-ud-Din ¹, Ghulam Bilal ², James Reecy ³, Muhammad Sajjad. Khan ⁴

¹PMAS-Arid Agriculture University, ²PMA-Arid Agriculture University, Rawalpindi, ³Iowa State University, ⁴Institute of Animal & Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Pakistan

PHYSIOLOGY AND ENDOCRINOLOGY

12:00 PM PSVII-32 **Profiling peripheral microRNA in normal- versus over-conditioned dairy cows during dry-off and early lactation**

Christiane Urh ¹, Katharina Schuh ¹, Valentina Zamarian ², Laura Webb ¹, Cristina Lecchi ³, M. Taher Alaedin ¹, Hassan Sadri ⁴, Morteza Hosseini. Ghaffari ⁵, Georg Dusel ⁶, Christian Koch ⁷, Nares Trakooljul ⁸, Klaus Wimmers ⁹, Fabrizio Cecilian ¹⁰, Helga Sauerwein ¹

¹University of Bonn, Institute for Animal Science, Physiology and Hygiene, ²Università di Milano, Department of Veterinary Medicine, ³Università degli Studi di Milano, ⁴University of Tabriz, Department of Clinical Science, Faculty of Veterinary Medicine, ⁵University of Bonn, ⁶University of Applied Sciences Bingen, ⁷Educational and Research Centre for Animal Husbandry, Hofgut Neumühle, ⁸Leibniz-Institute for Farm Animal Biology (FBN), Dummerstorf, Germany, ⁹Institute of Genome Biology, Leibniz Institute for Farm Animal Biology, ¹⁰Università degli Studi di Milano

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

12:00 PM PSVII-33 **Sustainable livestock agroforestry: a dynamic model to estimate gross revenues, nitrogen excretion and animal CO₂eq. emissions of cow-calf extensive systems.**

Alberto S. Atzori ¹, Pier Giacomo S. Rassa ², Corrado Dimauro ², Gianni Battacone ², Antonio Casula ³, Giuseppe Pulina ⁴

¹Department of Agricultural Sciences, University of Sassari, Italy, ²Dipartimento di Agraria, sezione di Scienze Zootecniche, University of Sassari, Italy, ³Forests, Regional Agency for Forestry, Cagliari (Sardinia), Italy/Dipartimento di Agraria, sezione di Scienze Zootecniche, University of Sassari, Italy, ⁴Department of Agricultural Sciences, University of Sassari, Italy/Regional Agency for Forestry, Cagliari (Sardinia), Italy

PHYSIOLOGY AND ENDOCRINOLOGY

12:00 PM PSVII-34 The Characterization of Androstenone Binding to Plasma Proteins in Boars

Christine Bone¹, Yanping Lou¹, E. James Squires²

¹University of Guelph, ²University of Guelph, Department of Animal Biosciences, Centre for Genetic Improvement of Livestock, Guelph, ON, Canada

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

12:00 PM PSVII-35 Using observed data as inputs of life cycle assessment provides a better approach to evaluate the dietary crude protein reduction for starting pigs

Alessandra Nardina Tricia Rigo. Monteiro¹, Jean-Yves Dourmad², Natalia Yoko. Sitanaka¹, Camila de Araujo. Moreira¹, Robson Marcelo. Rossi¹, Cleiton Pagliari. Sangali³, Leandro Dalcin. Castilha¹, Paulo C. Pozza⁴

¹Universidade Estadual de Maringá, ²INRA, ³Centro Universitário Integrado, ⁴State University of Maringá

NONRUMINANT NUTRITION

12:00 PM PSVII-37 Growth performance and nutrient digestibility of weaned pigs fed multi-enzyme supplemented corn-barley-soybean meal-based diets

Sangwoo Park¹, Wenting Li², Tofuko A. Woyengo³

¹Chungnam National University, ²Dupont- Nutrition&Biosciences, ³Assistant professor

NONRUMINANT NUTRITION

12:00 PM PSVII-38 Growth performance and nutrient digestibility of weaned pigs fed multi-enzyme supplemented corn-soybean meal-based diets

Tofuko A. Woyengo¹, Agatha Ampaire², Wenting Li³

¹Assistant professor, ²South Dakota State University, ³Dupont- Nutrition&Biosciences

NONRUMINANT NUTRITION

12:00 PM PSVII-39 Improvement of trace mineral homogeneity in feed using a single-particle glycinate mineral blend.

Catherine Ionescu¹, Emma H. Wall¹

¹PANCOSMA SA

NONRUMINANT NUTRITION

12:00 PM PSVII-40 Maternal soluble fiber diet during pregnancy influences growth performance, intestinal microbiota and intestinal permeability in piglets

Chuanshang Cheng¹, Hongkui Wei¹, Jian Peng¹

¹Huazhong Agricultural University

NONRUMINANT NUTRITION

12:00 PM PSVII-41 Measurement of endogenous phosphorus losses in broiler chickens

Velmurugu Ravindran¹, Ruvini Mutucumarana²

¹Massey University, New Zealand, ²Massey University

NONRUMINANT NUTRITION

12:00 PM PSVII-42 **Mitigating effects of DON-contaminated DDGS on pig performance**

Crystal L. Levesque¹, Ryan S. Samuel², Tofuko A. Woyengo³, Kevin J. Herrick⁴, Robert C. Thaler¹

¹South Dakota State University, ²Department of Animal Science, South Dakota State University, ³Assistant professor, ⁴POET

CSAS Annual General Meeting and Lunch

12:30 PM – 2:00 PM

Poster Session VIII

1:00 PM – 2:00 PM

ANIMAL HEALTH

1:00 PM PSVIII-19 **Acute metabolic responses to a combined viral-bacterial respiratory disease challenge in heifers administered transdermal flunixin meglumine.**

Alyssa Word¹, Paul R. Broadway², Yu Liang³, Harold Newcomb⁴, Nicole C. Burdick-Sanchez², Sarah Capik⁵, Brittini P. Littlejohn⁶, Ben P. Holland⁷, Guy Ellis⁷, Jacques Fuselier⁴, John P. Hutcheson⁴, Michael A. Ballou⁸, Jeffery A. Carroll⁹

¹Cactus Feeders, ²USDA-ARS, ³Texas Tech University, ⁴Merck Animal Health, ⁵Texas A&M AgriLife Research and Department of Veterinary Pathobiology at Texas A&M College of Veterinary Medicine, ⁶Texas A&M University, ⁷Cactus Research, ⁸Texas Tech University, Department of Veterinary Sciences, ⁹USDA-ARS Livestock Issues Research Unit

FORAGES AND PASTURES

1:00 PM PSVIII-20 **Corn silage inoculated with *Lactobacillus buchneri* on performance and carcass characteristics of feedlot lambs**

Luis Gustavo Rossi¹, Carlos Henrique Silveira Rabelo², Erick E. Dallantonia³, Juliana A. Torrecilhas³, Faruk da Silveira Feres⁴, Ricardo Reis⁵

¹Sao Paulo State University, Jaboticabal, Brazil, ²Federal University of Pelotas, ³São Paulo State University (Unesp), School of Agricultural and Veterinarian Sciences, Jaboticabal, ⁴São Paulo State University - Faculty of Agriculture and Veterinary Sciences, ⁵Department of Animal Science, Unesp, Jaboticabal

FORAGES AND PASTURES

1:00 PM PSVIII-21 **Effect of inclusion of purple prairie clover with native cool-season grasses on in situ digestibility of mixed forage**

Kai Peng¹, Alan Iwaasa², Mike Schellenberg², Zhong Xu³, Tim A. McAllister⁴, Yuxi Wang³

¹Key Laboratory of Animal Nutrition and Feed Science (South China) of Ministry of Agriculture, Guangdong Key Laboratory of Animal Breeding and Nutrition, Institute of Animal Science, Guangdong Academy of Agricultural Science, ²Swift Current Research and Development Centre, Agriculture and Agri-Food Canada, ³Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ⁴Agriculture and Agri-Food Canada

ANIMAL HEALTH

1:00 PM PSVIII-22 Effect of nitro-treatment on ruminal metabolism of poultry litter nonprotein nitrogen

Ramon Copado-Garcia ¹, Michael E. Hume ², Gustavo Moreno-Degollado ¹, Robin Anderson ³, Martha Estrada-Gandarilla ¹, DAVID J. NISBET ⁴, CLAUDIO ARZOLA-ALVAREZ ⁵, OSCAR RUIZ-BARRERA ⁵, YAMICELA CASTILLO-CASTILLO ⁵, MARINA ONTIVEROS-MAGADAN ⁶, Agustin Corral-Luna ⁷, JAIME SALINAS-CHAVIRA ⁸

¹Autonomous University of Nuevo Leon, Mexico, ²USDA, ARS, College Station, Texas, USA, ³ARS/USDA, ⁴USDA/ARS, ⁵UNIVERSIDAD AUTONOMA DE CHIHUAHUA, ⁶UNIVERSIDAD AUTONOMA DE CIUDAD JUAREZ, ⁷Universidad Autónoma de Chihuahua, Facultad de Zootecnia y Ecología, ⁸UNIVERSIDAD AUTONOMA DE TAMAULIPAS

PHYSIOLOGY AND ENDOCRINOLOGY

1:00 PM PSVIII-23 Late-Breaking: Effect of reproductive tract size and position scores and estrus on reproductive performance in beef cows

Ky G. Pohler ¹, Savannah Speckhart ², Gessica Franco ², Tatiane Maia ², Felipe Dantas ², Kevin Thompson ², Justin D. Rhinehart ³

¹University of Tennessee - Department of Animal Science, ², ³University of Tennessee Institute of Agriculture

SMALL RUMINANT

1:00 PM PSVIII-24 Effect of semen dose on pregnancy rate using liquid semen AI in hair sheep

Stephan Wildeus ¹, Dahlia O'Brien ¹, Marlon Knights ², Ashleigh Nabers ³

¹Virginia State University, ²Fellow Researcher, ³West Virginia University

ANIMAL HEALTH

1:00 PM PSVIII-25 Expression and Secretion of circulating galectins in domestic ruminants

Mulumebet Worku ¹, Kingsley Ekwemalor ², Emmanuel Asiamah ³, Sarah Adjei-Fremah ⁴, Bertha Osei ⁵, Bharath kumar Mulakala ², Eluka-Okoludoh Eboghoye ², Hamid Ismail ¹

¹NC A&T State University, ²North Carolina Agricultural and Technical state university, ³North Carolina Agricultural and Technical State university, ⁴North Carolina Agricultural and Technical State University, ⁵North Carolina A&T State University,

FORAGES AND PASTURES

1:00 PM PSVIII-26 Fermentation and aerobic stability of sorghum silages inoculated with wild strains of Lactobacillus buchneri isolated from tropical sorghum silage

Odilon Pereira ¹, Ricardo Pinho ², Rosinea Paula ¹, Joao Roseira ², Felipe Pimentel ¹, Hilario Mantovani ²

¹Universidade Federal de Vicosa, ²Federal University of Vicosa

ANIMAL HEALTH

1:00 PM PSVIII-27 Flunixin meglumine does not inhibit hyperthermia induced by central administration of α -1-acid-glycoprotein, an acute phase protein, in sheep

Jay A. Daniel ¹, Brittany Gregg ², Paxton Parker ², Katie Waller ², Miriam Garcia ³, Barry J. Bradford ³

¹Berry College, ²University of Tennessee, ³Kansas State University

FORAGES AND PASTURES

1:00 PM PSVIII-28 Forage pea-cereal mixtures for greenfeed production in Saskatchewan

Amarjargal Gungaabayar ¹, Alan Iwaasa ², Diane Knight ³, Gregory B. Penner ⁴, Tom Warkentin ⁵, Bill Biligetu ⁶

¹Department of Plant Sciences, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada, ²Swift Current Research and Development Centre, Agriculture and Agri-Food Canada, ³Department of Soil Science, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada, ⁴Department of Animal and Poultry Science, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada S7N 5A8, ⁵University of Saskatchewan, ⁶Department of Plant Sciences, University of Saskatchewan, Saskatoon, SK, Canada, S7N 5A8

ANIMAL HEALTH

1:00 PM PSVIII-29 Galectin 9 secretion in cow milk a marker for homostasis and health

Bharath kumar Mulakala ¹, Eluca-Okoludoh Eboghoye ¹, Sarah Adjei-Fremah ², Emmanuel Asiamah ³, Kingsley Ekwemalor ¹, Hamid Ismail ⁴, Salam Ibrahim ³, Mulumebet Worku ⁴

¹North Carolina Agricultural and Technical State University, ²North Carolina Agricultural and Technical State University, ³North Carolina Agricultural and Technical State University, ⁴NC A&T State University

ANIMAL HEALTH

1:00 PM PSVIII-30 Gastrointestinal nematode resistance in variable stress-responding sheep

Emma Borkowski ¹, Niel A. Karrow ², Bonnie Mallard ³, Paula I. Menzies ⁴, Jacob Avula ⁵, Brandon Lillie ⁶, Andrew Peregrine ⁵

¹Ontario Veterinary College, University of Guelph, Department of Pathobiology, ²Department of Animal Biosciences, University of Guelph, ³OVC, University of Guelph, ⁴Ontario Veterinary College, University of Guelph, Department of Population Medicine, ⁵Ontario Veterinary College, ⁶University of Guelph

FORAGES AND PASTURES

1:00 PM PSVIII-31 Grass and legume hays for feedlot sheep: in vivo digestibility and in situ degradability

Iana Otoni ¹, Karina Ribeiro ², Sebastião de Campos Valadares Filho ², Thiago Silva ¹, Luiz Fernando Silva ¹, Janaina Silva ³, Odilon Pereira ¹

¹Universidade Federal de Vicosa, ²Universidade Federal de Viçosa, ³Universidade Federal do Oeste da Bahia

FORAGES AND PASTURES

1:00 PM PSVIII-32 Improving quality of alfalfa-grass mixtures

Debbie J. Cherney ¹, Jerome H. Cherney ¹

¹Cornell University

FORAGES AND PASTURES

1:00 PM PSVIII-33 In vitro DM and NDF degradability of signal grass and forage peanut

Lucas Cardoso ¹, Karina Ribeiro ², Sebastião de Campos Valadares Filho ², Paulo Roberto Cecon ¹, Cassia Freitas ², Tarcis Alexandre Raimundi ¹, Yago Pena ¹, Odilon Pereira ¹

¹Universidade Federal de Vicosa, ²Universidade Federal de Viçosa

FORAGES AND PASTURES

1:00 PM PSVIII-34 **In vitro digestibility and fermentation kinetics of six irrigated forage hays in the US Intermountain West**

Andrea Bolletta¹, Juan J. Villalba², Xin Dai², Jennifer MacAdam²

¹Utah State University and INTA EEA Bordenave, Buenos Aires, Argentina., ²Utah State University

FORAGES AND PASTURES

1:00 PM PSVIII-35 **Isolation and identification of lactic acid bacteria in guinea grass silages**

Iana Otoni¹, Rosinea Paula¹, Jaina Alves², Joao Roseira², Felipe Pimentel¹, Karina Ribeiro³, Odilon Pereira¹

¹Universidade Federal de Vicosa, ²Federal University of Vicosa, ³Universidade Federal de Viçosa

PHYSIOLOGY AND ENDOCRINOLOGY

1:00 PM PSVIII-36 **Late-Breaking: Lipid content of uterus and milk throughout the diestrus stage of the estrous cycle**

Elvis Ticiani¹, Murilo R. Carvalho¹, Jose F.W. Spricigo¹, Ainsley Moore¹, Meghan Bateman¹, Eduardo S. Ribeiro²

¹, ²University of Guelph

ANIMAL HEALTH

1:00 PM PSVIII-37 **Modulation of innate and adaptive immune response genes in bovine neutrophil by Galectin-8**

Eluka-Okoludoh Eboghoye¹, Emmanuel Asiamah², Kingsley Ekwemalor¹, Bharath kumar Mulakala¹, Sarah Adjei-Fremah³, Mulumebet Worku⁴

¹North Carolina Agricultural and Technical state university, ²North Carolina Agricultural and Technical State university, ³North Carolina Agricultural and Technical State University, ⁴NC A&T State University

ANIMAL HEALTH

1:00 PM PSVIII-38 **Oral hydration therapy and bovine respiratory disease affects rumination behavior, rumen pH, and rumen temperature in high risk, newly received beef bulls**

Dexter J. Tomczak¹, Kendall L. Samuelson², Jenny Jennings³, John T. Richeson¹

¹West Texas A&M University, ²Department of Animal and Range Sciences -New Mexico State University, ³Texas A&M AgriLife Research

FORAGES AND PASTURES

1:00 PM PSVIII-39 **Silage of elephant grass harvested at different times and regrowth ages**

Tamara Silveira¹, Karina Ribeiro¹, Rasmoo Garcia¹, Joao Paulo Silveira², Rosinea Paula², Felipe Pimentel², Vanessa Silva¹, Odilon Pereira²

¹Universidade Federal de Viçosa, ²Universidade Federal de Vicosa

ANIMAL HEALTH

1:00 PM PSVIII-40 **Stress alters bacterial density in the upper respiratory tract of beef calves**

Nilusha Malmuthuge¹, Philip Griebel²

¹Vaccine and Infectious Disease Organization-International Vaccine Centre, University of Saskatchewan, ²VIDO-Intervac, University of Saskatchewan

ANIMAL HEALTH

1:00 PM PSVIII-41 **Unique Signatures of Galectin Expression in Cow Blood Exposed to Microbial Cell Wall Antigens.**

Emmanuel Asiamah¹, Kingsley Ekwemalor², Sarah Adjei Fremah³, Mulumebet Worku⁴, Bertha Osei³

¹North Carolina Agricultural and Technical State university, ²North Carolina Agricultural and Technical state university, ³North Carolina A&T State University, ⁴NC A&T State University

FORAGES AND PASTURES

1:00 PM PSVIII-42 **Varying the application rate of a Lactobacillus plantarum based inoculant on nutrient composition, fermentation characteristics, and digestibility of corn silage**

Ishwary P. Acharya¹, Terry Waugh², David P. Casper³

¹Kay Dee Feeds, ²Kay Dee Feed Company, ³Furst-McNess Company

Nonruminant Nutrition II: Amino Acids

Chair: Chair: Shengfa T. Liao, Associate Professor, Mississippi State University

Chair: John Scott Radcliffe, Professor and Assistant Head, Purdue University

1:45 PM – 5:00 PM

1:45 PM 180 **Jr. Platform Speaker: Evaluation of Phase-Feeding Strategies and Lysine Specifications for Grow-Finish Pigs**

Mariana Boscato Menegat¹, Steve S. Dritz², Michael D. Tokach³, Jason Woodworth⁴, Joel M. DeRouchey³, Robert Goodband⁵

¹Holden Farms, ²Department of Diagnostic Medicine & Pathobiology, College of Veterinary Medicine, Kansas State University, ³, ⁴Kansas State University, ⁵Department of Animal Sciences & Industry, College of Agriculture, Manhattan, KS 66506

2:15 PM 184 **Supplementation with Leucine and the Leucine Metabolite, Beta-hydroxy-beta-methylbutyrate, Stimulates Muscle Protein Synthesis in Neonatal Pigs via Different Signaling Mechanisms**

Teresa A. Davis¹, Agus Suryawan¹, Marta L. Fiorotto¹

¹USDA/ARS Children's Nutrition Research Center, Department of Pediatrics, Baylor College of Medicine

2:30 PM 185 **The effect of reduced dietary glycine and supplemental threonine on growth performance and collagen content in skin of pigs fed low crude protein diets**

Kayla E. Silva¹, Wilfredo Mansilla², Anna K. Shoveller², John K. Htoo³, John Cant², Cornelis de Lange², Lee-Anne Huber²

¹University Of Guelph, ²University of Guelph, ³Evonik Operations GmbH

2:45 PM 186 **Additivity of apparent and standardized ileal digestibility of amino acid in mixed diets containing wheat and multiple protein sources fed to growing pigs**

Tingting Wang¹, Saheed Osho¹, Olayiwola Adeola¹

¹Purdue University

3:00 PM 190 **L-Arginine upregulates aquaporin-3 expression and water transport by porcine trophectoderm cells through NO- and cAMP-dependent mechanisms**

Cui Zhu¹, Jinling Ye¹, Fuller W. Bazer², Greg Johnson², Yinshan Bai³, Jun Yang¹, Zhuang Chen¹, Zongyong Jiang⁴, Guoyao Wu⁵

¹Agro-biological Gene Research Center, Guangdong Academy of Agricultural Sciences, ²Texas A&M University, ³School of Life Science and Engineering, Foshan University; Department of Animal Biosciences, University of Guelph, ⁴Institute of Animal Science, Guangdong Academy of Agricultural Sciences; Ministry of Agriculture Key Laboratory of Animal Nutrition and Feed Science in South China, ⁵Department of Animal Science, Texas A&M University

3:15 PM 182 **Feeding newly-weaned pigs low-lysine (Lys) diets followed by a non-limiting-Lys diet can induce compensatory growth with no effects on carcass quality at market weight**

Wilfredo Mansilla¹, Adam D. Totafurno², Doug Wey², Lee-Anne Huber¹, Ira B. Mandell¹, Cornelis de Lange¹

¹University of Guelph, ²Department of Animal Biosciences / University of Guelph

3:30 PM **Break**

3:45 PM 189 **Efficiency of utilizing standardized ileal digestible Thr for whole body protein retention in pregnant gilts during early, mid and late gestation**

Ron Aldwin S. Navales¹, James L. Dunn², John K. Htoo³, Kevin J. Touchette⁴, Robert C. Thaler¹, Crystal L. Levesque¹

¹South Dakota State University, ²ADM Animal Nutrition, ³Evonik Operations GmbH, ⁴AJINOMOTO ANIMAL NUTRITION NORTH AMERICA, INC.

4:00 PM 188 **Effects of dietary supplementation of L-histidine and beta-alanine on growth performance, breast muscle carnosine content and carnosine-related enzyme mRNA expression in broiler chicks**

Meng Hu¹, Guanghai Qi¹, Jing Wang¹, Shugeng Wu¹, Hongyuan Yu¹

¹Feed Research Institute of Chinese Academy of Agricultural Sciences

4:15 PM 187 **Optimal standardized ileal digestible lysine and methionine + cysteine to lysine ratio for 30 to 50 kg pigs fed antibiotic-free diets**

John K. Htoo¹, Trung T. Ho², Thi B. A. Dao³, Maria E. Carpena⁴, Nu A. T. Le², Chi Vu³, Quang Nguyen⁵

¹Evonik Operations GmbH, ²Faculty of Animal Sciences and Veterinary Medicine, College of Agriculture and Forestry - Hue University, Vietnam, ³Institute of Animal Husbandry, Hanoi, Vietnam, ⁴Evonik (Philippines) Inc., ⁵College of Agriculture and Forestry - Hue University, Vietnam

4:30 PM 181 **Multi-tissue transcriptomic analysis of the effects of supplementation of L- or D-methionine in acute heat stress-exposed broiler chickens**

Mingyung Lee¹, Hyesun Park¹, Jung Min Heo¹, Ho Jun Choi², Seongwon Seo¹

¹Chungnam National University, ²CJ Cheiljedang

4:45 PM 183 **The optimal SID lysine: crude protein ratio for maximal nitrogen efficiency in piglets**

Sam Millet¹, Marijke Aluwé¹, Johan De Boever¹, Bavo De Witte¹, Laid Doudah¹, Alice Van den Broeke¹, Frederik Leen¹, Carolien De Cuyper¹, Bart Ampe¹, Sam De Campeneere¹
¹Flanders research institute for agriculture, fisheries and food (ILVO)

ARPAS Exams Session IV

2:00 PM – 4:00 PM

ASAS Graduate Student Symposium: Communication in Animal Science

Chair: Kelsey J. Phelps, Food Scientist, Cargill Protein;
Bailey N. Engle, Texas A&M University, Department of Animal Science

2:00 PM – 4:35 PM

2:00 PM **Introductory Remarks**

2:05 PM 201 **Communicating with the public and media**

Meghan Wulster-Radcliffe¹

2:35 PM 202 **Communicating Animal Science through Extension Publications**

Shane Gadberry¹

¹University of Arkansas

3:05 PM **Break**

3:15 PM 203 **Communicating Policy**

Deb Hamernik¹

¹University of Nebraska-Lincoln

3:45 PM 200 **Surviving the review process: An editor's perspective**

James Sartin¹

¹American Society of Animal Science

Breeding and Genetics Symposium: New Breeding goals in animal breeding

Chair: Filippo Miglior, Scientific Researcher, Canadian Dairy Network

2:00 PM – 5:15 PM

2:00 PM **Introductory Remarks**

2:05 PM 314 **New breeding goals in beef cattle**

Stephen P. Miller¹

¹Angus Genetics Inc.

2:35 PM 317 **Applications for molecular breeding tools in honeybee populations**

Gertje Petersen¹

¹AbacusBio Ltd

3:05 PM 318 **A broodstock program for Arctic charr**

Kris A. Christensen¹, Willie S. Davidson¹

¹Simon Fraser University

3:35 PM **Break**

3:45 PM 313 **Selection to mitigate heat stress in pigs**

Daniela Lourenco¹

¹University of Georgia

4:15 PM 316 **Changing breeding objectives for turkey production - yesterday, today and tomorrow**

Ben J. Wood¹

¹Hybrid Turkeys

4:45 PM 315 **Breeding for Efficiency: investigating dairy cattle efficiency traits and future implementation strategies**

Caeli M.R. Richardson¹

¹La Trobe University

Companion Animal Sciences

Chair: Anna Kate K. Shoveller, Assistant Professor, University of Guelph

2:00 PM – 4:45 PM

2:00 PM 376 **Ancient grains as a novel dietary fiber and carbohydrate source in canine diets**

Zachary T. Traughber¹, Fei He², Heather F. Mangian³, Jolene Hoke⁴, Gary M. Davenport⁴, Maria R. de Godoy⁵

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

³Department of Animal Sciences, University of Illinois at Urbana-Champaign, ⁴Archer Daniels Midland Company, ⁵University of Illinois Urbana-Champaign

2:15 PM 373 **Evaluation of next generation-distillers dried grain as a dietary ingredient in dog and cat diets**

Spencer Smith¹, Greg G. Aldrich¹

¹Kansas State University

2:30 PM 377 **Effects of fiber blend and prebiotic supplementation on food intake, apparent total tract digestibility, fecal quality of adult dogs**

Juliana P S Nogueira¹, Fei He², Patrícia M. Oba³, Heather F. Mangian¹, Maria R. de Godoy⁴

¹Department of Animal Sciences, University of Illinois at Urbana-Champaign, ²University of Illinois at Urbana Champaign, ³University of Illinois at Urbana-Champaign, ⁴University of Illinois Urbana-Champaign

2:45 PM 375 **Evaluation of extruded soybean hulls for relative metabolizable energy values and as a source of fiber in monogastric nutrition**

Patrick von Schaumburg¹, Katelyn B. Detweiler², Gary M. Davenport³, Pamela L. Utterback⁴, Carl M. M. Parsons⁴, Maria R. de Godoy¹

¹University of Illinois Urbana-Champaign, ²Department of Animal Sciences, University of Illinois at Urbana-Champaign, ³Archer Daniels Midland Company, ⁴University of Illinois at Urbana-Champaign

3:00 PM 370 **Determination of macronutrient composition and amino acid digestibility of plant-based proteins for use in canine and feline diets**
Lauren M. Reilly ¹, Patrick von Schaumburg ², Jolene Hoke ³, Gary M. Davenport ³, Pamela L. Utterback ⁴, Carl M. M. Parsons ⁴, Maria R. de Godoy ²
¹University of Illinois - Urbana/Champaign, ²University of Illinois Urbana-Champaign, ³Archer Daniels Midland Company, ⁴University of Illinois at Urbana-Champaign

3:15 PM **Break**

3:30 PM 371 **Tryptophan requirements in small, medium, and large breed adult dogs using the indicator amino acid oxidation technique**
James Templeman ¹, Wilfredo Mansilla ¹, Lisa Fortener ², Anna K. Shoveller ¹
¹University of Guelph, ²Mars Petcare

3:45 PM 372 **Effects of probiotic *Enterococcus faecium* in shelter cats**
Rachel F. Gordon ¹, Mara E. Denny ¹, Lauren N. Williams ¹, Dawn M. Spangler ², Susanna E. Kitts-Morgan ²
¹Lincoln Memorial University, College of Veterinary Medicine, ²Lincoln Memorial University

4:00 PM 379 **Effect of yeast fermentation on pea starch glycemic index in dogs**
Priscila Curso- Almeida ¹, Lynn P. Weber ¹
¹University of Saskatchewan

4:15 PM 374 **The effects of a yeast fermentation product on diet palatability, apparent total tract macronutrient digestibility and fecal characteristics of adult dogs**
Ching-Yen Lin ¹, Tzu-Wen L. Cross ¹, Celeste Alexander ², Andrew J. Steelman ³, Maria R. de Godoy ⁴, Kelly S. Swanson ⁴
¹Division of Nutritional Sciences, University of Illinois at Urbana-Champaign, ²University of Illinois at Urbana-Champaign, ³Department of Animal Sciences, University of Illinois at Urbana-Champaign Division of Nutritional Sciences, University of Illinois at Urbana-Champaign Neuroscience Program, University of Illinois at Urbana-Champaign Carle R Woese Institute for Genomic Biology, University of Illinois at Urbana-Champaign, ⁴University of Illinois Urbana-Champaign

4:30 PM 378 **Modeling Net Energy of Commercial Cat Diets**
Natalie J. Asaro ¹, Wilfredo Mansilla ¹, Dave J. Seymour ¹, Kimberely Berendt ², Ruurd T. Zijlstra ²
¹University of Guelph, ²University of Alberta

**Comparative Gastrointestinal Physiology Symposium:
Taste perception throughout life and evolution - Sponsored by Pancosma**

Chair: Soraya P. Shirazi-Beechey, University of Liverpool

2:00 PM – 5:00 PM

2:00 PM **Introductory Remarks**

2:15 PM 397 **Taste perception throughout life and evolution**
Soraya P. Shirazi-Beechey ¹
¹University of Liverpool

2:45 PM 395 **Human flavor perception in early life: developmental and functional significance**

Gary Beauchamp¹

¹Monell Chemical Senses Center

3:15 PM **Break**

3:30 PM 393 **The effect and management of taste disorders in later life**

Margot A. Gosney¹

¹University of Reading

4:00 PM 394 **Sweet sensing by gut bacteria**

Kristian Daly¹

¹University of Liverpool

4:30 PM 396 **Microbial Endocrinology: The intersection of microbiology and neurobiology to examine microbiome-behavior relationships including selectively bred taste phenotype**

Mark Lyte¹

¹Iowa State University

CSAS Graduate Student Oral Competition - PhD II

2:00 PM – 4:15 PM

2:00 PM 362 **Impact of dietary fiber and immune system stimulation on threonine requirement for whole body protein deposition in growing pigs**

Michael O. Wellington¹, John K. Htoo², Andrew G. Van Kessel³, Daniel A. Columbus¹

¹Prairie Swine Centre, Inc., ²Evonik Operations GmbH, ³University of Saskatchewan

2:15 PM 361 **Diurnal and nocturnal meal patterns of growing pigs change according to feeding systems**

Luan S. Santos¹, Paulo Campos², Luciano Hauschild³, Welex C. Silva⁴, Alini M. Veira⁵, Jaqueline Gobi³, Candido Pomar⁶

¹Federal Rural University of Rio De Janeiro, Seropédica, Brazil, ²Federal University of Vicosa, ³Sao Paulo State University, ⁴São Paulo State University, ⁵FAPESP Scholarship, São Paulo State University, Jaboticabal, Brazil, ⁶AgriFood Canada

2:30 PM 363 **Increased Intestinal Alkaline Phosphatase Maximal Activities Mediate Improvements in Growth and Gut Health Status in Weanling Pigs Fed the Antibiotic-Supplemented Diet**

Xindi Yin¹, Tania L. Archbold¹, Nicole Burello¹, Michael Scolaro¹, Mengyun Li², Weijun Wang¹, Kevin Zhou¹, Ming Z. Fan¹

¹University of Guelph, ²Henan University of Animal Husbandry and Economy, China

2:45 PM 364 **Effect of humic substances on rumen fermentation, nutrient digestibility, methane emissions and rumen microbiota in beef heifers**
Stephanie A. Terry ¹, Gabriel O. Ribeiro Jr ², Robert J. Gruninger ³, Martin Hünenberg ⁴, Ping Sheng ⁵, Alex Chaves ⁶, Karen A. Beauchemin ³, Jake Burlet ⁷, Tim A. McAllister ³
¹The University of Sydney, School of Life and Environmental Sciences, ²Agriculture and Agri-Food Canada; Lethbridge Research and Development Centre, ³Agriculture and Agri-Food Canada, ⁴Department of Animal Sciences, University of Göttingen, ⁵Institute of Biological Resources, Jiangxi Academy of Sciences, ⁶University of Sydney, Sydney, Australia, ⁷Venture West Veterinary Services Ltd

3:00 PM **Break**

3:15 PM 365 **Effects of coated-cysteamine on growth performance, carcass characteristics, meat quality and lipid metabolism in finishing pigs**
Wenjing Tao ¹, minqi wang ², Hui Li ³, Rong Yu ⁴, Zhefeng Li ⁴
¹College of Animal Science, Zhejiang University, ²College of Animal Science Zhejiang University, ³Zhejiang University, ⁴Hangzhou King Techina Technology Co., Ltd.

3:30 PM 358 **The short and long term effects of weaning on structural and transcriptomic adaptations of the colon in Holstein bull calves fed elevated plane of milk nutrition pre-weaning**
Jolet K. van Niekerk ¹, Josue M. Romao ¹, Marleen Middeldorp ², Michael Steele ³
¹University of Alberta, ²Animal Nutrition Group, Wageningen UR, The Netherlands, ³University of Alberta, University of Guelph

3:45 PM 359 **Transportation of cull dairy cows in British Columbia: duration and effects on cow condition**
Jane Stojkov ¹, David Fraser ¹
¹Animal Welfare Program, Faculty of Land and Food Systems, The University of British Columbia, Vancouver, BC, Canada

4:00 PM 360 **Feeding *Saccharomyces cerevisiae* fermentation product affected rumen pH and fermentation, and site of digestion in finishing beef heifers**
Yizhao Shen ¹, Hongrong Wang ², Tao Ran ³, Ilkyu Yoon ⁴, Atef Saleem ⁵, WenZhu Yang ⁶
¹College of Animal Science and Technology, Hebei Agricultural University, ²Yangzhou University, ³Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada; Institute of Subtropical Agriculture, the Chinese Academy of Sciences, Changsha, Hunan 410125, China, ⁴Cargill, Diamond V brand, ⁵South Valley University, ⁶Agriculture and Agri-Food Canada

Forages and Pastures II

Chair: William B. Smith, Assistant Professor, Tarleton State University

2:00 PM – 5:00 PM

2:00 PM 428 **Platform Speaker: Nutrients and plant secondary compounds in pasturelands and their ecological services**
Juan J. Villalba ¹, Jennifer MacAdam ¹, Karen A. Beauchemin ²
¹Utah State University, ²Agriculture and Agri-Food Canada

2:30 PM 427 **Digestibility and N-use efficiency of bermudagrass treated with plant growth-promoting rhizobacteria or N fertilizer**

Phillip Gunter¹, Connie Fike¹, D.W. Held¹, Elizabeth Wagner¹, Russell B. Muntifering¹
¹Auburn University

2:45 PM 426 **Economics of replacing N fertilization with legumes in bermudagrass pastures for growing beef steers in the Southeastern USA**

Paul A. Beck¹, Caleb P. Weiss², Don S. Hubbell³, Tom Hess², Elizabeth B. Kegley⁴, John A. Jennings⁵, Shane Gadberry²

¹University of Arkansas Southwest Research & Extension Center, ²University of Arkansas, ³UA Livestock and Forestry Station, retired, ⁴University of Arkansas System, Division of Agriculture, Department of Animal Science, ⁵University of Arkansas System Division of Agriculture, Department of Animal Science, Little Rock, AR

3:00 PM 425 **Forage productivity, quality and compatibility of native and tame legume species in mixtures with cool season grasses in western Canada**

Samuel Peprah¹, Paul Jefferson², Alan Iwaasa³, Bill Biliget⁴, Herbert A. Lardner⁵

¹University of Saskatchewan, ²Western Beef Development Centre, ³Swift Current Research and Development Centre, Agriculture and Agri-Food Canada, ⁴Department of Plant Sciences, University of Saskatchewan, Saskatoon, SK, Canada, S7N 5A8, ⁵Dept. of Animal and Poultry Science, University of Saskatchewan and Western Beef Development Centre

3:15 PM 424 **Mycotoxin Survey of Southern US Pasture Grasses**

Paige N. Gott¹, Aaron M. Stam², Alex Johns³, Erika G. Hendel⁴, S. Maria Mendoza⁵, Ursula Hofstetter⁶, Brett Bell⁵, G. Raj Murugesan⁴

¹BIOMIN America Inc., ²Federally Recognized Tribal Extension Program, University of Florida, Seminole Tribe of Florida, ³Seminole Tribe of Florida, Inc., ⁴BIOMIN America Inc, ⁵BIOMIN America, Inc., ⁶Biomin

3:30 PM **Break**

3:45 PM 423 **Ergovaline and Additional Mycotoxins in Tall Fescue**

Paige N. Gott¹, Erika G. Hendel², Krista L. Lea³, S. Ray. Smith⁴, Ursula Hofstetter⁵, Katelynn M. Robbins⁶, G. Raj Murugesan²

¹BIOMIN America Inc., ²BIOMIN America Inc, ³University of Kentucky Forage Extension Program, ⁴University of Kentucky, ⁵Biomin, ⁶BIOMIN America, Inc.

4:00 PM 422 **Investigation of DRD2 Single Nucleotide Polymorphism and grazing toxic tall fescue during late gestation on cow and calf performance in Spring calving herds.**

Sarah Adams¹, Cheryl Kojima², John G. Andrae¹, Susan K. Duckett¹

¹Clemson University, ²University of Tennessee

4:15 PM 429 **Effects of endophyte strain on performance of beef cows grazed on summer stockpiled tall fescue pastures**

Taylor A. Langford¹, Grace M. Barry², Wil M. Sims², Keri N. Hardin¹, David A. Fiske³, Gabriel J. Pent⁴, Thomas B. Wilson⁵

¹Virginia Tech, ²Department of Animal and Poultry Sciences, Virginia Tech, Blacksburg, ³Shenandoah Valley Agriculture Research and Extension Center, ⁴Virginia Tech - SVAREC, ⁵Department of Animal and Poultry Sciences, Virginia Tech

4:30 PM 430 **Platform Speaker: Forage quality assessment for large diverse landscapes**

Corey A. Moffet ¹

¹USDA-ARS

Physiology and Endocrinology II: Reproduction

Chair: Jordan M. Thomas, Assistant Professor, University of Missouri

2:00 PM – 3:45 PM

2:00 PM 128 **Evaluation of SexedULTRA sex-sorted semen in timed artificial insemination programs for mature beef cows**

Jordan M. Thomas ¹, James William C. Locke ², Rachael C. Bonacker ², Emma R. Knickmeyer ², Dallas J. Wilson ³, Ramanaryanan Vishwanath ⁴, Aaron M. Arnett ⁴, Michael F. Smith ⁵, David J. Patterson ¹

¹University of Missouri, ²University of Missouri - Columbia, ³Wilson Veterinary Services, ⁴Sexing Technologies, ⁵University of Missouri Division of Animal Sciences

2:15 PM 133 **One versus two prostaglandin F2 α injections on progesterone concentrations and luteolysis in suckling beef cows subjected to a 5-day controlled internal drug release-Cosynch protocol**

Jennifer A. Spencer ¹, Saulo Menegatti Zoca ¹, Maggie Reynolds ¹, William Price ², Bahman Shafii ³, Amin Ahmadzadeh ²

¹University of Idaho, Animal and Veterinary Science, ²University of Idaho, ³University of Idaho, Statistical Programs

2:30 PM 132 **Concentrations of circulating pregnancy-associated glycoprotein differs between cows receiving Bos indicus vs. Bos taurus embryos**

Pedro Fontes ¹, Nicky Oosthuizen ², Francine M. Ciriaco ³, Darren D. Henry ⁴, Carla D. Sanford ⁵, Luara B. Canal ³, Ky G. Pohler ⁶, Vitor R. G. Mercadante ⁷, Alan Ealy ⁷, Sally Johnson ⁸, Nicolas DiLorenzo ⁹, G. Cliff C. Lamb ¹

¹Texas A&M University, ²ABS Global, ³University of Florida - North Florida Research and Education Center, ⁴Texas Tech University, ⁵University of Florida, NFREC, ⁶University of Tennessee - Department of Animal Science, ⁷Virginia Tech, ⁸Virginia Polytechnic and State Institution, ⁹University of Florida

2:45 PM 131 **The effects of injectable trace mineral supplements in donor cows at the initiation of a superovulation protocol in embryo outcomes and pregnancy rates in recipient females.**

Felipe A C C da Silva ¹, Nicolas Negrin-Pereira ¹, Bethany J. Funnell ², Friederike Baumgaertner ¹, Mellissa Crosswhite ³, Kacie L. McCarthy ⁴, Sarah R. Underdahl ¹, Bryan W. W. Neville ⁵, Kevin K. Sedivec ¹, Darrel DeGroff ⁶, Carl R. Dahlen ¹

¹North Dakota State University, ²Purdue University College of Veterinary Medicine, ³Oklahoma State University, ⁴University of Nebraska-Lincoln, ⁵U.S. DEPARTMENT OF AGRICULTURE, ⁶Colorado Genetics Inc.

3:00 PM 130 **Pregnancy-associated glycoprotein profile is altered in twin but not singleton pregnancies after pre-conception diet manipulation**

Cesar A. Rosales-Nieto ¹, Richard A. Ehrhardt ¹, Barbara Makela ², Katherine May ³, Almudena Veiga-Lopez ¹

¹Michigan State University, ²Laboratory Aide, ³NorthStar Cooperative

3:15 PM 129 **Split-time artificial insemination improves estrous response and pregnancy rates following administration of the MGA-PG protocol to synchronize estrus in beef heifers**

Emma R. Knickmeyer¹, Jordan M. Thomas², James William C. Locke¹, Rachael C. Bonacker¹, Mark R. Ellersieck³, Scott E. Pooch², David J. Patterson²

¹University of Missouri - Columbia, ²University of Missouri, ³University of Missouri

3:30 PM 127 **Comparison of long-term progestin-based protocols to synchronize estrus prior to fixed-time artificial insemination or natural service in Bos indicus-influenced beef heifers**

James William C. Locke¹, Jordan M. Thomas², Emma R. Knickmeyer¹, Mark R. Ellersieck³, Joel V. Yelich⁴, Scott E. Pooch², Michael F. Smith⁵, David J. Patterson²

¹University of Missouri - Columbia, ²University of Missouri, ³University of Missouri, ⁴University of Florida-Gainesville, ⁵University of Missouri Division of Animal Sciences

Ruminant Nutrition III: Feed Additives

Chair: Kendall L. Samuelson, Assistant Professor, West Texas A&M University

2:00 PM – 4:30 PM

2:00 PM 90 **The effect of removing tylosin from finishing diets with increasing roughage concentration on growth performance, carcass characteristics, and prevalence of liver abscesses of finishing cattle**

Ben P. Holland¹, Alyssa Word², Paul Defoor¹, Kendall J. Karr¹, Casey L. Maxwell³

¹Cactus Research, ²Cactus Feeders, ³Elanco Animal Health

2:15 PM 89 **Evaluation of the strategic use of Tylan® to control liver abscess condemnation in finishing beef cattle**

Lee-Anne Walter¹, Mike Brown¹, Gary Vogel¹, Jacob A. Hagenmaier¹, Nathan Pyatt¹, Ben P. Holland², Alyssa Word³, Kaitlyn R. Wesley³, Paul Defoor², Casey L. Maxwell¹

¹Elanco Animal Health, ²Cactus Research, ³Cactus Feeders

2:30 PM 88 **Feedlot performance and carcass traits of Nellore cattle fed virginiamycin to shorten the adaptation period to high-concentrate diets**

André Rigueiro¹, Antonio M. M. Silvestre², Mariana M. Squizatti², Carlos Henrique Garcia³, Daniela Dutra Estevam¹, Evandro Fernando Ferreira Dias³, Luana Felizari³, Breno L.

Demartini², Eduardo Lima Caixeta³, Pedro Fernando Santi³, Mário Arrigoni¹, Danilo Millen³

¹São Paulo State University (UNESP), School of Veterinary Medicine and Animal Science, Botucatu, São Paulo, Brazil 18618-000, ²School of Veterinary Medicine and Animal Science, São Paulo State University (UNESP), Botucatu, Brazil, ³São Paulo State University (UNESP), Animal Science College, Dracena, São Paulo, Brazil 17900-000

2:45 PM 87 **Effect of addition of short and medium chain fatty acids monoglycerides in Holstein steers fed straw and concentrates**

Laura Miranda¹, Celestino Serrano², Mario García³, Violeta González³, Pedro Medel⁴

¹UNIVERSIDAD CATÓLICA SANTA TERESA DE JESÚS DE ÁVILA, ²SOLARSAN, S.L., ³FF FEED AND FOOD S.L., ⁴INNOVABIOTICS, S.L.

3:00 PM **Break**

3:15 PM 86 **Effects of feeding an alkaloid binder on nutrient digestibility, alkaloid recovery in feces and performance of lambs fed diets contaminated with cereal ergot**

Alberta Agriculture Stanford ¹, Mary Lou Swift ², Yuxi Wang ³, Tim A. McAllister ⁴, John J. McKinnon ⁵, Barry R. Blakley ⁵, Alex Chaves ⁶

¹Alberta Agriculture and Forestry, ²Trouw Nutrition, ³Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ⁴Agriculture and Agri-Food Canada, ⁵University of Saskatchewan, ⁶University of Sydney, Sydney, Australia

3:30 PM 85 **Effect of a commercial phytogetic product on milk production**

Bryan Miller ¹, S. Maria Mendoza ², Franck Gaudin ³, Andy Meyer ⁴

¹BIOMIN America Inc., ²BIOMIN America, Inc., ³Big Gain, ⁴Richland Dairy

3:45 PM 84 **Effects of an olive bioactive extract on lipopolysaccharide-challenged weaned heifers**

Lautaro Rostoll-Cangiano ¹, Francine M. Ciriaco ², Darren D. Henry ³, Sebastian E. Mejia ¹, Manuel Peña ¹, Marcos Zenobi ⁴, Ignacio R. Ipharraguerre ⁵, Corwin D. Nelson ⁴, Nicolas DiLorenzo ⁶

¹North Florida Research and Education Center, University of Florida, ²University of Florida - North Florida Research and Education Center, ³Texas Tech University, ⁴Department of Animal Sciences, University of Florida, ⁵Christian Albrechts University of Kiel, ⁶University of Florida

4:00 PM 83 **Late-Breaking: Towards sustainable alternatives to antibiotics. 1: The evaluation of an active dried yeast in the diets of finishing steers on growth performance and carcass composition**

Whitney L. Crossland ¹, Caitlyn Cagle ², Flavio Ribeiro ³, Luis O. Tedeschi ⁴, Todd R. Callaway ⁵

¹Texas Tech University, ²Texas A&M university, ³Department of Animal Science/Texas A&M University, ⁵University of Georgia

4:15 PM 91 **Late-Breaking: Towards sustainable alternatives to antibiotics. 2: The evaluation of an active dried yeast in the diets of finishing steers on feedlot performance, rumen pH and liver health**

Whitney L. Crossland ¹, Caitlyn Cagle ², Luis O. Tedeschi ³, Todd R. Callaway ⁴

¹Texas Tech University, ²Texas A&M university, ³Department of Animal Science/Texas A&M University, ⁴University of Georgia

Nonruminant Nutrition III: Feed Additives II and Heat Stress

Chairs: Samer W. El-kadi, Assistant Professor, Virginia Tech;

Xingen Lei, Professor, Cornell University College of Agricultural and Life Science

2:15 PM – 4:30 PM

2:15 PM 173 **Protocatechuic Acid Improved Growth Performance, Meat Quality and Intestinal Health of Chinese Yellow Broilers**

Yibing Wang ¹, Shouqun Jiang ², Weifen Li ³

¹The Key Laboratory of Animal Nutrition and Feed Science (South China) of Ministry of Agriculture; Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, ²State Key Laboratory of Livestock and Poultry Breeding, Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture, Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, P.R. China, ³Key Laboratory of Molecular Animal Nutrition of Ministry of Education, Institute of Feed Science, College of Animal Sciences, Zhejiang University, Hangzhou, China

2:30 PM 174 **Effects of high degree deacetylated chitosan supplementation on yolk and blood immune status of laying hens**

Afshin Farivar¹, Naeim Saber², Zeynep Şahan³, Uğur Serbester², Fatma Yenilmez², Aygül Küçükgülmez², Ali Eslem Kadak², Mehmet Çelik², Ahmet Tekeli⁴, Hasan Rüştü Kutlu², Ladine Celik⁵

¹University of Çukurova, ²Çukurova University, ³Adıyaman University, ⁴Eskişehir Osmangazi University, ⁵Çukurova University Agriculture Faculty Department of Animal Science

2:45 PM 175 **Effects of Bacillus spp. probiotics on growth performance, diarrhea, and systemic immunity of weaned pigs experimentally infected with an enterotoxigenic Escherichia coli**

Yijie He¹, Kwangwook Kim², Cynthia N. Jinno², Zhaohai Wu², Rose Whelan³, Kiran Doranalli³, Yanhong Liu²

¹Department of Animal Science, University of California, Davis, ²University of California, Davis, ³Evonik Nutrition & Care GmbH

3:00 PM **Break**

3:15 PM 176 **Supplemental dietary microalgal docosahexaenoic acid enriched this fatty acid and improved n-6 to n-3 fatty acid ratios in egg yolks and tissues of laying hens**

Andrew D. Magnuson¹, Tao Sun², Guanchen Liu², Samar Tolba², Xingen Lei³

¹Cornell, ²Cornell University, ³Cornell University College of Agricultural and Life Science

3:30 PM 177 **Effect of dietary choline and Schizochytrium oil on DHA content in the egg yolk and egg quality during storage**

Hao Wang¹, Guanghai Qi¹, Haijun Zhang¹, Xiaocui Wang¹, Shugeng Wu¹, Jing Wang¹, Hongyuan Yue¹

¹Feed Research Institute of Chinese Academy of Agricultural Sciences

3:45 PM 172 **Feed intake level and ambient temperature affect the body temperature of pigs exposed to heat stress**

Adriana Morales¹, Duckens Antoine², Alan Valle¹, Hugo Bernal Barragán³, Lucero R. Pérez Mejía¹, Miguel Cervantes-Ramírez¹

¹Universidad Autónoma de Baja California, ²UABC, ³Universidad Autónoma de Nuevo León

4:00 PM 178 **Influence of dietary supplementation with omega-3 on eggs and blood profiles in laying hens**

Jian Ying Zhang¹, Jing Hu², In Ho Kim²

¹421-1 Department of Animal Resources Science Dankook University, ²Dankook University

4:15 PM 179 **Protective Effects of Soybean Isoflavones in Broilers Challenged with Infectious Bursal Disease Virus**

Shouqun Jiang¹, Long Li², Qiuli Fan³, Yibing Wang², Zhongyong GOU⁴, Xiajing LIN⁴, Zongyong Jiang⁵

¹State Key Laboratory of Livestock and Poultry Breeding, Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture, Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, P.R. China, ²The Key Laboratory of Animal Nutrition and Feed Science (South China) of Ministry of Agriculture; Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, ³Institute of Animal Science, ⁴Institute of Animal Science, Guangdong Academy of Agricultural Sciences, State Key Laboratory of Livestock and Poultry Breeding, Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture Guangdong Public Laboratory of Animal Breeding and Nutrition, Guangdong Key Laboratory of Animal Breeding and Nutrition, ⁵Institute of Animal Science, Guangdong Academy of Agricultural Sciences; Ministry of Agriculture Key Laboratory of Animal Nutrition and Feed Science in South China

Growth and Development I: Fetal Programming

Chair: Gary Hausman, University of Georgia

2:30 PM – 4:45 PM

2:30 PM 444 **Jr. Platform Speaker: The effects of late gestation hypoxia on fetal metabolism**

Amanda K. Jones¹, Stephanie R. Wesolowski²

¹University of Colorado Denver, ²University of Colorado, Denver

3:00 PM 446 **Impacts of Ergot Alkaloid Exposure During Mid and Late Gestation on Wether Performance and Glucose, Insulin, and NEFA Values**

Maslyn A. Greene¹, Jessica Britt¹, Markus Miller Jr¹, Sarah Adams¹, Susan K. Duckett¹

¹Clemson University

3:15 PM 445 **Protein supplementation in late gestation affects maternal skeletal muscle gene expression and plasma circulating amino acids**

Mateus P. Gionbelli¹, Rodrigo C. Lopes¹, Aline S. Trece², Priscilla D. Teixeira¹, Marcio Duarte³, Claudia B. Sampaio²

¹Universidade Federal de Lavras, ²Universidade Federal de Vicosa, ³University of Guelph

3:30 PM 440 **Impacts of Ergot Alkaloid Exposure During Mid and Late Gestation on Maternal Glucose, Insulin, and NEFA Concentrations and the Effects on Offspring Birth Weight**

Maslyn A. Greene¹, Jessica Britt¹, Markus Miller Jr¹, Sarah Adams¹, Susan K. Duckett¹

¹Clemson University

3:45 PM 439 **Increasing the Concentration of In Ovo Injected Nicotinamide Riboside has a Positive Influence on Avian Myogenesis**

Stephanie R. Kruger¹, Olivia S. Khatri¹, John M. Gonzalez¹

¹Kansas State University

4:00 PM 442 **Effects of poor maternal nutrition during gestation on the offspring muscle metabolome**

Dominique E. Martin¹, Amanda K. Jones², Maria L. Hoffman³, Sambhu Pillai⁴, Kristen E. Govoni¹, Steven A. Zinn¹, Sarah A. Reed¹

¹University of Connecticut, ²University of Colorado Denver, ³University of Rhode Island, ⁴Georgetown University

4:15 PM 443 **Impact of ergot alkaloids fed during gestation on fetal growth and subsequent postnatal growth in ewe lambs.**

Jessica Britt¹, Sarah Adams¹, Markus Miller Jr¹, Cheryl Kojima², John G. Andrae¹, Susan K. Duckett¹

¹Clemson University, ²University of Tennessee

4:30 PM 441 **Late-Breaking: Exosomal activity in maternal circulation of ewes exposed to ergot alkaloids during mid – late gestation**

Susan K. Duckett¹, Jessica Britt¹, Zheng Zhou², Maggie Miller¹

¹Clemson University, ²

Ruminant Nutrition IV: Feed Intake Level

Chair: Travis R. Whitney, Associate Professor, Texas A&M AgriLife Research

3:15 PM – 5:30 PM

3:15 PM 81 **Evaluating the lag between body temperature and ambient temperature in Senepol and crossbred heifers in the tropics**

Robert Godfrey¹, Adam Weis², Henry Nelthropp²

¹University of the Virgin Islands, Agricultural Experiment Station, ²University of the Virgin Islands

3:30 PM 80 **Effects of feeding level on performance and heat production of high and low residual feed intake beef steers**

Emily M. Andreini¹, Sheyenne M. Augenstein¹, Carrie S. Fales¹, Roberto D. Sainz¹, James W. Oltjen²

¹University of California, Davis, ²University of California Davis

3:45 PM 79 **Residual Feed Intake (RFI) Reranking in Beef Steers Fed Growing and Finishing Diets under Two Management Regimens**

Natalie Ferriman¹, Cheryl P. Campbell¹, Katharine M. Wood¹, Anne M. Edwards¹, Ira B. Mandell¹

¹University of Guelph

4:00 PM 78 **Effects of strategic supplementation of low quality diets and previously determined residual feed intake rank on performance in gestating beef cattle.**

Joshua J. Devos¹, Cheryl P. Campbell², Katharine M. Wood², Flavio S. Schenkel³, Ira B. Mandell²

¹Department of Animal Biosciences / University of Guelph, ²University of Guelph, ³University of Guelph, Department of Animal Biosciences, Centre for Genetic Improvement of Livestock, Guelph, ON, Canada

4:15 PM 77 **Ruminal fermentation pattern of Nellore cattle previously submitted to either nutritional restriction or intake concentrate feedstuffs prior to adaptation to high-concentrate diets**

Danilo D. Millen¹, Gustavo Perina Bertoldi², Evandro Fernando Ferreira Dias², Mariana M. Squizzati³, Antonio M. M. Silvestre³, Breno L. Demartini³, Paulo Henrique Mazza Rodrigues⁴, Danilo Millen²

¹College of Technology and Agricultural Sciences, São Paulo State University (UNESP), Dracena, Brazil, ²São Paulo State University (UNESP), Animal Science College, Dracena, São Paulo, Brazil 17900-000, ³School of Veterinary Medicine and Animal Science, São Paulo State University (UNESP), Botucatu, Brazil, ⁴Department of Animal Nutrition and Production, College of Medicine Veterinary and Animal Science, University of Sao Paulo

4:30 PM 76 **Nutrient intake, apparent total tract nutrient digestion and N excretion in backgrounding cattle fed increasing amounts of grape pomace**

James R. Vinyard¹, Cheyanne A. Myers², Gwinyai E. Chibisa²

¹University of Idaho, Department of Animal and Veterinary Sciences, ²University of Idaho

4:45 PM 74 **Effects of bismuth subsalicylate and encapsulated calcium-ammonium nitrate on enteric methane production and apparent total-tract nutrient digestibility of beef cattle**

Darren D. Henry¹, Francine M. Ciriaco², Rafael C. Araujo³, Pedro Fontes⁴, Nicky Oosthuizen⁵, Mariana E. Garcia-Ascolani², Carla D. Sanford⁶, Tessa M. Schulmeister⁷, Martin Ruiz Moreno⁷, Jose C. Dubeux⁷, Lautaro Rostoll-Cangiano⁸, G. Cliff C. Lamb⁴, Nicolas DiLorenzo⁷

¹Texas Tech University, ²University of Florida - North Florida Research and Education Center, ³GRASP, ⁴Texas A&M University, ⁵ABS Global, ⁶University of Florida, NFREC, ⁷University of Florida, ⁸North Florida Research and Education Center, University of Florida

5:00 PM 82 **Late-Breaking: Effects of Solvent- or Mechanically Extracted-Carinata Meal On Intake And Total-Tract Digestibility In Cows Fed Long-stem Or Ground Corn Residues**

Derek Brake¹, Emily Rosenthal², George Perry¹

¹South Dakota State University, ²

5:15 PM 75 **Late-Breaking: Investigation into the relationship Methanobrevibacter millerae YE315 and Residual Feed Intake in cattle offered a high grain diet**

Emily McGovern¹, David A. Kenny², Alan K. Kelly³, Sinead Waters¹

¹Teagasc, ²Teagasc Animal and Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath, Ireland, ³University College Dublin

ASAS New Board of Directors Orientation Meeting

4:00 PM – 5:30 PM

**Production, Management, and the Environment II:
Environmental Sustainability of Livestock Production**

Chair: Kristin E. Hales, Meat Animal Research Center, Clay Center, NE
4:00 PM – 5:00 PM

4:00 PM 112 **An environmental assessment of beef cattle production in the United States**

Sara E. Place¹, Al Rotz², Senorpe Asem-Hiablíe³, Greg Thoma⁴

¹National Cattlemen's Beef Association, ²USDA-ARS, ³USDA/Agricultural Research Service, ⁴University of Arkansas

4:15 PM 111 **Carbon and blue water footprints of California sheep production**

Holland C. Dougherty¹, James W. Oltjen², Frank M. Mitloehner³, Ed DePeters², Lee Allen Pettey², Dan Macon⁴, Julie Finzel⁴, Kim Rodrigues⁵, Ermias Kebreab³

¹Texas A&M AgriLife Research & Extension Center - Amarillo, ²University of California Davis, ³UC Davis, ⁴University of California Cooperative Extension, ⁵University of California Division of Agriculture and Natural Resources

4:30 PM 110 **Evaluation of net protein contribution and methane production from beef production as the duration of confinement increases in the cow-calf sector**

Jessica Gilreath¹, Jason Sawyer², Tryon A. Wickersham¹

¹Texas A&M University, ²Texas A&M University-Kingsville

4:45 PM 113 **Analyzing conflicts between biological and economic efficiencies of beef production without mature cows**

Meredith A. Harrison¹, George Seidel¹, Jason Ahola¹, Ryan Rhoades¹, Daniel Mooney¹

¹Colorado State University

Poster Session IX

5:00 PM – 6:00 PM

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-1 **Influence of Pen-shade area on hematocrit and white blood cells of feedlot cattle during hot season**

Alejandro Ramos-Suarez¹, Juan E. Guerra-Liera², Billy J. Cervantes³, Ruben Barajas⁴

¹Universidad Autónoma de Sinaloa, ²FA Universidad Autónoma de Sinaloa, ³Ganadera Los Migueles SA de CV, ⁴Faculty of Agriculture Universidad Autónoma de Sinaloa

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-2 **Effects of early heat conditioning on heat stress-induced changes in broiler growth performance, oxidative stress in blood, and quality parameters in breast meat**

Anuradha PUNCHIHewage Don¹, Wendy Attuquayefio¹, Sang-Hyon OH¹, Xi Feng², Dong Ahn², Byungrok R. MIN¹

¹University of Maryland Eastern Shore, ²Iowa State University

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-3 **Product quality in finishing cattle fed a high amount of grape pomace**

Arend Frances¹, Neil Goeckner², Matt Beckman², Gordon Murdoch³, Matt Doumit¹, Gwinyai E. Chibisa³

¹University of Idaho, Animal and Veterinary Science, ²Pioneer Enterprises Inc., ³University of Idaho

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-4 **Cleaning frequency and straw bedding length alters behavior and animal and pen cleanliness of fattening bulls**

Astrid Iglesias¹, Ramon Casals², Bruna Quintana³, Anna Sole⁴, Sonia Marti⁵, Maria Devant⁶
¹IRTA/UAB, ²UAB, ³Ruminant Production, IRTA, ⁴IRTA, Ruminant Production, ⁵IRTA- Ruminant Production, ⁶IRTA-Ruminant Production

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-5 **Behavioral Repertoire of Commercial Layers Under Free Range, Semi-Intensive and Intensive Rearing Systems**

Athar Mahmud¹, Ali Husnain¹, Shahid Mehmood¹, Khalid Javed², Muhammad Tahir Khan¹, Sohail Ahmad¹

¹University of Veterinary and Animal Sciences, Lahore, Pakistan, ²Livestock Production, University of Veterinary and Animal Sciences, Lahore, Pakistan

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-6 **Diurnal movement and consumption patterns of calf-fed Holstein steers fed in confinement**

Blake Mari¹, Jake Reed¹, Trent McEvers², Nathan May¹, Lee-Anne Walter¹, Jennie Hodgen³, John P. Hutcheson³, Ty E. Lawrence¹

¹West Texas A&M University, ²Dean Cluck Feedyard, ³Merck Animal Health

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-7 **Effect of season on feedlot performance of shade-protected finishing bull in a hot weather**

Briceida Ortiz-López¹, Billy J. Cervantes², Ruben Barajas³

¹FMVZ Universidad Autónoma de Sinaloa, ²Ganadera Los Migueles SA de CV, ³Faculty of Agriculture Universidad Autónoma de Sinaloa

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-8 **Respiration rate of calf-fed Holstein steers exposed to high ambient temperature during the late finishing phase**

Brooke C. Latack¹, Richard A. Zinn²

¹University of California Cooperative Extension, ²University of California - Davis

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-9 **Tick-borne disease is associated with altered ingestive behaviors and reduced feed and water intake by weaned dairy calves**

Bruna F. Silper¹, Baltazar R. Oliveira Júnior¹, Marcelo N. Ribas², Fernanda S. Machado³, Juliana A. M. Lima³, Luigi F. L. Cavalcanti², Sandra G. Coelho¹

¹Universidade Federal de Minas Gerais, ²CNPq, RHAÉ – SEVA Engenharia, Projeto Intergado, ³Embrapa Dairy Cattle

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-10 **Self-selection of plant bioactive compounds by sheep in response to challenge infection with *Haemonchus contortus***

Cesar Poli ¹, Kara J. Thornton-Kurth ², Jerrad A. Legako ³, Carolina Bremm ¹, Viviane Hampel ¹, Jeffery Hall ², Ignacio R. Ipharraguerre ⁴, Juan J. Villalba ²

¹Universidade Federal do Rio Grande do Sul, ²Utah State University, ³Texas Tech University, ⁴Christian Albrechts University of Kiel

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-11 **Pioglitazone Hydrochloride Combined with Vitamin E or Chromium-Methionine Improves Meat Quality and Muscle Antioxidant Ability in Finishing Pigs**

Cheng-long Jin ¹, Chun-qi Gao ¹, Qiang Wang ¹, Hui-chao Yan ¹, Xiu-qi Wang ²

¹College of Animal Science, South China Agricultural University, ²College of Animal Science, South China Agricultural University

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-12 **Meta-analysis of exercise programs implemented in the research and commercial environments that were designed to enhance *Bos indicus* influence cattle welfare upon entry to a feedlot**

Courtney L. Daigle ¹, Amanda Mathias ², Emily Ridge ², Tryon A. Wickersham ², Ron Gill ³, Jason Sawyer ⁴

¹Department of Animal Science, Texas A&M University, ²Texas A&M University, ³Texas A&M University, Texas A&M AgriLife Extension, ⁴Texas A&M University-Kingsville

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-13 **Effect of oral or subcutaneous meloxicam on indicators of pain after knife castration in weaned beef calves**

Daniela M. Meléndez ¹, Sonia Marti ², Edmond Pajor ³, Desiree Gellatly ³, Eugene Janzen ⁴, Karen Schwartzkopf-Genswein ⁵

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ²IRTA-Ruminant Production, ³University of Calgary, ⁴University of Calgary, Faculty of Veterinary Medicine, ⁵Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-14 **Impact of needle-free injection device on injection-site tissue damage in beef sub-primals**

Dipana Maharjan ¹, Argenis Rodas ², Amelia Tanner ³, Victoria C. Kennedy ³, James D. Kirsch ³, James Gaspers ³, Nicolas Negrin-Pereira ³, Ananda B. P Fontoura ⁴, Marc L. Bauer ³, Kendall C. Swanson ³, Lawrence P. Reynolds ⁵, Gerald Stokka ⁶, Alison K. Ward ³, Carl R. Dahlen ³, Bryan W. W. Neville ⁷, Karin Wittenberg ¹, Emma J. McGeough ¹, Kimberly A. Vonnahme ⁸, Allan L. Schaefer ⁹, Oscar López-Campos ¹⁰, Jennifer L. Aalhus ¹¹, Kim Ominski ¹

¹University of Manitoba, ²University of Manitoba, Department of Animal Science, ³North Dakota State University, ⁴Cornell University, ⁵NDSU, ⁶Department of Animal Sciences, North Dakota State University, ⁷U.S. DEPARTMENT OF AGRICULTURE, ⁸Zoetis, ⁹University of Alberta,

¹⁰Lacombe Research and Development Centre, Agriculture and Agri-Food Canada,

¹¹Agriculture and Agri-Food Canada, Lacombe Research and Development Centre, 6000 C & E Trail, Lacombe, Alberta, Canada T4L 1W1

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-15 **A pilot study to investigate the relationship between social behavior and serum metabolite concentration in finisher pigs**

Elda Dervishi ¹, Lisette van der Zande ², Inonge Reimert ³, Pramod Mathur ⁴, Egbert Knol ⁵, Graham Plastow ⁶

¹Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, ²Topigs Norsvin Research Center, ³Wageningen University & Research, ⁴Topigs Norsvin Research Center B.V., ⁵Topigs Norsvin Research Centre, ⁶University of Alberta

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-16 **Effect of supplementing hydrolysable tannins to a grower-finisher diet containing divergent PUFA levels on growth performance and boar taint levels in the backfat of entire males**

Federica Maghin ¹, Paolo Silacci ², Silvia Ampuero ², Sébastien Dubois ², Giuseppe Bee ²

¹Università degli Studi di Milano, Milan, ²Agroscope

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-17 **Effects of dietary *Allium mongolicum* Regel leaves or probiotic complexes on mutton eating quality and antioxidant activities of DuHan sheep**

He Ding ¹, Wang jing Liu ¹, Chang jin Ao ¹, Erdene Khas ¹

¹College of animal science, Inner Mongolia Agricultural University

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-18 **Sensory texture quality assessment of broiler *Pectoralis major* with the woody breast condition**

Hong Zhuang ¹, Gabriela Sanchez-Brambilia ², Debolina Chatterjee ², Brian Bowker ²

¹USDA-ARS, ²USDA-ARS, US National Poultry Research Center

ANIMAL HEALTH

5:00 PM PSIX-19 **Late-Breaking: Immune responses of weaned pigs from lactating sows fed palm kernel expellers**

J Kim ¹, Jeongjae Lee ², Sheena Kim ², Byeonghyeon Kim ², Joowon Kang ², Daye Mun ², Jangryeol Baek ², Soyun Kim ³, Jeehwan Choe ⁴, Minho Song ²

¹, ²Chungnam National University, ³Chungnam National University, ⁴Korea National College of Agriculture and Fisheries

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-20 **Sow behavior, heart rate, and cortisol responses to a novel piglet crushing prevention technology to reduce pre-weaning mortality**

Jared M. Mumm ¹, Eduarda M. Mazzardo Bortoluzzi ¹, Morgan J. Coffin ², Luke A. Ruiz ², Mikayla J. Goering ², David T. Medin ³, Matthew S. Rooda ³, Lindsey E. Hulbert ²

¹Kansas State University - Animal Science and Industry, ²Kansas State University, ³Swine Tech, Inc.

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-21 **Computer vision system as a tool to predict intramuscular fat of pork whole loin and chop**

Jenghung Liu ¹, Xin (Rex) Sun ², Jennifer M. Young ³, David Newman ⁴

¹North Dakota State University, ²North Dakota State University, ³Department of Animal Sciences, North Dakota State University, ⁴Arkansas State University

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-22 **The behavioural effects of innovative litter developed to attract cats**

Jennifer Frayne¹, Anna K. Shoveller¹, Candace Cronney², Anne M. Edwards¹
¹University of Guelph, ²Purdue University

TEACHING/UNDERGRADUATE AND GRADUATE EDUCATION

5:00 PM PSIX-23 **Prior completion of general chemistry improves success in animal nutrition**

Jessica Suagee-Bedore¹, Thomas Janini², Jonathon Flad², Karen Bennett-Wimbush³, Mike Amstutz³, Jeanine Osborne², Daniel Linden²
¹Sam Houston State University, ²The Ohio State University, ³The Ohio State University Agricultural Technical Institute

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-24 **Concentration of minerals in meat of lambs fattened under different feeding systems**

José María Arroyo¹, Mariela Pistón², Fariña Victoria¹, María José Urioste¹, Sebastián Brambillasca¹, José Luis Repetto³, Cecilia Cajarville⁴, Analía Pérez-Ruchel¹
¹Instituto de Producción Animal, Facultad de Veterinaria, Universidad de la República, ²Química Analítica, DEC, Facultad de Química, Universidad de la República, Montevideo, Uruguay, ³Unidad Académica de Bovinos, Departamento de Producción Animal y Salud de los Sistemas Productivos, Universidad de la República, Facultad de Veterinaria, Ruta 1 km 42.5, San José, Uruguay, ⁴Unidad Académica de Nutrición Animal, Departamento de Producción Animal y Salud de los Sistemas Productivos, Universidad de la República, Facultad de Veterinaria, Ruta 1 km 42.5, San José, Uruguay

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-25 **Meat quality of young cattle fed with different nutritional plans on growing phase and finished in pasture or feedlot**

Juliana A. Torrecilhas¹, Erick E. Dallantonia¹, Lais O. Lima¹, Tiago Simioni², Kenia L. G. C. Alves³, Josiane F Lages⁴, Giovani Fiorentini¹, Telma Berchielli⁵
¹São Paulo State University (Unesp), School of Agricultural and Veterinarian Sciences, Jaboticabal, ²São Paulo State University, ³Unesp Jaboticabal, ⁴ASAS, ⁵Sao Paulo State University

TEACHING/UNDERGRADUATE AND GRADUATE EDUCATION

5:00 PM PSIX-26 **Late-Breaking: Increasing exposure of undergraduate students to animal agriculture: Creation of a face to face and online general animal science course as part of a university core curriculum**

Kathrin Dunlap¹, Leslie Frenzel², Shawn Ramsey³
¹Texas A&M University, ²Texas A&M University-Department of Animal Science, ³Texas A&M University, Department of Animal Science

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-27 **Effect of environmental enrichment devices on behavior of individually housed beef heifers**

Kelsey Bruno¹, Elizabeth DeSocio¹, Jason White¹, Blake K. Wilson²
¹Oklahoma State University, ²Department of Animal Science, Oklahoma State University

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-28 **The Effectiveness of the Parelli Horsenality Profiling System in Determining Suitability of Horses for Therapeutic Riding Programs**

Mark Anderson ¹, Lori Ramagli ², Marcy M. Beverly ¹, Jessica L. Leatherwood ³

¹Sam Houston State University, ²Sam Houston State university, ³Texas A&M University

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-29 **Effect of condensed tannin extract (BYPRO®) on carcass traits of cattle in a feedlot system**

Maurícia Brandão. Silva ¹, Juliano José de Resende Fernandes ², Kaique S. Nascimento ¹, Lorena Emily L M Bomfim ¹, Victor R. Moreira Couto ¹, Wallace Vieira da Silva Santos ¹, Ana Laura Araújo Lopes ², Debora Gomes de Sousa ¹

¹Universidade Federal de Goiás, ²Goiás Federal University

TEACHING/UNDERGRADUATE AND GRADUATE EDUCATION

5:00 PM PSIX-30 **Determining Effective Minimum Grade Requirements in Early Prerequisite Courses to Ensure Student Success in Animal Science**

Michael J. Mann ¹, Cheryl Kojima ², Liesel G. Schneider ³, Arnold M. Saxton ²

¹University of Tennessee, Department of Animal Science, ²University of Tennessee, ³Animal Science Department, University of Tennessee Institute of Agriculture

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-31 **Early postmortem pH and glycogen content, and their association with meat quality traits in grass-fed steers.**

Nancy C. Jerez-Timaure ¹, Gaspar Brickmann ¹, Alfredo Ramirez ¹, Pablo Strobel ¹, Maureen Berkhoff ¹

¹Universidad Austral de Chile

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-32 **Effects of feeding upper vitamin D3 limit over the finishing period on heifer performance and beef tenderness**

Payam Vahmani ¹, David C. Rolland ¹, Ivy L. Larsen ¹, Oscar López-Campos ², Nuria Prieto ², Jennifer L. Aalhus ¹, Michael E.R. Dugan ¹

¹Agriculture and Agri-Food Canada, Lacombe Research and Development Centre, 6000 C & E Trail, Lacombe, Alberta, Canada T4L 1W1, ²Lacombe Research and Development Centre, Agriculture and Agri-Food Canada

TEACHING/UNDERGRADUATE AND GRADUATE EDUCATION

5:00 PM PSIX-33 **Student perceptions on the ability of a certificate in equine science to prepare them for obtaining an industry career**

Rafael E. Martinez ¹, Jessica L. Leatherwood ², Neely L. Walker ³, Mattea L. Much ², Martha Vogelsang ²

¹Department of Animal Science, Texas A&M University and Texas A&M AgriLife Research,

²Texas A&M University, ³Louisiana State University Agricultural Center

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-34 **Acclimating feedlot cattle: Effects on home pen behavior**

Rebecca Parsons ¹, Grant Dewell ¹, Renee D. Dewell ¹, Johann F. Coetzee ², Tom Noffsinger ³, Anna K. Johnson ¹, Suzanne Millman ¹

¹Iowa State University, ²Kansas State University College of Veterinary Medicine, Department of Anatomy and Physiology, Manhattan, KS, ³Production Animal Consultation

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-35 **Finishing feeding strategies for dairy steers based on summer turnip and their effects on beef quality produced in south Chile**

Rodrigo Morales ¹, Ignacio Subiabre ¹, Joaquin Lara ², Rafael Larraín ², Francisco A. Sales ³
¹Instituto de Investigaciones Agropecuarias, Osorno, Chile, ²Facultad de Agronomía e Ingeniería Forestal, Pontificia Universidad Católica de Chile. Santiago, Chile., ³Instituto de Investigaciones Agropecuarias, Punta Arenas, Chile

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-36 **Influence of pen-shade area on feedlot performance of finishing bulls in a warm environment**

Ruben Barajas ¹, Billy J. Cervantes ², Juan E. Guerra-Liera ³, Alejandro Ramos-Suarez ⁴
¹Faculty of Agriculture Universidad Autónoma de Sinaloa, ²Ganadera Los Migueles SA de CV, ³FA Universidad Autónoma de Sinaloa, ⁴Universidad Autónoma de Sinaloa

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-37 **Fatty acid composition and antioxidant potential of beef from steers fed corn or wheat dried distillers' grains in a supplement to grass silage**

Saheed A. Salami ¹, Michael N. O'Grady ¹, Giuseppe Luciano ², Alessandro Priolo ³, Stephen Onakuse ⁴, Mark McGee ⁵, Aidan P. Moloney ⁵, Joseph Kerry ¹
¹Food Packaging Group, School of Food and Nutritional Sciences, College of Science, Engineering and Food Science, University College Cork, Cork, Ireland, ²Animal Production Science, University of Perugia, Perugia, Italy, ³Animal Production Science, University of Catania, Catania, Italy, ⁴Department of Food Business and Development, University College Cork, Cork, Ireland, ⁵Teagasc

ANIMAL HEALTH

5:00 PM PSIX-38 **Late-Breaking: Effect of butyrate and/or tannin extract on the consequences, namely the production results, of a coccidiostatic or a vaccination against coccidiosis in male broilers**

Saskia Leleu ¹, Beatrice Wegge ¹, Luc Goethals ¹, Marta Lourenco ¹, Evelyne Delezie ¹

ANIMAL HEALTH

5:00 PM PSIX-39 **Late-Breaking: Effects of brown rice as alternatives on immune responses and gut microbiota of weaned pigs**

Sheena Kim ¹, J Kim ², Jeongjae Lee ¹, Byeonghyeon Kim ¹, Joowon Kang ¹, Daye Mun ¹, Jangryeol Baek ¹, Soyun Kim ³, Jeehwan Choe ⁴, Minho Song ¹
¹Chungnam National University, ², ³Chungnam National University, ⁴Korea National College of Agriculture and Fisheries

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-40 **Effect of abrupt increase the hours of daily light exposure during winter months in Holstein bulls fed high-concentrate diets**

Sonia Marti ¹, Carles Medinya ², Armando Pérez ³, Marcal Verdu ⁴, Anna Sole ⁵, Bruna Quintana ⁶, Maria Devant ⁷
¹IRTA- Ruminant Production, ²Nutricion Animal S.L., ³PIENSOS PROCASA, ⁴Alimentació Animal i Producció, bonÀrea Agrupa, ⁵IRTA, Ruminant Production, ⁶Ruminant Production, IRTA, ⁷IRTA-Ruminant Production

ANIMAL BEHAVIOR AND WELL-BEING

5:00 PM PSIX-41 **Effect of progressive increase the hours of daily light exposure during winter months in Holstein bulls fed high-concentrate diets**

Sonia Marti ¹, Carles Medinya ², Armando Pérez ³, Marcal Verdu ⁴, Anna Sole ⁵, Bruna Quintana ⁶, Maria Devant ⁷

¹IRTA- Ruminant Production, ²Nutricion Animal S.L., ³PIENSOS PROCASA, ⁴Alimentació Animal i Producció, bonÀrea Agrupa, ⁵IRTA, Ruminant Production, ⁶Ruminant Production, IRTA, ⁷IRTA-Ruminant Production

MEAT SCIENCE AND MUSCLE BIOLOGY

5:00 PM PSIX-42 **Inactivation of gene α -1,3-galactosyltransferase in bovine aortic smooth muscle cells using CRISPR-Cas9**

Yan Huang ¹, Xiaodan Wang ¹, Jason Apple ²

¹University of Arkansas, ²University of Arkansas Division of Agriculture

ASAS Public Policy Committee Meeting

5:30 PM – 6:30 PM

CSAS Awards Banquet

6:00 PM – 9:00 PM

ASAS-CSAS Annual Meeting Wine and Cheese Poster Social

6:30 PM – 8:30 PM

Poster Session X

6:30 PM – 7:30 PM

RUMINANT NUTRITION

6:30 PM PSX-1 **Nitrogen balance in beef cattle offered mid-season grass herbage fertilised with two rates of nitrogen**

Alan O'Connor ¹, Aidan P. Moloney ², Padraig O'Kiely ¹, Tommy Boland ³, Mark McGee ²

¹Teagasc, Grange Research Centre, Dunsany, Co. Meath, Ireland, ²Teagasc, ³UCD

RUMINANT NUTRITION

6:30 PM PSX-2 **In vitro evaluation of the inclusion of a fibrous concentrate to partial Total Mixed Ration for lambs**

Alejandro Britos ¹, Bruno Dearmas ², José Luis Repetto ³, Cecilia Cajarville ⁴

¹Facultad de Veterinaria - Universidad de la Republicaública, ²Facultad de Veterinaria - Universidad de la Republica, ³Unidad Académica de Bovinos, Departamento de Producción Animal y Salud de los Sistemas Productivos, Universidad de la República, Facultad de Veterinaria, Ruta 1 km 42.5, San José, Uruguay, ⁴Unidad Académica de Nutrición Animal, Departamento de Producción Animal y Salud de los Sistemas Productivos, Universidad de la República, Facultad de Veterinaria, Ruta 1 km 42.5, San José, Uruguay

SWINE SPECIES

6:30 PM PSX-3 **Estimation of biodiversity of four Russian local pig breeds and wild boar based on SNP-analysis.**

Aleksey Aleksandrovich. Traspov¹, Veronika R. Kharzinova¹, Igor Aleksandrovich. Domsy², Alexander Vyacheslavovich. Ecomonov³, Olga V. Kostyunina¹, Natalia A. Zinovieva¹

¹L.K. Ernst Federal Research Center for Animal Husbandry, ²Russian Game Management and Fur Farming Research Institute, ³Russian Research Institute of Game Management and Fur Farming, Russian Academy of Agricultural Sciences

SWINE SPECIES

6:30 PM PSX-4 **Zearalenone and metabolite uptake modulation by feeding Mycosorb A+® to growing pigs.**

Alexandros Yiannikouris¹, Colm Moran², Jason D. Keegan³, Paul Groenewegen⁴, Kirsi Vienola⁵, Juha Apajalahti⁵

¹Alltech Inc., ²Alltech SARL, ³Alltech Ireland, ⁴Alltech Inc, ⁵Alimetrics Ltd.

SWINE SPECIES

6:30 PM PSX-5 **Evidences of mitochondrial dysfunction and oxidative stress in newly weaned piglets.**

Aliny Kétilim-Novais¹, Caroline Roy¹, Sandrine Beaulieu¹, Yan Martel-Kennes¹, Martin Lessard¹, Jacques Matte¹, Jérôme Lapointe²

¹Agriculture et Agroalimentaire Canada / Agriculture and Agri-Food Canada, ²Agriculture and Agri-Food Canada

SWINE SPECIES

6:30 PM PSX-6 **Effect of dietary microalgae and fish oil on the nursery pig acute-phase response**

Alison Lee¹, Lan You¹, Ziwei Li¹, Steven Oh¹, Mike Alcorn¹, Cuilan Zhu¹, Rebecca Fisher-Heffernan¹, Tim Regnault², Lee-Anne Huber¹, Niel A. Karrow³

¹University of Guelph, ²Western University, ³Department of Animal Biosciences, University of Guelph

BEEF SPECIES

6:30 PM PSX-7 **Differences of the carcass and non-carcass traits between divergent groups for residual feed intake in water buffaloes.**

André Michel de Castilhos¹, Caroline L. Francisco², Amanna Jacaúna¹, Felipe de Barros², Daiane C. Marques da Silva², Aline S. Aranha², Paulo Roberto Meirelles¹, André M. Jorge¹

¹Sao Paulo State University / School of Veterinary Medicine and Animal Science, ²São Paulo State University - Unesp, School of Veterinary Medicine and Animal Science - FMVZ, Department of Animal Production and Preventive Veterinary Medicine - DPAMVP

BEEF SPECIES

6:30 PM PSX-8 **Use of anabolic implants in calves to increase weaning weight and backgrounding gains**

Brian Beer¹, G. Scott Sell¹, S. Maggie Justice¹, John G. Andrae¹, Maggie Miller¹, Matt Burns¹, Susan K. Duckett¹

¹Clemson University

SMALL RUMINANT

6:30 PM PSX-9 Sexual Behavior of Rams Exposed to Anovulatory Ewes Receiving Different Doses of P4 plus ECG in Northern Mexico

Carolina Villalobos-Triana ¹, JUAN M. GUILLEN ², Juan Ramon Luna-Orozco ³, Sergio Orlando Yong-Wong ¹, Francisco Gerardo Véliz-Deras ¹, MA ANGELES DE SANTIAGO ², Viridiana Contreras-Villarreal ¹

¹Universidad Autonoma Agraria Antonio Narro, ²UAAAN, ³Instituto Tecnológico de Torreon

BEEF SPECIES

6:30 PM PSX-10 Blood serum traits associated with efficiency measures in water buffaloes.

Caroline L. Francisco ¹, André Michel de Castilhos ², Paulo Roberto Meirelles ², Aline S. Aranha ¹, Daiane C. Marques da Silva ¹, Amanna Jacaúna ², Felipe de Barros ¹, Rafael Pinheiro ³, Jessica Arismendi ⁴, André M. Jorge ²

¹São Paulo State University - Unesp, School of Veterinary Medicine and Animal Science - FMVZ, Department of Animal Production and Preventive Veterinary Medicine - DPAMVP, ²Sao Paulo State University / School of Veterinary Medicine and Animal Science, ³Sao Paulo State University, ⁴Universidad de Antioquia / Medellin

BEEF SPECIES

6:30 PM PSX-11 Climatic conditions associated with feed and water intake and body weight of feedlot water buffaloes

Caroline L. Francisco ¹, André Michel de Castilhos ², Daiane C. Marques da Silva ¹, Aline S. Aranha ¹, Felipe de Barros ¹, Amanna Jacaúna ², Paulo Roberto Meirelles ², André M. Jorge ²

¹São Paulo State University - Unesp, School of Veterinary Medicine and Animal Science - FMVZ, Department of Animal Production and Preventive Veterinary Medicine - DPAMVP, ²Sao Paulo State University / School of Veterinary Medicine and Animal Science

SWINE SPECIES

6:30 PM PSX-12 Effects of dietary supplementation with α -terpineol on growth performance and intestinal functions in piglets challenged with recombinant E. coli strain LMG194-Sta

Dan Yi ¹, Haiwang Xu ¹, Yongqing Hou ¹, Lei Wang ¹, Di Zhao ¹, Tao Wu ², Binying Ding ¹, Guoyao Wu ³

¹Wuhan Polytechnic University, ²Wuhan polytechnic University, ³Texas A&M University

BEEF SPECIES

6:30 PM PSX-13 The University of Missouri DVM-MS Dual Program in Bovine Reproduction

David J. Patterson ¹, James William C. Locke ², Emma R. Knickmeyer ², Rachael C. Bonacker ², Jordan M. Thomas ¹, Michael F. Smith ³, Scott E. Pooch ¹

¹University of Missouri, ²University of Missouri - Columbia, ³University of Missouri Division of Animal Sciences

BEEF SPECIES

6:30 PM PSX-14 The University of Missouri Internship in Bovine Reproductive Management

Emma R. Knickmeyer ¹, Jordan M. Thomas ², Megan McLean ², Lauren Ciernia ², James William C. Locke ¹, Rachael C. Bonacker ¹, Jared E. Decker ², Michael F. Smith ³, David J. Patterson ²

¹University of Missouri - Columbia, ²University of Missouri, ³University of Missouri Division of Animal Sciences

RUMINANT NUTRITION

6:30 PM PSX-15 Screening recombinant fibrolytic enzymes for improved ruminal fiber degradability of barley straw

Gabriel O. Ribeiro Jr ¹, Ajay Badhan ², Jiangli Huang ³, Karen A. Beauchemin ⁴, WenZhu Yang ⁴, Yuxi Wang ², Adrian Tsang ⁵, Tim A. McAllister ⁴

¹Agriculture and Agri-Food Canada; Lethbridge Research and Development Centre, ²Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ³Institute of Biological Resources, Jiangxi Academy of Sciences, ⁴Agriculture and Agri-Food Canada, ⁵Centre for Structural and Functional Genomics, Concordia University

SWINE SPECIES

6:30 PM PSX-16 GC-FID method validation and stability assessment of DHA in swine tissues

Gerry P. Dillon ¹, Walter Brandl ², Cathy Cardinal ², Wendy Yuan ², Paul Groenewegen ³, Alexandros Yiannikouris ⁴, Colm Moran ⁵

¹Alltech Ireland, ²Mérieux Nutrisciences, ³Alltech Inc, ⁴Alltech Inc., ⁵Alltech SARL

EXTENSION EDUCATION

6:30 PM PSX-17 Late-Breaking: Calving interval in Holstein cattle herds in Los Altos de Jalisco, Mexico

Heriberto Estrella-Quintero ¹, D Valentina. Mariscal-Aguayo ¹, Enrique Salas-Barboza ², Andres Martinez-Cuevas ³

¹Universidad Autonoma Chapingo, ²Independent advisor, ³Asesores San José

RUMINANT NUTRITION

6:30 PM PSX-18 Inclusion of physically effective fiber from forage on whole corn based diets for beef cattle and its effects on the intake and digestibilities of dry matter, starch and neutral detergent fiber

Herlon Alhadas ¹, Sebastião de Campos Valadares Filho ², Caio Souza ¹, Lethiane Rocha ¹, Marcos Pacheco ³, Breno Silva ³, Douglas Costa ¹, Hilário Mantovani ¹

¹Federal University of Vicosa, ²Universidade Federal de Viçosa, ³UFV

BEEF SPECIES

6:30 PM PSX-19 Effects of yeast fermentation products on performance and serum metabolites of beef cattle grazing warm season pastures

J. D. Rivera ¹, Joseph Johnson ¹, Alexis Lutz ¹, Rhonda C. Vann ², Paige N. Tipton ³

¹Mississippi Agricultural and Forestry Experiment Station-White Sand Branch, Mississippi State University, ²Department of Animal and Dairy Sciences, College of Agriculture and Life Sciences, Mississippi State University, Starkville, ³Department of Animal and Dairy Sciences, Mississippi State University

SWINE SPECIES

6:30 PM PSX-20 **Evaluation of the effectiveness of an anti-mycotoxins additive, to reduce toxic effects on weaned pigs, when consuming feed contaminated with deoxynivalenol**

Jose Antonio Fierro¹, Juan Carlos Medina¹
¹NUTEK, S.A. de C.V.

BEEF SPECIES

6:30 PM PSX-21 **Influence of estrous synchronization on herd calving distribution and weaning weight**

Julie Walker¹, George Perry², Jerica Rich², Emmalee Northrop², Stephanie Perkins², Taylor Grussing³, Warren C. Rusche²

¹South Dakota State University Department of Animal Science, Brookings, SD, ²South Dakota State University, ³SDSU Extension

RUMINANT NUTRITION

6:30 PM PSX-22 **Feeding condensed and hydrolysable tannins in high protein finishing diets to beef cattle to reduce ammonia emissions from manure**

Karen M. Koenig¹, Karen A. Beauchemin², Sean M. McGinn¹

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ²Agriculture and Agri-Food Canada

SWINE SPECIES

6:30 PM PSX-23 **Influence of immunocastration on genital organs and sex hormones of heavy gilts**

Leticia Pérez-Ciria¹, Olga Mitjana², María Victoria Falceto², Andres Suárez², Francisco Javier Miana-Mena¹, Manuel Fondevila³, María Ángeles Latorre²

¹IA2-Universidad de Zaragoza, ²Universidad de Zaragoza, ³University of Zaragoza

SWINE SPECIES

6:30 PM PSX-24 **Effect of compound organic trace minerals on growth performance, serum indices and micromineral excretion in fattening pigs**

Lianxiang Ma¹, Junna He², Chuanchuan Hou², Jialing Qiu², Xintao Lu¹, B Liu², Gang lin³, Yan Xue⁴, Anne Koontz⁵, Dongyou Yu¹

¹College of Animal Sciences, Zhejiang University, Hangzhou, P. R. China, ²College of Animal Sciences, Zhejiang University, Hangzhou, P. R. China, ³Beijing Alltech Biological Products Co. Limited, ⁴Alltech Biological Products (Beijing) Co., Ltd., Beijing, P. R. China, ⁵Alltech

SWINE SPECIES

6:30 PM PSX-25 **Effect of total replacing inorganic trace minerals with low dose organic trace minerals on reproductive performance, mineral status and fecal mineral excretion of sows**

Lianxiang Ma¹, Chuanchuan Hou², Junna He², Jialing Qiu², B Liu², Gang lin³, Yan Xue⁴, Anne Koontz⁵, Dongyou Yu¹

¹College of Animal Sciences, Zhejiang University, Hangzhou, P. R. China, ²College of Animal Sciences, Zhejiang University, Hangzhou, P. R. China, ³Beijing Alltech Biological Products Co. Limited, ⁴Alltech Biological Products (Beijing) Co., Ltd., Beijing, P. R. China, ⁵Alltech

RUMINANT NUTRITION

6:30 PM PSX-26 **Ruminal bacteria and protozoa profile during adaptation and finishing periods of Nellore cattle previously submitted to either nutritional restriction or intake concentrate feedstuffs.**

Luana Felizari¹, Danilo D. Millen², Gustavo Perina Bertoldi¹, Mariana M. Squizatti³, Antonio M. M. Silvestre³, Ana Beatriz Pavão Coffani Nunes⁴, Lígia Garcia Mesquita⁵, Danilo Millen¹
¹São Paulo State University (UNESP), Animal Science College, Dracena, São Paulo, Brazil 17900-000, ²College of Technology and Agricultural Sciences, São Paulo State University (UNESP), Dracena, Brazil, ³School of Veterinary Medicine and Animal Science, São Paulo State University (UNESP), Botucatu, Brazil, ⁴São Paulo State University (UNESP), Animal Science College, ⁵São Paulo University (USP), School of Veterinary Medicine and Animal Science, Pirassununga, Brazil 13635-900

SWINE SPECIES

6:30 PM PSX-28 **Dietary Lycopene Helps Protecting Pork Against Oxidation**
Marcelise R. Fachinello¹, Eliane Gasparino¹, Alessandra Nardina Tricia Rigo. Monteiro¹, Natalia Yoko. Sitanaka¹, Camila de Araujo. Moreira¹, Leandro Dalcin. Castilha¹, André Vinicius Sturzenegger Partyka¹, Paulo C. Pozza²

¹Universidade Estadual de Maringá, ²State University of Maringá

BEEF SPECIES

6:30 PM PSX-29 **Intake, feed efficiency and carcass traits of Charolais and Holstein-Friesian steers offered a high-concentrate diet**

Mark McGee¹, David A. Kenny², Claire Fitzsimons³

¹Teagasc, ²Teagasc Animal and Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath, Ireland, ³Department of Agriculture, Ireland

BEEF SPECIES

6:30 PM PSX-30 **Effects of pre-breeding administration of injectable trace mineral supplements on subsequent reproductive performance in beef herds**

Mellissa Crosswhite¹, Carl R. Dahlen²

¹Oklahoma State University, ²North Dakota State University

SWINE SPECIES

6:30 PM PSX-31 **Effects of Dietary Non-starch Polysaccharide (NSP) and NSP-Degrading Enzyme Complex (Endo-Power™) Supplementation on Growth Performance, Intestinal Environments and Systemic Immune Responses in Growing Pigs**

Minjin Kwak¹, Jonggun Kim¹, Ki Peum Sung², Kwang-Youn Whang¹

¹Korea University, ²EASY BIO Inc., Seoul, Korea

RUMINANT NUTRITION

6:30 PM PSX-32 **The rumen microbiome of Hanwoo steers from the growing to fattening stages**

Minseok Kim¹, Jin Young Jeong¹, Jaeyong Song¹, Hyun Jung Lee², Seul Lee¹, Youlchang Baek¹, Sang Yun Ji³

¹National Institute of Animal Science, ²Department of Agricultural Biotechnology, College of Agriculture and Life Science, Seoul National University, ³Rural Development Administration

SWINE SPECIES

6:30 PM PSX-33 **Effects of cellulase-producing microorganisms isolated from silkworm (*Bombyx mori*) on growth performance and gut microbial community composition of weaned piglets**

Robin Becina. Guevarra¹, Sun Hee Lee¹, Vignesh Marimuthu¹, Jun Hyung Lee², Sheena Kim³, Jangryeol Baek³, Daye Mun³, Jin Young Kim¹, Seunghye Paek¹, Seoung Jung¹, Minho Song³, Hyeun Bum Kim¹

¹Dankook University, ²Department of Agricultural Biotechnology, Seoul National University, ³Chungnam National University

SWINE SPECIES

6:30 PM PSX-34 **Body weight at the end of the nursery period may be a suitable predictor of carcass depreciation, helping to improve the efficiency for the entire growing-fattening period**

Sergi López-Vergé¹, Mercè Farré², Josep Gasa³, David Solà-Oriol³

¹Animal Nutrition and Welfare Service, Department of Animal and Food Sciences, Universitat Autònoma de Barcelona, Bellaterra, Spain, ²Department of Mathematics, area of Statistics and Operations Research, Universitat Autònoma de Barcelona, Bellaterra, Spain, ³Animal Nutrition and Welfare Service (SNIBA), Department of Animal and Food Science, Autonomous University of Barcelona, Bellaterra 08193, Spain

SWINE SPECIES

6:30 PM PSX-35 **Effects of dietary plant extracts on growth performance and intestinal microbiota composition in weaned piglets**

Sun Hee Lee¹, Robin Becina. Guevarra¹, Jun Hyung Lee², Vignesh Marimuthu¹, Doowan Kim³, Sheena Kim⁴, Jangryeol Baek⁴, Daye Mun⁴, Minho Song⁴, Hyeun Bum Kim¹

¹Dankook University, ²Department of Agricultural Biotechnology, Seoul National University, ³National Institute of Animal Science, ⁴Chungnam National University

RUMINANT NUTRITION

6:30 PM PSX-36 **Rumen protozoal dynamics of beef calves along transition from a milk/grass diet to a high-concentrate based diet: effect of tannins or medium-chain fatty acids as additives**

Susana Yuste¹, Gabriel de la Fuente², Zahia Amanzougarene¹, Antonio de Vega³, Manuel Fondevila⁴

¹Universidad de Zaragoza, ²Universitat de Lleida, ³Universidad de Zaragoza-CITA, ⁴University of Zaragoza

SMALL RUMINANT

6:30 PM PSX-37 **Influence of type of birth and sex on weight the weaning of Dorper crossbred lambs**

Tiago Neves Pereira. Valente¹, Jeferson Corrêa. Ribeiro², Wallacy Barbacena Rosa dos. Santos², Andréia Santos. Cezário², Erico da Silva. Lima³

¹Instituto Federal Goiano, Posse, Brazil, ²Instituto Federal Goiano, Morrinhos, Brazil., ³Master's Degree Studies Program in Environmental Health at FMU, São Paulo/SP, Brazil

SWINE SPECIES

6:30 PM PSX-38 **Tryptophan alleviates intestinal injury in lipopolysaccharide-challenged weaning piglets**

Wence Wang¹, Yingli Yan¹, Yichao Yan¹, Yongwen Zhu¹, Hui Ye¹, Lin Yang¹

¹South China Agricultural University

SWINE SPECIES

6:30 PM PSX-39 **Effect of body condition measured using a sow caliper on performance of group-housed gestating sows**

Yuzhi Li ¹, Shiquan Cui ¹, Samuel Baidoo ², Lee J. Johnston ¹

¹West Central Research and Outreach Center, University of Minnesota, ²University of Minnesota Southern Research and Outreach Center, Waseca, MN

BEEF SPECIES

6:30 PM PSX-40 **Gene co-expression networks contributing to compensatory growth in jejunal epithelium of cattle**

Yvonne Mullins ¹, Kate Keogh ¹, David A. Kenny ², Sinead Waters ¹

¹Teagasc, ²Teagasc Animal and Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath, Ireland

BEEF SPECIES

6:30 PM PSX-41 **Immunological status of cattle during dietary restriction and subsequent compensatory growth**

Yvonne Mullins ¹, Kate Keogh ¹, David A. Kenny ², Sinead Waters ¹

¹Teagasc, ²Teagasc Animal and Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath, Ireland

SWINE SPECIES

6:30 PM PSX-42 **Assessing Haplotype-based Genomic Predictions in Canadian Swine Breeds**

Zahra Karimi ¹, Mohsen Jafarikia ², Andy Robinson ³, Mehdi Sargolzaei ⁴, Flavio S. Schenkel ⁵

¹Canadian Centre for Swine Improvement, ²Canadian Centre for Swine Improvement Inc., Ottawa, ON, Canada; Centre for Genetic Improvement of Livestock, University of Guelph, Guelph, ON, Canada, ³University of Guelph, department of animal bioscience, ⁴University of Guelph, ⁵University of Guelph, Department of Animal Biosciences, Centre for Genetic Improvement of Livestock, Guelph, ON, Canada

Poster Session XI

7:30 PM– 8:30 PM

FORAGES AND PASTURES

7:30 PM PSXI-1 **Evaluating the yield and nutritive value of perennial forage species for stockpile grazing of beef cows under western Canadian conditions**

Brittainy Hewitt ¹, Emma J. McGeough ¹, Doug Cattani ¹, Kim Ominski ¹, Gary Crow ¹, Karin Wittenberg ¹

¹University of Manitoba

RUMINANT NUTRITION

7:30 PM PSXI-2 **Milk composition of Girolando cattle fed with calcium salt of palm oil**

Carol Lopez-Rodriguez ¹, Aleisi Quintero-Vergel ¹, Ivan Rodriguez-Carrascal ², Ciro Ordoñez-Gomez ²

¹Universidad Francisco de Paula Santander-Ocaña, ²Independent

FORAGES AND PASTURES

7:30 PM PSXI-3 **Tussock dynamics in pastures of BRS Zuri and BRS Quênia under rotational stocking**

Cassia Freitas ¹, Karina Ribeiro ¹, Priscila Valote ², Thaís Jaguaribe ³, Mateus Jose Abreu ⁴, Maria Carolina Sousa ⁵, Mirton Morenz ⁶, Carlos Augusto Gomide ⁶

¹Universidade Federal de Viçosa, ²UFRRJ, ³UFJF, ⁴IFET Rio Pomba, ⁵UFBA, ⁶EMBRAPA

COMPARATIVE GUT PHYSIOLOGY

7:30 PM PSXI-4 **Minimum inhibitory concentration of a heterotrophically grown, dried microalgae powder (All-G-Rich®) and extracted microalgal oil against selected intestinal microorganisms**

Colm Moran ¹, Jason D. Keegan ², Kate A. Jacques ³, Heather Hart ⁴

¹Alltech SARL, ²Alltech Ireland, ³Alltech Inc, ⁴ABC Research Laboratories

RUMINANT NUTRITION

7:30 PM PSXI-5 **Profiling of transcriptome responses of the intestinal epithelium to starch hydrolysate direct infusion using RNA-seq technology**

Congjun Li ¹, Ransom Baldwin ²

¹USDA-ARS, ²Animal Genomics & Improvement Laboratory, ARS, USDA

RUMINANT NUTRITION

7:30 PM PSXI-6 **Evaluation of Palm kernel meal supplementation on grazing dairy cows at highlands**

Diana Andrade ¹, Pamela Tituaña ¹, Diego Vela ¹, Christian H. Ponce ²

¹Universidad de las Fuerzas Armadas-ESPE, ²Universidad San Francisco de Quito

FORAGES AND PASTURES

7:30 PM PSXI-7 **Sustainable intensification of the beef cattle production system in Brazil: animal performance in growing phase in pasture**

Erick E. Dallantonia ¹, Josiane F Lages ², Juliana A. Torrecilhas ¹, Rhaony Gonçalves. Leite ³, Adriana Ferrari ⁴, Luis Gustavo Rossi ³, Márcia Helena Fernandes ³, Ricardo Reis ⁵

¹São Paulo State University (Unesp), School of Agricultural and Veterinarian Sciences, Jaboticabal, ²ASAS, ³Sao Paulo State University, Jaboticabal, Brazil, ⁴São Paulo State University, Jaboticabal, ⁵Department of Animal Science, Unesp, Jaboticabal

RUMINANT NUTRITION

7:30 PM PSXI-8 **Supplementation of a fennel herbaceous flavor to total mixed rations containing cottonseed or flaxseed increased dry matter intake of high-yield Holstein cows during early lactation period**

Haifeng Wang ¹, Chong Wang ², Xudong Wang ², Maolong He ³

¹College of Animal Science, Zhejiang University, ²Faculty of Animal Sciences, Zhejiang Agricultural and Forestry University, ³Luca Flavours Co. Ltd.,

RUMINANT NUTRITION

7:30 PM PSXI-9 **Effects of cultivation stages on in vitro rumen digestibility and fermentation characteristics of sprouted barley**

hyuk jun lee ¹, youngho joo ², seongshin Lee ³, Dimas Hand Vidya Parahipta ⁴, In Hak Choi ⁵, Dong Hyeon Kim ⁶, samchrul kim ²

¹Division of Applied Life Science (BK 21Plus, Insti. of Agric. & Life Sci.), Gyeongsang National University, ²Gyongsang National University, ³Korean National Institute of Animal Science, ⁴Gyeongsang National University, ⁵Joongbu University, ⁶University of Florida

COMPARATIVE GUT PHYSIOLOGY

7:30 PM PSXI-10 **Rumen microbial characteristics of goats selectively bred to have greater consumption of *Juniperus pinchotii* forage**

Jeff A. Brady¹, Whit C. Stewart², Travis R. Whitney³, Eric J. Scholljegerdes⁴, Carl J. Yeoman⁵, Dan F. Waldron³, Jeffrey M. B. Musser⁶, Bob Adams⁷, John W. Walker⁸

¹Department of Crop and Soil Sciences, Texas A&M AgriLife, ²Department of Animal Science, University of Wyoming, ³Texas A&M AgriLife Research, ⁴NM State Univ., Dept. Animal and Range Sci., ⁵Montana State University, ⁶Texas A&M University, College of Vet. Medicine and Biomedical Sci., ⁷Baylor University, ⁸Texas A&M AgriLife

FORAGES AND PASTURES

7:30 PM PSXI-11 **Effects of pasture grazing on growth performance, herbage intake and blood composition of Hanwoo heifers during the growing stage**

Jeongsung Jung¹, Ki Choon Choi², Hyeonshup Kim²

¹National Institute of Animal Science (Republic of Korea), ²National Institute of Animal Science

FORAGES AND PASTURES

7:30 PM PSXI-12 **Non-destructive assessment of green biomass in natural grasslands for precision livestock in the Pampa Biome**

Joana G. Kuhn¹, Carolina Bremm¹, Fabiane Quevedo da Rosa¹, Saulo Díaz², Martin Jaurena², Fernando Alfredo Lattanzi², Paulo César. de Faccio Carvalho³

¹Universidade Federal do Rio Grande do Sul, ²Instituto Nacional de Investigación Agropecuaria, ³Federal University of Rio Grande do Sul

RUMINANT NUTRITION

7:30 PM PSXI-13 **Nutrient supply alters adipose tissue physiology in pre-weaned calves**

Josue M. Romao¹, Leonel Leal², Guido Hooiveld³, Fernando Soberon⁴, Harma Berends², Mark Boekschoten³, Michael Van Amburgh⁵, Javier Martín-Tereso⁶, Michael Steele⁷

¹University of Alberta, ²Trouw Nutrition Research and Development, ³Wageningen University, ⁴Trouw Nutrition, ⁵Cornell University, ⁶Trouw Nutrition R&D, ⁷University of Alberta, University of Guelph

RUMINANT NUTRITION

7:30 PM PSXI-14 **Effects of dietary neutral detergent fiber and starch ratio on performance and milk composition in lactating dairy cows: a meta-analysis**

Junli Niu¹, Meng Zhao², Dengpan Bu³, Qiaoe Zhang⁴, Wenju Zhang⁵, Lu Ma⁶

¹Institute of Animal Science, Chinese Academy of Agricultural Sciences, Beijing, China, ²Inner Mongolia Youran Farming Co., Ltd., Hohhot, China, ³Institute of Animal Science, Institute of Animal Science, Chinese Academy of Agricultural Sciences, ⁴Department of Animal Science, Ningxia University, Ningxia, China, ⁵College of Animal Science and Technology, Shihezi University, Shihezi, China, ⁶Institute of Animal Science, Chinese Academy of Agricultural Sciences, Beijing, China

RUMINANT NUTRITION

7:30 PM PSXI-15 **Effect of peptides and corn processing on in vitro rumen fermentation and microbial protein synthesis**

Junli Niu ¹, Lu Ma ², Qiaoe Zhang ³, Dengpan Bu ⁴

¹Institute of Animal Science, Chinese Academy of Agricultural Sciences, Beijing, China,

²Institute of Animal Science, Chinese Academy of Agricultural Sciences, Beijing, China,

³Department of Animal Science, Ningxia University, Ningxia, China, ⁴Institute of Animal Science, Institute of Animal Science, Chinese Academy of Agricultural Sciences

RUMINANT NUTRITION

7:30 PM PSXI-16 **A multiple flux chamber system to evaluate nutritional strategies for beef cattle to mitigate ammonia emission potential of manure**

Karen M. Koenig ¹, Jean-Francois Coulombe ¹, Karen A. Beauchemin ², Sean M. McGinn ¹

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada,

²Agriculture and Agri-Food Canada

COMPARATIVE GUT PHYSIOLOGY

7:30 PM PSXI-17 **CCL5–monocyte/macrophage axis maintains homeostasis in rumen epithelium**

Koki Nishihara ¹, Sanggun Roh ¹, Satoshi Haga ²

¹Tohoku University, ²Institute of Livestock and Grassland Science, National Agriculture and Food Research Organization

RUMINANT NUTRITION

7:30 PM PSXI-18 **Effects of Glucose Infusion on Expression of Genes Related to Amino Acid Metabolism in Muscle and Mammary Glands of Lactating Dairy Cows**

Linaya Pot ¹, Boning Li ¹, Ryan Laforest ¹, Richelle Curtis ¹, Julie Kim ¹, Dave J. Seymour ¹, John Cant ¹, John Doelman ²

¹University of Guelph, ²Trouw Nutrition R&D

FORAGES AND PASTURES

7:30 PM PSXI-19 **Production and Nitrogenous compounds of genotypes of dwarfish elephant grass (*Pennisetum purpureum*, Schum) under rotational grazing**

Lizbeth Collazos ¹

¹University Alas Peruanas

RUMINANT NUTRITION

7:30 PM PSXI-20 **Heat stress induces proteomic changes in the liver and mammary tissue of dairy cows independent of feed intake: an iTRAQ study**

Lu Ma ¹, Yongxin Yang ², Xiaowei Zhao ³, Fang Wang ⁴, Shengtao Gao ⁴, Zhiliang Tan ⁵, Lance H. Baumgard ⁶, Dengpan Bu ⁷

¹Institute of Animal Science, Chinese Academy of Agricultural Sciences, Beijing, China, ²Institute of Animal Science, Chinese Academy of Agricultural Sciences; Institute of Animal Science and Veterinary Medicine, Anhui Academy of Agricultural Sciences, Hefei, China., ³Institute of Animal Science, Chinese Academy of Agricultural Sciences, Beijing, China; Institute of Animal Science and Veterinary Medicine, Anhui Academy of Agricultural Sciences, Hefei, China, ⁴Institute of Animal Science, Chinese Academy of Agricultural Sciences, Beijing, China, ⁵Institute of Subtropical Agriculture, The Chinese Academy of Sciences, Changsha, China, ⁶Iowa State University, ⁷Institute of Animal Science, Institute of Animal Science, Chinese Academy of Agricultural Sciences

RUMINANT NUTRITION

7:30 PM PSXI-21 **Supplementation of ruminal aflatoxins-detoxifying bacteria on in vitro nutrients digestibility and aflatoxin B1 detoxification**

Malinee Intanoo¹, Virote Pattarajinda¹, John K. Bernard², Todd R. Callaway³

¹Department of Animal Science, Khon Kaen University, Thailand, ²Department of Animal and Dairy Science, University of Georgia, Athens, USA, ³University of Georgia

RUMINANT NUTRITION

7:30 PM PSXI-22 **Effects of reducing milk replacer allowance at first week after arrival on concentrate intake, performance, and health in milk-fed Holstein bull calves from auction markets**

Marcial Verdu¹, Anna Sole², Maria Devant³

¹Alimentació Animal i Producció, bonÀrea Agrupa, ²IRTA, Ruminant Production, ³IRTA-Ruminant Production

FORAGES AND PASTURES

7:30 PM PSXI-23 **Effects of stocking rate on body condition of F-1 (Brahman x Hereford or Angus) cows at weaning and rebreeding performance**

Monte Rouquette¹, Joel Kerby², Kelli Norman³

¹Texas A&M AgriLife Research at Overton, ²Texas A&M AgriLife Research and Extension Center at Overton, ³Texas A&M AgriLife Research

RUMINANT NUTRITION

7:30 PM PSXI-24 **Effect of extrusion process, temperature and sodium hydroxide on in vitro ruminal fermentation of corn stover**

Paulina Luna¹, Jonathan Aviles-Nieto², Oscar Hernández², Francisco Castrejón², Manuel Pérez², Luis Corona³

¹Facultad de Medicina Veterinaria y Zootecnia, UNAM, ²Universidad Nacional Autónoma de México, ³Universidad Nacional Autónoma de México. Facultad de Medicina Veterinaria y Zootecnia. Department of Animal Nutrition

RUMINANT NUTRITION

7:30 PM PSXI-25 **Feeding a microbially-enhanced soy protein in starter pellets affects the fecal microbiome composition of growing dairy calves**

Prakash Poudel¹, Nirosh D. Senevirathne², Venkata Bandurupalli¹, William R. Gibbons³, Jill L. Anderson², Benoit St-Pierre⁴

¹Department of Animal Science, South Dakota State University, ²SDSU, ³Biology and Microbiology Department, South Dakota State University, ⁴South Dakota State University

RUMINANT NUTRITION

7:30 PM PSXI-26 **Effects of condensed tannins in purple prairie and white prairie clover on ruminal fermentation and methane production in vitro**

Qianqian Huang¹, Kai Peng², Alan Iwaasa³, Mike Schellenberg³, Tim A. McAllister⁴, Yuxi Wang⁵

¹College of Animal Science and Technology, Yangzhou University, ²Key Laboratory of Animal Nutrition and Feed Science (South China) of Ministry of Agriculture, Guangdong Key Laboratory of Animal Breeding and Nutrition, Institute of Animal Science, Guangdong Academy of Agricultural Science, ³Swift Current Research and Development Centre, Agriculture and Agri-Food Canada, ⁴Agriculture and Agri-Food Canada, ⁵Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada

RUMINANT NUTRITION

7:30 PM PSXI-27 **Excretion of purine derivatives and rumen microbial protein synthesis in buffaloes fed sugarcane**

Ricardo A. S. Pessoa ¹, Matheus R. do Carmo ¹, Luciana P. C. Alves ¹, Cleber T. F. Costa ², Kedes P. Pereira ³, Maria L. M. W. Neves ¹, Sánara A. F. Melo ¹, Cláudio C. Bartolomeu ¹, Luiz H. C. Ribeiro ¹

¹Federal Rural University of Pernambuco, ²Federal Institute of Pernambuco, ³Federal University of Alagoas

RUMINANT NUTRITION

7:30 PM PSXI-28 **Intake, digestibility and ruminal parameters in buffaloes fed sugarcane**

Ricardo A. S. Pessoa ¹, Matheus R. do Carmo ¹, Luciana P. C. Alves ¹, Cleber T. F. Costa ², Kedes P. Pereira ³, Guilherme H. P. Vieira ¹, Maria L. M. W. Neves ¹, Karollayny R. F. Silva ¹, Cláudio C. Bartolomeu ¹

¹Federal Rural University of Pernambuco, ²Federal Institute of Pernambuco, ³Federal University of Alagoas

FORAGES AND PASTURES

7:30 PM PSXI-29 **Dynamics of litter decomposition in signalgrass and forage peanut mixed pastures**

Rodrigo Menezes ¹, Karina Ribeiro ², Jose C. Dubeux ³, Albert Anjos ¹, Joao Paulo Rezende ¹, Odilon Pereira ¹

¹Universidade Federal de Vicosa, ²Universidade Federal de Viçosa, ³University of Florida

RUMINANT NUTRITION

7:30 PM PSXI-30 **Impacts of hypocalcemia on physiological and productive responses of Holstein × Gir dairy cows**

Rodrigo Rodrigues ¹, Reinaldo F. Cooke ², Sílvia Rodrigues ¹, Larissa Bastos ¹, Vltória Camargo ¹, Kaio Gomes ¹, José Luiz Vasconcelos ³

¹São Paulo State University (UNESP), School of Veterinary Medicine and Animal Science,

²Texas A&M University, ³São Paulo State University

FORAGES AND PASTURES

7:30 PM PSXI-31 **Methane emissions by cattle grazing tannin-containing legumes**

Sebastian Lagrange ¹, Raul Guevara ², Karen A. Beauchemin ³, Jennifer MacAdam ¹, Juan J. Villalba ¹

¹Utah State University, ²Universidad Autonoma de Barcelona, ³Agriculture and Agri-Food Canada

RUMINANT NUTRITION

7:30 PM PSXI-32 **Ensiling time effects on nitrogen fractions and effects of ensiling corn and sorghum grains rehydrated on intake, ruminal and intestinal starch digestibility**

Sebastião de Campos Valadares Filho ¹, Breno Silva ², Marcos Pacheco ², Ana Menezes ³, Letícia Godoi ³, Herlon Alhadas ³, Fabyano Fonseca e Silva ¹, Pedro Veiga ⁴, Luciana Renno ³

¹Universidade Federal de Viçosa, ²UFV, ³Federal University of Vicosa, ⁴Cargill

COMPARATIVE GUT PHYSIOLOGY

7:30 PM PSXI-33 Differential Action of TGR5 Agonists on GLP-2 Secretion and Promotion of Intestinal Adaptation in a Piglet Short Bowel Model

Sen Lin ¹, Barbara Stoll ², Jason Robinson ³, Jose J. Pastor ⁴, Stephanie Cruz ⁵, Patricio Lau ⁵, Juan Marini ⁶, Ignacio R. Ipharraguerre ⁷, Bolette Hartmann ⁸, Jens J. Holst ⁸, Oluyinka Olutoye ⁹, Zhengfeng Fang ¹, Douglas Burrin ¹⁰

¹Institute of Animal Nutrition, Sichuan Agricultural University, ²USDA/ARS Children's Nutrition Research Center, Department of Pediatrics, Baylor College of Medicine, ³USDA-ARS Children's Nutrition Research Center, Baylor College of Medicine, ⁴Lucta S.A., Innovation Division, ⁵Texas Children's Hospital, Division of Pediatric Surgery, Baylor College of Medicine, ⁶USDA-ARS Children's Nutrition Research Center, Critical Care Medicine, Baylor College of Medicine, ⁷Christian Albrechts University of Kiel, ⁸Department of Biomedical Sciences, and NNF Center for Basic Metabolic Research, University of Copenhagen, Copenhagen, Denmark, ⁹Department of Pediatric Surgery, Texas Children's Hospital, ¹⁰USDA/ARS Children's Nutrition Research Center Baylor College of Medicine

FORAGES AND PASTURES

7:30 PM PSXI-34 Diet selection by Raramuri Criollo and Angus crossbreds in the Chihuahuan Desert

Sheri Spiegall ¹, Shelemia Nyamuryekung'e ², Rick Estell ¹, Andres Cibils ³, Darren James ⁴, Alfredo Gonzalez ¹, Matt M. McIntosh ²

¹USDA-ARS Jornada Experimental Range, ²Animal and Range Science Department, New Mexico State University, ³Department of Animal Science, New Mexico State University, ⁴USDA/ARS/Jornada Experimental Range

RUMINANT NUTRITION

7:30 PM PSXI-35 Effects of chitosan source, molecular weight and supplementation level on in vitro (RUSITEC) ammonia and methane production.

Stuart Kirwan ¹, Tommy Boland ², Alan K. Kelly ³, Elenoroa Serra ¹, Gaurav Rajauria ³, Karina Pierce ³

¹University College Dublin, Ireland, ²UCD, ³University College Dublin

FORAGES AND PASTURES

7:30 PM PSXI-36 Productivity of the Mombaça grass cultivated in a crop-livestock-forest integration system in the Amazon region

Túlio Otávio Jardim D'Almeida. Lins ¹, Rafael Reis ², Ernando Balbinot ², Ana Paula Melo ², Suellen Ferraz ², Fernando Padilha ², Amanda Maciel ², Fabiano Gama. Sousa ², Gabriel Martins ², Gabriel Meurer. Wachekowski ²

¹Federal Institute of Rondônia (IFRO Colorado), ²Federal Institute of Rondônia, IFRO Colorado

FORAGES AND PASTURES

7:30 PM PSXI-37 Percentage of leaves and neutral detergent fiber content of the Mombaça grass cultivated in a crop-livestock-forest integration system in the Amazon region

Túlio Otávio Jardim D'Almeida. Lins ¹, Rafael Reis ², Ernando Balbinot ², Ana Paula Melo ², Suellen Ferraz ², Fernando Padilha ², Amanda Maciel ², Fabiano Gama. Sousa ², Gabriel Martins ², Gabriel Meurer. Wachekowski ²

¹Federal Institute of Rondônia (IFRO Colorado), ²Federal Institute of Rondônia, IFRO Colorado

FORAGES AND PASTURES

7:30 PM PSXI-38 **Nitrous oxide emissions from excreta of cattle grazed in mixed, single or fertilized pastures of Marandu-grass**

Vanessa Z. Longhini¹, Abmael S. da Silva Cardoso², Andressa S. Scholz Berca³, Robert M. Boddey⁴, Ricardo Reis⁵, Flavia O. S. van Cleef⁶, Ana Cláudia Ruggieri⁷

¹São Paulo State University, ²FCAV/ Unesp - Jaboticabal, ³Department of Animal Science/Texas A&M University, ⁴Embrapa Agrobiologia, ⁵Department of Animal Science, Unesp, Jaboticabal, ⁶University of Florida, North Florida Research and Education Center, Marianna, United States, ⁷Sao Paulo State University, Jaboticabal, Brazil

FORAGES AND PASTURES

7:30 PM PSXI-39 **Effect of legume inclusion and nitrogen fertilization on ammonia volatilization from cattle excreta in tropical grassland**

Vanessa Z. Longhini¹, Abmael S. da Silva Cardoso², Andressa S. Scholz Berca³, Robert M. Boddey⁴, Flavia O. S. van Cleef⁵, Ricardo Reis⁶, Ana Cláudia Ruggieri⁷

¹São Paulo State University, ²FCAV/ Unesp - Jaboticabal, ³Department of Animal Science/Texas A&M University, ⁴Embrapa Agrobiologia, ⁵University of Florida, North Florida Research and Education Center, Marianna, United States, ⁶Department of Animal Science, Unesp, Jaboticabal, ⁷Sao Paulo State University, Jaboticabal, Brazil

FORAGES AND PASTURES

7:30 PM PSXI-40 **Morphogenetic characteristics of signal grass pastures in monoculture and intercropped with forage peanut**

Vitor Santos¹, Karina Ribeiro², Rodrigo Menezes¹, Hemython Nascimento¹, Carla Chaves¹, Odilon Pereira¹

¹Universidade Federal de Vicosa, ²Universidade Federal de Viçosa

RUMINANT NUTRITION

7:30 PM PSXI-41 **Effect of different homoserine lactones on in vitro rumen fermentation**

Yunjung Kim¹, Eunjung Jeon¹, Chaehwa Ryu¹, Seongjin Oh¹, jinwook Lee², Sangbuem Cho³, Nag-jin Choi¹

¹Chonbuk National University, ²National Institute of Animal Science, Republic of Korea, ³Department of Animal Science

FORAGES AND PASTURES

7:30 PM PSXI-42 **Assessment of the inclusion of prairie clovers in native cool-season grass pastures on the nutritive value of forage using in vitro ruminal incubation**

Yuxi Wang¹, Germma Gresham², Kai Peng³, Alex Chaves⁴, Tim A. McAllister⁵, Alan Iwaasa⁶, Mike Schellenberg⁶

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ²The University of Sydney, School of Life and Environmental Sciences, ³Key Laboratory of Animal Nutrition and Feed Science (South China) of Ministry of Agriculture, Guangdong Key Laboratory of Animal Breeding and Nutrition, Institute of Animal Science, Guangdong Academy of Agricultural Science, ⁴University of Sydney, Sydney, Australia, ⁵Agriculture and Agri-Food Canada, ⁶Swift Current Research and Development Centre, Agriculture and Agri-Food Canada

CSAS Member Mixer

9:00 PM – 11:55 PM

Wednesday, July 11, 2018

Registration Open
7:00 AM – 5:15 PM

Upload Room
7:00 AM – 6:00 PM

Poster Session XII
7:15 AM – 8:15 AM

ASAS UNDERGRADUATE STUDENT POSTER COMPETITION

7:15 AM PSXII-1 **Effects of copper, zinc, and manganese source and concentration during late gestation on beef cow colostrum yield and quality**

Abigail R. Rathert-Williams¹, Emma L. Stephenson¹, Ann L. Kenny¹, Tiago B. Freitas², Heather Tucker³, Allison M. Meyer¹

¹Division of Animal Sciences, University of Missouri, ²Novus International Inc, St. Charles, MO, USA, ³Novus International Inc.

LACTATION BIOLOGY

7:15 AM PSXII-2 **Comparative study on effects of two different colostrum feeding methods on immunoglobulin G concentration in serum of newborn camel calves**

Amir Ahmadpour¹, Rachael Christensen², Mousa Zarrin³, Saeed Osouli⁴

¹Utah State University, ²United States Department of Agriculture, ³Yasouj University,

⁴Department of Animal Productions Improvement, Agri-Jahad Organization, Qom, I.R. Iran

LACTATION BIOLOGY

7:15 AM PSXII-3 **Postparturient immunoglobulin variations in mammary quarters and its repeatability in sequential lactations of Dromedary camel**

Amir Ahmadpour¹, Mousa Zarrin², Rachael Christensen³, Saeed Osouli⁴

¹Utah State University, ²Yasouj University, ³United States Department of Agriculture,

⁴Department of Animal Productions Improvement, Agri-Jahad Organization, Qom, I.R. Iran

LACTATION BIOLOGY

7:15 AM PSXII-4 **The relation between oxytocin released by milking and expression of the oxytocin receptor in the mammary glands of Holstein, Jersey and Gir cows**

Aska Ujita¹, Giovana Krempel Fonseca. Merighe¹, Sandra Oliveira¹, Lenira El Faro Zadra², Anibal Vercesi³, Joao Alberto. Negrao¹

¹University of Sao Paulo, ²Centro APTA Bovinos de Corte, Instituto de Zootecnia (IZ), ³Institute of Animal Science

RUMINANT NUTRITION

7:15 AM PSXII-5 Rumen tissue histology of Nellore cattle submitted to either nutritional restriction or intake of concentrate feedstuffs prior to adaptation period

Beatriz Q. Reis ¹, Murillo Pereira ², André Rigueiro ², Danilo D. Millen ³, Antonio M. M. Silvestre ⁴, Mariana M. Squizatti ⁴, Luana Felizari ⁵, Mário Arrigoni ², Danilo Millen ⁵

¹Texas Tech University, ²São Paulo State University (UNESP), School of Veterinary Medicine and Animal Science, Botucatu, São Paulo, Brazil 18618-000, ³College of Technology and Agricultural Sciences, São Paulo State University (UNESP), Dracena, Brazil, ⁴School of Veterinary Medicine and Animal Science, São Paulo State University (UNESP), Botucatu, Brazil, ⁵São Paulo State University (UNESP), Animal Science College, Dracena, São Paulo, Brazil 17900-000

ANIMAL HEALTH

7:15 AM PSXII-6 Variation in Immune Pathway Genes Associated with Tannins-containing Diets in Meat Goats: A Pilot Study

Byeng Min ¹, Michael Mienaltowski ², Frank W. Abrahamsen ¹, Honghe Wang ¹, Thomas H. Terrill ³, Nar K. Gurung ¹

¹Tuskegee University, ²UCLA, ³Fort Valley State University

RUMINANT NUTRITION

7:15 AM PSXII-7 Influence of energy in the diet of buffalo heifers (Bubalus bubalis) on the metabolic energy and mineral profile

Caio A. Costa ¹, Emanuel F. Oliveira Filho ², Rafael A. Silva Júnior ², Ayna A. A. Silva ², Gabriela G. Silva ², Francisco A. Veloso Junior ³, Cleyton C. D. Carvalho ², Cláudio C. Bartolomeu ², Ricardo A. S. Pessoa ², Pierre C. Soares ²

¹Federal University of Roraima, ²Federal Rural University of Pernambuco, ³Tapuio Agropecuária Ltda

ANIMAL HEALTH

7:15 AM PSXII-8 Molecular Markers Associated with Physiological Response after Vaccination against Porcine Respiratory and Reproductive Syndrome in Replacement Gilts from Northern Mexico

Carlos M. Aguilar-Trejo ¹, Javier A. Romo-Rubio ², Guillermo Luna-Nevárez ¹, Javier R. Reyna-Granados ¹, Xi Zeng ³, Miguel A. Sánchez-Castro ³, R. Mark Enns ³, Scott E. Speidel ³, Milton G. G. Thomas ³, Pablo Luna-Nevárez ¹

¹Instituto Tecnológico de Sonora, ²Universidad Autónoma de Sinaloa, ³Colorado State University

LACTATION BIOLOGY

7:15 AM PSXII-9 The dietary supplement of the combined soluble fiber during gestation alleviate oxidative stress and improve sow and piglet performance

Chuanhui Xu ¹, Xiong Xia ¹, Wen Lai ¹, Jian Peng ²

¹Department of Animal Nutrition and Feed Science, College of Animal Science and Technology, Huazhong Agricultural University, ²Huazhong Agricultural University

LACTATION BIOLOGY

7:15 AM PSXII-10 **Providing excess metabolizable protein prior to calving shifts the protein composition of colostrum and early post-colostrum serum proteomic profiles in neonatal beef calves**

Devon R. Radford¹, Koryn S. Hare², Gregory B. Penner³, Katharine M. Wood⁴

¹University of Guelph, Department of Animal Biosciences, ²Department of Agricultural, Food and Nutritional Science, Faculty of Agriculture Life and Environmental Sciences, University of Alberta, ³Department of Animal and Poultry Science, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada S7N 5A8, ⁴University of Guelph

RUMINANT NUTRITION

7:15 AM PSXII-11 **Apparent total-tract digestibility of nutrients in beef steers consuming bahiagrass hay treated with calcium oxide**

Francine M. Ciriaco¹, Darren D. Henry², Jose C. Dubeux³, Nicolas DiLorenzo³

¹University of Florida - North Florida Research and Education Center, ²Texas Tech University, ³University of Florida

RUMINANT NUTRITION

7:15 AM PSXII-12 **Dietary flavors and rumen bioactive additives increased feed intake and lactation performance of high-yield Holstein cows during early lactation period**

Haifeng Wang¹, Chong Wang², Xudong Wang², Maolong He³

¹College of Animal Science, Zhejiang University, ²Faculty of Animal Sciences, Zhejiang Agricultural and Forestry University, ³Lucta Flavours Co. Ltd.,

7:15 AM PSXII-13 **Use of Bovikal[®] calcium boluses and their effect on periparturient cow health**

Heiko Scholz¹, Andreas Ahrens²

¹Anhalt University of Applied Sciences, ²Thuringia Animal Health Fund

LACTATION BIOLOGY

7:15 AM PSXII-14 **Nutritional restriction induced oxidative stress might compromise mammary protein synthesis through inhibition of v-ATPase/mTORC1 signaling**

Heju Zhong¹, Yumo Song¹, ZhengFeng Fang¹, Bin Feng¹, Xiaoling Zhang¹, lianqiang che², Yan Lin¹, Shengyu Xu¹, Jian Li¹, De Wu³, Zhengfeng Fang³

¹Animal Nutrition Institute, Sichuan Agricultural University, ²Sichuan Agricultural University, ³Institute of Animal Nutrition, Sichuan Agricultural University

ASAS UNDERGRADUATE STUDENT POSTER COMPETITION

7:15 AM PSXII-15 **Effects of poor maternal nutrition during gestation on oxidative stress in offspring muscle**

Helen R. Iannitti¹, Amanda K. Jones², Maria L. Hoffman³, Sambhu Pillai⁴, Katelyn McFadden¹, Kristen E. Govoni¹, Steven A. Zinn¹, Sarah A. Reed¹

¹University of Connecticut, ²University of Colorado Denver, ³University of Rhode Island, ⁴Georgetown University

ANIMAL HEALTH

7:15 AM PSXII-16 **Late-Breaking: Effects of dietary multigrain carbohydrase on colostrum and milk microRNA of lactating sows**

Jeongjae Lee¹, J Kim², Sheena Kim¹, Byeonghyeon Kim¹, Joowon Kang¹, Daye Mun¹, Jangryeol Baek¹, Soyun Kim³, Minho Song¹

¹Chungnam National University, ², ³Chungnam National University

LACTATION BIOLOGY

7:15 AM PSXII-17 **Supplementing ten essential amino acids alters beta-casein expression and cell and medium protein synthesis in bovine mammary epithelial cells**

Jay Ronel Conejos¹, JungEun Kim¹, Thae Su Yadana Moe¹, WonTae Choe¹, Munhee Bae¹, JaeSung Lee², Jeong-Eun Lee³, Baek-Seok Lee³, Jin Seung Park³, Jun Ok Moon³, HongGu Lee⁴

¹Department of Animal Science and Technology, Konkuk University, Seoul, Republic of Korea, ²Department of Animal Science and Technology, Konkuk University, ³CJ CheilJedang Research Institute of Biotechnology, Suwon, Republic of Korea, ⁴Department of Animal Science and Technology, Sanghuh College of Life Sciences, Konkuk University, Seoul 05029, Republic of Korea

RUMINANT NUTRITION

7:15 AM PSXII-18 **Autophagy may contribute to variation in residual feed intake in Hereford cattle.**

Jennifer J. Michal¹, Holly L. Neibergs¹, Jacob L. Mutch¹, Jennifer N. Kiser¹, Jerry F. Taylor², U.S. Feed Efficiency Consortium², Kris A. Johnson¹

¹Washington State University, ²University of Missouri

RUMINANT NUTRITION

7:15 AM PSXII-19 **Gene sets and pathways associated with residual feed intake in Angus steers.**

Jennifer J. Michal¹, Holly L. Neibergs¹, Jacob L. Mutch¹, Jennifer N. Kiser¹, Jerry F. Taylor², U.S. Feed Efficiency Consortium², Kris A. Johnson¹

¹Washington State University, ²University of Missouri

LACTATION BIOLOGY

7:15 AM PSXII-20 **AMPK senses energy substrate availability to regulate glucose metabolism in bovine mammary epithelial cells**

Jianhui Huang¹, Marc-Antoine Guesthier¹, Sergio.A. Burgos¹

¹Department of Animal Science. McGill University

LACTATION BIOLOGY

7:15 AM PSXII-21 **CLA supplementation affects inflammatory and metabolic responses during an intramammary LPS challenge in early lactating dairy cows**

Josef J. Gross¹, Linda Grossen-Rösti¹, Reanne Heritier¹, Arnulf Troesch², Rupert M. Bruckmaier¹

¹Veterinary Physiology, Vetsuisse Faculty, University of Bern, ²BASF SE

ASAS UNDERGRADUATE STUDENT POSTER COMPETITION

7:15 AM PSXII-22 **Factors Influencing Youth Horse Industry Involvement: A Survey of Youth Participants**

Julia Rhyne¹, Holly Spooner¹, Ariel Herrin¹, Dean Jousan²

¹Middle Tennessee State University, ²Mississippi State University

RUMINANT NUTRITION

7:15 AM PSXII-23 **iTRAQ-based proteomic analysis reveals key proteins affecting feed efficiency in Holstein heifers limit-fed with low or high concentrate diets**

Jun Zhang¹, George Nhamo Gozho², Chengbo Yang³, Haitao Shi¹, Shengli Li⁴, Zhijun Cao¹, Ya Jing Wang⁵

¹China Agricultural University, ²Department of Animal Science, University of Manitoba,

³University of Manitoba, Department of Animal Science, ⁴China agricultural university,

⁵Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2 / College of Animal Science and Technology, China Agricultural University, Beijing, China, 100193

ANIMAL HEALTH

7:15 AM PSXII-24 **Time course determination of the effects of rapid and gradual cooling after heat stress on body temperature and intestinal integrity in pigs**

Kouassi R. Kpodo¹, Alan W. Duttlinger¹, John Scott Radcliffe¹, Jay S. Johnson²

¹Purdue University, ²USDA-ARS Livestock Behavior Research Unit

ASAS UNDERGRADUATE STUDENT POSTER COMPETITION

7:15 AM PSXII-25 **The Effects of Poor Maternal Nutrition on Fetal Brain Development**

Lauren N. Engels¹, Mary C. Wynn¹, Brandon I. Smith¹, Maria L. Hoffman², Amanda K. Jones³, Sambhu Pillai⁴, Sarah A. Reed¹, Steven A. Zinn¹, Jingyue E. Duan¹, Xiuchun C. Tian¹, Kristen E. Govoni¹

¹University of Connecticut, ²University of Rhode Island, ³University of Colorado Denver,

⁴Georgetown University

RUMINANT NUTRITION

7:15 AM PSXII-26 **The Relationship between Climatic Heat Stress Indices and feedlot performance on Nellore calves**

Lorena Emily L M Bomfim¹, Juliano José de Resende Fernandes², Maurícia Brandão. Silva¹, Victor R. Moreira Couto¹, Kaique S. Nascimento¹, Ana Laura Araújo Lopes², Wallace Vieira da Silva Santos¹, Debora Gomes de Sousa¹, Gladston Rafael de Arruda³

¹Universidade Federal de Goiás, ²Goiás Federal University, ³universidade federal de Sergipe

RUMINANT NUTRITION

7:15 AM PSXII-27 **Determining the potential usefulness of different metrics of eating behavior in relation to growth performance of fattening Holstein bulls**

Maria Devant¹, Alex Bach²

¹IRTA-Ruminant Production, ²ICREA, IRTA

RUMINANT NUTRITION

7:15 AM PSXII-28 **The influence of age at arrival in the design of milk-feeding program on concentrate consumption and performance in milk-fed Holstein bull calves from auction markets.**

Marcàl Verdu¹, Anna Sole², Maria Devant³

¹Alimentació Animal i Producció, bonÀrea Agrupa, ²IRTA, Ruminant Production, ³IRTA-Ruminant Production

ASAS UNDERGRADUATE STUDENT POSTER COMPETITION

7:15 AM PSXII-29 **Dietary protein impacts neonatal piglet muscle growth and protein synthesis**

Rachel Gagliardi ¹, Robert Murray ¹, Wei Zhang ¹, Kellie Kroscher ², Robert P. Rhoads ³, Chad Stahl ¹

¹University of Maryland Department of Animal Science, ²Virginia Tech Department of Animal Science, ³Virginia Tech

ASAS UNDERGRADUATE STUDENT POSTER COMPETITION

7:15 AM PSXII-30 **Suffolk Ram Yearling Breeding Potential Evaluation**

Rebekka J. Sawyer ¹, Denise Konetchy ¹, Saulo Menegatti Zoca ², Jeremy Falk ¹, Dino Vinci ¹, Brenda M. Murdoch ¹

¹University of Idaho, ²University of Idaho, Animal and Veterinary Science

LACTATION BIOLOGY

7:15 AM PSXII-31 **Effect of dietary protein level and amino acid balance on heat production in lactating sows exposed to thermal neutral and heat stress conditions**

Sai Zhang ¹, Jay S. Johnson ², Nathalie Trottier ¹

¹Department of Animal Science, Michigan State University, ²USDA-ARS Livestock Behavior Research Unit

RUMINANT NUTRITION

7:15 AM PSXII-32 **Effects of dietary glycerin supplementation on rumen fermentation, growth performance, and carcass characteristics in Korean cattle steers**

Seok-Hyeon Beak ¹, Min Yu Piao ¹, Seon Pil Yoo ², Hyun Jung Lee ³, Hyeok Joong Kang ¹, Seung Ju Park ³, sang Weon Na ¹, Dajinsol Jung ¹, InHyuk Jung ¹, Hae In Yong ¹, HyunJin Kim ¹, Cheorun Jo ³, Myunggi Baik ¹

¹Seoul National University, ²Seoul national university, ³Department of Agricultural Biotechnology, College of Agriculture and Life Science, Seoul National University

RUMINANT NUTRITION

7:15 AM PSXII-33 **Effects of quality and inclusion rate of roughages on feed intake, growth, rumen fermentation characteristics, and blood parameters of growing Hanwoo steers (*Bos taurus coreanae*)**

Seoyoung Jeon ¹, Mingyung Lee ², Donghan Shin ¹, Seongwon Seo ²

¹Chungnam national university, ²Chungnam National University

RUMINANT NUTRITION

7:15 AM PSXII-34 **Effects of genomic estimated breeding value (GEBV) of marbling score and dietary energy level on growth performance during fattening stage of Korean cattle steers**

Seung Ju Park ¹, HyunJin Kim ², Min Yu Piao ², Hyeok Joong Kang ², Dilla Fassah ¹, Dajinsol Jung ², Sang Yeob Kim ², sang Weon Na ², Seok-Hyeon Beak ², InHyuk Jung ², Seon Pil Yoo ³, Soo Jong Hong ³, Seung Hwan Lee ⁴, Myunggi Baik ²

¹Department of Agricultural Biotechnology, College of Agriculture and Life Science, Seoul National University, ²Seoul National University, ³Seoul national university, ⁴Division of Animal and Dairy Science, Chungnam National University, Republic of Korea.

ANIMAL HEALTH

7:15 AM PSXII-35 Establishment of a recombinant Escherichia coli-induced piglet diarrhea model

Tao Wu ¹, Yang Lv ¹, Xueni Li ², Di Zhao ², Dan Yi ², Lei Wang ², Bingying Ding ², Hongbo Chen ², Yongqing Hou ²

¹Wuhan polytechnic University, ²Wuhan Polytechnic University

ANIMAL HEALTH

7:15 AM PSXII-36 Effectiveness of sericea lespedeza leaf meal pellets and whole plant pellets for natural control of gastrointestinal nematodes and coccidia in goats

Thomas H. Terrill ¹, Gregory Dykes ¹, Anil Singh ¹, Loreal Greer-Mapson ¹, Vicki Owen ¹, James E. Miller ², Niki C. Whitley ¹

¹Fort Valley State University, ²Louisiana State University

RUMINANT NUTRITION

7:15 AM PSXII-37 Effect of diets with different levels of fiber in neutral detergent for finishing of lambs in drylot conditions

Valdi Lima. Júnior ¹, Pedro Henrique Cavalcante Ribeiro ², Migson Santos Menezes ², Jessica Caroline Nascimento Rodrigues ², Naira Cristina ribeiro pimentel ², Leônia Régia Costa da Silva ², Maria Lourdes Tavares Neta ², Marccone Geraldo Costa ²

¹Federal University of Rio Grande do Norte, ²UFRN

ASAS UNDERGRADUATE STUDENT POSTER COMPETITION

7:15 AM PSXII-38 The Effects of Maternal Milk Production on Dairy Calf Growth and Health

Veronica A. Pleasant ¹, Mary C. Wynn ¹, Kristen E. Govoni ¹, Alexandra C. Cabra ¹, Randi L. Szabo ¹, Brandon I. Smith ¹, Kaitlynn Cameron ², Steven A. Zinn ¹, Maria L. Hoffman ²

¹University of Connecticut, ²University of Rhode Island

ANIMAL HEALTH

PSXII-39 Effects of pre-weaning iron supplementation on post-weaning diarrhea in pigs challenged with enterotoxigenic E. coli

Victoria Seip ¹, Robert Friendship ¹, Vahab Farzan ¹

¹University of Guelph

ANIMAL HEALTH

7:15 AM PSXII-40 Moringa Oleifera enhance the oxidation resistance and lipid homeostasis in 1-21 d old lion head geese

Wence Wang ¹, Yichao Yan ¹, Yingli Yan ¹, Yongjie Yang ¹, Yan Feng ¹, Hui Ye ¹, Yongwen Zhu ¹, Lin Yang ¹

¹South China Agricultural University

ANIMAL HEALTH

7:15 AM PSXII-41 Acute exposure to deoxynivalenol inhibits porcine enteroid activity and Wnt/ β -catenin pathway

Xiang-guang Li ¹, Min Zhu ², Ming-xia Chen ², Jia-yi Zhou ², Chun-qi Gao ³, Hui-chao Yan ³, Xiu-qi Wang ⁴

¹South China Agricultural University, ²South China Agricultural University, ³College of Animal Science, South China Agricultural University, ⁴College of Animal Science, South China Agricultural University

ANIMAL HEALTH

7:15 AM PSXII-42 **Peptide product (FPM), zinc oxide and lactobacillus acidophilus fermented product (LAFP) alter gut microbiota of nursery pigs**

Xiaoyuan Wei ¹, Tsungcheng Cheng Tsai ², Charles V. Maxwell ², Jiangchao Zhao ³

¹Department of Animal Science, Division of Agriculture, ²University of Arkansas, ³Department of Animal Science, University of Arkansas, Fayetteville, AR, 72701

Exhibits Open

7:30 AM – 2 :00 PM

Job Resource Center

7:30 AM – 2:00 PM

Poster Session XIII

8:15 AM – 9:15 AM

8:15 AM PSXIII-1 **Relationship between estrus expression detected by four methods and initial GnRH treatment with pregnancy per artificial insemination in suckler cows**

Albina Sanz ¹, Jose Antonio Rodríguez-Sánchez ¹, Javier Ferrer ¹, Javier Álvarez-Rodríguez ², Isabel Casasús ¹

¹CITA de Aragón-IA2, ²Universitat de Lleida. Department de Ciència Animal

COMPANION ANIMALS

8:15 AM PSXIII-2 **Effect of Carbohydrate Sources in Commercial Extruded Dog Foods on Glycemic Index and Satiety-Related Gut Hormones in Sled Dogs**

Alexandra Rankovic ¹, Jennifer Adolphe ², Anna K. Shoveller ³, Dan Ramdath ⁴, Adronie Verbrugge ⁵

¹University of Guelph, Ontario Veterinary College, ²ADM, ³University of Guelph, ⁴Guelph Research and Development Centre, Agriculture and Agri-Food Canada, ⁵Department of Clinical Studies, University of Guelph, Guelph, Ontario, Canada.

COMPANION ANIMALS

8:15 AM PSXIII-3 **Descriptive analysis of the effects of fiber source on processing settings, nutrient composition, and physical characteristics of extruded high fiber pet foods**

Amanda N. Dainton ¹, Katelyn B. Detweiler ², Maria R. de Godoy ³

¹Department of Grain Science and Industry, Kansas State University, ²Department of Animal Sciences, University of Illinois at Urbana-Champaign, ³University of Illinois Urbana-Champaign

PHYSIOLOGY AND ENDOCRINOLOGY

8:15 AM PSXIII-4 **The dynamics of spermatogenesis in turkey**

Anastasia N. Vetokh ¹, Natalia A. Volkova ¹, Vugar A. Bagirov ², Natalia A. Zinovieva ²

¹L.K. Ernst Federal Science Center for Animal Husbandry, ²L.K. Ernst Federal Research Center for Animal Husbandry

COMPANION ANIMALS

8:15 AM PSXIII-5 **Nitrogen Retention and Protein Quality in Dogs and Cats Fed Commercial Pet Food**

Andrea K. Geiger¹, Lynn P. Weber¹

¹University of Saskatchewan

COMPANION ANIMALS

8:15 AM PSXIII-6 **Statistics and Tendencies for Cat Adoptions in the State of Washington**

Annie E G. Frosolone¹, Martin G. Maquivar²

¹Department of Animal Sciences, ²Washington State University. Department of Animal Sciences

COMPANION ANIMALS

8:15 AM PSXIII-7 **Statistics and Tendencies for Dog Adoptions in the State of Washington**

Annie E G. Frosolone¹, Martin G. Maquivar²

¹Department of Animal Sciences, ²Washington State University. Department of Animal Sciences

COMPANION ANIMALS

8:15 AM PSXIII-8 **Metagenomics Analysis of the Healthy Feline Fecal Microbiota using Illumina Whole Genome Shotgun Sequencing**

Bianca DiSabatino¹, Adronie Verbrugghe², Scott Weese¹, Myriam Hesta³, Moran Tal⁴

¹University of Guelph, ²Department of Clinical Studies, University of Guelph, Guelph, Ontario, Canada., ³Laboratory of Animal Nutrition, Faculty of Veterinary Medicine, Ghent University, ⁴Ontario veterinary college

COMPANION ANIMALS

8:15 AM PSXIII-9 **Essential amino acid intake in obese cats before and after weight loss on a veterinary therapeutic food intended for maintenance and weight loss**

Caitlin E. Grant¹, Anna K. Shoveller², Shauna Blois³, Marica Bakovic², Adronie Verbrugghe⁴

¹Department of Clinical Studies, Ontario Veterinary College, University of Guelph, ²University of Guelph, ³Department of Clinical Studies, Ontario Veterinary College, ⁴Department of Clinical Studies, University of Guelph, Guelph, Ontario, Canada.

HORSE SPECIES

8:15 AM PSXIII-10 **Effects of short-term dexamethasone administration on glucose and insulin dynamics and muscle protein signaling in horses after the consumption of a high protein meal**

Caroline Loos¹, Sophie Dorsch¹, Ashley Gerritsen¹, Tammy Barnes¹, Kristine Urschel¹

¹University of Kentucky

COMPANION ANIMALS

8:15 AM PSXIII-11 **A Crossover Target Animal Safety Study of Unextracted Aurantiochytrium Microalgal Biomass (AURA) as a Dietary Source of Docosahexaenoic Acid in Mature Dogs**

Colm Moran¹, Craig Reinemeyer², Jason D. Keegan³, Paul Groenewegen⁴, Kate A. Jacques⁴

¹Alltech SARL, ²East Tennessee Clinical Research Inc., ³Alltech Ireland, ⁴Alltech Inc

INTERNATIONAL ANIMAL AGRICULTURE

8:15 AM PSXIII-12 **Effects of altitudinal floor on nutrient digestibility, energy efficiency, visceral organ mass, and performance by guinea pigs.**

Daniela Izurieta¹, Betty Heredia², Diana Sandoval², Christian H. Ponce¹

¹Universidad San Francisco de Quito, ²Universidad de las Fuerzas Armadas-ESPE

PHYSIOLOGY AND ENDOCRINOLOGY

8:15 AM PSXIII-13 **Artificial insemination by estrus detection or by fixed-time in superovulated beef cows.**

David Forrest¹, Jacob Calloway¹, David G. Riley¹, Chelsie Steinhauser², Richard D. Posey¹, Charles Looney³

¹Texas A&M University, ²OvaGenix, Inc., ³Southwest Research and Extension Center

RUMINANT NUTRITION

8:15 AM PSXIII-14 **Use of enzyme technology to improve nutritive value of corn modified distillers grains.**

Devan M. Paulus Compart¹, Uchenna Anele², Chanda Engel³

¹PMI, ²North Carolina A & T State University, ³North Dakota State University, Carrington Research Extension Center

RUMINANT NUTRITION

8:15 AM PSXIII-15 **Substitution of protein source by corn DDGS in the supplementation of Nellore young bulls during the rearing phase**

Diego Monteiro. Renesto¹, Tiago Luís Da Ros de. Araújo¹, Alvair Hoffmann², Lutti Maneck Delevatti¹, Adriana Ferrari³, Rhaony Gonçalves. Leite¹, Gustavo de Oliveira. Rincão¹, Ricardo Reis⁴

¹Sao Paulo State University, Jaboticabal, Brazil, ²FCAV/Unesp, Jaboticabal, São Paulo, Brasil,

³São Paulo State University, Jaboticabal, ⁴Department of Animal Science, Unesp, Jaboticabal

COMPANION ANIMALS

8:15 AM PSXIII-16 **The validation and verification of an LC/MS method for the determination of total docosahexaenoic acid concentrations in canine blood serum**

Gerry P. Dillon¹, Jason D. Keegan¹, Geoff Wallace², Kate A. Jacques³, Alexandros Yiannikouris⁴, Colm Moran⁵

¹Alltech Ireland, ²LGC, ³Alltech Inc, ⁴Alltech Inc., ⁵Alltech SARL

RUMINANT NUTRITION

8:15 AM PSXIII-17 **Effects of dry tomato pomace on milk performance and hematological parameters of lactating ewes**

Giovanna Buffa¹, Giuseppe Pulina², Maria Grazia Cappai³, Gianni Battacone⁴, Anna Nudda⁵

¹Dipartimento di Agraria - University of Sassari, ²Department of Agricultural Sciences, University of Sassari, Italy/Regional Agency for Forestry, Cagliari (Sardinia), Italy, ³Department of Veterinary Medicine - University of Sassari, ⁴Dipartimento di Agraria, sezione di Scienze Zootecniche, University of Sassari, Italy, ⁵University of Sassari

RUMINANT NUTRITION

8:15 AM PSXIII-18 **The optimum dietary forage inclusion level for finishing cattle fed diets containing corn dried distillers grains**

Authors:

Gwinyai E. Chibisa ¹, Karen A. Beauchemin ², Gregory B. Penner ³

¹University of Idaho, ²Agriculture and Agri-Food Canada, ³Department of Animal and Poultry Science, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada S7N 5A8

INTERNATIONAL ANIMAL AGRICULTURE

8:15 AM PSXIII-19 **Swine Health Health and Management Evaluation in American Samoa**

Halina M. Zaleski ¹, Thomas M. Petznick ², Michael Otto. Hansell ³, Fili Uta ³, Ian Gurr ³

¹University of Hawai'i at Mānoa, Honolulu, HI, ²Thomas M Petznick, D V M, P C, ³American Samoa Community College

RUMINANT NUTRITION

8:15 AM PSXIII-20 **The relationships between the predicted metabolic parameters of protein and biomolecular spectroscopic features in different batches of corn by-products from the same processing plant**

Hangshu Xin ¹, Yonggen Zhang ¹, Kaijing Sun ¹

¹Northeast Agricultural University

RUMINANT NUTRITION

8:15 AM PSXIII-21 **Nutrient intake, ruminal and apparent total tract digestibility, and nitrogen utilization in finishing cattle fed increasing amounts of grape pomace**

James R. Vinyard ¹, Gwinyai E. Chibisa ²

¹University of Idaho, Department of Animal and Veterinary Sciences, ²University of Idaho

PHYSIOLOGY AND ENDOCRINOLOGY

8:15 AM PSXIII-22 **Changes of reproductive hormones and pregnancy rate with different estrus synchronization methods in Korean black goats**

jinwook Lee ¹, Dayeon Jeon ², Sung-Soo Lee ², Seung-Chang Kim ³, Yeoung-Gyu Ko ⁴, Hee-Jong Roh ³, Sung woo Kim ⁵, Kwan-Woo Kim ⁵

¹National Institute of Animal Science, Republic of Korea, ²National Institute of Animal Science,

³National Institute of Animal Science, ROK, ⁴Animal Genetic Resources Research Center,

⁵National institute of animal science

INTERNATIONAL ANIMAL AGRICULTURE

8:15 AM PSXIII-23 **Facilitating Smallholder Dairy Farmers entry into the Value Chain**

John S. McCormack ¹

¹Winrock International

COMPANION ANIMALS

8:15 AM PSXIII-24 **A Survey of Australian Shepherd Breeding Practices and Genetic Diversity**

Karen Bennett-Wimbush ¹, Jessica Suagee-Bedore ², CA Sharp ³

¹The Ohio State University Agricultural Technical Institute, ²Sam Houston State University,

³Australian Shepherd Health and Genetics Institute

COMPANION ANIMALS

8:15 AM PSXIII-25 **Use of insect meal an alternative protein source in feline nutrition**

Karen G. Lisenko ¹, Flávia M. O. B. Saad ¹, Maiara Oliveira ¹, Thaianie V. Silva ¹, Diego V. Costa ², Daniel S. Dias ¹, Mateus R. Damasceno ¹, Luiz D. Oliveira ¹, Sudario R. S. Junior ¹, Márcio G. Zangeronimo ¹, Maria R. de Godoy ³

¹Federal University of Lavras, Lavras, Minas Gerais, Brazil, ²Federal University of Minas Gerais, Montes Claros, Minas Gerais, Brazil, ³University of Illinois Urbana-Champaign

COMPANION ANIMALS

8:15 AM PSXIII-26 **Compositional analysis and effects of dietary supplementation of insect meals on nutrient digestibility and gut health of adult dogs**

Karen G. Lisenko ¹, Maria R. de Godoy ², Maiara Oliveira ¹, Thaianie V. Silva ¹, Táfanie V. Fontes ¹, Diego V. Costa ³, Roberta F. Lacerda ¹, Lívia G. Ferreira ¹, Tarcísio M. Gonçalves ¹, Márcio G. Zangeronimo ¹, Flávia M. O. B. Saad ¹

¹Federal University of Lavras, Lavras, Minas Gerais, Brazil, ²University of Illinois Urbana-Champaign, ³Federal University of Minas Gerais, Montes Claros, Minas Gerais, Brazil

ANIMAL BEHAVIOR AND WELL-BEING

8:15 AM PSXIII-27 **Late-Breaking: Afiliative behavior of dairy heifers on grazing system**

Karolini T. Sousa ¹, Matheus Deniz ¹, Bianca Vandresen ¹, Rodrigo S. Conceicao ¹, Juliana Luiz Butzge ¹, Luiz Carlos Machado Filho ¹

¹

COMPANION ANIMALS

8:15 AM PSXIII-28 **Inclusion of Soybean Hulls in Extruded Diets for Adult Cats: Effects on Apparent Total Tract Macronutrient Digestibility, Fecal Quality, and Fermentative End-Product Concentrations**

Katelyn B. Detweiler ¹, Gary M. Davenport ², Maria R. de Godoy ³

¹Department of Animal Sciences, University of Illinois at Urbana-Champaign, ²Archer Daniels Midland Company, ³University of Illinois Urbana-Champaign

RUMINANT NUTRITION

8:15 AM PSXIII-29 **DIFFERENT LEVELS OF DRIED DISTILLERS GRAINS IN DIETS FED TO *Bos indicus* CATTLE IN FEEDLOT SYSTEM**

Leandro S. Martins ¹, Flavio Santos ², James Drouillard ³, Lainer S Leite ¹

¹Centro de Pesquisa Nutripura, ²Department of Animal Science, "Luiz de Queiroz" College of Agriculture, University of São Paulo (USP), Piracicaba, SP, ³Kansas State University

RUMINANT NUTRITION

8:15 AM PSXIII-30 **Evaluation of corn silage with addition of spent substrate from cultivation of white rot mushroom**

Lucia M. Zeoula ¹, Bruna Calvo Agostinho ¹, Erica Machado ¹, Nadine Woruby Santos ¹, Emerson Henri Yoshimura ¹, Janaina Maciero Bragatto ¹, João L. P. Daniel ², Paula Toshimi Matumoto Pinto ¹

¹State University of Maringá, ²Universidade Estadual de Maringa

INTERNATIONAL ANIMAL AGRICULTURE

8:15 AM PSXIII-31 **Effects of protein levels on guinea pig on growth performance, nitrogen utilization, and nutritional composition of meat by guinea pigs.**

Marco Araujo¹, Andres Molina¹, Patricia Falconi¹, Christian H. Ponce²

¹Universidad de las Fuerzas Armadas-ESPE, ²Universidad San Francisco de Quito

INTERNATIONAL ANIMAL AGRICULTURE

8:15 AM PSXIII-32 **Effects of implementing a semi-stall-fed production system on goat kid survival and farmer adoption in Western Odisha**

Maureen Valentine¹, Keenan McRoberts¹, Michael Thonney¹, Debbie J. Cherney¹

¹Cornell University

INTERNATIONAL ANIMAL AGRICULTURE

8:15 AM PSXIII-33 **Hen weight and feed consumption effects on egg weight of three different laying groups of quail**

Olatunji T. Abanikannda¹, Adewumi A. Adejumo², Abdulazeez O. Giwa¹, Abisogun Leigh¹

¹Lagos State University, ²Sigma Statistical Services

RUMINANT NUTRITION

8:15 AM PSXIII-34 **Effect of supplementation with corn DDGS on intake and ruminal fermentation parameters by beef steers fed a tropical grass hay**

Olegario Hernández¹, Agustín López¹, Monica Nazareno², Mariana García², Pablo Sebastian Reineri³, Héctor Fissolo¹, José Arroquy⁴

¹INTA EEA Santiago del Estero, Santiago del Estero, Argentina, ²Universidad Nacional de Santiago del Estero, ³INTA, ⁴Instituto Nacional de Tecnología Agropecuaria; Universidad Nacional del Sur

PHYSIOLOGY AND ENDOCRINOLOGY

8:15 AM PSXIII-35 **Administration of prostaglandin F_{2α} 24 h prior to CIDR removal alters distribution of estrus expression in replacement beef heifers assigned to the Select-Synch estrus synchronization protocol**

Pedro L.P. Fontes¹, Reinaldo F. Cooke², Nicky Oosthuizen³, Bruce Carpenter⁴, G. Cliff C. Lamb²

¹Texas A&M University, Department of Animal Science, ²Texas A&M University, ³ABS Global, ⁴Texas A&M University - Department of Animal Science

PHYSIOLOGY AND ENDOCRINOLOGY

8:15 AM PSXIII-36 **The relationship between polymorphonuclear cells (PMN), size and position of the reproductive tract (SPS) and pregnancy outcomes in postpartum Nellore cows.**

Ramiro Vander Oliveira Filho¹, José Humberto Furlan Junior², Hugo Graff², José Luiz Vasconcelos³, Ronaldo Cerri⁴, Ky G. Pohler⁵

¹University of Tennessee, ²Fazenda Brasil, ³São Paulo State University, ⁴The University of British Columbia, ⁵University of Tennessee - Department of Animal Science

COMPANION ANIMALS

8:15 AM PSXIII-37 **A comparison of different methods of estimation of dry fecal output in dogs**

Renan Donadelli¹, Greg G. Aldrich¹

¹Kansas State University

PHYSIOLOGY AND ENDOCRINOLOGY

8:15 AM PSXIII-38 **Methods for accurate determination of bovine placental tissue weight**

Riley D. Messman¹, Katy S. Stoecklein², Emma L. Stephenson², Natalie B. Duncan², Allison M. Meyer²

¹Mississippi State University, ²Division of Animal Sciences, University of Missouri

RUMINANT NUTRITION

8:15 AM PSXIII-39 **Feed intake and in vitro digestibility of sheep fed high concentrations of soybean molasses**

SERGIO A. G. Pereira¹, Edivilson Silva. Castro Filho¹, Rayanne Viana. Costa², Andresa L. Feliciano¹, Julia Lisboa. Rodrigues², Joao Pedro Amaral. Bertoco¹, Robson S. Barducci¹, Eric H. C. B. van Cleef³, Jane M. B. Ezequiel¹

¹Sao Paulo State University, ²SÃO PAULO STATE UNIVERSITY, ³Federal University of Triangulo Mineiro

PHYSIOLOGY AND ENDOCRINOLOGY

8:15 AM PSXIII-40 **Monitoring in-line milk progesterone profiles prior to first breeding to predict reproductive performance in Holstein cows**

Tony C. Bruinje¹, Marcos G. Colazo², Divakar J. Ambrose²

¹Department of Agricultural, Food and Nutritional Science, University of Alberta, ²Alberta Agriculture and Forestry, 7000 - 113 Street, Edmonton, AB, Canada T6H 5T6

COMPANION ANIMALS

8:15 AM PSXIII-41 **Beagles and Labrador Retrievers adult dogs have similar threonine maintenance requirements determined by the indirect amino acid oxidation technique**

Wilfredo Mansilla¹, Lisa Fortener², Anna K. Shoveller¹

¹University of Guelph, ²Mars Petcare

RUMINANT NUTRITION

8:15 AM PSXIII-42 **Effects of alkaloid rich potato by-product on in vitro rumen digestibility and fermentation characteristics**

youngho joo¹, hyuk jun lee², seongshin Lee³, Dimas Hand Vidya Parahipta⁴, Donghun Kang⁵, Ki Yong Chung⁶, Dong Hyeon Kim⁷, samchrul kim¹

¹Gyongsang National University, ²Division of Applied Life Science (BK 21Plus, Insti. of Agric. & Life Sci.), Gyeongsang National University, ³Korean National Institute of Animal Science, ⁴Gyeongsang National University, ⁵Hanwoo Research Institute, ⁶Korea National College of Agriculture and Fisheries, ⁷University of Florida

ASAS Foundation Board of Trustees Meeting

8:30 AM – 11:00 AM

Poster Session XIV

9:15 AM – 10:15 AM

BREEDING AND GENETICS

9:15 AM PSXIV-1 **Population structure of the Simmental cattle of different origin bred in Russia revealed by whole-genome SNP scanning**

Alexander A. Sermyagin¹, Arsen V. Dotsev¹, Larisa P. Ignatieva¹, Margaret S. Fornara¹, Olga V. Kostyunina¹, Henry Reyer², Klaus Wimmers², Gottfried Brem³, Natalia A. Zinovieva¹
¹L.K. Ernst Federal Research Center for Animal Husbandry, ²Institute of Genome Biology, Leibniz Institute for Farm Animal Biology, ³Institute of Animal Breeding and Genetics, University of Veterinary Medicine (VMU)

RUMINANT NUTRITION

9:15 AM PSXIV-2 **Effects of feed additives on rumen parameters of steers fed a high-forage diet**

Alexandre A. Miszura¹, Daniel M M. Polizel², Marcos V. C. Ferraz Jr.³, José paulo P. R. Barroso², Luiz Guilherme M. Gobato¹, André S. Martins¹, Gabriela B. Oliveira⁴, Evandro M. Ferreira⁵, Alexandre Vaz Pires²
¹FMVZ/University of Sao Paulo, ²ASAS, ³Federal University of Amazonas, ⁴University of Sao Paulo, ⁵ESALQ/University of Sao Paulo

PHYSIOLOGY AND ENDOCRINOLOGY

9:15 AM PSXIV-3 **Humoral immune responses in ostrich chicks to dietary L-carnitine supplementation**

Ali Hajibabaei¹, Norman Casey¹
¹University of Pretoria

BREEDING AND GENETICS

9:15 AM PSXIV-4 **Breed purity of Holstein bulls born in Russia and imported from different countries**

Arsen V. Dotsev¹, Alexander A. Sermyagin¹, Alexey V. Shakhin¹, Henry Reyer², Klaus Wimmers², Gottfried Brem³, Natalia A. Zinovieva¹
¹L.K. Ernst Federal Research Center for Animal Husbandry, ²Institute of Genome Biology, Leibniz Institute for Farm Animal Biology, ³Institute of Animal Breeding and Genetics, University of Veterinary Medicine (VMU)

PHYSIOLOGY AND ENDOCRINOLOGY

9:15 AM PSXIV-5 **Effects of pre-transport administration of Meloxicam on indicators of protein metabolism in transported 4-day old Jersey calves**

Cheyenne A. Myers¹, Zachary Carlson², Gordon Murdoch¹, Gwinyai E. Chibisa¹
¹University of Idaho, ²University of Idaho, Animal and Veterinary Science

RUMINANT NUTRITION

9:15 AM PSXIV-6 **Feeding differing direct fed microbials and its influence on growth and haematological parameters of growing lambs**

Christopher Antwi¹, Patience Awotwe-Mensah², Yaw Oppong Frimpong², John Baah³
¹Kwame Nkrumah University of Science & Technology, ²KNUST, ³BEST GHANA ENVIRONMENTAL TECHNOLOGIES INC.

ANIMAL HEALTH

9:15 AM PSXIV-7 Transcriptomic analysis of varying immune responses in BVDV challenged cattle

Damarius Fleming¹, Clare A. Gill²

¹USDA/Texas A and M University, ²Texas A and M University

RUMINANT NUTRITION

9:15 AM PSXIV-8 Effects of narasin on rumen parameters of steers fed a high-forage diet

Daniel M M. Polizel¹, Alexandre A. Miszura², Marcos V. C. Ferraz Jr.³, José paulo P. R. Barroso¹, Luiz Guilherme M. Gobato², Gabriela B. Oliveira⁴, Analisa Bertoloni⁴, Bruno I. Cappelozza⁵, Catarina N. Lopes⁶, Fernanda Hoe⁵, Alexandre Vaz Pires¹

¹ASAS, ²FMVZ/University of Sao Paulo, ³Federal University of Amazonas, ⁴University of Sao Paulo, ⁵Elanco Animal Health, ⁶Elanco

RUMINANT NUTRITION

9:15 AM PSXIV-9 Narasin improves performance of grazing Nelore yearling bulls

Daniel M M. Polizel¹, Marcos V. C. Ferraz Jr.², Alexandre A. Miszura³, José paulo P. R. Barroso¹, André S. Martins³, José R. S. Gonçalves⁴, Arnaldo C. Limede⁵, Bruno I. Cappelozza⁶, Evandro M. Ferreira⁷, Alexandre Vaz Pires¹

¹ASAS, ²Federal University of Amazonas, ³FMVZ/University of Sao Paulo, ⁴Experimental Station Hildegard Georgina Von Pritzelwitz, ⁵University of Sao Paulo, ⁶Elanco Animal Health, ⁷ESALQ/University of Sao Paulo

RUMINANT NUTRITION

9:15 AM PSXIV-10 Effect of rumen protected Ca-gluconate on the performance, gastrointestinal tract development, digesta composition, and total tract digestibility of lambs

Daniel H. Watanabe¹, Michael Steele², John Doelman³, Gregory B. Penner⁴

¹Department of Animal and Poultry Science, University of Saskatchewan, ²University of Alberta, University of Guelph, ³Trouw Nutrition R&D, ⁴Department of Animal and Poultry Science, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada S7N 5A8

RUMINANT NUTRITION

9:15 AM PSXIV-11 The use of essential oils alone or in combination with monensin for calf starters.

David P. Casper¹, L. Guo², Ting Liu², Jianping Wu³

¹Furst-McNess Company, ²Gansu Agricultural University, ³Gansu Academy of Agricultural Sciences

RUMINANT NUTRITION

9:15 AM PSXIV-12 Impact of prebiotic and probiotic feed additive blends on bovine respiratory disease, E. coli O157:H7 shedding, and performance of receiving steers.

Devan M. Paulus Compart¹, Uchenna Anele², Chanda Engel³, Diwakar Vyas⁴, Dong Kim⁴, Karl Hoppe⁵

¹PMI, ²North Carolina A & T State University, ³North Dakota State University, Carrington Research Extension Center, ⁴University of Florida, ⁵North Dakota State University

ANIMAL HEALTH

9:15 AM PSXIV-13 **Novel DI/LC-MS/MS-based urinary metabolite signatures for monitoring dairy cows for occurrence of retained placenta**

Elda Dervishi ¹, Guanshi Zhang ², David S. Wishart ², Burim N. Ametaj ²

¹Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, ²University of Alberta

RUMINANT NUTRITION

9:15 AM PSXIV-14 **Effects of protein supplementation on beef heifer circulating non-esterified fatty acids, blood urea nitrogen (BUN), and glucose in relation to time of feeding**

Emma L. Stephenson ¹, Allison M. Meyer ¹, Amy E. Radunz ²

¹Division of Animal Sciences, University of Missouri, ²University of Wisconsin-River Falls

ANIMAL HEALTH

9:15 AM PSXIV-15 **The Effect of Intravaginal Progesterone Implant in The Vaginal Microbiota of Holstein Cows**

Eraldo L. Zanella ¹, Giovana C. Zanella ¹, Daniel L. Quadros ¹, Carlos Bondan ¹, Arthur N da Silva ¹, Fernanda Faccioli ¹, Lucas Lof ¹, Mauricio E Cantão ², Ricardo Zanella ¹

¹University of Passo Fundo, ²Embrapa

ANIMAL HEALTH

9:15 AM PSXIV-17 **Gene co-expression network analysis identifies important modules and genes for cow's response to Mycobacterium avium ssp. paratuberculosis infection in the small intestine**

Eveline M. Ibeagha-Awemu ¹, Duy N. Do ², Pier-Luc Dudemaine ¹, Nathalie Bissonnette ¹

¹Sherbrooke Research and Development Centre, Agriculture and Agri-Food Canada,

²Agriculture and Agri-Food Canada

BREEDING AND GENETICS

9:15 AM PSXIV-18 **Genome-wide association study to identify genomic regions and single nucleotide polymorphisms functionally associated with bull fertility**

Hannah Sweett ¹, Filippo Miglior ², Alexandra Livernois ³, Pablo A.S Fonseca ⁴, Samir Id Lahoucine ⁵, Evert Troya ⁵, Aroa S. Suárez-Vega ⁵, Angela Cánovas ⁴

¹Centre for Genetic Improvement of Livestock, Department of Animal Bioscience, University of Guelph, Guelph, Ontario, Canada, ²Canadian Dairy Network, ³Food from Thought, University of Guelph, ⁴Department of Animal Biosciences, Centre for Genetic Improvement of Livestock, University of Guelph, N1G 2W1, Guelph, Ontario, Canada., ⁵University of Guelph

ANIMAL HEALTH

9:15 AM PSXIV-19 **Escherichia coli K88 inhibits fatty acids absorption in dietary through decreasing Fatty Acid-binding Protein 3**

Heyuan Liu ¹

¹College of Animal Science, Zijingang Campus of Zhejiang University

RUMINANT NUTRITION

9:15 AM PSXIV-20 **Effect of dietary monensin on rumen fluid metabolomic profile of beef cattle**

Ibukun M. Ogunade ¹, Hank Schweickart ¹

¹Kentucky State University

BREEDING AND GENETICS

9:15 AM PSXIV-21 **Assessing homozygosity level in the Russian Black-and-White and Holstein cattle using whole-genome analysis**

Igor S. Nedashkovsky¹, Alexander A. Sermyagin², Olga V. Kostyunina², Gottfried Brem³, Natalia A. Zinovieva²

¹L.K. Ernst Federal Science Center for Animal Husbandry, ²L.K. Ernst Federal Research Center for Animal Husbandry, ³Institute of Animal Breeding and Genetics, University of Veterinary Medicine (VMU)

BREEDING AND GENETICS

9:15 AM PSXIV-22 **Identification of genetic markers for carcass quality traits within the American Simmental Association Carcass Merit Program**

Jordan K. Hieber¹, Rachel Endecott², Jennifer M. Thomson¹

¹Department of Animal and Range Sciences, Montana State University, ²American Simmental Association

BREEDING AND GENETICS

9:15 AM PSXIV-23 **Prediction accuracies of genomic selection in American mink: a simulation study**

Karim Karimi¹, Mehdi Sargolzaei², Zhiquan Wang³, Graham Plastow⁴, Younes Miar⁵

¹Dalhousie University, ²University of Guelph, ³Livestock Gentec, University of Alberta, ⁴University of Alberta, ⁵Department of Animal Science and Aquaculture, Dalhousie University, Truro, NS, B2N 5E, Canada

RUMINANT NUTRITION

9:15 AM PSXIV-24 **Effect of essential oils and exogenous enzyme on adaptation period of cattle fed different roughage sources**

Tiago Sabella Acedo¹, Rodrigo Goulart², Vinicius Nunes de Gouvea¹, Tiago S. S. Acedo³, Guilherme S. S. F. M. Vasconcellos³, Paulo Roberto Leme⁴, Arlindo Saran Netto⁴, Saulo da Luz e Silva⁴

¹DSM Produtos Nutricionais Brasil S.A., ²FZEA-USP, ³DSM Nutritional Products S/A Brazil, ⁴University of São Paulo, Pirassununga, SP, Brazil – College of Animal Science and Food Engineering

PHYSIOLOGY AND ENDOCRINOLOGY

9:15 AM PSXIV-25 **Peripartum supplementation of vitamins A, D, and E increases monocyte CD14, neutrophil CD11b and lymphocyte CD62L in newborn beef calves**

Leslie Blakely¹, Mercedes Kweh¹, Madelin Pozadas¹, Luara B. Canal², Joyce Maciel³, Carla D. Sanford⁴, Pedro L.P. Fontes⁵, Nicky Oosthuizen⁶, Nicolas DiLorenzo¹, G. Cliff C. Lamb⁷, Corwin D. Nelson⁸

¹University of Florida, ²University of Florida - North Florida Research and Education Center, ³NFREC - University of Florida, ⁴University of Florida, NFREC, ⁵Texas A&M University, Department of Animal Science, ⁶ABS Global, ⁷Texas A&M University, ⁸Department of Animal Sciences, University of Florida

RUMINANT NUTRITION

9:15 AM PSXIV-26 **Do mycotoxin contaminated diets and yeast-derived adsorbent affect finishing Nellore cattle performance in feedlot?**

Leticia Custodio¹, Laura F. Prados², Alexandros Yiannikouris³, Danubia Figueira¹, Eduardo Gloria⁴, Vaughn Holder³, James Pettigrew⁵, Leandro Kuritza⁶, Flávio D. Resende⁷, Gustavo R. Siqueira⁷

¹UNESP/APTA, ²Cargill, ³Alltech Inc., ⁴ESALQ/USP, ⁵Pettigrew Research Services, ⁶Alltech, ⁷APTA

RUMINANT NUTRITION

9:15 AM PSXIV-27 **Do mycotoxin contaminated diets and yeast-derived adsorbent affect meat quality of finishing Nellore cattle in feedlot?**

Leticia Custodio¹, Laura F. Prados², Alexandros Yiannikouris³, Danubia Figueira¹, Eduardo Gloria⁴, Vaughn Holder³, James Pettigrew⁵, Leandro Kuritza⁶, Flávio D. Resende⁷, Gustavo R. Siqueira⁷

¹UNESP/APTA, ²Cargill, ³Alltech Inc., ⁴ESALQ/USP, ⁵Pettigrew Research Services, ⁶Alltech, ⁷APTA

BREEDING AND GENETICS

9:15 AM PSXIV-28 **Genetic correlation between level of Babesia bovis, tick count and weight gain in Braford and Hereford cattle**

Ligia Cavani¹, Rodrigo Giglioti², Cintia Hiromi Okino², Claudia Cristina Gulias-Gomes³, Gabriel Soares Campos⁴, Alexandre Rodrigues Caetano⁵, Márcia Cristina de Sena Oliveira⁶, Fernando Flores Cardoso⁷, Guilherme J. J. M. Rosa⁸, Henrique Nunes de Oliveira⁹

¹Supported by the São Paulo Research Foundation (FAPESP) #2017/08940-3, São Paulo, Brazil. São Paulo State University (Unesp), School of Agricultural and Veterinarian Sciences, Jaboticabal, Brazil, ²Embrapa Southeast Livestock, São Carlos, Brazil, ³Embrapa South Livestock, Bagé, Brazil, ⁴Federal University of Rio Grande do Sul, Porto Alegre, Brazil, ⁵Embrapa Genetic Resources and Biotechnology, Brasília, Brazil, ⁶Embrapa Pecuária Sudeste, ⁷EMBRAPA - CPPSul, ⁸Department of Animal and Dairy sciences, University of Wisconsin-Madison, ⁹São Paulo State University (Unesp), School of Agricultural and Veterinarian Science (FCAV), Jaboticabal, Brazil

RUMINANT NUTRITION

9:15 AM PSXIV-29 **Citrus aurantium flavonoid extract improves concentrate efficiency, and animal behavior of Holstein bulls fed high-concentrate diets**

Montse Paniagua¹, F Javier Crespo², Mar Serra², Anna Aris³, Maria Devant⁴

¹Quimidroga, ²Interquim SA, Ferrer HealthTech, ³Ruminant Production, IRTA, ⁴IRTA-Ruminant Production

ANIMAL HEALTH

9:15 AM PSXIV-30 **Study of S. aureus strains, isolated from different biotopes of the cows' organism.**

Olga Artemieva¹, Daria A. Nikanova¹, Ksenia Fursova², Fedor Brovko¹, Natalia A. Zinovieva¹

¹L.K. Ernst Federal Research Center for Animal Husbandry, ²Shemyakin and Ovchinnikov Institute of Bioorganic Chemistry, Federal Agency of Scientific Organizations

ANIMAL HEALTH

9:15 AM PSXIV-31 **Mycotoxin Occurrence in the 2017 US Corn Crop**

Paige N. Gott¹, Erika G. Hendel², S. Maria Mendoza³, Ursula Hofstetter⁴, G. Raj Murugesan²

¹BIOMIN America Inc., ²BIOMIN America Inc., ³BIOMIN America, Inc., ⁴Biomin

BREEDING AND GENETICS

9:15 AM PSXIV-32 Inbreeding depression in a Hereford beef cattle population using the pedigree and genomic information

Pattarapol Sumreddee ¹, Sajjad Toghiani ¹, EL Hamidi Hay ², Ashley S. Ling ³, Samuel E. Aggrey ¹, Romdhane Rekaya ⁴

¹University of Georgia, ²USDA Agricultural Research Service, Fort Keogh Livestock and Range Research Laboratory, ³University of Georgia, Department of Animal and Dairy Science, ⁴University of Georgia

PHYSIOLOGY AND ENDOCRINOLOGY

9:15 AM PSXIV-33 Impacts of *Bos indicus* vs. *Bos taurus* genetics and nutrient energy restriction during early gestation on offspring performance and feed efficiency

Pedro L.P. Fontes ¹, Nicky Oosthuizen ², Francine M. Ciriaco ³, Darren D. Henry ⁴, Carla D. Sanford ⁵, Luara B. Canal ³, Vitor R. G. Mercadante ⁶, Alan Ealy ⁶, Sally Johnson ⁷, Nicolas DiLorenzo ⁸, G. Cliff C. Lamb ⁹

¹Texas A&M University, Department of Animal Science, ²ABS Global, ³University of Florida - North Florida Research and Education Center, ⁴Texas Tech University, ⁵University of Florida, NFREC, ⁶Virginia Tech, ⁷Virginia Polytechnic and State Institution, ⁸University of Florida, ⁹Texas A&M University

RUMINANT NUTRITION

9:15 AM PSXIV-34 The influence of microencapsulated plant secondary compounds (MPSC/Activo Premium®) on performance and carcass characteristics of growing and finishing feedlot beef cattle

Sam Jalali ¹, Ashley Budde ¹, Octavio de Almeida Guimaraes Bisneto ², Rafael C. Araujo ³, Myron Tiedeman ⁴, Rick Goodall ⁵, Terry E. Engle ²

¹Colorado State University, Department of Animal Sciences, ²Colorado State University, ³GRASP, ⁴EW Nutrition USA, Inc., ⁵Rick Goodall Consulting

PHYSIOLOGY AND ENDOCRINOLOGY

9:15 AM PSXIV-35 Low feed intake induced gut microbiome alteration leads to exacerbated bile acid metabolism in piglets during transition periods

Sen Lin ¹, Xiaomin Yang ¹, Jiameng Yang ¹, ZhengFeng Fang ², Heju Zhong ², Jian Li ², Lianqiang che ³, Bin Feng ², Yan Lin ², Shengyu Xu ², De Wu ¹, Zhengfeng Fang ¹

¹Institute of Animal Nutrition, Sichuan Agricultural University, ²Animal Nutrition Institute, Sichuan Agricultural University, ³Sichuan Agricultural University

BREEDING AND GENETICS

9:15 AM PSXIV-36 Robust Bayesian inference based on birth, weaning and yearling weight data in Brangus beef cattle using normal/independent distributions

Sunday O. Peters ¹, Mahmut Sinecen ², Kadir Kizilkaya ², Mehmet Yildiz ³, Dorian Garrick ⁴, Milton G. G. Thomas ⁵

¹Department of Animal Science, Berry College, ²Aydin Adnan Menderes University, AYDIN, ³Ankara University, Ankara, ⁴Massey University, ⁵Colorado State University

BREEDING AND GENETICS

9:15 AM PSXIV-37 **Accuracies of genomic breeding values for growth and carcass traits in Brangus beef cattle using K-means clustering for cross-validation**

Sunday O. Peters ¹, Mahmut Sinecen ², Kadir Kizilkaya ², Mehmet Yildiz ³, Dorian Garrick ⁴, Milton G. G. Thomas ⁵

¹Department of Animal Science, Berry College, ²Aydin Adnan Menderes University, AYDIN,

³Ankara University, Ankara, ⁴Massey University, ⁵Colorado State University

RUMINANT NUTRITION

9:15 AM PSXIV-38 **Feeding natural probiotic products improved growth performance and health of growing beef steers**

Tao Ran ¹, Yizhao Shen ², Walaa Gomaa ³, Atef Saleem ⁴, WenZhu Yang ⁵, Tim A. McAllister ⁵

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada; Institute of Subtropical Agriculture, the Chinese Academy of Sciences, Changsha, Hunan 410125, China,

²College of Animal Science and Technology, Hebei Agricultural University, ³Department of Animal Nutrition and Clinical Nutrition, Assiut University, ⁴South Valley University, ⁵Agriculture and Agri-Food Canada

RUMINANT NUTRITION

9:15 AM PSXIV-39 **Protein source and essential oil inclusion in the ruminal and blood parameters of grazing Nelore cattle**

Verônica Aparecida Costa Mota ¹, Laura F. Prados ², Cleisy Ferreira Nascimento ³, Felipe Almeida Nascimento ³, Willian Manoel R. Foresto ⁴, Diego Monteiro Batista ⁴, Flávio D. Resende ⁵, Gustavo R. Siqueira ⁵

¹The University of Queensland, ²Cargill, ³Universidade Estadual Paulista “Júlio de Mesquita Filho”, Faculdade de Ciências Agrárias e Veterinárias, Brazil, ⁴Centro Universitário da Fundação Educacional de Barretos, Brazil, ⁵APTA

RUMINANT NUTRITION

9:15 AM PSXIV-40 **Effects of Different Diets on Fatty Acid Composition and Lipid Stability of Intramuscular Fat in Dorper×Thin-Tailed Han Crossbred Mutton Lambs**

Wang jing Liu ¹, Chang jin Ao ¹, He Ding ¹, Erdene Khas ¹

¹College of animal science, Inner Mongolia Agricultural University

ANIMAL HEALTH

9:15 AM PSXIV-41 **Intestinal Inflammatory impairs lipid transport via m6A-dependent pathway**

Xin Zong ¹, Jing Zhao ¹, Hong Wang ¹, Yizhen Wang ²

¹Zhejiang university, ²Institute of Feed Science, Zhejiang University

ANIMAL HEALTH

9:15 AM PSXIV-42 **Effect of a corn-soybean meal mixed feed fermented with Bacillus subtilis and Enterococcus faecium on intestinal morphage, digestive function and flora of piglets**

Yu Zhang ¹, Changyou Shi ¹, Cheng Wang ¹, Zeqing Lu ², Fengqin Wang ¹, Yizhen Wang ²

¹College of Animal Science, Institution of Animal Nutrition and Feed Science, Zhejiang University, ²Institute of Feed Science, Zhejiang University

Forages and Pastures Symposium: Water-use efficiency at the forage-animal interface

Chair: Clayton Robins, Manitoba 4-H Council Inc.

9:30 AM – 11:40 AM

9:30 AM **Introductory Remarks**

9:40 AM 435 **Water footprint of stocker beef production**

Charles P. West ¹

¹Texas Tech University

10:10 AM 436 **Steps to Sustainable Ruminant Livestock Production – the role of instrumented farms and networks**

Michael R.F Lee ¹

¹Rothamsted Research

10:40 AM 437 **Forage management and nutrient capture**

Debbie J. Cherney ¹

¹Cornell University

11:10 AM 438 **Life cycle assessment of forage-based livestock production systems**

Dirk Philipp ¹

¹University of Arkansas

ARPAS Exams Session V

10:30 AM – 12:30 PM

Spouse Event II: The Museum of Anthropology at UBC

10:00 AM – 3:30 PM

Poster Session XV

10:15 AM – 11:15 AM

GROWTH AND DEVELOPMENT

10:15 AM PSXV-1 **The effect of Improvac® at two live weights on testes size, behavior, gains and hormonal profile of beef bulls**

Albina Sanz ¹, Agustí Noya ¹, Isabel Casasús ¹, Eva Monleón ², Guillermo Ripoll ³

¹CITA de Aragón-IA2, ²Facultad de Medicina, Universidad de Zaragoza, ³IA2-CITA de Aragón

SMALL RUMINANT

10:15 AM PSXV-2 **Can lambs modify their grazing behavior according to the finishing production systems?**

Alda G. Monteiro ¹, Laura D. Faisca ¹, Leonardo Deiss ², Olivier Bonnet ³, Mylena T. Peres ¹, Rafael Batista ¹, Karla Duarte. Campos ¹

¹Federal University of Paraná, Brazil, ²UTP, Brazil, ³Federal University of Pelotas, RS, Brazil

SMALL RUMINANT

10:15 AM PSXV-3 Sheep methane emissions in two feeding systems in summer and winter pastures in South of Brazil

Alda G. Monteiro ¹, Mylena T. Peres ¹, Amanda Moser. Faro ², Rafael Batista ¹, Leonardo Deiss ³, Henrique Ribeiro ⁴, Alexandre Berndt ⁵, Laura D. Faisca ¹

¹Federal University of Paraná, Brazil, ²Instituto Federal Catarinense, Brazil, ³UTP, Brazil,

⁴UDESC, Lages, Brazil, ⁵Brazilian Agricultural Research Corporation Southeast Livestock

SMALL RUMINANT

10:15 AM PSXV-4 Effect of Water Restriction on Intake and Body Weight Responses in Hair Sheep Breeds

Ali H. Hussein ¹, Ryszard Puchala ², Italo Portugal ³, Terry Gipson ², Blake K. Wilson ⁴, Arthur L. Goetsch ²

¹American Institute for Goat Research, Langston University; Department of Animal Science, Oklahoma State University, ²American Institute for Goat Research, Langston University,

³American Institute for Goat Research Langston University, ⁴Department of Animal Science, Oklahoma State University

SMALL RUMINANT

10:15 AM PSXV-5 Divergent residual intake and body weight gain on ingestive behavior and diet selection by feedlot lambs

Americo Froes. Garcez ¹, Eduardo Michelin. Nascimento ¹, Sergio Rodrigo. Fernandes ¹, Deborah Sandri ¹, Matheus Friedrich ¹, Jose Antonio. Freitas ¹, Willian Gonçalves. Nascimento ¹

¹Federal University of Parana

SMALL RUMINANT

10:15 AM PSXV-6 Narasin improves milk production of ewes

André S. Martins ¹, Daniel M M. Polizel ², Marcos V. C. Ferraz Jr. ³, Alexandre A. Miszura ¹, José paulo P. R. Barroso ², Luiz Guilherme M. Gobato ¹, Gabriela B. Oliveira ⁴, Analisa Bertoloni ⁴, Alexandre Vaz Pires ²

¹FMVZ/University of Sao Paulo, ²ASAS, ³Federal University of Amazonas, ⁴University of Sao Paulo

SMALL RUMINANT

10:15 AM PSXV-7 Static effect of nutrition on the sexual performance of creole male goats in northern Mexico

MA ANGELES DE SANTIAGO ¹, Efren Cruz ², Xochilt Luna ², Viridiana Contreras Villarreal ³, Oscar Angel ⁴, Francisco Gerardo Véliz-Deras ³

¹UAAAN, ²UNIVERSIDAD AUTONOMA AGRARIA ANTONIO NARRO, ³Universidad Autónoma Agraria Antonio Narro, ⁴Universidad Autónoma Agraria Antonio Narro

SMALL RUMINANT

10:15 AM PSXV-8 Nutritional supplementation + testosterone treatment, increases, body weight, sexual odor, scrotal circumference and libido in male goats during sexual resting

MA ANGELES DE SANTIAGO ¹, Xochilt Luna ², Efren Cruz ², Viridiana Contreras Villarreal ³, Oscar Ángel-García ³, Francisco Gerardo Véliz-Deras ³

¹UAAAN, ²UNIVERSIDAD AUTONOMA AGRARIA ANTONIO NARRO, ³Universidad Autónoma Agraria Antonio Narro

GROWTH AND DEVELOPMENT

10:15 AM PSXV-9 **A Novel Anti-sense LncRNA of CEBPA Inhibits Bovine**

Adipogenic Differentiation

Anning Li ¹, Yun Hu ¹, Xiangdong Liu ², Liang Zhao ¹, Qiyu Tian ¹, Min Du ²

¹Department of Animal Sciences, Washington State University, ²Washington State University

GROWTH AND DEVELOPMENT

10:15 AM PSXV-10 **Targeted Gene Evaluation for Association with Heifer Maturity Grading based upon Skeletal Ossification**

Antonetta M. Colacchio ¹, Brenda M. Murdoch ¹, Kacie Salove ¹, Kimberly M. Davenport ¹, Matt Doumit ², Alysha O'Connell ¹, Gordon Murdoch ¹

¹University of Idaho, ²University of Idaho, Animal and Veterinary Science

GROWTH AND DEVELOPMENT

10:15 AM PSXV-11 **Modulation of bacterial composition in the gastrointestinal tract of calves fed Lactobacillus acidophilus during the early period of growth**

Bridget E. Fomenky ¹, Duy N. Do ², Guylaine Talbot ², Nathalie Bissonnette ³, Martin Lessard ⁴, Yvan P. Chouinard ⁵, Eveline M. Ibeagha-Awemu ³

¹Agriculture and Agri-Food Canada, ²Agriculture and Agri-Food Canada, ³Sherbrooke Research and Development Centre, Agriculture and Agri-Food Canada, ⁴Agriculture et Agroalimentaire Canada / Agriculture and Agri-Food Canada, ⁵Université laval

SMALL RUMINANT

10:15 AM PSXV-12 **The effect of condensed tannin-containing diets on lipogenic genes expression in meat goats: A Pilot Study**

Byeng Min ¹, Michael Mienaltowski ², Honghe Wang ¹, Thomas H. Terrill ³, Nar K. Gurung ¹

¹Tuskegee University, ²UCLA, ³Fort Valley State University

SMALL RUMINANT

10:15 AM PSXV-13 **Rumen fermentation and rumen microorganism enzymes activity of Oura-type Tibetan sheep in different seasons**

Cailian Wang ¹, Jianping Wu ¹, David P. Casper ², Xiaoxi Lang ³, Faming Pan ³, Shuzhen Song ³, F. Wang ³, X. Gong ³

¹Gansu Academy of Agricultural Sciences, ²Furst-McNess Company, ³Institute of Animal & Pasture Science and Green Agriculture, Gansu Academy of Agricultural Science. Lanzhou 730070, China

SMALL RUMINANT

10:15 AM PSXV-14 **The impact of pre-mating nutrition during optimal and sub-optimal breeding seasons on reproductive outcomes in an accelerated lamb production system**

Cesar A. Rosales-Nieto ¹, Almudena Veiga-Lopez ¹, Barbara Makela ², Alex Mantey ¹, Richard A. Ehrhardt ¹

¹Michigan State University, ²Laboratory Aide

GROWTH AND DEVELOPMENT

10:15 AM PSXV-15 **Impact of maternal dietary energy excess and deficit prior to mating on size at birth and pre-weaning growth in prolific sheep**

Cesar A. Rosales-Nieto ¹, Richard A. Ehrhardt ¹, Barbara Makela ², Alex Mantey ¹, Almudena Veiga-Lopez ¹

¹Michigan State University, ²Laboratory Aide

GROWTH AND DEVELOPMENT

10:15 AM PSXV-16 **Plasma and tissue abundance of Retinol Binding Protein 4 and body composition of crossbred bulls**

Elke Albrecht¹, Yinuo Liu¹, Runjun yang², Steffen Maak¹

¹Leibniz Institute for Farm Animal Biology, ²Jllin University

SMALL RUMINANT

10:15 AM PSXV-17 **Effects of increasing concentrations of soybean molasses on feed intake, growth performance, carcass and meat traits of feedlot lambs**

Eric H. C. B. van Cleef¹, Marco Tulio Costa. Almeida², Josimari R. Paschoaloto², Edivilson Silva. Castro Filho², Robson S. Barducci², Guilherme P. Soragni², Escalfiar A. Zampieri Neto², Ariane E. Pedro², Jane M. B. Ezequiel²

¹Federal University of Triangulo Mineiro, ²Sao Paulo State University

SMALL RUMINANT

10:15 AM PSXV-18 **Evaluation of palm kernel meal (*Elaeis guineensis* J.) as a supplement for tropically adapted sheep consuming *Pennisetum purpureum***

Erin N. Alava¹, Eduardo I. Alava-Hidalgo², Fanny Urquizo³

¹University of Findlay, ²Escuela Superior Politecnica del Litoral, ³Escuela Superior Politecnica del Litoral

GROWTH AND DEVELOPMENT

10:15 AM PSXV-19 **Fetal Blood Oxygenation and Placental Efficiency Is Increased By Melatonin Implants in Sheep**

Francisco A. Sales¹, Victor H. Parraguez², Susan A. McCoard³, Eileen Cofré², Oscar A. Peralta², Ignacio Subiabre⁴, Antonio González-Bulnes⁵

¹Instituto de Investigaciones Agropecuarias, Punta Arenas, Chile, ²Faculty of Veterinary Sciences, University of Chile, Santiago, Chile, ³AgResearch Limited, Palmerston North, New Zealand, ⁴Instituto de Investigaciones Agropecuarias, Osorno, Chile, ⁵INIA-Madrid and Facultad de Veterinaria, Universidad Complutense de Madrid, Spain

SMALL RUMINANT

10:15 AM PSXV-20 **Effects of Narasin supplementation frequency on lambs performance**

Gabriela B. Oliveira¹, Daniel M M. Polizel², Marcos V. C. Ferraz Jr.³, Alexandre A. Miszura⁴, Analisa Bertoloni¹, José paulo P. R. Barroso², André S. Martins⁴, Lairana A. Sardinha¹, Alexandre Vaz Pires²

¹University of Sao Paulo, ²ASAS, ³Federal University of Amazonas, ⁴FMVZ/University of Sao Paulo

GROWTH AND DEVELOPMENT

10:15 AM PSXV-21 **Measuring reticulorumen pH and temperature in dairy cattle: How often is enough? Evaluation of different recording intervals from an automated reticulorumen bolus**

Gustavo Mazon¹, Joao H.C. Costa¹

¹University of Kentucky

SMALL RUMINANT

10:15 AM PSXV-22 **Effects of Lespedeza Condensed Tannins Alone or with Monensin, Soybean Oil, and Coconut Oil on Feed Intake, Growth, Digestion, Ruminal Methane Emission, and Heat Energy by Yearling Alpine Doelings**

Haiying Liu¹, Ryszard Puchala², Shirron LeSure², Terry Gipson², Arthur L. Goetsch²
¹American Institute for Goat Research Langston University; College of Animal and Veterinary Medicine, Shenyang Agricultural University, Shenyang, China, ²American Institute for Goat Research, Langston University

SMALL RUMINANT

10:15 AM PSXV-23 **The effect of Bacillus subtilis or Ehinacea on growth performance, meat quality and immune indexes in lambs**

Jlanping Wu¹, Shuzhen Song², Cailian Wang¹, Faming Pan², David P. Casper³, Liping Zhang⁴, Xiax Lang², X. Gong², F. Wang², L. Liu²
¹Gansu Academy of Agricultural Sciences, ²Institute of Animal & Pasture Science and Green Agriculture, Gansu Academy of Agricultural Science. Lanzhou 730070, China, ³Furst-McNess Company, ⁴Faculty of Animal Science and Technology, Gansu Agricultural University, No. 1 Yingmen Village Anning, Lanzhou, Gansu, People's Republic of China 730070; Faculty of Animal Science and Technology, Gansu Agricultural University, No. 1 Yingmen Village An

SMALL RUMINANT

10:15 AM PSXV-24 **Dietary strategies to reduce the impact of high-concentrate diet on performance, ruminal fermentation and milk composition of dairy goats**

Janie Lévesque¹, Stéphanie Dion², Marie-Eve Brassard³, Daniel Rico², Rachel Gervais³, Yvan P. Chouinard³

¹CRSAD, ²Centre de recherche en sciences animales de Deschambault (CRSAD), ³Université laval

PHYSIOLOGY AND ENDOCRINOLOGY

10:15 AM PSXV-25 **Placental histology using H&E and Ki67 after exposure to ergot alkaloids during mid and late gestation**

Jessica Britt¹, Rhonda Powell¹, Chad McMahan², Terri Bruce¹, Susan K. Duckett¹
¹Clemson University, ²Bioengineering

GROWTH AND DEVELOPMENT

10:15 AM PSXV-26 **Coated and non-coated steroidal implants containing trenbolone acetate and estradiol benzoate on adipogenic gene expression of beef steers.**

Jongkyoo Kim¹, Zachary KF. Smith², Bradley J. Johnson²
¹Michigan State University, ²Texas Tech University

GROWTH AND DEVELOPMENT

10:15 AM PSXV-27 **Determination of the optimal canola meal inclusion rate in pelleted starters for Holstein calves**

Katarzyna Burakowska¹, Paweł Górka², Gregory B. Penner³

¹Department of Animal and Poultry Science, University of Saskatchewan, ²Department of Animal Nutrition and Dietetics, University of Agriculture in Krakow, Poland, ³Department of Animal and Poultry Science, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada S7N 5A8

GROWTH AND DEVELOPMENT

10:15 AM PSXV-28 **α -solanine induces myogenesis of bovine satellite cells but does not affect adipogenesis of adipocytes**

Ki Yong Chung ¹, Sun Sik Chang ², Seung Hak Yang ³, Somi Hwang ², Donghun Kang ², Bo Hye Park ², Eung Gi Kwon ²

¹Korea National College of Agriculture and Fisheries, ²Hanwoo Research Institute, ³National Institute of Animal Science

SMALL RUMINANT

10:15 AM PSXV-29 **Growth and development of bottle-fed white-tailed deer (*Odocoileus virginianus*) fawns consuming different milk replacers**

Kyle Stutts ¹, Elizabeth Brindza ¹, Mark Anderson ¹, Chris Stewart ¹

¹Sam Houston State University

SMALL RUMINANT

10:15 AM PSXV-30 **Lactation performance of ewes fed a diet containing narasin**

Lairana A. Sardinha ¹, Daniel M M. Polizel ², Alexandre A. Miszura ³, José paulo P. R. Barroso ², André S. Martins ³, Gabriela B. Oliveira ¹, Arnaldo C. Limede ¹, Marcos V. C. Ferraz Jr. ⁴, Alexandre Vaz Pires ²

¹University of Sao Paulo, ²ASAS, ³FMVZ/University of Sao Paulo, ⁴Federal University of Amazonas

SMALL RUMINANT

10:15 AM PSXV-31 **Effects of Gestation Nutritional Plane and Diet Nutritive Value During Lactation on Feed Intake and Digestion in Lactating Alpine Goats**

Luana Ribeiro ¹, Ryszard Puchala ¹, Terry Gipson ¹, Roger Merkel ¹, Arthur L. Goetsch ¹

¹American Institute for Goat Research, Langston University

SMALL RUMINANT

10:15 AM PSXV-32 **Effects of increasing inclusion of soybean molasses on rumen fermentation of feedlot sheep**

Marco Tulio Costa. Almeida ¹, Eric H. C. B. van Cleef ², Josimari R. Paschoaloto ¹, Edivilson Silva. Castro Filho ¹, Robson S. Barducci ¹, Guilherme P. Soragni ¹, Escalfiar A. Zampieri Neto ¹, Ariane E. Pedro ¹, Jane M. B. Ezequiel ¹

¹Sao Paulo State University, ²Federal University of Triangulo Mineiro

GROWTH AND DEVELOPMENT

10:15 AM PSXV-33 **The effect of dietary sodium bisulfate and Monensin on growth performance of experimental *Eimeria* inoculated broiler chickens**

Maryam Talghari ¹, Shaban Rahimi ², Mohammad Amir Karimi Torshizi ¹, Ahad Mozafari ¹

¹Department of Poultry Science, Tarbiat Modares University, Tehran, Iran, ²Tarbiat Modares University

GROWTH AND DEVELOPMENT

10:15 AM PSXV-34 **Effects of feeding either pelleted concentrate and TMR or only TMR from 10 to 18 weeks of age on performance of dairy calves**

Mogens Vestergaard ¹, Annedorte Jensen ¹, Natasha Drake ¹, Margit Bak Jensen ¹

¹Aarhus University

GROWTH AND DEVELOPMENT

10:15 AM PSXV-35 **Impacts of bovine maternal nutrition on muscle fiber type in skeletal muscle of the progeny**

Nikole E. Ineck¹, Kara J. Thornton-Kurth¹, Rachael Christensen², Kerry Rood¹, Chuck Carpenter¹, Jerrad A. Legako³, Shelby Quarnberg⁴

¹Utah State University, ²United States Department of Agriculture, ³Texas Tech University, ⁴b Nutrition, Dietetics and Food Science, Utah State University, Logan, Utah, 84322

GROWTH AND DEVELOPMENT

10:15 AM PSXV-36 **Maternal zinc sources had long-term effects on growth, and bone metabolism and development of their offspring**

Qiujuan Sun¹, Yuming Guo², Aiqiao Liu³

¹Beijing Huadu Yukou Poultry Industry Co., Ltd., ²The State Key Lab of Animal Nutrition, College of Animal Science and Technology, China Agricultural University, ³Beijing Huadu Yukou Poultry Industry Co., Ltd.

GROWTH AND DEVELOPMENT

10:15 AM PSXV-37 **Effect of maternal melatonin supplementation during late gestation on relative expression of adipogenic genes in adipose tissue and skeletal muscle of bovine fetuses at 240 days of gestation**

Robyn Thompson¹, Keelee J. McCarty², Racheal Lemire¹, Katie Pannell¹, Megan P. Owen³, Caleb O. Lemley⁴, Derris D. Burnett⁵

¹Department of Animal and Dairy Sciences, Mississippi State University, ²Mississippi State University, ³Texas A&M University Commerce, ⁴Department of Animal and Dairy Sciences, College of Agriculture and Life Sciences, Mississippi State University, Starkville, ⁵PhD

SMALL RUMINANT

10:15 AM PSXV-38 **Effects of Different Levels of Lespedeza and Supplementation with Monensin, Coconut Oil, or Soybean Oil on Ruminal Methane Emission by Mature Boer Goat Wethers After Different Lengths of Feeding**

Ryszard Puchala¹, Terry Gipson¹, Kesete Tesfai¹, MICHAEL Flythe², Arthur L. Goetsch¹

¹American Institute for Goat Research, Langston University, ²USDA/ARS

SMALL RUMINANT

10:15 AM PSXV-39 **Soybean molasses improves texture of meat from feedlot lambs**

SERGIO A. G. Pereira¹, Rayanne Viana. Costa², Edivilson Silva. Castro Filho¹, Marco Tulio Costa. Almeida¹, Julia Lisboa. Rodrigues², Joao Pedro Amaral. Bertoco¹, Andresa L. Feliciano¹, Robson S. Barducci¹, Eric H. C. B. van Cleef³, Jane M. B. Ezequiel¹

¹Sao Paulo State University, ²SÃO PAULO STATE UNIVERSITY, ³Federal University of Triangulo Mineiro

GROWTH AND DEVELOPMENT

10:15 AM PSXV-40 **Plasma metabolomic analysis in underperforming piglets at 1 and 21 days of age, identification of potential prediction markers for growth rate**

Timothy Ramsay¹, Margo Stoll², Amy Shannon², Le Ann Blomberg², Katie L. Summers³

¹ars-usda, ²USDA-ARS, ³USDA

GROWTH AND DEVELOPMENT

10:15 AM PSXV-41 **EPA and DHA Mediated C2C12 Adipogenic Differentiation Involves Up-regulation of Key Adipogenic Markers and Inhibition of Myotubes Formation**

Yan Huang¹, Saeed Hemza¹, Jamie Baum¹

¹University of Arkansas

GROWTH AND DEVELOPMENT

10:15 AM PSXV-42 **Role of cholesterol in proliferation and differentiation of bovine myoblasts**

Yuguo Hou¹, Honglin Jiang²

¹Virginia Tech, ²Department of Animal and Poultry Sciences, Virginia Tech

Poster Session XVI

11:15 AM – 12:15 PM

HORSE SPECIES

11:15 AM PSXVI-1 **The effects of two equine feed supplements on gastrointestinal health as reflected in fecal pH, fecal microbial profiles and digestibility**

Alexa C. Johnson¹, Heidi A. Rossow¹

¹University of California, Davis

HORSE SPECIES

11:15 AM PSXVI-2 **Impact of DigestaWell® NRG on the insulinemic and glycemic responses of performance horses**

Ashley L. WAGNER¹, Katlyn M. DeLano², Brittany N. Jenkins¹, Bridgett J. McIntosh², Ivan, D. Girard¹, Bertrand MEDINA¹

¹Probiotech International Inc., ²Virginia Polytechnic Institute and State University

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

11:15 AM PSXVI-3 **Evaluating the lag between body temperature and ambient temperature in hair sheep ewes in the tropics**

Robert Godfrey¹, Amran Nero², Gilbert Roberts², Sue A. Lakos¹

¹University of the Virgin Islands, Agricultural Experiment Station, ²University of the Virgin Islands

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

11:15 AM PSXVI-4 **Effects of monensin concentration in a free-choice mineral and byproduct supplementation on growth and reproductive performance of developing beef heifers**

Caleb P. Weiss¹, Paul A. Beck², Elizabeth B. Kegley³, John D. Tucker¹, Don S. Hubbell⁴

¹University of Arkansas, ²University of Arkansas Southwest Research & Extension Center,

³University of Arkansas System, Division of Agriculture, Department of Animal Science, ⁴UA Livestock and Forestry Station, retired

HORSE SPECIES

11:15 AM PSXVI-5 **A high protein meal affects plasma insulin concentrations and amino acid metabolism in horses with equine metabolic syndrome**

Caroline Loos¹, Sophie Dorsch¹, Tammy Barnes¹, Sarah Elzinga², Amanda A. Adams¹, Kristine Urschel¹

¹University of Kentucky, ²University of Michigan

NONRUMINANT NUTRITION

11:15 AM PSXVI-6 **Diet deprivation followed by compensatory feeding of gestating gilts does not affect lactation performance**

Chantal Farmer¹, Brad James², Kevin Herkelman³, Pierre Lessard⁴, Arnaud Samson⁵, Isabelle Cormier⁶

¹Agriculture and Agri-Food Canada, ²Kalmbach Feeds, ³Cooperative Research Farms, ⁴Olymel, ⁵NEOVIA, ⁶La COOP Fédérée

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

11:15 AM PSXVI-7 **Effect of glycerol supplementation on growth performance, carcass characteristics and beef sensory traits during finishing period of Korean cattle steers**

Dilla Fassah¹, Hyeok Joong Kang², Seok-Hyeon Beak², Dajinsol Jung², InHyuk Jung², sang Weon Na², Seon Pil Yoo³, HyunJin Kim², Myunggi Baik²

¹Department of Agricultural Biotechnology, College of Agriculture and Life Science, Seoul National University, ²Seoul National University, ³Seoul national university

HORSE SPECIES

11:15 AM PSXVI-8 **The effects of arginine or glutamine supplementation in late gestation mares on weanling growth**

Dustin Gaskins¹, Laura M. White², Alyssa Oates¹, Ashley Hansen¹

¹NMSU, ²New Mexico State University

HORSE SPECIES

11:15 AM PSXVI-9 **An Analysis of Horse Related Injuries**

Fernanda C. Camargo¹, K. Amy Lawyer¹, Susan Pollack², F. Scot Mattingly³, Trish Cooper³, William Gombeski⁴

¹University of Kentucky, ²Ky Injury Prevention and Research Center, ³Trauma and Acute Care Surgery - UK Hospital, ⁴UK HealthCare

NONRUMINANT NUTRITION

11:15 AM PSXVI-10 **Growth performance, nutrient digestibility, meat quality, blood profiles, and gut health supplemented with Synbiotic Yeast Culture in broiler diets**

Haoyang Sun¹, Kyung A Kim², Wan Lin Zhang², In Ho Kim³

¹Dankook Univ., ²421-1 Department of Animal Resources Science Dankook University, ³Dankook University

NONRUMINANT NUTRITION

11:15 AM PSXVI-11 **Effects of different level of guava extract on diet of japanese quail breeder (*Coturnix coturnix japonica*) on intestinal growth of neonate japanese quail**

Heloisa Helena de Carvalho. Mello¹, Hyara Paula Fleuri Xavier², Maryelle Duraes Oliveira¹, Raiana Almeida Noleto¹, Karen Neves¹, Nadja Suzana Mogyca Leandro²

¹Federal University of Goias, ²Universidade Federal de Goi as

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

11:15 AM PSXVI-12 Long term effects of cloning by nuclear transfer on monocytes methylome in Dairy Cattle

Hélène Jammes¹, Maxime Gasselín¹, Laura Notebaert¹, Gilles Foucras², Jean-Philippe Perrier¹, Luc Jouneau¹, Audrey Prézélin¹, Christine Leroux¹, José Pires¹, Christophe Richard¹, Valérie Gelin¹, Michaël Weber³, Hélène Kiefer¹

¹INRA, ²Ecole Nationale Vétérinaire de Toulouse (ENVT), ³CNRS, Université de Strasbourg

HORSE SPECIES

11:15 AM PSXVI-13 Six months of dietary supplementation with LinPro® improves hoof growth rates of mature mares

Jessica Suagee-Bedore¹, Steven J. Hebrock², Benjamin A. Corl³, Andrea Lengi³, Olivia Sundin⁴, Kimberly Cole⁴, Melyni Worth⁵

¹Sam Houston State University, ²Enlightened Equine, ³Virginia Tech, ⁴The Ohio State, ⁵Foxden Equine

HORSE SPECIES

11:15 AM PSXVI-14 The Basotho Pony. A Breed Improvement Program in the highlands of Lesotho

John S. McCormack¹

¹Winrock International

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

11:15 AM PSXVI-15 Comparison of liver and blood as indicators of Se and Cu status in beef cows

Juliana Ranches¹, Umberto Pardelli², Jose Cordero³, Matheus Piccolo⁴, Gleise Medeiros da Silva⁵, John Arthington⁶

¹UF/IFAS - Range Cattle Research & Education Center, ²MUB Nutrição Animal, Guararapes, SP – Brazil, ³University of Florida, Department of Animal Sciences, Gainesville, FL, 32608,

⁴University of Florida/IFAS, Range Cattle Research and Education Center, Ona, FL, 33865.,

⁵ASAS, ⁶Department of Animal Sciences - University of Florida

NONRUMINANT NUTRITION

11:15 AM PSXVI-16 Influence of Vitamin Premix Level on Gestating Sows on Physiological Response and Reproductive Performance

Jun Hyung Lee¹, Jae Hark Jeong¹, Lin Hu Fang¹, Jin Su Hong¹, Young Geol Han¹, Yoo Yong Kim¹

¹Department of Agricultural Biotechnology, Seoul National University

HORSE SPECIES

11:15 AM PSXVI-17 Acclimation Reduces Stress in Adult Horses Tied in Visual Isolation

Karen Bennett-Wimbush¹, Jessica Suagee-Bedore², Mike Amstutz¹

¹The Ohio State University Agricultural Technical Institute, ²Sam Houston State University

HORSE SPECIES

11:15 AM PSXVI-18 **A novel blend of probiotics, prebiotics, spices, and essential oils inhibits a number of common equine pathogens**

Katlyn M. DeLano ¹, Ashley L. WAGNER ², Lila Maduro ³, Martine Boulianne ³, Ivan, D. Girard ², Bertrand MEDINA ²

¹Virginia Polytechnic Institute and State University, ²Probiotech International Inc., ³University of Montreal

COMPANION ANIMALS

11:15 AM PSXVI-19 **Dietary amino acids influence lean muscle mass in cats with chronic kidney disease**

Dale Fritsch ¹, Dennis E. Jewell ², Patricia Burris ¹, Jean A. Hall ³, Kathy Gross ⁴

¹, ²Hill's Pet Nutrition Inc., ³Oregon State University, ⁴Hill's Pet Nutrition

HORSE SPECIES

11:15 AM PSXVI-20 **Comparison of zinc finger sequences of PR domain-containing protein 9 between Jianchang horse and Anning pony**

Le Yang ¹, Suyu Jin ¹, Lin Huang ¹, Yucai Zheng ²

¹Southwest Minzu University, ²Southwest Minzu University

EXTENSION EDUCATION

11:15 AM PSXVI-21 **The New Mexico Youth Ranch Management Camp: A Collaborative Effort to Educate Youth in Sustainable Ranch Management Practices**

Marcy Ward ¹, Jack Blandford ¹, Sid Gordon ¹, Josh Boyd ¹, Steve Lucero ¹, Jasper McCarty ¹, Leigh Ann Marez ², Patrick Torres ¹, Tom Dean ¹, Doug Cram ³, Craig Gifford ¹, Samuel Smallidge ¹

¹New Mexico State University Cooperative Extension Service, ²New Mexico State University Cooperative Extension Service, ³New Mexico State Cooperative Extension Service

NONRUMINANT NUTRITION

11:15 AM PSXVI-22 **Protease for laying hens as a strategy to save on feed cost and reduce nitrogen excretion**

Ludovic Lahaye ¹, Glenmer Tactacan ¹, Mariana Lemos de Moraes ¹, Jean-Christophe Bodin ², Dong Yong Kil ³

¹Jefo, ²Jefo Nutrition Inc., ³Chung-Ang University

NONRUMINANT NUTRITION

11:15 AM PSXVI-23 **Effects on nursery pig growth performance and economics of protease inclusion in feeds with and without matrix contribution.**

Ludovic Lahaye ¹, Miguel Barrios ¹

¹Jefo

HORSE SPECIES

11:15 AM PSXVI-24 **Effects of sericea lespedeza on parasite load and oxidative stress in mature horses**

Madison M. Fagan ¹, Marrissa J. Blackwell ¹, Cody Swint ², Anthony Britt ², Kylee Duberstein ¹

¹University of Georgia, ²University of Georgia

NONRUMINANT NUTRITION

11:15 AM PSXVI-25 **Excess dietary calcium failed to induce hypocalcemia in multiparous sows during the peripartum period**

Mariola Grez Capdeville ¹, Thomas D. Crenshaw ¹

¹Department of Animal and Dairy Sciences, University of Wisconsin-Madison

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

11:15 AM PSXVI-26 **Physiological Effect of Heat Stress on Canadian Holstein Dairy Cows Classified based on Immune Response Capacity**

Marnie J. McKechnie ¹, Shannon L. Cartwright ¹, Alexandra Livernois ², Bonnie Mallard ³

¹University of Guelph - Ontario Veterinary College - Department of Pathobiology, ²Food from Thought, University of Guelph, ³OVC, University of Guelph

NONRUMINANT NUTRITION

11:15 AM PSXVI-27 **Rosa Roxburghii Tratt extracts improves performance, enhances immune function and reduces oxidative stress in geese under heat stress**

Mengyun Li ¹, Wantao Li ¹, Guizhi Zhang ¹, Wei Cheng ¹, Liangxing Guo ¹, Shangxi Liu ², Chengbo Yang ³

¹Henan University of Animal Husbandry and Economy, Zhengzhou 450046, China, ²University of Manitoba, ³University of Manitoba, Department of Animal Science

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

11:15 AM PSXVI-28 **Documenting production parameters associated with beef production without mature cows**

Meredith A. Harrison ¹, George Seidel ¹, Jason Ahola ¹, Ryan Rhoades ¹, Daniel Mooney ¹

¹Colorado State University

HORSE SPECIES

11:15 AM PSXVI-29 **Zinc-glycinate improves the bioavailability of zinc in ponies**

Mieke V. Zoon ¹, Fabrice Reigner ², Philippe Barrière ², Thierry Blard ², Aurélie Meunier ², Alexandra Blanchard ³

¹Pancosma, ²INRA, ³Pancosma SA

NONRUMINANT NUTRITION

11:15 AM PSXVI-30 **Supplemental Vitamin D3 for mediation of immune challenges in nursery pigs and subsequent growth responses**

Morgan McCue ¹, Jamie L. Reichert ¹, Thomas D. Crenshaw ²

¹UNIVERSITY OF WISCONSIN-Madison, ²Department of Animal and Dairy Sciences, University of Wisconsin-Madison

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

11:15 AM PSXVI-31 **Intervention strategy for Zearalenone's negative effects on performance of cow-calf pairs supplemented with liquid feed in South Central Florida - A field study**

Paige N. Gott ¹, Alex Johns ², Aaron M. Stam ³, Bryan Miller ¹, Terry Weaver ⁴, Brett Bell ⁵, Erika G. Hendel ⁶, Ursula Hofstetter ⁷, G. Raj Murugesan ⁶

¹BIOMIN America Inc., ²Seminole Tribe of Florida, Inc., ³Federally Recognized Tribal Extension Program, University of Florida, Seminole Tribe of Florida, ⁴Westway Feeds Products LLC,

⁵BIOMIN America, Inc., ⁶BIOMIN America Inc., ⁷Biomin

HORSE SPECIES

11:15 AM PSXVI-32 **Evaluation of equine industry participation among young adults**
Rafael E. Martinez ¹, Jessica L. Leatherwood ², Neely L. Walker ³, Mattea L. Much ², Martha Vogelsang ²

¹Department of Animal Science, Texas A&M University and Texas A&M AgriLife Research,
²Texas A&M University, ³Louisiana State University Agricultural Center

HORSE SPECIES

11:15 AM PSXVI-33 **Evaluation of the microbiome of mares' milk through lactation**
Robert D. Jacobs ¹, Mary Beth Gordon ²

¹Purina Animal Nutrition, ²Purina Animal Nutrition/Land O'Lakes

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

11:15 AM PSXVI-34 **Readily available water access improves milk yield in grazing dairy herds**

Ruan R. Daros ¹, José A. Bran ², Maria J. Hötzel ³, Marina A G. von Keyserlingk ¹

¹Animal Welfare Program, University of British Columbia, Vancouver - Canada, ²Laboratório de etologia aplicada e bem-estar animal, Universidade Federal de Santa Catarina, Florianópolis - Brasil, ³Universidade Federal de Santa Catarina

NONRUMINANT NUTRITION

11:15 AM PSXVI-35 **Egg production performance and egg quality of laying hens fed a diet supplemented with deoxynivalenol mycotoxins contaminated corn distillers dried grains with soluble**

Samiru Sudharaka. Wickramasuriya ¹, Eunjoo Kim ¹, Shemil Priyan. Macelline ¹, Taeg Kyun Shin ¹, Hyun Min Cho ¹, Jung Min Heo ¹

¹Chungnam National University

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

11:15 AM PSXVI-36 **Factors influencing blood urea nitrogen concentration in Angus cattle.**

Scott E. Speidel ¹, Miranda M. Culbertson ¹, Miguel A. Sánchez-Castro ¹, Karen S. Sellins ¹, Terry E. Engle ¹, Milton G. G. Thomas ¹, R. Mark Enns ¹

¹Colorado State University

NONRUMINANT NUTRITION

11:15 AM PSXVI-37 **Rutin attenuates inflammatory responses induced by lipopolysaccharide (LPS) in an in vitro mouse muscle cell (C2C12) model**

Shangxi Liu ¹, Li Yu ², Victoria Sid ³, Blake Wang ⁴, Karmin O ⁵, Chengbo Yang ⁶

¹University of Manitoba, ²Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2, ³CCARM, St. Boniface Hospital Research Centre, Winnipeg, Manitoba, Canada R2H 2A6, ⁴Wallenstein Feed & Supply Ltd., Wallenstein, Ontario, Canada N0B 2S0, ⁵University of Manitoba, ⁶University of Manitoba, Department of Animal Science

NONRUMINANT NUTRITION

11:15 AM PSXVI-38 **Growth performance and nutrient digestibility of grow-finish fed corn-DDGS-soybean meal-based diets without or with a combination of protease and direct fed microbial**

Tofuko A. Woyengo ¹, Laura Payling ²

¹Assistant professor, ²Danisco Animal Nutrition - DuPont Industrial Biosciences

PRODUCTION, MANAGEMENT, AND THE ENVIRONMENT

11:15 AM PSXVI-39 **Responses of growth performance, physiological and blood parameter to long-term heat stress in beef calves**

WonSeob Kim¹, JaeSung Lee², DongQiao Peng², Jay Ronel Conejos³, YongHo Jo², JangHoon Jo², JungKeun Seo⁴, WonTae Choe³, JungEun Kim³, TaeBin Kim⁴, HongGu Lee⁵
¹Department of Animal Science and Technology, Sanghuh College of Life Sciences, Konkuk University, Seoul, Republic of Korea, ²Department of Animal Science and Technology, Konkuk University, ³Department of Animal Science and Technology, Konkuk University, Seoul, Republic of Korea, ⁴Konkuk University, ⁵Department of Animal Science and Technology, Sanghuh College of Life Sciences, Konkuk University, Seoul 05029, Republic of Korea

NONRUMINANT NUTRITION

11:15 AM PSXVI-40 **Semen quality in relation to microelement concentrations in serum and seminal plasma in Duroc boars**

Wu Ying. Hui¹, Lai Wen¹, Sun Hai. qing², Jian Peng¹
¹Huazhong Agricultural University, ²YangXiang Joint Stock Company

NONRUMINANT NUTRITION

11:15 AM PSXVI-41 **Effects of Essential Oils on Performance of Post Weaning Pigs Fed Different Energy Levels Diets**

Xuemei Zhou¹, Guobin Li², Chongwu Yang³, Zaibin Yang¹
¹Shandong Agricultural University, ²Linyi BLJ Food Co., Ltd, ³Department of Animal Science, University of Manitoba

NONRUMINANT NUTRITION

11:15 AM PSXVI-42 **Dietary soybean meal level and β -mannanase supplementation affected serum biochemical constituents in nursery pigs**

Yanrui Qiao¹, Xiaotong Zhu², Lili Zhai¹, Robert L. Payne¹, Tiejun Li³
¹Elanco Animal Health, ²Institute of Subtropical Agriculture, Chinese Academy of Sciences, ³Institute of Subtropical Agriculture, The Chinese Academy of Sciences

Student/Faculty/Industry Networking Luncheon

12:00 PM – 2:00 PM

Poster Session XVII

12:15 PM – 1:15 PM

BREEDING AND GENETICS

12:15 PM PSXVII-1 **Real time determination of metabolic efficiency in cattle with infrared thermography**

Allan L. Schaefer¹, Clover Bench¹, Randy Bollum², Nigel Cook³, Gary Crow⁴, Dipana Maharjan⁴, Kim Ominski⁴, Argenis Rodas⁵, Sean Thompson⁶, Hartmut von Gaza⁷
¹University of Alberta, ²R and R Acres, ³Alberta Ministry of Agriculture and Forestry, 6000 C&E Trail, Lacombe, Alberta T4L1W1, ⁴University of Manitoba, ⁵University of Manitoba, Department of Animal Science, ⁶University of Saskatchewan, ⁷HVG Software Solutions

EXTENSION EDUCATION

PSXVII-2 TECHNOLOGY ON MILK QUALITY INDICATORS IN BULK TANK MILK OF SMALLHOLDER'S DAIRY FARMERS

Bruno Bonafini ¹, Lenira El Faro Zadra ², Luiz Carlos Roma Junior ³

¹Instituto de Zootecnia de Nova Odessa, ²Centro APTA Bovinos de Corte, Instituto de Zootecnia (IZ), ³Centro APTA Bovinos de Leite, Instituto de Zootecnia (IZ)

EXTENSION EDUCATION

PSXVII-3 Pregnancy rate in a Holstein farm in Los Altos of Jalisco, México

D Valentina. Mariscal-Aguayo ¹, Heriberto Estrella-Quintero ¹, Enrique Salas-Barboza ², Andres Martinez-Cuevas ³

¹Universidad Autonoma Chapingo, ²Independent advisor, ³Asesores San José

BREEDING AND GENETICS

PSXVII-4 A comparison of weighted gene co-expression networks in high- and low-feed efficiency dairy cattle

Dave J. Seymour ¹, Filippo Miglior ², Pablo A.S Fonseca ³, Stephanie Lam ¹, Luiz F. Brito ⁴, Aroa S. Suárez-Vega ¹, Angela Cánovas ³

¹University of Guelph, ²Canadian Dairy Network, ³Department of Animal Biosciences, Centre for Genetic Improvement of Livestock, University of Guelph, N1G 2W1, Guelph, Ontario, Canada.,

⁴Centre for the Genetic Improvement of Livestock, Department of Animal Biosciences, University of Guelph

BREEDING AND GENETICS

PSXVII-5 Genomic evaluation of genotype by prenatal nutritional environment interaction for growth traits in beef cattle

EL Hamidi Hay ¹, Andy J. Roberts ¹

¹USDA Agricultural Research Service, Fort Keogh Livestock and Range Research Laboratory

EXTENSION EDUCATION

PSXVII-6 Myths and misconceptions about small ruminant gastrointestinal parasites control.

Enrique Nelson Escobar ¹

¹University of Maryland Eastern Shore

BREEDING AND GENETICS

PSXVII-7 Genetic interrelationship between body weight, age at first egg and external egg traits in Nigerian indigenous chicken with different coloured feathers.

Authors:

Folasade Olubukola. Ajayi ¹, Brilliant Ogagaoghene. Agaviezor ¹, Festus I. Ologbose ²

¹University of Port Harcourt, ²University of Port Harcourt

RUMINANT NUTRITION

PSXVII-8 Effects of β -carotene and vitamins in grazing Nellore multiparous cows submitted to fixed timed artificial insemination (FTAI)

Guilherme S. S. F. M. Vasconcellos ¹, Walter Antonio Gonçalves-Junior ², Marcos Henrique Alcantara Colli ², Vinicius Nunes de Gouvea ³, Tiago S. S. Acedo ¹, Luis M. Tamassia ⁴, Rodolfo Daniel Mingoti ², Pietro Sampaio Baruselli ²

¹DSM Nutritional Products S/A Brazil, ²University of Sao Paulo, Sao Paulo, SP, Brazil – School of Veterinary Medicine and Animal Science, ³DSM Produtos Nutricionais Brasil S.A., ⁴DSM Nutritional Products Brazil A.S., Kaiseraugst, Switzerland

RUMINANT NUTRITION

PSXVII-9 Effects of β -carotene and vitamins in grazing Nellore primiparous cows submitted to fixed timed artificial insemination (FTAI)

Guilherme S. S. F. M. Vasconcellos¹, Marcos Henrique Alcantara Colli², Walter Antonio Gonçalves-Junior², Vinicius Nunes de Gouvea³, Tiago S. S. Acedo¹, Luis M. Tamassia⁴, Rodolfo Daniel Mingoti², Pietro Sampaio Baruselli²

¹DSM Nutritional Products S/A Brazil, ²University of Sao Paulo, Sao Paulo, SP, Brazil – School of Veterinary Medicine and Animal Science, ³DSM Produtos Nutricionais Brasil S.A., ⁴DSM Nutritional Products Brazil A.S., Kaiseraugst, Switzerland

EXTENSION EDUCATION

PSXVII-10 Application of a survey instrument for determining psychographic profiles of participants of the Dixie Nationals Sale of Junior Champions

Holly Evans¹, Dean Jousan¹, Erdogan Memili², Leigh Beckman¹, Molly Nicodemus²

¹Mississippi State University, ²Animal & Dairy Sciences, Mississippi State University

NONRUMINANT NUTRITION

PSXVII-11 Effect of supplementation with brewer yeast hydrolysate on growth performance, blood profile, fecal score, fecal microbial, and rectal temperature in weanling pigs challenged with lipopolysaccharide

Jian Ying Zhang¹, Jing Hu¹, Yang Jiao¹, In Ho Kim¹

¹421-1 Department of Animal Resources Science Dankook University South Korea

NONRUMINANT NUTRITION

PSXVII-12 Effect of dietary supplementation with brewer's yeast hydrolysate on growth performance, nutrients digestibility, blood profiles and meat quality in growing to finishing pigs

Jian Ying Zhang¹, Jing Hu², Subin Serpunja³, In Ho Kim²

¹421-1 Department of Animal Resources Science Dankook University, ²Dankook University,

³Swine Nutrition and Feed Technology 421-1 Department of Animal Resources Science Dankook University

EXTENSION EDUCATION

PSXVII-13 Kosovo Advisory System for Agriculture and Rural Development

John S. McCormack¹

¹Winrock International

BREEDING AND GENETICS

PSXVII-14 Inbreeding depression in alpacas

Jorge Luis Vilela¹, Victor Leyva², Lidia Tania. Castro Smith³

¹Universidad Científica del Sur, Grupo de Investigación Ciencia Equina y Animales Autóctonos,

²Universidad Nacional Mayor de San Marcos, ³Banco Nacional de Semen

EXTENSION EDUCATION

PSXVII-15 Evaluation of online modules designed for youth to learn about biosecurity

Julia M. Smith¹, Jeannette McDonald², Susan R. Kerr³, Jeanne M. Rankin⁴, Rebecca Sero⁵

¹University of Vermont, ²TLC Projects, LLC, ³Washington State University, ⁴Montana State University Extension, ⁵Washington State University Extension

BREEDING AND GENETICS

PSXVII-16 Effect of hair characteristics on vaginal temperature under hot and humid conditions in an Angus-Brahman multibreed herd

Kaitlyn M. Sarlo Davila ¹, Heather Hamblen ², Peter J. Hansen ², Serdal Dikmen ³, Mauricio A. Aguirre Elzo ², Raluca G. Mateescu ²

¹ORISE/NADC, ²University of Florida, ³Bursa Uludağ University

ANIMAL BEHAVIOR AND WELL-BEING

PSXVII-17 Late-Breaking: Effect of cow's social rank on calf's passive immunity – a pilot study

Karolini T. Sousa ¹, Matheus Deniz ¹, Bianca Vandresen ¹, Rodrigo S. Conceicao ¹, Juliana Luiz Butzge ¹, Patrizia Anna Bricarello ¹, Luiz Carlos Machado Filho ¹

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NONRUMINANT NUTRITION

PSXVII-18 Butyrate alters the innate immune response to gram-positive antigens in the porcine intestinal cell line IPEC-J2

Katie L. Summers ¹, Timothy Ramsay ²

¹USDA, ²ars-usda

EXTENSION EDUCATION

PSXVII-19 Assessing the effectiveness of a training program for Latino(a) dairy workers on Colorado dairies

Kayla Rink ¹, Flor Amaya-Soto ¹, Lauren Menger-Ogle ¹, Lorann Stallones ², Pablo Pinedo ¹, Noa Roman-Muniz ¹

¹Colorado State University, ²Colorado State University Department of Psychology

BREEDING AND GENETICS

PSXVII-20 Reproductive performance of cattle: a meta-analytical approach

Lidiane Raquel. Eloy ¹, Luciana Pötter ², José Lobato ¹, Carolina Bremm ¹, Emilio Laca ³

¹Universidade Federal do Rio Grande do Sul, ²Universidade Federal de Santa Maria,

³University of California - UC Davis

NONRUMINANT NUTRITION

PSXVII-21 Effects of neonatal supplementation of copper, vitamins A and D on micronutrient status of piglets during lactation and after weaning.

Lucie Galiot ¹, Isabelle Audet ¹, Bazoumana Ouattara ¹, Nathalie Bissonnette ², Guylaine Talbot ³, Jérôme Lapointe ³, Frédéric Guay ⁴, Martin Lessard ¹, Luca Lo Verso ¹, Jacques Matte ¹

¹Agriculture et Agroalimentaire Canada / Agriculture and Agri-Food Canada, ²Sherbrooke Research and Development Centre, Agriculture and Agri-Food Canada, ³Agriculture and Agri-Food Canada, ⁴Université Laval

MEAT SCIENCE AND MUSCLE BIOLOGY

PSXVII-22 Late-Breaking: Metabolome analysis of porcine fast and slow type muscles during postmortem aging

Mika Oe ¹, Koichi Ojima ¹, Susumu Muroya ²

¹Institute of Livestock and Grassland Science, NARO, ²NARO

BREEDING AND GENETICS

PSXVII-23 Effect of breed, age and sex on body weight and various body measurements in goat breeds of Northern Areas, Pakistan

Muhammad Moaeen-ud-Din ¹, Ghulam Bilal ², James Reecy ³, Muhammad Sajjad. Khan ⁴
¹PMAS-Arid Agriculture University, ²PMA-Arid Agriculture University, Rawalpindi, ³Iowa State University, ⁴Institute of Animal & Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Pakistan

EXTENSION EDUCATION

PSXVII-24 Relationships among feed efficiency, performance, and value of bulls in the Florida Bull Test

Nicky Oosthuizen ¹, Pedro L.P. Fontes ², David A. Thomas ³, Luara B. Canal ⁴, Carla D. Sanford ⁵, Nicolas DiLorenzo ³, G. Cliff C. Lamb ⁶
¹ABS Global, ²Texas A&M University, Department of Animal Science, ³University of Florida, ⁴University of Florida - North Florida Research and Education Center, ⁵University of Florida, NFREC, ⁶Texas A&M University

NONRUMINANT NUTRITION

PSXVII-25 Effects of antioxidant supplementation on meat quality and carcass yield in broilers fed commercial-type diets.

Nicole Rios ¹, Luis Fuentes ², Betty Heredia ³, Diana Sandoval ³, Davinia Sanchez-Macias ⁴, Christian H. Ponce ¹
¹Universidad San Francisco de Quito, ²Universidad de las Fuerzas Armadas, ³Universidad de las Fuerzas Armadas-ESPE, ⁴Universidad Nacional de Chimborazo

EXTENSION EDUCATION

PSXVII-26 Using webinar short courses to educate sheep and goat producers

Susan Schoenian ¹, Jeffery W. Semler ²
¹University of Maryland, ²University of Maryland Extension

RUMINANT NUTRITION

PSXVII-27 Effect of 25-hydroxy-vitamin-D3 on feedlot cattle

Tiago S. S. Acedo ¹, Vinicius Nunes de Gouvea ², Guilherme S. S. F. M. Vasconcellos ¹, Mário Arrigoni ³, Cyntia Ludovico Martins ⁴, Danilo Millen ⁵, Leonardo Rosolen Muller ⁴, Gabriel Fernandes de Melo ⁴, Ramon Argentini Rizzieri ⁴, Caroline Floret da Costa ⁴, Ana Bárbara Domingues Sartor ⁴

¹DSM Nutritional Products S/A Brazil, ²DSM Produtos Nutricionais Brasil S.A., ³São Paulo State University (UNESP), School of Veterinary Medicine and Animal Science, Botucatu, São Paulo, Brazil 18618-000, ⁴São Paulo State University (UNESP), School of Veterinary Medicine and Animal Science, Botucatu, São Paulo, Brazil, ⁵São Paulo State University (UNESP), Animal Science College, Dracena, São Paulo, Brazil 17900-000

BREEDING AND GENETICS

PSXVII-28 Analysis of genetic diversity using microsatellite DNA for genetic structure

Xia Lang ¹, Cailian Wang ¹, Jianping Wu ¹, David P. Casper ²
¹Gansu Academy of Agricultural Sciences, ²Furst-McNess Company

RUMINANT NUTRITION

PSXVII-29 Effects of vitamin A supplementation in late-pregnancy cow diets on tissue development and birth traits in calves

YongHo Jo ¹, DongQiao Peng ¹, WonSeob Kim ², JaeSung Lee ¹, HongGu Lee ³

¹Department of Animal Science and Technology, Konkuk University, ²Department of Animal Science and Technology, Sanghuh College of Life Sciences, Konkuk University, Seoul, Republic of Korea, ³Department of Animal Science and Technology, Sanghuh College of Life Sciences, Konkuk University, Seoul 05029, Republic of Korea

RUMINANT NUTRITION

PSXVII-30 Effects of dietary supplementation of yeast chromium and dihydropyridine on serum biochemical indices and HSP70 mRNA expression of lactating dairy cows in summer

Zhili Qi ¹, Jing Gao ², Chuan-Chao Zhao ³, Yi-Feng Zhang ², Yu-Chen Liu ², Xiang-Ming Wang ², Han Li ²

¹Hua Zhong Agricultural University, ²HuaZhong Agricultural University, ³Shangdong Dezhou Shenniu Animal Pharmaceutical Co.,Ltd

RUMINANT NUTRITION

PSXVII-31 Late-Breaking: Effect of dietary addition of slow release nitrate and essential oil on animal performance and methane emissions from backgrounded cattle fed high-forage diets

Aklilu Alemu ¹, Atmir Romero-Pérez ², Rafael C. Araujo ³, Karen A. Beauchemin ⁴

¹Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre,

²Universidad Nacional Autónoma de México, Facultad de Medicina Veterinaria y Zootecnia,

³GRASP, ⁴Agriculture and Agri-Food Canada

RUMINANT NUTRITION

PSXVII-32 Late-Breaking: Weaning of ad libitum fed dairy calves with automated feeders using fixed and individual methods

Annemiek Welboren ¹, Leonel Leal ², Michael Steele ³, Ajmal Khan ⁴, Javier Martín-Tereso ⁵

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

Nutrition Research and Development, ³University of Alberta, University of Guelph, ⁴, ⁵Trouw

Nutrition R&D

ANIMAL HEALTH

PSXVII-33 Identification of urine metabolite signatures for monitoring dairy cows for susceptibility to metritis by DI/LC-MS/MS-based metabolomics

Dagnachew Hailemariam ¹, Guanshi Zhang ¹, David S. Wishart ¹, Burim N. Ametaj ¹

¹University of Alberta

ANIMAL HEALTH

PSXVII-34 Targeted metabolomics profiling for identification of novel serum biomarkers in early prediction of subclinical mastitis in transition dairy cows

Guanshi Zhang ¹, Elda Dervishi ², David S. Wishart ¹, Burim N. Ametaj ¹

¹University of Alberta, ²Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta

ANIMAL HEALTH

PSXVII-35 ICP-MS based ionotyping reveals altered ionome in the serum, urine, and milk of pre-milk fever (MF), MF, and post-MF dairy cows

Guanshi Zhang¹, Elda Dervishi², David S. Wishart¹, Burim N. Ametaj¹

¹University of Alberta, ²Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta

FORAGES AND PASTURES

PSXVII-36 Brewers' spent grain residues after extraction with proteases of different concentrations showed digestibility differences in batch culture

Yizhao Shen¹, Ranithri Abeynayakea², Hongrong Wang³, Lingyun Chen⁴, WenZhu Yang⁵

¹College of Animal Science and Technology, Hebei Agricultural University, ²University of Alberta, ³Yangzhou University, ⁴Department of Agricultural, Food and Nutritional Science, University of Alberta, ⁵Agriculture and Agri-Food Canada

FORAGES AND PASTURES

PSXVII-37 Effect of canola oil supplementation to AAC Mountainview sainfoin, alone or in combination with grass mixtures, on in vitro DMD, methane production and ruminal fermentation

Angela A. Cerilli-Stankevicius¹, Emma J. McGeough¹, Bill Biliget²

¹University of Manitoba, ²Department of Plant Sciences, University of Saskatchewan, Saskatoon, SK, Canada, S7N 5A8

BREEDING AND GENETICS

PSXVII-38 Metabolic efficiency in swine determined with automated real time infrared thermography

Allan L. Schaefer¹, Hartmut von Gaza², Nigel Cook³, Clover Bench¹, Patrick Charagu⁴, Greg Simpson⁵, Abe Huisman⁴

¹University of Alberta, ²HVG Software Solutions, ³Alberta Ministry of Agriculture and Forestry, 6000 C&E Trail, Lacombe, Alberta T4L1W1, ⁴Hendrix Genetics Swine, ⁵Hendrix Genetics

ASAS Business Meeting

12:30 PM – 1:30 PM

Using social media to increase the impact of scientific research articles

Speaker: Victoria Sparkman, Marketing Coordinator - Academic Journals,
End User Marketing Team, Oxford University Press

12:30 PM – 1:30 PM

Ruminant Nutrition V: Yeast Products

Chair: Robin Anderson, ARS/USDA

1:15 PM – 2:30 PM

1:15 PM 71 Effects of yeast product supplementation during late gestation and subsequent effects on calf health and growth performance

Elizabeth Palmer¹, Elizabeth B. Kegley², Jase Ball¹, Pete A. Hornsby³, Jana L. Reynolds², Benjamin P. Shoulders⁴, Matthew Cravey⁵, Jeremy G. Powell²

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

⁴University of Arkansas System Division of Agriculture Department of Animal Science, ⁵Phileo

1:30 PM 70 **Effect of Diamond V NaturSafe on receiving period cattle performance and markers of oxidative stress relative to transit.**

Erin L. Deters¹, Stephanie L. Hansen¹

¹Iowa State University

1:45 PM 73 **Effect of subacute ruminal acidosis (SARA) and Saccharomyces cerevisiae fermentation products on gastrointestinal microbiome of dairy cows**

Junfei Guo¹, Zhengxiao Zhang¹, Hooman Derakhshani¹, Ilkyu Yoon², Jan C. Plaizier¹, Ehsan Khafipour¹

¹University of Manitoba, ²Cargill, Diamond V brand

2:00 PM 72 **A microencapsulated blend of essential oils and dead yeast culture on the performance of nellore bulls finished in feedlot**

Leandro S. Martins¹, Juliano José De Resende Fernandes², James Drouillard³, Lainer S Leite¹, Rafael C. Araujo⁴

¹Centro de Pesquisa Nutripura, ²Universidade Federal de Goiás, ³Kansas State University, ⁴GRASP

2:15 PM 69 **Effects of supplementing ruminally protected and non-protected active dried yeast on growth performance and carcass traits in finishing beef steers**

Tao Ran¹, Yizhao Shen², Atef Saleem³, Lingyun Chen⁴, Ousama Alzahal⁵, Karen A. Beauchemin⁶, WenZhu Yang⁶

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada; Institute of Subtropical Agriculture, the Chinese Academy of Sciences, Changsha, Hunan 410125, China, ²College of Animal Science and Technology, Hebei Agricultural University, ³South Valley University, ⁴Department of Agricultural, Food and Nutritional Science, University of Alberta, ⁵AB Vista, ⁶Agriculture and Agri-Food Canada

ARPAS Exams Session VI

2:00 PM – 4:00 PM

ASAS Board of Directors Meeting

2:00 PM – 4:00 PM

Breeding and Genetics V: Dairy Cattle and Methods I

Chair: Daniela Lourenco, Assistant Professor, University of Georgia

2:00 PM – 3:45 PM

2:00 PM 322 **Evaluation of the biological function of genes linked to regions with distortion of Mendelian segregation and their relation to reproductive traits in dairy cattle**

Aroa S. Suárez-Vega¹, Filippo Miglior², Samir Id Lahoucine¹, Joaquim Casellas³, Pablo A.S. Fonseca⁴, Mehdi Sargolzaei¹, Stephen P. Miller⁵, Flavio S. Schenkel⁶, Juan F. F. Medrano⁷, Angela Cánovas⁴

¹University of Guelph, ²Canadian Dairy Network, ³Department of Animal and Food Science, Autonomous University of Barcelona, Bellaterra 08193, Spain, ⁴Department of Animal Biosciences, Centre for Genetic Improvement of Livestock, University of Guelph, N1G 2W1, Guelph, Ontario, Canada., ⁵Angus Genetics Inc., ⁶University of Guelph, Department of Animal Biosciences, Centre for Genetic Improvement of Livestock, Guelph, ON, Canada, ⁷Department of Animal Science, University of California-Davis, 95616, Davis, California

2:15 PM 319 **Copy number variation of PRAME gene across dairy breeds**
Tatiane C. Seleguim Chud¹, Derek M. Bickhart², John B. Cole³, Fernando S. Baldi⁴, Marcos Vinícius G. B. da Silva⁵, Danísio P. Munari⁶

¹Centre for Genetic Improvement of Livestock, Dept of Animal Biosciences, University of Guelph., ²Dairy Forage Research Center, USDA-ARS, ³Animal Genomics and Improvement Laboratory, USDA-ARS, ⁴State University of São Paulo - Jaboticabal, Brazil, ⁵Embrapa Dairy Cattle, ⁶Universidade Estadual Paulista (Unesp), Faculdade de Ciências Agrárias e Veterinárias, Departamento de Ciências Exatas

2:30 PM 320 **Genomic Predictions for Calf Wellness in Holstein Cattle**
Dianelys Gonzalez Pena¹, Natascha Vukasinovic¹, Jordan Brooker¹, Cory Przybyla¹, Brenda Fessenden¹, Sue DeNise¹

¹Zoetis

3:00 PM 323 **Paternal effects of peri-pubertal bulls on the transcriptomes of blastocysts**
Chongyang Wu¹, Rémi Labrecque², Christian Vigneault², Patrick Blondin², Marc-André A. Sirard³

¹Université Laval, ²L'Alliance Boviteq Inc, ³Department of Animal Science, Laval University

2:45 PM 321 **Effect of G×E on Breeding Cooperation Using Genomic Selection**
Lu Cao¹

¹Aarhus University, Denmark

3:15 PM 324 **A progress report for the Efficient Dairy Genome Project**
Filippo Miglior¹, Christine F. Baes², Angela Cánovas³, Mike Coffey⁴, Erin Connor⁵, Mary De Pauw⁶, Ellen Goddard⁶, Getu Hailu⁷, Jan Lassen⁸, Francesca Malchiodi⁹, Vern R. Osborne¹⁰, Jennie E. Pryce¹¹, Mehdi Sargolzaei⁷, Flavio S. Schenkel¹², Eileen Wall¹³, Zhiquan Wang¹⁴, Silvia Wegman¹⁵, Tom Wright¹⁶, Paul Stothard¹⁷

¹Canadian Dairy Network, ²University of Guelph and University of Bern, ³Department of Animal Biosciences, Centre for Genetic Improvement of Livestock, University of Guelph, N1G 2W1, Guelph, Ontario, Canada., ⁴Scotland's Rural College, ⁵AGIL - USDA, ⁶University of Alberta, ⁷University of Guelph, ⁸Aarhus University, ⁹Semex / University of Guelph, ¹⁰Department of Animal Biosciences, University of Guelph, ON, N1G 2W1., ¹¹Department of Economic Development, Jobs, Transport and Resources, ¹²University of Guelph, Department of Animal Biosciences, Centre for Genetic Improvement of Livestock, Guelph, ON, Canada, ¹³Scottish Rural College, ¹⁴Livestock Gentec, University of Alberta, ¹⁵Qualitas, ¹⁶OMAFRA, ¹⁷California Polytechnic State University San Luis Obispo

3:30 PM 325 **Functional analysis of macrophages to identify genetic markers associated with Johne's disease**

Nathalie Bissonnette¹, Olivier Ariel², Jean-simon Brouard², Filippo Miglior³, Eveline M. Ibeagha-Awemu¹

¹Sherbrooke Research and Development Centre, Agriculture and Agri-Food Canada,

²Agriculture and Agri-Food Canada, ³Canadian Dairy Network

Companion Animal Symposium:

Considerations for exotic or wild animals: Marine animal focus

Chair: Ellen S. Dierenfeld, Lead Specialist, Sustainable Feed Innovations, World Wildlife Fund
2:00 PM – 5:00 PM

2:00 PM **Introductory Remarks**

2:15 PM 385 **Interspecies differences in coping with the unique challenges of migration**

Morag Dick ¹

¹University of Western Ontario

2:45 PM 386 **The bioenergetics of marine mammals; insights from laboratory and wild studies**

David Rosen ¹

¹University of British Columbia

3:15 PM **Break**

3:30 PM 387 **Killer whale nutrition at SeaWorld and beyond**

Heidi Bissell ¹

¹SeaWorld

4:00 PM 388 **Nutrition and Feeding Ecology across Aquatic Taxa: Integrating Research into the Feeding of Aquarium Collection**

Lisa A. Hoopes ¹

¹Georgia Aquarium

Growth and Development II

Chair: Jay A. Daniel, Professor, Berry College

2:00 PM – 3:45 PM

2:00 PM 447 **Effects of probiotic solid-state fermented complete feed on growth performance and pork quality of finishing pigs**

Xuefen Yang ¹, Zongyong Jiang ¹, Yueqin Qiu ², Li Wang ²

¹Institute of Animal Science, Guangdong Academy of Agricultural Sciences; Ministry of Agriculture Key Laboratory of Animal Nutrition and Feed Science in South China, ²Institute of Animal Science, Guangdong Academy of Agricultural Sciences

2:15 PM 448 **Multi-Cohort Study of the Mesenteric Fat from Crossbred Beef Steers Identifies Genes Associated with Body Weight Gain**

Amanda K. Lindholm-Perry ¹, H. C. Freetly ¹, Brittney Keel ¹

¹USDA, ARS, US Meat Animal Research Center

2:45 PM 451 **Identification and characterization of euchromatic regions associated with gene expression and intramuscular fat in Nelore cattle**

Luiz Lehmann Coutinho ¹, Natalia Morosini ², Aline Cesar ³, Mirele Poleti ⁴, Luciana Regitano ⁵, Gabriel Margarido ⁶

¹University of Sao Paulo - ESALQ, ²ESALQ / USP, ³Department of Agri-Food Industry, Food and Nutrition, University of São Paulo, Piracicaba, SP, Brazil, ⁴Faculdade de Zootecnia e Engenharia de Alimentos (FZEA), Universidade de São Paulo (USP), ⁵Embrapa Pecuária Sudeste, ⁶ESALQ/USP

2:30 PM 450 **Impact of ergot alkaloid consumption during mid and late gestation on mammary development and lactation**

Jessica Britt¹, Sarah Adams¹, Markus Miller Jr¹, Cheryl Kojima², John G. Andrae¹, Susan K. Duckett¹

¹Clemson University, ²University of Tennessee

3:00 PM 452 **Supplementation of *Saccharomyces cerevisiae* boulardii and an antibiotic growth promoter affects bacterial composition of the gastrointestinal tract of calves during the pre- and post-weaning periods**

Bridget E. Fomenky¹, Duy N. Do², Guylaine Talbot², Nathalie Bissonnette³, Martin Lessard⁴, Yvan P. Chouinard⁵, Eveline M. Ibeagha-Awemu³

¹Agriculture and Agri-Food Canada, ²Agriculture and Agri-Food Canada, ³Sherbrooke Research and Development Centre, Agriculture and Agri-Food Canada, ⁴Agriculture et Agroalimentaire Canada / Agriculture and Agri-Food Canada, ⁵Université laval

3:15 PM 453 **Biological responses to non-coated and coated steroidal implants containing equal doses and ratios of trenbolone acetate and estradiol benzoate in beef steers**

Zachary K.F. Smith¹, Jessica Baggerman², Jongkyoo Kim³, Kimberly B. Wellmann¹, Bradley J. Johnson¹

¹Texas Tech University, ²Huntington University, ³Michigan State University

3:30 PM 449 **Effect of different nucleotides supplementation source on performance of newly weaned piglets**

Rodrigo Gardinal¹, Fernando de Oliveira Roberti Filho¹, João Fernando Albers Koch¹, Carlos Alberto Ferreira Oliveira¹, Bruno Mazzer¹, Alessandro Morais Rocha¹, Vinícius S. Cantarelli²

¹Biorigin Company, Lençóis Paulista, SP, Brazil, ²Federal University of Lavras

Meat Science and Muscle Biology Symposium: The impact of inflammation and infection on muscle growth, efficiency and meat quality

Chair: Anna Dilger, Professor, University of Illinois at Urbana-Champaign

2:00 PM – 4:15 PM

2:00 PM **Introductory Remarks**

2:05 PM 500 **Roles for inflammation in livestock muscle growth and repair**

Sarah A. Reed¹

¹University of Connecticut

2:35 PM 498 **Implications of maternal infection and inflammation for offspring muscle development**

Anna Dilger¹

¹University of Illinois

3:05 PM **Break**

3:15 PM 501 **Immunometabolism responses to disease in pigs and its impact on feed efficiency**

Nicholas K. Gabler¹, Emma T. Helm¹, Carson M. De Mille¹, Shelby Curry², Wesley Schweer¹, Steven M. Lonergan¹, Crystal L. Loving³, Kent Schwartz¹, Eric R. Burrough¹
¹Iowa State University, ²ORISE Postdoctoral Researcher, ³USDA-ARS-National Animal Disease Center

3:45 PM 499 **The effects of disease on growth efficiency and carcass composition of beef cattle**

Casey L. Maxwell¹, Jacob A. Hagenmaier¹, Nicholas Betts¹, Stephanie Rutten-Ramos¹
¹Elanco Animal Health

Nonruminant Nutrition IV: Feedstuffs

Chair: Shengfa T. Liao, Associate Professor, Mississippi State University;
Xingen Lei, Professor, Cornell University College of Agricultural and Life Science
2:00 PM – 4:15 PM

2:00 PM 170 **Effects of feeding different feed forms to laying hens in the deep litter on egg physical attributes during storage**

Olaniyi J. Babayemi¹, Olugbenga A. Ogunwole², Okiki O. Adagba³, Temitope V. Abioye³, Ireti A. Oludoyi⁴

¹University of Ibadan, Ibadan, Nigeria, ²University of Ibadan, Ibadan, Nigeria, ³Department of Animal Science, University of Ibadan, ⁴University of Ibadan - Department of Animal Science, Agricultural Biochemistry & Nutrition Unit

2:15 PM 167 **Production performance and egg quality of free-range laying hens fed diets containing chopped full-fat dried black soldier fly larvae**

Masoumeh Bejaei¹, Kimberly M. Cheng²

¹Faculty of Land and Food Systems, University of British Columbia, ²University of British Columbia

2:30 PM 168 **Effects of feeding different feed brands to caged laying hens on egg physical attributes during storage in Ibadan, Nigeria**

Olugbenga A. Ogunwole¹, Ireti A. Oludoyi², Olaniyi J. Babayemi³, Aderonke O. Mosuro⁴

¹University of Ibadan, Ibadan, Nigeria, ²University of Ibadan - Department of Animal Science, Agricultural Biochemistry & Nutrition Unit, ³University of Ibadan, Ibadan, Nigeria, ⁴University of Ibadan

2:45 PM 169 **Influence of Diet Fortification on Body Composition of Mature Horses at Maintenance**

Mattea L. Much¹, Jessica L. Leatherwood¹, Amanda N. Bradbery¹, Rafael E. Martinez², Abby Keegan³, Emily Lamprecht³

¹Texas A&M University, ²Department of Animal Science, Texas A&M University and Texas A&M AgriLife Research, ³Cargill Animal Nutrition

3:00 PM 171 **Growth performance of weaned pigs fed a high-protein corn co-product**

Alissa Martindale ¹, Melanie Trenhaile-Grannemann ², Shana M. Winkel ³, Phillip S. Miller ⁴, Thomas E. Burkey ⁴

¹University of Nebraska, ²Cobb-Vantress, ³University of Nebraska - Lincoln, ⁴University of Nebraska-Lincoln

3:15 PM **Break**

3:30 PM 164 **Chemical composition and in vitro digestion of reconstituted and ensiled sorghum grains for pig feeding**

Sebastián Brambillasca ¹, Marina Fernández García ¹, José María Arroyo ¹, José Luis Repetto ², Cecilia Cajarville ³

¹Instituto de Producción Animal, Facultad de Veterinaria, Universidad de la República, ²Unidad Académica de Bovinos, Departamento de Producción Animal y Salud de los Sistemas Productivos, Universidad de la República, Facultad de Veterinaria, Ruta 1 km 42.5, San José, Uruguay, ³Unidad Académica de Nutrición Animal, Departamento de Producción Animal y Salud de los Sistemas Productivos, Universidad de la República, Facultad de Veterinaria, Ruta 1 km 42.5, San José, Uruguay

3:45 PM 165 **Effect of feed forms on physical characteristics of eggs in the duration of storage**

Ireti A. Oludoyi ¹, Olugbenga A. Ogunwole ², Gbemiga O. Adeyemo ², Olaniyi J. Babayemi ³

¹University of Ibadan - Department of Animal Science, Agricultural Biochemistry & Nutrition Unit, ²University of Ibadan, Ibadan, Nigeria, ³University of Ibadan, Ibadan, Nigeria

4:00 PM 166 **Effect of gas production recording system and inoculum volume on in vitro fermentation of corn distillers dried grains with solubles (cDDGS) or soybean hulls using pig fecal inoculum**

Jae C. Jang ¹, Zhikai Zeng ², Gerald C. Shurson ¹, Pedro E. Urriola ¹

¹University of Minnesota, ²Department of Animal Science, University of Minnesota

Nonruminant Nutrition V: Energy, Protein, & Micronutrients

Chair: John Scott Radcliffe, Professor and Assistant Head, Purdue University;
Samer W. El-kadi, Assistant Professor, Virginia Tech

2:00 PM – 4:45 PM

2:00 PM 158 **Determination of Crude Protein Requirement of Broiler Chickens Placed on Straight/Single Diet**

Adegbenro Henry. Akinmutimi ¹, Otu Daniel ¹, Rahman Onabanjo ¹

¹Michael Okpara University of Agriculture Umudike

2:15 PM 149 **Effects of Replacing Vitamin-mineral Premix with Leaf Meal Composite on The Performance of Broiler Starter Chickens**

Aderonke O. Mosuro ¹, Olugbenga A. Ogunwole ², Bamidele Samuel. Adedeji ³, Jemiseye Omowumi. Folasade ³

¹University of Ibadan, ²University of Ibadan, Ibadan, Nigeria, ³Department of Animal Science, University of Ibadan

2:30 PM 150 **Liquid Chromatography-Mass Spectrometry-Based Serum Metabolomics Analysis of the Effect of Dietary Energy Intake on the Onset of Puberty in Gilts**

Meng Shi ¹

¹China Agricultural University

2:45 PM 151 **Sodium and Chlorine Requirement of Yellow-feathered Broilers Aged from 1 to 21 Days, 22 to 42 Days, and 43 to 63 Days**

Shouqun Jiang ¹, Huan Yu ², Zhongyong GOU ³, Long Li ⁴, Yibing Wang ⁴, Zongyong Jiang ⁵, Xiajing LIN ³

¹State Key Laboratory of Livestock and Poultry Breeding, Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture, Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, P.R. China, ²Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640; College of Animal Science and Animal Veterinary, Huazhong Agricultural University, Wuhan 430070, ³Institute of Animal Science, Guangdong Academy of Agricultural Sciences, State Key Laboratory of Livestock and Poultry Breeding, Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture Guangdong Public Laboratory of Animal Breeding and Nutrition, Guangdong Key Laboratory of Animal Breeding and Nutrition, ⁴The Key Laboratory of Animal Nutrition and Feed Science (South China) of Ministry of Agriculture; Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, ⁵Institute of Animal Science, Guangdong Academy of Agricultural Sciences; Ministry of Agriculture Key Laboratory of Animal Nutrition and Feed Science in South China

3:00 PM 157 **ValiMP, a mixture of phytogetic compounds with manganese, reduces abdominal fat in broilers**

Sun-woo Choi ¹, Min Young Park ², Minjin Kwak ², Ji-hyeon Lee ², Kwang-Youn Whang ²

¹CTCBIO Inc., ²Korea University

3:15 PM 152 **Supplemental effects of chelated trace minerals replacing inorganic trace minerals in sow diets on production performance, DNA methylation, histone acetylation, and gene expression in muscle and intestinal tissues of progeny**

Ki Beom Jang ¹, Jong Hyuk Kim ¹, Norman Purvis ², Jerry Purvis ³, Juxing Chen ⁴, Ping Ren ⁵, Mercedes Vazquez ⁵, Sung Woo Kim ¹

¹North Carolina State University, ²NG Purvis Farm Inc., ³Purvis Farms, ⁴Novus International Inc., ⁵Novus International, Inc

3:30 PM **Break**

3:45 PM 153 **Effects of dietary copper on production and hatching performance of Chinese Yellow broiler breeder hens during egg-laying period**

Zhongyong GOU¹, Qiuli Fan², Long Li³, Yibing Wang³, Xiajing LIN¹, Chuntian zheng⁴, Shouqun Jiang⁵

¹Institute of Animal Science, Guangdong Academy of Agricultural Sciences, State Key Laboratory of Livestock and Poultry Breeding, Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture Guangdong Public Laboratory of Animal Breeding and Nutrition, Guangdong Key Laboratory of Animal Breeding and Nutrition, ²Institute of Animal Science, ³The Key Laboratory of Animal Nutrition and Feed Science (South China) of Ministry of Agriculture; Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, ⁴Institute of Animal Science, Guangdong Academy of Agricultural Sciences, ⁵State Key Laboratory of Livestock and Poultry Breeding, Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture, Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, P.R. China

4:00 PM 154 **Effect of substitution of ZnO by organic acids, medium chain fatty acids monoglycerides and essential oils in high or low protein diets in piglets**

Laura Miranda¹, Alfonso Fuentetaja², Juan Gálvez³, Juan Ignacio Lozano³, Pedro Medel⁴

¹UNIVERSIDAD CATÓLICA SANTA TERESA DE JESÚS DE ÁVILA, ²COPESE, ³3F FEED AND FOOD S.L., ⁴INNOVABIOTICS, S.L.

4:15 PM 155 **Effects of maternal and dietary vitamin A level on growth performance, meat quality and immune function of broiler offspring**

Yibing Wang¹, Shouqun Jiang²

¹The Key Laboratory of Animal Nutrition and Feed Science (South China) of Ministry of Agriculture; Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, ²State Key Laboratory of Livestock and Poultry Breeding, Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture, Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, P.R. China

4:30 PM 156 **Modeling Energy Requirement of Chinese Yellow broiler breeder hens during egg-laying period**

Zhongyong GOU¹, Zongyong Jiang², Long Li³, Xiajing LIN¹, Yibing Wang³, Qiuli Fan⁴, Chuntian zheng⁵, Shouqun Jiang⁶

¹Institute of Animal Science, Guangdong Academy of Agricultural Sciences, State Key Laboratory of Livestock and Poultry Breeding, Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture Guangdong Public Laboratory of Animal Breeding and Nutrition, Guangdong Key Laboratory of Animal Breeding and Nutrition, ²Institute of Animal Science, Guangdong Academy of Agricultural Sciences; Ministry of Agriculture Key Laboratory of Animal Nutrition and Feed Science in South China, ³The Key Laboratory of Animal Nutrition and Feed Science (South China) of Ministry of Agriculture; Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, ⁴Institute of Animal Science, ⁵Institute of Animal Science, Guangdong Academy of Agricultural Sciences, ⁶State Key Laboratory of Livestock and Poultry Breeding, Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture, Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, P.R. China

**Physiology and Endocrinology Symposium:
Regulation of the growing follicle pool - basic and applied aspects**

Chair: Jordan M. Thomas, Assistant Professor, University of Missouri
2:00 PM – 5:10 PM

2:00 PM 126 **Regulation of initiation of follicle growth and dynamics of early follicular development in the sheep**

Danielle Monniaux¹, Véronique Cadoret², Frédérique Clément³, Stéphane Fabre⁴, Yann Locatelli², Philippe Monget², Rozenn Dalbies-Tran²

¹Physiologie de la Reproduction et des Comportements, INRA, CNRS, IFCE, Université de Tours, 37380, Nouzilly, France, ²PRC, CNRS, IFCE, INRA, Université de Tours, 37380, Nouzilly, France, ³Project-team M3DISIM, Centre Inria Saclay Île-de-France, 91120 Palaiseau, France, ⁴GenPhySE, Université de Toulouse, INRA, INPT, ENVT, Castanet Tolosan, France

2:40 PM 125 **Anti-Müllerian Hormone (AMH): a biomarker for the ovarian reserve, ovarian function and fertility in dairy cows**

James J. Ireland¹, Francesca Mossa²

¹Michigan State University, ²Department of Veterinary Medicine

3:20 PM **Break**

3:40 PM 123 **Physiological regulation of ovarian follicle growth and maturation in the pig**

Holly A. LaVoie¹

¹University of South Carolina School of Medicine

4:20 PM 124 **Factors influencing follicle development in gilts and sows and management strategies used to regulate growth for control of estrus and ovulation**

Robert V. Knox¹

¹University of Illinois at Urbana-Champaign

Ruminant Nutrition VII: Concentrates and Forages

Chair: J. D. Rivera, Associate Professor, Mississippi Agricultural and Forestry Experiment Station-White Sand Branch, Mississippi University

2:45 PM – 5:00 PM

2:45 PM 59 **Effect of heat processing on nutritive value of oat (*Avena sativa* L.) grain for dairy cattle as determined by DVE/OEB system and its relationship to oat grain protein molecular structure using advanced molecular spectroscopy**

L. Prates¹, Aaron D. Beattie², X. Feng¹

¹ASAS, CSAS, ADSA, ²University of Saskatchewan

3:00 PM 58 **Evaluation of heat processing on ruminal degradation and intestinal digestion of oat (*Avena sativa* L.) grain in dairy cattle**

L. Prates¹, Aaron D. Beattie², X. Feng¹

¹ASAS, CSAS, ADSA, ²University of Saskatchewan

3:30 PM **62 Characterization of the dietary protein in Brassica carinata meal when used as a supplement for beef cattle**

Tessa M. Schulmeister¹, Martin Ruiz Moreno¹, Gleise Medeiros da Silva², Mariana E. Garcia-Ascolani³, Francine M. Ciriaco³, Darren D. Henry⁴, G. Cliff C. Lamb⁵, Jose C. Dubeux¹, Nicolas DiLorenzo¹

¹University of Florida, ²ASAS, ³University of Florida - North Florida Research and Education Center, ⁴Texas Tech University, ⁵Texas A&M University

3:45 PM **61 Effect of rapeseed inclusion in late-summer planted oat pasture on growing performance of beef steers**

Hannah Riley¹, Kristin E. Hales², Steven D. Shackelford³, H. C. Freetly⁴, Mary E. Drewnoski¹

¹University of Nebraska-Lincoln, ²Meat Animal Research Center, Clay Center, NE 68933,

³USDA, Meat Animal Research Center, ⁴US Meat Animal Research Center

3:15 PM **57 Effects of particle size and heat treatment on in situ and in vitro digestion of dry-rolled Enogen® Feed Corn**

Lucas Horton¹, James Drouillard¹

¹Kansas State University

4:00 PM **60 Performance of growing beef cattle consuming bahiagrass hay treated with calcium oxide and molasses**

Francine M. Ciriaco¹, Darren D. Henry², Luara B. Canal¹, Carla D. Sanford³, Gonzalo Barreneche³, Ana C. G. Luna¹, Manuel Peña⁴, Jose C. Dubeux⁵, Nicolas DiLorenzo⁵

¹University of Florida - North Florida Research and Education Center, ²Texas Tech University,

³University of Florida, NFREC, ⁴North Florida Research and Education Center, University of Florida, ⁵University of Florida

4:15 PM **56 Determining the energy value of dried corn gluten feed in forage-based beef rations**

Keri N. Hardin¹, Taylor A. Langford¹, Grace M. Barry², Wil M. Sims², Robin R. White³, Scott P. Greiner¹, David A. Fiske⁴, Thomas B. Wilson³

¹Virginia Tech, ²Department of Animal and Poultry Sciences, Virginia Tech, Blacksburg,

³Department of Animal and Poultry Sciences, Virginia Tech, ⁴Shenandoah Valley Agriculture Research and Extension Center

4:30 PM **64 Effect of grass silage chop length when fed alone, or with corn silage, on digestion and metabolism in dairy cows**

Usama Tayyab¹, Robert G. Wilkinson¹, Christopher K. Reynolds², Liam A. Sinclair³

¹Harper Adams University, ²University of Reading, ³Harper Adams University

4:45 PM **63 Late-Breaking: Fermentation characteristics and aerobic stability of silage from Enogen® Feed Corn**

Adrian Baker¹, James Drouillard¹

¹Kansas State University

Undergraduate & Graduate Teaching and Education

Chair: Jennifer M. Bundy, Assistant Professor, Iowa State University

2:45 PM – 5:00 PM

2:45 PM **6 The relationship between agriculture background and student's perception of self in an animal science department**

Lonisa Early¹, Chi-Ning Chang¹, Tryon A. Wickersham¹

¹Texas A&M University

3:00 PM **5 The effectiveness of a gamified, online, beef cattle breeding simulation to increase student engagement, motivation, and learning gains**

Maria Haag¹, Justin LeTourneau¹, Rose Marra¹, David J. Patterson¹, Michael F. Smith², William R. Lamberson¹

¹University of Missouri, ²University of Missouri Division of Animal Sciences

3:15 PM **4 Development of an Animal Science-Specific Alumni International Travel Experience to Increase Student Travel Support**

Jodi A. Sterle¹, Maynard Hogberg¹

¹Iowa State University

3:30 PM **Break**

3:45 PM **3 Implementing a classroom assessment technique to improve student engagement, communication, and performance in an introductory animal science laboratory course**

Amy Abrams¹, Rosemarie Nold¹, Michael Gonda¹

¹South Dakota State University

4:00 PM **8 Identifying factors that affect the transition of transfer students to a four-year university through the use of focus groups.**

Cori J. Siberski¹, Jennifer M. Bundy²

¹Department of Animal Science, Iowa State University, ²Iowa State University

4:15 PM **7 Aligning Undergraduate Animal Science Curriculum with Current Disciplinary Vision**

Lonisa Early¹, Debra Fowler¹, Kathrin Dunlap¹, Tryon A. Wickersham¹

¹Texas A&M University

4:30 PM **1 Changing paradigm in graduate education: Collaborative On-line Approach in Reproduction**

John J. Parrish¹, Aileen F. Keating², Joy L. Pate³, Ky G. Pohler⁴, Milo C. Wiltbank⁵, Alan Ealy⁶

¹University of Wisconsin-Madison, ²Iowa State University, ³Pennsylvania State University - Department of Animal Science, ⁴University of Tennessee - Department of Animal Science, ⁵University of Wisconsin-Madison, Department of Animal and Dairy Science, ⁶Virginia Tech

4:45 PM **2 Developing future animal science students through a residential summer camp program**

Carrie L. Pickworth¹

¹North Carolina State University

ASAS Executive Committee Meeting

4:00 PM – 5:00 PM

Breeding and Genetics VI: Dairy Cattle and Methods II

Chair: Daniela Lourenco, Assistant Professor, University of Georgia

4:00 PM – 5:30 PM

4:00 PM 330 **Multivariate genome wide association for continuous and discrete responses using multivariate Bernoulli prior**

Romdhane Rekaya¹, Sajjad Toghiani², Pattarapol Sumreddee², Ashley S. Ling³, Samuel E. Aggrey²

¹University of Georgia, ²University of Georgia, ³University of Georgia, Department of Animal and Dairy Science

4:15 PM 328 **Polymorphism in TMEM95, SUGT1 and RASGRP2 genes in Russian Simmental cattle population**

Olga V. Kostyunina¹, Anna A. Filipchenko², Margaret S. Fornara¹, Alexander A. Sermyagin¹, Natalia A. Zinovieva¹

¹L.K. Ernst Federal Research Center for Animal Husbandry, ²Federal Science Center for Animal Husbandry named after Academy Member L.K. Ernst

4:30 PM 329 **Comparison of quantitative trait nucleotide assisted selection and gene editing for improvement of complex traits**

Ashley S. Ling¹, Samuel E. Aggrey², Romdhane Rekaya³

¹University of Georgia, Department of Animal and Dairy Science, ²University of Georgia, ³University of Georgia

4:45 PM 326 **Comparison of Genomic Relationship Matrices Using Differing Number of SNP in Pooled DNA Analyses.**

Ryan J. Boldt¹, John W. Keele², Larry A. Kuehn³, Tara G. McDanel², Timothy P. Smith⁴, R. Mark Enns¹

¹Colorado State University, ²USDA-ARS, U.S. Meat Animal Research Center, ³USDA ARS U.S. Meat Animal Research Center, ⁴USDA, Agricultural Research Service, US Meat Animal Research Center

5:00 PM 327 **Practical problems and solutions using unknown parent groups in combined commercial pig sub-lines**

Ivan Pocrnic¹, Daniela Lourenco¹, Shogo Tsuruta², Ching-Yi Chen³, Ignacy Misztal¹

¹University of Georgia, ²The University of Georgia, ³Genus PIC

5:15 PM 331 **Accuracies of multi-breed genomic evaluations of breeds that share the same SNP effects**

Yvette Steyn¹, Daniela Lourenco¹, Breno Fragomeni¹, Ignacy Misztal¹

¹University of Georgia

Ruminant Nutrition VI: Enzyme Products

Chair: Robin Anderson, ARS/USDA

4:00 PM – 5:00 PM

4:00 PM **68 Comparative transcriptomic analysis of the carbohydrate active enzymes that are expressed to degrade plant cell wall carbohydrates by diverse genera of anaerobic fungi isolated from the rumen**

Robert J. Gruninger¹, Thi Truc Minh Nguyen², Ian Reid², Jay Yanke³, Pan Wang³, Wade Abbott³, Adrian Tsang⁴, Tim A. McAllister¹

¹Agriculture and Agri-Food Canada, ²Centre for Structural and Functional Genomics, Concordia University, ³Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ⁴Centre for Structural and Functional Genomic, Concordia University, Montreal, QC H4B 1R6, Canada

4:15 PM **65 Effect of exogenous fibrolytic enzymes on untreated or ammonia fiber expansion (AFEX) - treated wheat straw on in vitro semi-continuous culture fermentation using the rumen simulation technique (RUSITEC)**

Atef Saleem¹, Gabriel O. Ribeiro Jr², Daryoush Alipour², Tassilo Brand², Liaze Santos², WenZhu Yang³, Tim A. McAllister³

¹South Valley University, ²Agriculture and Agri-Food Canada; Lethbridge Research and Development Centre, ³Agriculture and Agri-Food Canada

4:30 PM **67 Effects of exogenous fibrolytic enzymes on beef cattle fed growing diets: metabolism study**

Lucas B. Kondratovich¹, Jhones Sarturi¹, Michael A. Ballou², Alan Carlos Barbosa Melo¹, Mikenzie Hanlon¹, Pedro R. B. Campanili¹, Lucas A. Pellarin¹

¹Texas Tech University, ²Texas Tech University, Department of Veterinary Sciences

4:45 PM **66 Effect of essential oil and exogenous enzyme on performance and carcass traits of finishing cattle fed different roughage sources**

Tiago Sabella Acedo¹, Rodrigo Goulart², Vinicius Nunes de Gouvea¹, Tiago S. S. Acedo³, Guilherme S. S. F. M. Vasconcellos³, Paulo Roberto Leme⁴, Arlindo Saran Netto⁴, Saulo da Luz e Silva⁴

¹DSM Produtos Nutricionais Brasil S.A., ²FZEA-USP, ³DSM Nutritional Products S/A Brazil, ⁴University of São Paulo, Pirassununga, SP, Brazil – College of Animal Science and Food Engineering

Small Ruminant III

Chair: Joseph P. Cassady, South Dakota State University

4:00 PM – 5:30 PM

4:00 PM **35 Classical Scrapie Resistance in Goats Based on S146 or K222 Amino Acid Substitutions in the Prion Gene**

Mehmet Ulas Cinar¹, David Schneider², Daniel Waldron³, Katherine O'Rourke⁴, Stephen N. White⁴

¹Erciyes University/Washington State University, ²USDA-ARS Animal Disease Research, ³Texas A&M Agrilife Research, ⁴USDA-ARS Animal Disease Research

4:15 PM 34 **Thermophysiological and Blood Responses of West African Dwarf Goats Managed Under 5 Housing Patterns in Akwa Ibom State**

Glory Eyoh ¹, A. Ausaji Ayuk ², I.m. Anya ³

¹Akwa Ibom State University, ²Univerisity of Calabar, Calabar, ³University Of Calabar

4:30 PM 33 **Breed, age and sex factors influencing body weight and measurements in Azad Jammu and Kashmir goat breeds**

Muhammad Moaeen-ud-Din ¹, Ghulam Bilal ², James Reecy ³, Muhammad Sajjad. Khan ⁴, Zulfiqar Hussan. Khuto ⁵

¹PMAS-Arid Agriculture University, ²PMA-Arid Agriculture University, Rawalpindi, ³Iowa State University, ⁴Institute of Animal & Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Pakistan, ⁵Faculty of Veterinary and Animal Sciences, University of Poonch, Rawalakot, Pakistan

4:45 PM 32 **Variation among breeds for productive and reproductive performances in Azad Jammu & Kashmir goat population**

Muhammad Moaeen-ud-Din ¹, Ghulam Bilal ², James Reecy ³, Muhammad Sajjad. Khan ⁴, Zulfiqar Hussan. Khuto ⁵

¹PMAS-Arid Agriculture University, ²PMA-Arid Agriculture University, Rawalpindi, ³Iowa State University, ⁴Institute of Animal & Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Pakistan, ⁵Faculty of Veterinary and Animal Sciences, University of Poonch, Rawalakot, Pakistan

5:00 PM 37 **Estimation of Beetal goat live-weight for all types of age classes in field and farm conditions through linear body measurements**

Muhammad Moaeen-ud-Din ¹, Hafiz Muhammad. Waheed ², Ghulam Bilal ³, James Reecy ⁴, Muhammad Sajjad. Khan ⁵

¹PMAS-Arid Agriculture University, ²Laboratories of Animal Breeding and Genetics, Faculty of Veterinary and Animal Sciences, PMAS Arid Agriculture University, Rawalpindi, 46300, Pakistan, ³PMA-Arid Agriculture University, Rawalpindi, ⁴Iowa State University, ⁵Institute of Animal & Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Pakistan

5:15 PM 36 **Morphometric measurements and body weight is determined by breed, age and sex among Punjab goat breeds of Pakistan**

Raja Danish. Muner ¹, Ghulam Bilal ², Muhammad Moaeen-ud-Din ³, James Reecy ⁴, Muhammad Sajjad. Khan ⁵

¹Laboratories of Animal Breeding and Genetics, Faculty of Veterinary and Animal Sciences, PMAS Arid Agriculture University, Rawalpindi, 46300, Pakistan, ²PMA-Arid Agriculture University, Rawalpindi, ³PMAS-Arid Agriculture University, ⁴Iowa State University, ⁵Institute of Animal & Dairy Sciences, Faculty of Animal Husbandry, University of Agriculture, Pakistan

Thursday, July 12, 2018

Upload Room
7:00 AM – 12:00 PM

Registration Open
7:30 AM – 12:00 PM

The 3rd International Animal Sciences and Biotechnology Forum: International multidisciplinary approach to enhance animal production and health

Chair: Sung Woo Kim, Professor, NC State University
8:30 AM – 12:45 PM

8:30 AM **Introductory Remarks**

8:35 AM 16 **The control of homeostasis in rumen epithelium of Japanese Black cattle**

Sanggun Roh ¹
¹Tohoku University

9:05 AM 22 **Evaluation of intestinal health in nursery pigs**

Sung Woo Kim ¹
¹North Carolina State University

9:35 AM 21 **Increased dietary isoleucine enhances lipogenesis and fat accumulation in skeletal muscle through depressing AMPK phosphorylation in pigs**

Jingdong Yin ¹
¹China Agricultural University

10:05 AM **Break**

10:15 AM 20 **Exploring use of supplemental amino acids in swine and poultry: Beyond the most limiting amino acids**

Jong-Su Eun ¹
¹Biotechnology Research Institute, CJ CheilJedang

10:45 AM 19 **Strategic approaches to improve immune response against stresses in farm animals**

Cheol-Heui YUN ¹
¹College of Agriculture and Life Sciences, Seoul National University

11:15 AM 18 **International collaboration: Are the challenges worth the benefits?**

M. Todd. See ¹
¹North Carolina State University

11:45 AM 17 **Alternative feedstuff for pigs in China: Efficient utilization of sorghum as an alternative energy source fed to pigs**

Xiangshu Piao ¹
¹College of Animal Science and Technology, China Agricultural University

12:15 PM 15 **International regulatory issues on animal feed additives: impacts on consumer safety and related-industry**

Byung-Chul Park¹

¹Seoul National University

Triennial Growth Symposium: The nutrition of muscle growth

Chair: Jay A. Daniel, Professor, Berry College

8:30 AM – 2:30 PM

8:30 AM **Introductory Remarks**

8:40 AM 14 **Signatures of pre-natal nutrition in cattle: adaptations in DNA methylation, gene expression, and post-natal growth**

Carolyn J. Fitzsimmons¹, Julia Devos², Changxi Li¹, Francois Paradis², Christina Straathof³, Gregory B. Penner⁴, Koryn S. Hare⁵, John J. McKinnon⁶, Federico Añez-Osuna⁷, Hushton Block⁸, Marcos G. Colazo⁹, Heather L. Bruce¹⁰

¹University of Alberta/Agriculture and Agri-Food Canada, ²Agriculture and Agri-Food Canada/University of Alberta, ³University of Alberta, ⁴Department of Animal and Poultry Science, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada S7N 5A8, ⁵Department of Agricultural, Food and Nutritional Science, Faculty of Agriculture Life and Environmental Sciences, University of Alberta, ⁶University of Saskatchewan, ⁷Department of Animal and Poultry Science, College of Agriculture and Bioresources, University of Saskatchewan, ⁸Agriculture and Agri-Food Canada, ⁹Alberta Agriculture and Forestry, 7000 - 113 Street, Edmonton, AB, Canada T6H 5T6, ¹⁰Department of Agricultural, Food and Nutritional Science, University of Alberta

9:25 AM 13 **Impacts of nutrition and other environmental factors on the differentiation and proliferation of satellite cells**

Kara J. Thornton-Kurth¹

¹Utah State University

10:10 AM **Break**

10:30 AM 12 **Effect of long-term leucine supplementation on muscle protein synthesis in a pig model of neonatal growth**

Rodrigo Manjarin¹, Daniel A. Columbus², Agus Suryawan³, Marta L. Fiorotto³, Teresa A. Davis³

¹California Polytechnic State University, ²Prairie Swine Centre, Inc., ³USDA/ARS Children's Nutrition Research Center, Department of Pediatrics, Baylor College of Medicine

11:15 AM 11 **Factors affecting the transformation of muscle to meat**

Eric England¹

¹The Ohio State University

12:00 PM **Lunch Break**

1:00 PM 10 **The intricate relationship between animal nutrition, muscle growth and fresh meat quality: How does it all fit together?**

Elisabeth Huff Lonergan¹, Steven M. Lonergan¹, Stephanie L. Hansen¹

¹Iowa State University

1:45 PM 9 **Promoting Growth with Nutrition: Potentials and Limitations**

Samer W. El-kadi ¹

¹Virginia Tech

Nutrition/Physiology/ Animal Health Symposium: Gut physiology and microbiota influences on animal health and production - Sponsored by CSAS

Chairs: Michael Steele, University of Alberta, University of Guelph; Eveline M. Ibeagha-Awemu, Research Scientist, Sherbrooke Research and Development Centre, Agriculture and Agri-Food Canada

9:00 AM – 12:15 PM

9:00 AM **Introductory Remarks**

9:05 AM 143 **Metabolic control of nutrient metabolism and milk synthesis in bovine mammary epithelial cells**

Sergio.A. Burgos ¹

¹Department of Animal Science. McGill University

9:35 AM 144 **Recovery of the gastrointestinal tract in response to nutritional challenges**

Gregory B. Penner ¹

¹Department of Animal and Poultry Science, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK, Canada S7N 5A8

10:05 AM **Break**

10:15 AM 145 **The role of the bovine respiratory microbiota in health and disease**

Trevor Alexander ¹

¹Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, Lethbridge, AB Canada

10:45 AM 146 **Early life microbial exposures and disruptions shape subsequent animal health**

Ben Willing ¹

¹University of Alberta

11:15 AM 147 **The inter-related physio-ecology of the gastrointestinal tract, the mammary gland and the reproductive system in dairy cattle and swine**

Ehsan Khafipour ¹

¹University of Manitoba

11:45 Am 148 **Maximizing productivity of cattle by improving the efficiency of the rumen microbiota**

Timothy Hackmann ¹

¹University of Florida

Ruminant Nutrition VIII: Mineral metabolism

Chair: Darren D. Henry, Assistant Professor, Texas Tech University
9:00 AM – 10:15 AM

9:00 AM 51 **The effect of initial liver copper status in finishing steers fed three dietary levels of copper with or without ractopamine hydrochloride on liver copper status, growth performance and carcass characteristics**

Elizabeth M. Messersmith¹, Mark E. Branine², Olivia Genther-Schroeder¹, Stephanie L. Hansen¹

¹Iowa State University, ²Zinpro Corporation

9:15 AM 54 **Effects of copper, zinc, and manganese source and concentration during late gestation on beef cow performance, fetal growth, and mineral status of cows and neonatal calves**

Emma L. Stephenson¹, Abigail R. Rathert-Williams¹, Brian M. Shoemake², Dusty W. Nagy², Riley D. Messman¹, Tiago B. Freitas³, Heather Tucker⁴, Allison M. Meyer¹

¹Division of Animal Sciences, University of Missouri, ²College of Veterinary Medicine, University of Missouri, ³Novus International Inc, St. Charles, MO, USA, ⁴Novus International Inc.

9:30 AM 52 **The influence of supplemental zinc and dietary energy level on mineral retention of beef steers**

Remy N. Carmichael¹, Olivia Genther-Schroeder¹, Erin L. Deters¹, Trey D. Jackson¹, Elizabeth M. Messersmith¹, Katherine VanValin¹, Stephanie L. Hansen¹

¹Iowa State University

9:45 AM 53 **Evaluation of nutrient digestibility, apparent absorption and retention of zinc in lambs supplemented with zinc from zinc hydroxychloride, zinc sulfate or zinc methionine**

Katherine VanValin¹, Olivia Genther-Schroeder¹, Remy N. Carmichael¹, Christopher Blank¹, Erin L. Deters¹, Sarah Hartman¹, Emma Niedermayer¹, Stephanie L. Hansen¹

¹Iowa State University

10:00 AM 55 **Apparent absorption, zinc retention and nutrient digestibility in lambs during an adrenocorticotropic hormone challenge**

Katherine VanValin¹, Olivia Genther-Schroeder¹, Remy N. Carmichael¹, Christopher Blank¹, Erin L. Deters¹, Sarah Hartman¹, Emma Niedermayer¹, Stephanie L. Hansen¹

¹Iowa State University

Animal Behavior and Well-Being Symposium: Incorporating natural behavior and ethological knowledge into intensive livestock farming

Chair: Joao H.C. Costa, University of Kentucky
9:15 AM – 12:00 PM

9:15 AM 222 **Improving dairy goat management systems: We need to start with natural behavior**

Gosia Zobel¹

¹Animal Welfare Team, AgResearch Ltd.

9:45 AM 223 **Are we raising “normal” cows? Effects of early life diet, feeding plan, and housing on the natural behavior of dairy cattle**

Joao H.C. Costa ¹

¹University of Kentucky

10:30 AM 219 **Maternal isolation behavior in cattle: Effect of management**

Peter D. Krawczel ¹

¹The University of Tennessee

11:00 AM 220 **Incorporating natural behavior in housing design and management of lactating sows**

Nicolas Devillers ¹

¹Agriculture and Agri-Food Canada

11:30 AM 221 **Easing the transition: Using feedlot cattle behavior as a management tool**

Amanda Mathias ¹, Courtney L. Daigle ²

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

Beef Species II: Cow-Calf

Chair: Glenn Duff, New Mexico State University

9:30 AM – 12:30 PM

9:30 AM 264 **Early Career Awardee: Supplementing omega-6 fatty acids to enhance early embryonic development and pregnancy establishment in *Bos indicus* and *B. taurus* beef cows**

Reinaldo F. Cooke ¹

¹Texas A&M University

10:00 AM 265 **Jr. Platform Speaker: Impacts of stocking density on development and puberty attainment of replacement beef heifers**

Kelsey Schubach ¹, Reinaldo F. Cooke ¹, Alice P. Brandao ², L.G.T Silva ², Rodrigo Marques ³, David Bohnert ³

¹Texas A&M University, ², ³Oregon State University

10:30 AM 266 **Evaluation of peri-partum supplementation of methionine hydroxy analog on cow-calf performance**

Colby A. Redifer ¹, Heather Tucker ², Daniel D. Loy ³, Patrick J. Gunn ¹

¹Department of Animal Science, Iowa State University, Ames, IA, USA, ²Novus International Inc., ³Iowa State University

10:45 AM 267 **Predicting dry matter intake in lactating beef and dairy crossbred suckler cows using novel animal measurements**

Maeve Williams ¹, Simone McCabe ², Robert Prendiville ²

¹Teagasc and Munster Technological University, ²Teagasc

11:00 AM **Break**

11:15 AM 268 **Relationships of neonatal beef calf serum metabolites with colostrum nutrient composition and maternal metabolic status**

Allison M. Meyer¹, Emma L. Stephenson¹, Abigail R. Rathert-Williams¹, Ashleigh O. Redman², Katy S. Stoecklein¹, Natalie B. Duncan¹, Ann L. Kenny¹

¹Division of Animal Sciences, University of Missouri, ²Division of Animal Sciences, University of Missouri, Columbia

11:30 AM 263 **The Show-Me-Select Replacement Heifer Program: I. Adding value to beef herds in Missouri**

Rachael C. Bonacker¹, Jordan M. Thomas², James William C. Locke¹, Emma R. Knickmeyer¹, Scott E. Pooch², Douglas S. Brown², Jared E. Decker², David J. Patterson²

¹University of Missouri - Columbia, ²University of Missouri

11:45 PM 262 **The Missouri Show-Me-Select Replacement Heifer Program: II. Comparing pregnancy rates resulting from fixed-time artificial insemination based on reproductive tract score and estrous synchronization protocol**

Rachael C. Bonacker¹, Jordan M. Thomas¹, James William C. Locke¹, Emma R. Knickmeyer¹, Jared E. Decker¹, Scott E. Pooch², David J. Patterson¹

¹University of Missouri - Columbia

12:00 PM 261 **Responses by heifers to development strategies using confinement or supplemented native range herbivory in Northern Great Plains**

Mark K. Petersen¹, Jennifer Muscha¹, Andy J. Roberts², Sara Duke¹

¹USDA-ARS, ²USDA Agricultural Research Service, Fort Keogh Livestock and Range Research Laboratory

12:15 PM 260 **The National Center for Applied Reproduction and Genomics (NCARG) in Beef Cattle: Integrating Improvements in Reproductive and Genomic Technologies**

David J. Patterson¹, Douglas S. Brown¹, Michael F. Smith², William R. Lamberson¹, Jeremy Taylor¹, Thomas E. Spencer¹, Scott E. Pooch¹, Jared E. Decker¹, Glenn Duff³

¹University of Missouri, ²University of Missouri Division of Animal Sciences, ³New Mexico State University

Horse Species II

Chair: Jason Turner, New Mexico State University

9:30 AM – 11:45 AM

9:35 Am 470 **Invited Speaker: Strategies to control feral horse populations in Alberta**

Bruce Stover¹

¹University of Calgary School of Veterinary Medicine

10:05 AM **Break**

10:15 AM 469 **Soluble fiber in equine diets alters fecal characteristics**

Taylor L. Hansen¹, Lauren G. Cooney², Jillian M. Bobel², Ellen M. Rankins², Eoné Willemse², Angie M. Adkin², Lori K. Warren²

¹Trouw Nutrition, ²University of Florida

10:30 AM 464 **Use of titanium dioxide as a marker for determining fecal output in horses**

Ashley Fowler¹, Morgan B. Pyles¹, Susan Hayes¹, Andrea Crum¹, Veronica Bill¹, Laurie Lawrence¹

¹University of Kentucky

10:45 AM 467 **Long-term effects of concentrate feeding on the equine cecal microbiome**

Christine Warzecha¹, Josie A. Coverdale¹, Jan Janecka², Tryon A. Wickersham¹, William Pinchak³, Jessica L. Leatherwood¹, Joshua C. McCann⁴

¹Texas A&M University, ²Duquesne University, ³Texas A&M AgriLife Research, Vernon, ⁴University of Illinois

11:00 AM 466 **A comparison of chaffhaye and alfalfa hay on digestibility and glucose metabolism in mature, stock-type horses**

Ashley Hansen¹, Alyssa Oates¹, Dustin Gaskins¹, Clint A. Löest², Laura M. White²

¹NMSU, ²New Mexico State University

11:15 AM 465 **Effect of forage quality on muscle glycogen utilization by exercised horses.**

Caitlin M. Chase¹, Brian Rude², Clay A. Cavinder², J. Zoller³, Derris D. Burnett⁴

¹Mississippi State University, ²Animal & Dairy Sciences, Mississippi State University, ³Texas A&M University, ⁴PhD

11:30 AM 468 **Effect of selenium and vitamin E supplementation on erythrocyte super oxide dismutase activity and blood concentrations of zinc and copper in moderately exercised horses**

Eliás Velázquez-Cantón¹, Aurora H. Ramírez-Pérez², Luis A. Zarco³, Juan C. Ángeles-Hernández⁴, Juan C. Ramírez-Orejuel³, Delia A. Castillo-Mata³

¹National University of Mexico, ²Veterinary Medicine School, National University of Mexico, ³Veterinary Medicine School. National University of Mexico, ⁴University of Mexico State

Meat Science and Muscle Biology

9:30 AM – 11:15 AM

9:30 AM 484 **Exploratory observational quantification of liver abscess incidence, specific to region and cattle type, and their associations to viscera value and bacterial flora**

Ryan Herrick¹, Carson Rogers², Trent McEvers³, Raghavendra G. Amachawadi⁴, TG Nagaraja⁴, Casey L. Maxwell⁵, Ty E. Lawrence²

¹Beef Carcass Research Center/West Texas A&M University, ²West Texas A&M University, ³Dean Cluck Feedyard, ⁴Kansas State University, ⁵Elanco Animal Health

9:45 AM 483 **The effect of supplemental leucine on regulatory signaling in muscle of growing steers**

Kimberly A. Pearl¹, Hannah F. Speer¹, Olivia S. Khatri¹, Stephanie R. Kruger¹, Matt D. Miesner², John M. Gonzalez¹, Evan C. Titgemeyer¹

¹Kansas State University, ²Department of Clinical Sciences, Kansas State University

10:00 AM 482 **Association of cattle nutritional and management conditions to liver abscess incidence**

Ryan Herrick¹, Trent McEvers², Casey L. Maxwell³, Ty E. Lawrence⁴

¹Beef Carcass Research Center/West Texas A&M University, ²Dean Cluck Feedyard, ³Elanco Animal Health, ⁴West Texas A&M University

10:15 AM 487 **Effects of plant secondary compounds found in Juniperus spp. on yearling Rambouillet wethers feedlot performance, carcass characteristics, adipose tissue fatty acid composition, and sensory panel traits**

Travis R. Whitney¹, Chris R. Kerth², Tom W. Murphy³, Whit C. Stewart⁴, Jane A. Boles⁵, Rhonda K. Miller²

¹Texas A&M AgriLife Research, ²Texas A&M University, ³Montana State Univ., ⁴Department of Animal Science, University of Wyoming, ⁵Department of Animal and Range Sciences, Montana State University

10:30 AM 481 **Association of liver abscess presence and severity with trim loss, harvest yield, carcass grading performance, lung lesions, and value of fed Holsteins**

Ryan Herrick¹, Carson Rogers², Trenton Jones², Trent McEvers³, Tyson Brown⁴, Casey L. Maxwell⁵, Ty E. Lawrence²

¹Beef Carcass Research Center/West Texas A&M University, ²West Texas A&M University, ³Dean Cluck Feedyard, ⁴Cargill Meat Solutions, ⁵Elanco Animal Health

10:45 AM 486 **Assessment of blood metabolites in fed Holstein steers with and without liver abscesses**

Ryan Herrick¹, Trenton Jones², Jessica Sperber², John T. Richeson², Tyson Brown³, Ty E. Lawrence²

¹Beef Carcass Research Center/West Texas A&M University, ²West Texas A&M University, ³Cargill Meat Solutions

11:00 AM 485 **mRNA m6A regulates porcine intramuscular fat deposition through YTHDF1-dependent promotion of MTCH2 translation**

Qin Jiang¹, Yizhen Wang²

¹Zhejiang university, ²Institute of Feed Science, Zhejiang University

Roles of Biosynthesizable Amino Acids Symposium

Chair: Guoyao Wu, Professor, Department of Animal Science, Texas A&M University

9:30 AM – 12:15 PM

9:30 AM **Introductory Remarks**

9:35 AM 105 **The Nutrition of Glutamate, Glutamine, Glycine, Proline and Arginine in Ruminants**

Derek Brake¹

¹South Dakota State University

10:05 AM 107 **Roles of Amino Acids in One-carbon Metabolism and Nutrition**

Robert Bertolo¹, John T. Brosnan¹

¹Memorial University of Newfoundland

10:35 AM **Break**

10:45 AM 109 **Amino acids in intestinal growth and health**

Yongqing Hou ¹

¹Wuhan Polytechnic University

11:15 AM 108 **Glutamate, glutamine, glycine, and proline utilization in developing pigs beyond protein synthesis and consequences**

Francois Blachier ¹

¹INRA

11:45 AM 106 **Endogenous synthesis of amino acids is insufficient for animal lactation, reproduction and growth**

Guoyao Wu ¹

¹Department of Animal Science, Texas A&M University

Animal Health III

Chair: Jiangchao Zhao, Associate Professor, Department of Animal Science,
University of Arkansas, Fayetteville, AR, 72701

11:00 AM – 11:45 AM

11:00 AM 246 **Punicalagin is protective against Bisphenol A toxicity in male New Zealand Rabbits**

Mehmet S. Gulay ¹, Ozlem Yildiz Gulay ¹

¹Mehmet Akif Ersoy University

11:15 AM 248 **The detrimental effect of pregnancy-associated bile acid homeostasis disorder on fetal pig death**

ZhengFeng Fang ¹, Heju Zhong ¹, Peiqiang Yuan ¹, Sen Lin ², Xiaoling Zhang ¹, Jian Li ¹, Lianqiang Che ³, Bin Feng ¹, Yan Lin ¹, Shengyu Xu ¹, De Wu ², Douglas Burrin ⁴

¹Animal Nutrition Institute, Sichuan Agricultural University, ²Institute of Animal Nutrition, Sichuan Agricultural University, ³Sichuan Agricultural University, ⁴USDA/ARS Children's Nutrition Research Center Baylor College of Medicine

11:30 AM 247 **Regulation of Iron Homeostasis in Porcine Alveolar Macrophages Limits the Availability of Iron for Bacteria**

Huahua Du ¹, Zhenshun Gan ¹, Wan Ma ¹, Xueyou Tang ¹

¹Zhejiang University