

SCHEDULED SYMPOSIA BY DAY

MONDAY, MARCH 8, 2021: MORNING

Gary Allee Symposium: Science in Practice

- Dr. Mark Newcomb, Cargill Animal Nutrition – Review of the Career: Gary L. Allee
- Dr. Brian Kerr, USDA-ARS – A Metabolic Understanding of Nutrition
- Kevin Touchette, Ralco Nutrition – Nursery Pig Research Under Dr. Gary Allee
- Dr. Robert D. Goodband, Kansas State University – Protein and Amino Acid Concepts and Use in Swine Nutrition: Gary Allee's Contributions to the Swine Industry
- Dr. Gary R. Stoner, C.P. Group – International Scientific Development and Application
- Dr. Joel D. Spencer, JBS United, Inc. – Dr. Allee's Philosophy on Teaching, Research, and the Swine Industry—A Tribute

MONDAY, MARCH 8, 2021: AFTERNOON

David H. Baker Symposium: Form and Function of Supplemental Amino Acids in Swine Nutrition

- Dr. Jaap van Milgen, INRA – Functional Role of Histidine in Diets of Young Pigs
- Dr. So-Young Kim, CJ CheilJedang BIO – What would be the next feed Amino acid based on a microbial point of view?
- Dr. Jesse Goff, Iowa State University – Mechanisms by which Amino Acids May Enhance Mineral Absorption in Animals
- Dr. Karen Wedeking, Novus International – Metal Amino Acid Chelates/Complexes with Emphasis on Molecule, Absorption and Efficacy Differences in Swine

Ruminant Nutrition Symposium: A New Generation of Feed Additives for Sustainable Cattle Production

- Dr. Sergio Calsamiglia, Universitat Autònoma de Barcelona – Current Status and Future Prospective of the Use of Plant Bioactive Compounds in Dairy and Beef Cattle
- Dr. Karen A. Beauchemin, Agriculture and Agri-Food Canada – Utility of 3-NOP in Beef Production Systems
- Ehsan Khafipour, Diamond V – Next Steps for Microbial-derived Feed Additives
- Dr. Michael Ballou, Texas Tech University – Hidden Mechanisms of Nutraceutical Function

Swine Translational Symposium: How Embracing Technology is Changing the Swine Industry

- Jonathon Hoek, Summit SmartFarms – Equipping Humans--Optimizing Performance: The Role of Technology in Human Capital
- Dr. Caleb Shull, The Maschhoff's – Using Cameras to Predict Estrus and Ovulation
- Dr. Karl Kerns, Iowa State University – Opening the Black Box of Fertility Prediction
- Aidan Connolly, Cainthus – Precision Pig Nutrition: Unlocking the Potential through Digital Data Collection
- Brett Ramirez, Iowa State University – What's a Connected Barn and How Do We Use It?

TUESDAY, MARCH 9, 2021: MORNING

Harlan Ritchie Symposium: Beef Industry Infrastructure

- Bill Rishel, Rishel Angus and Donnell Brown, RA Brown Ranch – The Importance of Recognizing Economic Factors Influencing the Beef Industry
- Mark McCully, American Angus Association – How Will the Purebred Association Adapt to a Changing Beef Industry?
- Dr. Bo R. Harstine, Select Sires – Genetics Industry Infrastructure: How are Artificial Insemination Organizations Adapting to Changes in the Beef Industry?
- Dr. Bradley J. Johnson, Texas Tech University – What is the Impact of Dairy Influence Cattle on the Traditional Beef Industry Structure?
- Dr. Derrell S. Peel, Oklahoma State University – The Beef Industry in a Post-Pandemic World

Nonruminant Nutrition Symposium I: A Sustainable Approach of Reducing Antibiotics in Swine Production

- Crystal Loving, USDA – Why Resist: Harnessing Immune-microbiome Interactions for Improved Swine Gut Health
- John Pulske, Murdoch University, Australia – The Role of Crude Protein in Reducing the need for Antibiotics in the Post-weaning Period
- Hanne Maribo, SEGES – The Danish Perspective to Remove Medicinal Zinc and Reducing the use of Antibiotics in Swine Production
- Dr. Tsung Cheng Tsai, University of Arkansas – Feed Additives that Optimize Nitrogen Bio-availability in Nursery Pigs Fed Reducing Crude Protein Diets
- Dr. Ricardo Ekmay, Arbiom – Agriculture Residues as a Possible Sustainable Approach to Replacing Antibiotics in Animal Nutrition
- Dr. Whitney Lincoln, Smithfield – Raised Without Antibiotics, Lessons Learned
- Dr. Sara Hough, DSM Nutrition Products – A Veterinarian's Perspective on How Health and Nutrition Intersect
- Dr. Casey L. Bradley, The Sunswine Group LLC – When Too Many Feed Additives is Not a Sustainable Approach to Replacing Feed Antibiotics

Physiology Symposium I: Updates on Frozen Semen Utilization and Associated Technologies across Species

- Dr. Mitch Hockett, ST Genetics – How the Dairy Industry has Capitalized on Advancements in Artificial Insemination
- Dr. Phillip Purdy, USDA National Animal Germplasm Program – What Quality and Fertility Should We Expect When Using Semen Cryopreservation and AI with Livestock? A Comparison Across Species
- Dr. Brandon Kingsley Hopkins, Washington State University – TBD
- Dr. André Furugen Cesar de Andrade, University of Illinois, Urbana-Champaign – Analysis of Cryopreserved Semen Quality: With the Tools Available, What Can Be Interpreted?

TUESDAY, MARCH 9, 2021: AFTERNOON

Growth, Development, Muscle Biology and Meat Science Symposium: Managing Meat Supply and Animal Growth Amidst A Global Pandemic

- Dr. Bradley Johnson, Texas Tech University – Managing Beef Cattle Growth Amidst A Global Pandemic: Lessons Learned From 2020 And Strategies for the Future
- Dr. Nicolas Gabler, Iowa State University – Managing Swine Supply and Swine Growth Amidst A Global Pandemic: Lessons Learned from 2020 and Strategies for the Future
- Dr. J. Brad Morgan, Colorado State University – Managing Meat Supply Amidst A Global Pandemic at the Packer, Food Industry, and Retail Level: Lessons Learned from 2020 and Strategies for the Future

Nonruminant Nutrition Symposium II: Designing and Analyzing Nutrition Trials to Detect Small but Meaningful Differences

- Dr. Nick V. Serão, Iowa State University – Fundamentals, Common Mistakes, and Graduate Education in Statistics
- Dr. Mike D. Tokach, Kansas State University – Data Collection Practices to Reduce Variance in Swine Nutrition Trials
- Dr. Neil D. Paton, Cargill Animal Nutrition – The Evolving Statistical Science on P-Values and How My Count Data Methods and P-Values are Affected

Physiology Symposium II: Reproductive Fluids in Fertilization and Early Embryonic Development

- Dr. Sebastian Canovas, University of Murcia, Spain – Female Reproductive Fluids and Epigenetics
- Dr. David J. Miller, University of Illinois – Sperm Retention, Storage and Release from the Oviduct: A Story of Sugars, Steroids, and Channels
- Dr. Rocio Rivera, University of Missouri – Large Offspring Syndrome: Effects of In Vitro Production on Embryo Epigenetics and Development

WEDNESDAY, MARCH 10, 2021: MORNING

Animal Behavior and Well-Being Symposium: On-farm Animal Welfare: Current Considerations, Legislative Impacts, and Perspective for the Future

- Dr. Ivelisse Robles and Dr. Monique Pairis-Garcia, North Carolina State University – Timely Euthanasia on Farm; Dairy Cattle and Swine
- Dr. Kristina Horback, University of California-Davis – Prop 12 and its Implications for Future On-farm Animal Welfare in the United States
- Dr. Angela Baysinger, Merck Animal Health; Paul Ayers, The Maschhoffs; Stephanie Wisdom, National Pork Board; Dr. Jon Holt, North Carolina State University – Recent Practical Advancements Related to On-farm Animal Welfare in the United States
- Dr. Jennifer Brown, Prairie Swine Centre – Where is On-Farm Animal Welfare in the United States Headed? A Canadian Perspective

Genetics, Genomics and Bioinformatics Symposium: Genome to Phenome--Application to Animal Production

- Dr. David Kenny, Teagasc, Animal & Grassland Research and Innovation Centre, Ireland – Harnessing Proteome and Transcriptome Expression and Network/Interactome Analysis to Better Understand How Nutrition Regulates Sexual Development in Prepubertal Cattle
- Dr. Robert A. Cushman, USDA-ARS – Can We Developmentally Program the Epigenome to Improve Traits Relevant to Production in Cattle?
- Dr. Wellison Jarles Da Silva Diniz, North Dakota State University – Multi-Omics Approaches to Improve Animal Production

Nonruminant Nutrition Symposium III: Utilization of Fiber in Modern Swine Nutrition

- Dr. George C. Fahey, Jr., University of Illinois, Urbana-Champaign – Dietary Fiber: Chemical and Physical Characteristics and Methods of Analysis
- Dr. Ruurd T. Zijlstra, University of Alberta – Fiber and Co-product Utilization in Pigs
- Dr. Mariana Boscato Menegat, Holden Farms – Review of Current Nutrition Knowledge and Practices for Gilt Development