## 2023 INTERNATIONAL POULTRY SCIENTIFIC FORUM

Concurrent Meeting of  
The Southern Poultry Science Society 44th Annual Meeting  
The Southern Conference on Avian Diseases 64th Annual Meeting  
January 23-24, 2023

### Program Summary

#### MONDAY SESSIONS

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<td>SPSS Business Meeting</td>
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<td>Dr. Curran Gehring, Tucker Milling</td>
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Officers of the SPSS 2022-2023

President: Dr. Curran Gehring, Tucker Milling
First VP: Dr. Jesse Grimes, NCSU
Second VP: Dr. Roshan Adhikari, CJ America
Past President: Dr. Joey Bray, SFA
Executive Secretary: Dr. Mary Beck
   Poultry Science; Retired, Emeritus pending
   Mississippi State University
   Mail Stop 9665
   Mississippi State, MS 39762
Phone: 402.540.9016
Email: m.beck@msstate.edu

Officers of the SCAD 2022-2023

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   Dr. Brian Jordan, UGA
   Dr. Blanca Lupiani, Texas A&M U
   Dr. Ken Macklin, Auburn
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   Dr. Holly Sellers, UGA
   Dr. Christine Vuong, U Ark
   Dr. Susan Williams, UGA
Secretary / Treasurer: Dr. Susan M. Williams, UGA
   Department of Population Health/PDRC
   University of Georgia
   953 College Station Road
   Athens, Georgia 30602-4875
Phone: 706.583.0523
Email: smwillia@uga.edu
Teaching, Pedagogy, Extension
Moderator: Dr. Brian Fairchild, UGA
Room Number: B311
Monday, January 23, 2023

7:30 AM M1
Current perceptions, use, and needs of precision livestock farming systems
Tanner Thornton*GS, Yang Zhao, Tom Tabler, Robert Burns, Shawn Hawkins University of Tennessee-Knoxville

7:45 AM M2
Using water usage modeling to generate alarm events related to poultry management
Will Strickland*GS, Michael Czarick, Brian Fairchild, Garret Ashabranner University of Georgia

8:00 AM M3
Using ultrasonic water meters as management tool early in the flock
Garret Ashabranner*GS, Michael Czarick, Brian Fairchild University of Georgia
Processing and Products
Moderator: Dr. Jordan Gruber, IFF Inc
Room Number: B311
Monday, January 23, 2023
8:15 AM M4
Stunning and neck-cutting methods impact on the overall blood loss and rate of blood loss of broiler carcasses
Rachel Osborne*1GS, Caitlin Harris1,2, Richard Buhr2, Brian Kiepper1 1Department of Poultry Science, University of Georgia, 2Poultry Microbiological Safety and Processing Research Unit, U.S. National Poultry Research Center, Richard B. Russell Agricultural Research Center, USDA-ARS

8:30 AM M5
Analysis of broiler chicken blood parameters during carbon dioxide gas stunning
Montana Riggs*1GS, Marco Reina, Andrea Urrutia, Juan Figueroa, Juan Carlos, Matthew Hughes, Brett True, Charlene Hanlon, Rüdiger Hauck, Bethany Baker-Cook, Dianna Bourassa Auburn University

8:45 AM M6
Application of pressurized steam and forced hot air for cleaning broiler transport cage flooring
Marco Reina*1GS, Andrea Urrutia1, Juan Figueroa1, Montana Riggs1, Kenneth Macklin1, Richard Buhr2, Dianna Bourassa1 Auburn University, 2US National Poultry Research Center, USDA-ARS

9:00 AM M7
Biofilm formation ability of Campylobacter jejuni isolated from commercial broiler processing plants.
Diksha Pokhrel*1GS, Hudson Thames1, Hailey Fugate1, Li Zhang1, Thu Dinh2, Wes Schilling1, Shecaya White1, Reshma Ramachandran1, Anuraj Sukumaran1 Mississippi State University, 2Tyson Foods

9:15 AM M8
Isolation and identification of Salmonella and Campylobacter isolates from a commercial broiler complex through pullets to final raw product
Yagya Adhikari*1GS, Matthew Bailey1, James Krehling1, Kaicie Chasteen1, Luis Munoz1, Cesar Lobo1, Leticia Galindo1, Pankaj Goonkar2, Steven Kitchens2, Dianna Bourassa1, Stuart Price2, Jeff Buhr2, Kenneth Macklin1 1Department of Poultry Science, Auburn University, 2Department of Pathobiology, Auburn University, 3USDA ARS Poultry Microbiological Safety and Processing Research Unit

9:30 AM M9
Assessing Salmonella serovar dynamics through broiler processing
Amber Richards*1GS, Nikki Sharari1, USDA-FSIS Eastern Laboratory1 1Department of Population Health, University of Georgia, 2United States Department of Agriculture — Food Safety and Inspection Service (USDA-FSIS)

9:45 AM M10
Effect of chlorhexidine salts and cetylpyridinium chloride on Salmonella enterica Typhimurium (ST) recovery from an in vitro crop assay
Lauren Loverty*1GS, Juan Latorre, Makenly Coles, Kristen Martin, Danielle Graham, Billy Hargis University of Arkansas

10:00 AM M11
Field survey sampling strategies identifies flow patterns of Salmonella to the processing plant
Jordon Gruber*, joshua Walker2, Jennifer Freezemani, Connie Mou1, Elizabeth Kim1 1IFF/ Danisco Animal Nutrition and Health, 2IFF Wilmington Microbiology Lab
Monday, January 23, 2023
10:15 AM Break
**Physiology, Endocrinology and Reproduction I Broilers, Turkeys**

Moderator: Dr. Ramesh Selvaraj, UGA
Room Number: B311
Monday, January 23, 2023

**10:30 AM M12**
CO2 Incubation for Woody Breast Mitigation
Sameer Israni*, Frank Edens, Dellila Hodgson, Jenny Schlenker
Linde Inc., North Carolina State University

**10:45 AM M13**
Effect of environmental temperature on the blood chemistry of young turkeys
Rocio Crespo*, Jesse Grimes
North Carolina State University

**11:00 AM M14**
Comparison of standard and physiological cell culture temperatures on proliferation and differentiation of broiler chicken Pectoralis major primary muscle satellite cells
Caroline Gregg*, Brittany Wall, Joshua Flees, Charles Starkey, Jessica Starkey
Auburn University Department of Poultry Science

**11:15 AM M15**
Effect of starter diet nutrient reductions and feed form on Pectoralis major collagen infiltration and heterogeneity of muscle satellite cell and macrophage populations in young broiler chickens
Joshua Flees*, Gerardo Abascal-Ponciano, Cristopher Almendares, Said Herrera, Diego Ventura, Charles Starkey, Jessica Starkey
Department of Poultry Science, Auburn University

**11:30 AM M16**
Assessment of late-stage thermal manipulation on broiler chicken pectoralis major muscle satellite cell heterogeneity at hatch
John Rogers*, Jorge Banegas, Brittany Wall, Martha Rueda, Jeremiah Davis, Joseph Purswell, Charles Starkey, Jessica Starkey
Auburn University Department of Poultry Science, Auburn University National Poultry Technology Center, USDA ARS Poultry Research Unit

**11:45 AM M17**
The effect of Campylobacter jejuni challenge on the ileal microbiota and short-chain fatty acids concentration in broilers
Walid Al Hakeem*, Jefferson Lourenco, Emily Cason, Daniel Adams, Keila Acevedo Villanueva, Shalna Fathima, Bikas Shah, Revathi Shanmugasundaram, Ramesh Selvaraj
Department of Poultry Science, University of Georgia, Department of Animal and Dairy Science, University of Georgia, Toxicology and Mycotoxin Research Unit, USDA-ARS

**12:00 PM LUNCH**
The Effect of Dietary Calcium and Phosphorus on Plasma Calcium and Phosphorus Levels
Chelsea Phillips*, Carrie Walk, Aaron Cowieson DSM Nutritional Products
Physiology, Endocrinology and Reproduction II Layers, Breeders
Moderator: Dr. Brian Jordan, UGA
Room Number: B311
Monday, January 23, 2023
1:15 PM M19
Bottleneck effect in indigenous chicken of Poonch region located at international border of India and Pakistan
Mandeep Azad*1GS, Dibyendu Chakraborty1, Kwaradeep Kour1, Dhirinder Kumar2, Preeti Birwal1 1Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, 2Punjab Agriculture University
1:30 PM M20
Physiological changes associated with regulation of calcium utilization at the onset of egg production in commercial laying hens.
Alejandra Garcia*1GS, Micaela Sinclair-Black1, Roselina Angel2, Bibiana Jaramillo2, Xabier Arbe3, David Cavero3, Prafula Regmi4, Monika Proszkowiec-Weglarz5, Dima White6, Woo Kim6, Laura Elletted6 1Department of Poultry Science, University of Georgia, 2Animal and Avian Sciences, University of Maryland, 3Illuma Alliance, 4H&N International, 5Animal Biosciences and Biotechnology Laboratory, USDA-ARS
1:45 PM M21
Regulation of calcium and phosphorus homeostasis during peak egg production
Micaela Sinclair-Black1GS, Alejandra Garcia1, Roselina Angel2, Bibiana Jaramillo2, Xabier Arbe3, David Cavero3, Laura Elletted4 1Department of Poultry Science, University of Georgia, 2Animal and Avian Sciences, University of Maryland
2:00 PM M22
Recovery of Salmonella injected into the albumen or yolk of hatching eggs and then cold-stored and incubation to day 18.
Caitlin Harris*1,2GS, L. Nicole Bartenfeld Josselson2, R. Jeff Buhr2 1University of Georgia, 2USDA-ARS National Poultry Research Center
2:15 PM M23
Corticosterone binding globulin may regulate the stress response in broilers
Coleman Hatmaker*GS, Blayne Thomason, Adam Davis, Martha Freeman University of Georgia
2:30 PM M24
Graded levels of Eimeria infection temporarily ceased the egg production of Hy-Line W-36 laying hens at peak production
Milan Sharma*GS, Guanchen Liu, Doyun Goo, Dima White, Woo Kim Department of Poultry Science, University of Georgia
2:45 PM M25
The effect of dietary energy level and feed restriction on energy intake, body fat percentage, and egg production in laying hens to 50 weeks of age.
Jo Ann Chew*GS, Thiao Noetzold, Martin Zuidhof Department of Agricultural, Food and Nutritional Science, University of Alberta
3:00 PM M26
Impact of eggshell translucency and color intensity on egg quality parameters, moisture loss, and chick weight
Letícia Orellana*GS, James Krehling, Kaicie Chasteen, Marcela Quino, Carla Guardado, Luis Munoz, Yagya Adhikkari, Cesar Escobar, Matthew Bailey, Ken Macklin Auburn University
3:15 PM M27
The effects of dry hydrogen peroxide on hatchery performance when applied in single stage incubators
Kyle Bruce*GS, Russ Stephens2, Jeanna Wilson1, Brian Jordan1 1University of Georgia, 2Synexis
3:30 PM M28
Utilizing the growing feather pulp as a cutaneous test system to monitor local cellular responses to autogenous Salmonella vaccines in sensitized and non-sensitized Light-brown Leghorn pullets
Chrysta Beck*GS, Josie Santamaria, Marites Sales, Gisela Eft University of Arkansas System, Division of Agriculture, Department of Poultry Science
Effect of fish meal on the semen quality of broiler breeders and Red Jungle Fowl
Emmillie Boor*, Rebecca Wysocky, Ramon Malheiros North Carolina State University
4:00-6:00 Poster Reception
A comparative genomics approach to investigate virulence-associated genes in avian pathogenic E. coli during infection of broiler embryos
Chalise Brown1*, Grayson Walker1, Marion Suyemoto1, Heather Harbottle2, Jeffrey Gilbert2, Marilyn Martinez2, Steven Foley3, Luke Borst1 1Population Health and Pathobiology, NC State University College of Veterinary Medicine, 2U.S. FDA, Center for Veterinary Medicine, Office of New Animal Drug Evaluation, 3U.S. FDA, National Center for Toxicological Research

Evaluation of virulence characteristics of avian pathogenic Escherichia coli isolates from broiler breeders
Jiddu Joseph1*, Linan Jia, Li Zhang, Pratima Adhikari, Reshma Ramadhandran Mississippi State University

Effects of virulence genotype, motility, and multi-locus sequence type of Escherichia coli on development, mortality, yolk retention, and weight loss of chicken embryo
Fozol Ovi1*, Linan Jia1, Anuraj Sukumaran1, Reshma Ramadhandran1, Douglas Cosby2, Dan Wilson2, Ishab Poudel1, Pratima Adhikari1 1Mississippi State University, 2USDA-Agriculture Research Service, 1Wilson Veterinary Co.

Microbial analysis of feed ingredients and manufactured animal feed
Cesar Escobar Lobo1*, Luis R. Munoz, Matthew A. Bailey, James T. Krehling, Wilmer J. Pacheco, Ruediger Hauck, Kenneth S. Macklin Auburn University

Effect of Salmonella challenge doses and times on Salmonella colonization in turkey poults
Hanseo Ko1*, Doyun Goo, Hanyi Shi, Woo Kyun Kim University of Georgia

Effect of a triple-strain Bacillus-based probiotic on in vitro inhibition of Enterococcus cecorum isolated from broilers raised in commercial farms
Antoine Meuter1*, Dorthe Sandvang1, Line Skjoet-Rasmussen1, Douglas Duane-Rhoads2 1Chr. Hansen, A/S, 2Arkansas University

Virulence of Enterococcus cecorum strains associated with pericarditis and early mortality in broilers
Grayson Walker1*, M Suyemoto, Chalise Brown, Luke Borst North Carolina State University College of Veterinary Medicine

Evaluation protection of H5 vaccination regimes against early challenge with HPAI-H5N8 Clade 2.3.4.4
Wael Elfeil1*, Mohamed Rady2, Magdy Elkady2, Walid Kilany2, Mohamed Hamoud1 1Avian and Rabbit Medicine Department, Faculty of Veterinary Medicine, Suez Canal University, 2Animal Health Research Institute, Agriculture Research Center, 1Department of Poultry Diseases, Faculty of Veterinary Medicine, Beni-Suef University, 2Department of Poultry and Rabbit Diseases, Faculty of Veterinary Medicine, Cairo University

10:00 AM Break
Pathology II
Moderator: Dr. Eniope Oluwayinka, UGA
Room Number: B312
Monday, January 23, 2023
10:15 AM M39
Genotypic characterization of infectious bursal disease viruses (IBDV) detected in the Americas between 2019 to 2022.
Hugo Ramirez*1GS, Fernando Vargas2, Lucas Colvero3, Francisco Rios4, Jesus Cabriales4, Rosmar Marrano5, Cesar Reyes5, Pablo Nervi5, Martha Pulido - Landinez5, Alejandro Banda1 1Mississippi State University, 2Merck AH US, 3MSD AH Brazil, 4MSD AH México, 5MSD AH Perú, 6MSD AH Argentina
10:30 AM M40
Assessing the effect of time of infection with Cochlosoma anatis in turkey poults on flock uniformity and gut health.
Justin Lowery*1GS, Catherine Fudge2, Christina Sigmon1, Zohreh Mehdipour1, Jasmine Wiitala1, Chongxiao (Sean) Chen1, Lin Walker1 1North Carolina State University, 2University of Georgia
10:45 AM M41
The cytology of resting and reactive NK cells of chickens; implications in H/L computation
Paul Cotter*, Kathleen Cotter Cotter Laboratory
11:00 AM M42
Campylobacter jejuni infection induces immune responses in HD11 avian macrophage cells
Sabin Poudel*1GS, Linan Jia1, Chuan-Yu Hsu1, Cheng Wen-Hsing1, Pratima Adhikari2, Aaron Kiess3, Li Zhang1 1Department of Poultry Science, Mississippi State University, 2Institute for Genomics, Bioinformatics, and Biotechnology, Mississippi State University, 3Prestage Department of Food Science, Nutrition, and Health Promotion, Mississippi State University, 4Prestage Department of Poultry Science, North Carolina State University
11:15 AM M43
Characterizing the proteome of bacterial chondronecrosis with osteomyelitis (BCO) lesions in broiler’s proximal tibiae — implications for novel molecular pathways in lameness
Alison Ramser*1, Sami Dridi1, Elizabeth Greene1, Garrett Mullenix1, Julila Dridi1, Rohana Liyanage1, Jennifer Cook1, Robert Wideman1 1University of Arkansas, Center of Excellence for Poultry Science, 2École Universitaire de Kinésithérapie
11:30 AM M44
Curcumin reduces enteric isoprostane 8-iso-PGF2α and prostaglandin GF2α in specific pathogen-free Leghorn chickens challenged with Eimeria maxima
Victor Petrone-Garcia1, Raquel Lopez Arellano1, Juan Latorre2, Inkar Castellanos-Huerta1, Billy Hargis1, Guillermo Tellez-Isaias2* 1National Autonomous University of Mexico, 2University of Arkansas
11:45 AM M45
Saponin-rich plants mixture (Norponin® XO2) supports coccidiosis vaccination program in broiler chickens
Iraida Rosario Huamancoli1, Susana Fribourg2, Robert Saavedra2, Juan Manuel Garcia3, Mohammed el Amine BENARBIA*4 1UNIVERSIDAD NACIONAL AGRARIA LA MOLINA, 2ADISENS / Los Sauces, 3NOR FEED SAS, 4LABCOM FEED IN TECH: Université d’Angers
12:00 Noon Lunch
SCAD I
Moderator: Dr. Danielle Graham, UARK
Room Number: B312
Monday, January 23, 2023

1:00 PM M46
Prophylactic efficacy of paromomycin (liquid form) against Histomonas meleagridis challenge in turkeys

1:15 PM M47
Characterizing the O-serogroups of avian pathogenic E. coli (APEC) associated with colibacillosis in Georgia poultry production and their relationship with production types.
Klao Runcharoon*GS, Meaghan Young, Bellanirys Garcia, Ninokle Barbieri, Catherine Logue Department of Population Health, College of Veterinary Medicine, University of Georgia

1:30 PM M48
A novel presentation of focal ulcerative dermatitis syndrome (FUDS) in broiler breeder hens
Gunnar Dunnam*1GS, Andrew Bishop2, Martha Frances Dalton2, Jay Kay Thornton2, Rebecca Mackey1, Alejandro Banda1, Martha Pulido-Landinez1 1Mississippi State University Poultry Research and Diagnostic Laboratory, 2Amick Farms, 3Mississippi State Veterinary Research and Diagnostic Laboratory

1:45 PM M49
Parenteral application of live E. coli and Salmonella Typhimurium vaccines as a tool to improve immune response
Manuel Da Costa*, Kalen Cookson, John Dickson, Jon Schaeffer Zoetis - U.S. Poultry

2:00 PM M50
The impact of Salmonella Typhimurium and coccidiosis vaccine on the cecal transcriptome in broiler chickens
Andrea Pietruska*1GS, Steven Kitchens1, James Kreiling2, Ken Macklin2, Stuart Price1, Zubair Khalid2, Maria Terra-Long2, Teresa Dormitior2, Ruediger Hauck1,2 1Department of Pathobiology, Auburn University, 2Department of Poultry Science, Auburn University

2:15 PM M51
Evaluation of a blend of organic acids and essential oil in the drinking water during a Salmonella Heidelberg challenge in broilers
Jonathan Broomhead*1, Charles Hofacre2, Matthew Jones2 1Perstorp Animal Nutrition, 2Southern Poultry Research Group, Inc.

2:30 PM M52
The Effect of Salmonella autogenous vaccination on serotype surveillance, recovery, and phenotypic characteristics
Emily Robinett*, Marshall Putnam, Robert Beeksted Ceva Animal Health

2:45 PM M53
Campylobacter hepatitis in Georgia layers — what have we learned so far
Catherine Logue1, Roel Becerra, Julia Lima University of Georgia

3:00 PM M54
Understanding the transmission of Spotty Liver Disease (SLD) associated with Campylobacter hepatitis from wild birds using finches as a model.
Roel Becerra*GS, Catherine M. Logue University of Georgia

3:15 PM M55
Complete genome sequencing and comparison of Campylobacter hepatitis isolated from organic pasture-raised chickens
Julia Ienes-Lima*GS, Roel Becerra, Jenny Nichols, Catherine Logue Poultry Diagnostic and Research Center, College of Veterinary Medicine, University of Georgia

3:30 PM M56
Influence of avian reovirus infection on the intestinal microbiome
Zubair Khalid*GS, Andrea Pietruska1, Erfan Chowdhury2, Rüdiger Hauck1 1Department of Pathobiology, College of Veterinary Medicine, Auburn University, 2Thompson Bishop Sparks State Diagnostic Laboratory
Enhanced cross protection after simultaneous vaccination with live infectious bronchitis virus (IBV) Massachusetts and recombinant Newcastle disease virus expressing Arkansas-type IBV spike
Raimundo Espejo*, Cassandra Breedlove, Kellye Joiner, Haroldo Toro Auburn University
4:00-6:00 Poster Reception
Metabolism and Nutrition I General Nutrition

Moderator: Dr. Jordyn Samper, Orffa
Room Number: B313
Monday, January 23, 2023

7:30 AM M58
Effects of unused restaurant and bakery food products as protein supplements on laying hen production parameters and USDA egg size
Alea Bellflowers*1GS, Benjamin Alig, Kari Harding, Dimitri Malheiros, Emmillie Boot, Bhavisha Gulabrai, Madison Spangle, Kenneth Anderson, Ramon Malheiros Prestage Department of Poultry Science, North Carolina State University

7:45 AM M59
Interactive effects of feeding naturally-contaminated corn distillers dried grains with solubles and Eimeria infection on egg production and gut health in laying hens
Deependra Paneru*1GS, Milan Sharma, Doyun Goo, Janghan Choi, Woo Kim University of Georgia

8:00 AM M60
Evaluation of corn particle size on the growth performance, gut permeability, pellet quality, and litter moisture of turkey hens raised without antibiotics
Alyssa Lyons*1GS, Joe Moritz2, Tim Boltz2, John Boney4, Michael Persia1 1Virginia Tech, 2West Virginia University, 3Mississippi State University, 4The Pennsylvania State University

8:15 AM M61
Sample size, selection criteria, and personnel impact on processing metric variance in nutrition research
Caleb Marshall*1GS, Nickki Tillman2, Kelley Wamsley1 1Department of Poultry Science, Mississippi State University, 2Nutritional Statistics LLC

8:30 AM M62
Phosphorus utilization of fava bean and field pea for broiler chickens using a regression method
Abidemi Adekoya*1GS, Olayiwola Adeola Purdue University

8:45 AM M63
Relationship between viscosity of digesta and development of the gastrointestinal tract of broiler chickens
Emmanuel Alagbe*1GS, Patricia Jaynes1, Chansol Park2, Olayiwola Adeola1 1Purdue University, 2Pathway Intermediates

9:00 AM M64
Nutrient, starch and energy utilization along the digestive tract and their impacts on caecal short chain fatty acid production in broiler chickens receiving different types and graded dietary levels of resistant starches
Iyabo Oluseyifunmi*1GS, Jeffson Lourenco2, Oluvinka Olukosa 1Department of Poultry Science, University of Georgia, 2Department of Animal and Dairy Science, University of Georgia

9:15 AM M65
Energy utilization and ileal amino acids digestibility of cereal grains for broiler chickens
June Hyeok Yoon*1GS, Changsu Kong Kyungpook National University

9:30 AM M66
Field traits, fumonisins concentration, nutrient composition and digestible amino acids of different types of corn for poultry
Cristina Simoes*1GS, Juliano Vidal1, Janine Sarturi1, Isadora Laber1, Cristiane da Silva1, Denize Tyska2, Tiago Malalosso3, Carlos Mallmann1 1Federal University of Santa Maria, 2Pegasus Science, 3Cooperativa Agroindustrial Consolata

9:45 AM M67
Effect of sorghum-based conventional diets with or without phytase superdosing on broiler performance
Santiago Sasia*1GS, Brett Lumpkins2, Mireille Arguelles-Ramos3 1Clemson University, 2Southern Poultry Feed and Research, Inc.

10:00 AM Break
Comparative impact of incorporation of specialty protein feedstuffs and antibiotic growth promoters in broiler chicken starter feeding program on growth performance through to 49 days of age

Anastasia Tsementzis*1GS, Anderson Maina1, Colin De Cloet1, David Trott2, Lee-Anne Huber3, Elijah Kiarie1 University of Guelph, 2Wallenstein Feed & Supply Ltd.

Evaluation of dietary nutrient reduction on broiler chicken growth performance, carcass characteristics, and breast meat quality defects

Brittany Wall*GS, Caroline Gregg, Joshua Flees, Cristopher Almendares, Orlando Fiallos, Charles Starkey, Jessica Starkey Auburn University Poultry Science Department

Impact of moisture at harvest and drying temperature on quality parameters, and nutrient content of corn varieties

Joaquin Cabanas-Ojeda*1GS, Nicolas Mejia-Abaunza1, Paula Lozano-Cruz1, Valmiro Lima Aragão Noto1, Muhammad Ali2, Maria Camila Alfaro-Wisaquillo1, Gustavo Quintana-Ospina1, Gilson Gomez2, Edgar Oviedo-Rondon1 1Prestige Department of Poultry Science, North Carolina State University, 2AB Vista

Nitrogen correction of true metabolizable energy values for poultry feed ingredients

Reed Dillard*GS, Nicholas Dale, Adam Davis The University of Georgia

Effect of dietary metabolizable energy levels and conditioning temperature on broiler performance, processing yield and footpad dermatitis from 1 to 42 days of age

Jose Hernandez*1GS, Joseph Gulizia1, Jose Vargas1, Susan Bonilla1, Sureerat Thuekeaw2, Wilmer Pacheco1 1Auburn University, 2Chulalongkorn University

Nitrogen corrected apparent metabolizable energy (AMEn) and apparent ileal digestibility (AID) of amino acids (AA) of thermally processed food waste for broilers

Nelsa Beckman*1GS, Haley Otott, Allison Blomme, Patrick Badger, Liberty Thompson, Phillip Lancaster, Yi Zheng, Raghavendra Amachawadi, Melissa Schrader, Charles Stark, Chad Paulk Kansas State University

Influence of perennial wheat grass screenings and exogenous carbohydrase inclusion on broiler performance.

Mason Engnell*1GS, Nelsa Beckman, Haley Otott, Charles Stark, Chad Paulk Kansas State University

Monday, January 23, 2023

12:00 PM Lunch
Metabolism and Nutrition II General Nutrition
Moderator: Dr. Chad Paulk, KSU
Room Number: B313
Monday, January 23, 2023

1:00 PM M75
Effect of feed retention time in the conditioner and conditioning temperature on pellet mill throughput and pellet durability index (PDI)
Carter Minson*UG, Haley Otott, Charles Stark, Chad Paulk Kansas State University

1:15 PM M76
Effects of grinding kernza® grain with different hammermill screen sizes on subsequent particle size and flowability
Walter Friesen*UG, Chad Paulk, Haley Otott, Charles Stark Kansas State University

1:30 PM M77
Effects of AZOMITE (AZO) and distiller’s dried grains with solubles (DDGS) inclusion on pellet mill electrical efficiency and subsequent pellet quality
Patrick Badger*1GS, Charles Stark1, Jerry Shepherd2, Michael Sodak2, Kyle Coble2, Maks Kapetanovich2, Chad Paulk1 1Kansas State University, 2JBS Live Pork
Metabolism and Nutrition III Vitamins, Minerals
Moderator: Dr. Sam Rochell, Auburn
Room Number: B313
Monday, January 23, 2023

1:45 PM M78
Phosphorus digestibility responses of broiler chickens to autoclaving of feed ingredients
Vitor Santos Haetinger*GS, Olayiwola Adeola Purdue University

2:00 PM M79
Growth performance, bone characteristics, and nutrient utilization of broiler chickens fed graded levels of calcium and phytase during the starter phase
Opeadura Osunbami*1GS, Olayiwola Adeola1, Carrie Walk2 1Purdue University, 2DSM Nutritional Products

2:15 PM M80
Effects of phytase and 25-OHD fed to calcium and phosphorous-reduced diet on growth performance, body composition, and bone quality of broilers challenged with Eimeria spp.
Hanyi Shi*GS, Woo Kyun Kim University of Georgia

2:30 PM M81
Determination of ileal digestible phosphorus from several inorganic phosphate sources and two meat and bone meals in 3 week old broilers
Jay Hampton*3GS, Wenting Li1, Franco Mussini1, Katie Hilton1, Janet Remus1, Samuel Rochell2 1Danisco Animal Nutrition and Health, IFF Nutrition & Biosciences, 2Auburn University, 3University of Arkansas

2:45 PM M82
The effects of feeding different zinc, manganese, and copper sources and phytase levels on the growth performance and sustainability of 42-day-old broilers administered a coccidiosis vaccine
Macey Randig-Biar*1GS, Rosana Hirai1, Daniel De Leon1, Austin Silva1, Raquel Konrad Burin2, Marco Rebollo2, Duarte Neves3, Leonardo Linaras4, Audrey McElroy1 1Texas A&M University, 2Texas A&M AgriLife Research, 3BASF Corporation

3:00 PM M83
Does Zn source and dietary level influence the phytase effect on growth performance, blood minerals and bone ash in broiler chickens?
Hanna Philippi*2GS, Vera Sommerfeld1, Alessandra Monteiro3, Oluinyka Olukosi2, Markus Rodehutscord1 1University of Hohenheim, 2University of Georgia, 3Animine

3:15 PM M84
Determining the bioavailability of Vitamin A acetate concentrates mixed in a vitamin-mineral premix after a 56-day temperature and humidity storage stress
Daniel De Leon*1GS, Rosana Hirai1, Austin Silva1, Ervey Sanchez1, Macey Biar1, Audrey McElroy1, Christopher Bailey1, Nicolas Martinez2, Lawrie Music2 1Texas A&M AgriLife Research, 2BASF Corporation

3:30 PM M85
Hatching egg quality of broiler breeders fed diets supplemented with conventional free or lipid microencapsulated premix forms of trace minerals at standard or high levels
Dimitri Malheiro*1GS, Ramon Malheiro1, Kenneth Anderson1, Ondulla Toomer2, Peter Forket1 1North Carolina State University, 2USDA

4:00-6:00 Poster Reception
Delineating the phase-specific effects of functional amino acids during infection and recovery of broiler chickens challenged with a mixed coccidian infection

Adéle Ajao*, Guanchen Liu1, James Taylor2, Todd Applegate1, Ramesh Selvaraj1, M.E.E. Ball1, Ilías Kyriazakis2,3, Woon Kim1, Oluyinka Olukosi1

University of Georgia, 1Agri-Food & Biosciences Institute (AFBI), 2Institute for Global Food Security, Queen’s University

The effects of arginine and branched chain amino acids supplementation in low protein diet on intestinal permeability, histology and tight junction protein expression in broiler chickens challenged with Eimeria spp.

Guanchen Liu*, Adeleye Ajao1, James Taylor2, Todd Applegate1, Ramesh Selvaraj1, Elizabeth Ball1, Ilías Kyriazakis2, Oluyinka Olukosi1, Woon Kim1. 1Department of Poultry Science, University of Georgia, 2Institute for Global Food Security, Queen’s University, 3Agri-Food & Biosciences Institute (AFBI)

Interactive effects of dietary isoleucine and valine ratios to lysine in response to varying leucine to lysine ratios on jejunal protein expression in commercial broilers

Diego Ventura*, Cristopher Almendares1, Ruben Kriseldi2, Alejandro Corzo2, Roshan Adhikari2, Jason Lee3, Chance Williams4, Charles Starkey1, Jessica Starkey1. 1Department of Poultry Science, Auburn University, 2Aviagen, 3C. J. Bio America, 4Wayne-Sanderson Farms

Interactive effects of dietary isoleucine and valine ratios to lysine in response to varying leucine to lysine ratios on Pectoralis major protein expression in commercial broilers

Cristopher Almendares*, Diego Ventura1, Ruben Kriseldi2, Alex Corzo2, Roshan Adhikari2, Jason Lee3, Chance Williams4, Charles Starkey1, Jessica Starkey1. 1Department of Poultry Science, Auburn University, 2Aviagen, 3C. J. Bio America, 4Wayne-Sanderson Farms

The effects of hygienic pelleting in diets that differ in amino acid density on Ross 708 broiler performance, amino acid apparent ileal digestibility, and requirement

Elizabeth Lynch*, Kristina Bowen, Tim Boltz, Victoria Ayres, Joe Moritz. West Virginia University

The influence of dietary glycine concentration in reduced crude protein diets with different Met to Cys ratios fed to broilers

Trevor Lee*, Kentu Lassiter1, Walter Bottje1, Samuel Rodrell1. 1Center of Excellence for Poultry Science, University of Arkansas System Division of Agriculture, 2Auburn University

Interactive effects of stimbiotic supplementation and wheat bran inclusion in corn or wheat-based diets on glucose and amino acids transporters, ileal oligosaccharides profile, and ceca protein content

Shravani Veluri*, Oluyinka Olukosi1, Mike Bedford2, Gemma Gonzalez-ortiz2. 1University of Georgia, 2AB Vista and Feed Ingredients

Dietary supplementation of monosodium phosphate and exogenous phytase effects on growth, ileal phosphorus digestibility, and bone characteristics in broiler chickens

Jung Yeol Sung*, Brittney Emmert1, Darrin Karcher1, Carrie Walk2, Olayiwola Adeola1. 1Purdue University, 2DSM Nutritional Products

Impact of a cellulase-xylanase enzyme supplementation on performance and intestinal health in pullets fed almond hulls

Nelly Cribillero*, Craig Wyatt2, Kelley Wamsley1, Timothy Boltz2, Pratima Adhikari1. 1Poultry Science Department, Mississippi State University, 2AB Vista Feed Ingredients
Role of phytase and limestone particle size ratios on performance, egg breaking strength and gizzard pH and inositol levels of late-lay phase of single cycled laying hens
Charis Waters*1, Kelley Wamsley1, Michael Elliot2, Mike Bedford3, Craig Wyatt4, Pratima Adhikari1 1Mississippi State University, 2A&E Nutrition Services, LLC, 3AB Vista Feed Ingredients

10:00 AM Break
Detection of antimicrobial resistance genes in Lactobacillus spp. from poultry probiotic products and their horizontal transfer among Escherichia coli
Md. Rokon-Uz-Zaman*GS, Anica Bushra, Tanjida Pospo, Monika Runa, Sadia Tasnuva, Md. Taohidul Islam
Bangladesh Agricultural University

Butyrate affects chicken monocyte-like cell cycle progression.
Famatta Perry*1GS, Cristiano Bortoluzzi2, Jeyashree Nathan Elango1, Avinash James1, Emma Jones1, Cinthia Eyn1, Mike Kogut4, Ryan Arsenault1 University of Delaware, 2Texas A&M University, 3University of Maryland Eastern Shore, 4USDA-ARS Southern Plains Agricultural Research Center

Effects of red osier dogwood extract and grape pomace on growth performance, blood biochemistry, immune response, and antioxidant capacity of broiler chickens challenged with heat stress.
FISAYO AKINYEMI*GS, Deborah Adewole
Dalhousie University

Individual and combined effects of phytase and butyric acid on performance and processing yield of YPM x Ross 708 male broilers reared to 42 days of age
Joseph P. Gulizia*1GS, Jose I. Vargas1, Susan M. Bonilla1, Jose R. Hernandez1, Suresh Thuekeaw1, Ruediger Hauck1,3, Ken Macklin1, William A. Dozier, III1, Klint W. McCaffety4, Wilmer J. Pacheco7 Department of Poultry Science, Auburn University, 2Department of Animal Husbandry, Faculty Veterinary Science, Chulalongkorn University, 3Department of Pathobiology, Auburn University, 4USDA-ARS Poultry Research Unit

The effect of a dacitic (rhyolitic) tuff breccia (Azomite®) in corn, soybean, and DDGS based diets across pellet die size on production rate and pellet quality under a constant mill load.
Lucas Knarr*1GS, Kristina Bowen1, Jon Ferrell1, Joe Moritz2 West Virginia University, 2Azomite Mineral Products
Metabolism and Nutrition VI Feed Additives
Moderator: Dr. Timothy Johnson, Purdue
Room Number: B314
Monday, January 23, 2023

1:00 PM M103
The impact of antibiotic growth promoters on intestinal function during a subclinical necrotic enteritis challenge in broilers
Shailes Bhattrai*GS, Laura Ellestad University of Georgia

1:15 PM M104
Effect of symbiotic supplementation on production performance and necrotic enteritis severity in broilers under an experimental necrotic enteritis challenge
Bikas Shah*1GS, Mawd Al Hakeem1, Shahna Fatima1, Revathy Shannugasundaram2, Ramesh Selvaraj1 1Department of Poultry Science, The University of Georgia, 2Toxicology and Mycotoxin Research Unit, USDA-ARS

1:30 PM M105
Cecal microbiota profile of broiler chickens raised under different antimicrobial feeding programs
Philip Mak*1GS, Lisa Bean-Hodgins2, Elijah Kiriarie3, Diom Lepp4, Moussa Diarra1 1Guelph Research and Development Centre, Agriculture and Agri-Food Canada (AAFC), 2Department of Animal Biosciences, University of Guelph, 3New-Life Mills, A division of Parrish & Heimbecker

1:45 PM M106
Gut health of broiler fed enzymes treated or untreated cranberry pomace in a Eimeria spp. challenge model.
Aline Pereira*1GS, Bruna Belote2, Moussa Diarra3, Kelly Ross4, Qi Wang3, Elijah Kiriarie1 1University of Guelph, 2ISI Institute, 3Guelph Research and Development Centre, Agriculture and Agri-Food Canada, 4Summerland Research and Development Centre, Agriculture and Agri-Food Canada

2:00 PM M107
In-feed bacitracin methylene disalicylate impaired microbial function and increased antibiotic resistance in cecal microbiota of turkey in a dose dependent manner
Paul Oladele*1GS, Carmen Wickware1,2, Julian Trachsel2, Torey Looft2, Timothy Johnson1 1Department of Animal Sciences, Purdue University, 2National Animal Disease Center, Agricultural Research Service, United States Department of Agriculture

2:15 PM M108
Evaluation of dietary plasma fed to turkeys during brooding on performance to market age
Ashley Gernat*1GS, Joy Campbell1, Adam Fahrenheit3, Jesse Grimes1 1North Carolina State University, 2APC Proteins

2:30 PM M109
Impact of feeding sources of α-linolenic acid and yeast bioactives on growth and development of egg-type Lohmann LSL-Lite pullets from hatch through to 16 weeks of age
Junhyung Lee*GS, Veronica Cheng, Elijah Kiriarie University of Guelph

2:45 PM M110
Effect of a glycan microbial metabolic modulator on fecal shedding and tissue translocation of Salmonella Enteritidis in laying hen
Ishib Poudel*1GS, Murthala Umar-Faruq2, Fernando Cisneros-Gonzalez2, Aaron Kiess3, Li Zhang3, Pratima Adhikari1 1Department of Poultry Science, Mississippi State University, 2DSM Nutritional Products AG, 3Prestage Department of Poultry Science, North Carolina State University

3:00 PM M111
A microencapsulated blend of thymol and organic acids can control necrotic enteritis caused by Clostridium perfringens in broiler chickens
Benedetta Tugnoli*1, Andrea Piva2, Brett Lumpkins2, Ester Grilli2,4 Vetagro S.p.A., 2University of Bologna DIMEVET, 3Southern Poultry Feed and Research, Inc, 4Vetagro, Inc
3:15 PM M112
IMWSQ® association with essential oil and probiotic prevents negative effects of necrotic enteritis on broilers
Ricardo Barbalho¹, Melina Bonato *¹, Fernando Souza¹, Lucio Araujo², Aaron Kiess², Claudia Castaneda³, Caio Barbalho³, Raquel Carvalho³ ¹ICC Industrial Comercio Exportacao Importacao S.A, ²Faculty of Animal Science and Food Engineering, University of Sao Paulo, ³North Carolina State University, *Mississippi State University

3:30 PM M113
The impact of monoglyceride blend on improving broiler performance during necrotic enteritis challenge
Jundi Liu *¹, Matthew Jones², Ross Wolfenden¹, Charles Hofacre³ ¹Eastman Chemical Company, ²Southern Poultry Research Group, Inc.

3:45 PM M114
Evaluation of a monoglyceride blend on broiler performance during necrotic enteritis challenge in battery cages
Danielle Graham *¹, Jundi Liu², Ross Wolfenden², Billy Hargis¹ ¹Department of Poultry Science, University of Arkansas Division of Agriculture, ²Animal Nutrition BU, Eastman Chemical Company

4:00-6:00 Poster Reception
Environment/Management | Animal Well-being
Moderator: Dr. Jeanna Wilson, UGA
Room Number: B315
Monday, January 23, 2023

8:00 AM M115
The effects of varying methods of depopulation on laying hen gene expression
Kari Harding*1GS, Rebecca Wysocky1, Shelly Nolin1, Ramon Malheiros2, Sanjay Shah2, Kenneth Anderson1, 1Prestage Department of Poultry Science, North Carolina State University, 2Biological and Agricultural Engineering, North Carolina State University

8:15 AM M116
Tracking cage-free laying hens on litter floor with machine vision
Xiao Yang*GS, Ramesh Bist, Sachin Subedi, Lilong Chai Department of Poultry Science, University of Georgia

8:30 AM M117
Investigation of stocking density, age, and time of day on behavior profiles and aggression of white egg layer hens housed in colony cages
Benjamin Alig*GS, Kenneth Anderson, Allison Pullin, Ramon Malheiro Prestage Department of Poultry Science, NC State University

8:45 AM M118
Keel bone tracking from rearing to laying phase for understanding bone mineralization and 3-D structural development
Dima White*GS, Woo Kim University of Georgia

9:00 AM M119
Effect of oxidative stress on broiler bone homeostasis
Yuguo Tompkins*GS, Woo Kim University of Georgia

9:15 AM M120
Body composition and reproductive differences between broiler breeders fed under everyday or skip-a-day rearing programs
Luis Avila*GS, Kelly Sweeney, Camille Evans, Dima White, Woo Kim, Prafulla Regmi, Jeanna Wilson University of Georgia Department of Poultry Science

9:30 AM M121
Cecal microbiota transplantation: Modulation of aggressive behavior through the crosstalk between central serotonergic activity and gut microbiota in roosters
Yuechi Fu*GS, Jiaying Hu1, Marisa Erasmus1, Timothy Johnson1, Heng-wei Cheng2 1Department of Animal Sciences, Purdue University, 2Livestock Behavior Research Unit, USDA-ARS

9:45 AM M122
Evaluating broiler welfare and behavior as affected by growth rate and stocking density via PLF technologies
Shengyu Zhou*GS, Pattarawan Watcharanantapong, Xiao Yang, Tom Tabler, Jun Lin, Maria Prado, Hao Gan, Yang Zhao, Tanner Thornton The University of Tennessee

10:00 AM Break
Comparison of skeletal and cardiac parameters in commercial broilers raised using a standard or slow growth rate

Nabin Neupane*GS, Laura Ellestad, Robson Giglio, Prafulla Regmi University of Georgia

Environmental enrichments affect behavior and plasma corticosterone levels in broiler breeder pullets

Camille Evans*GS, Luis Avila, Lauren Vaccaro, Laura Ellestad, Jeanna Wilson, Prafulla Regmi Department of Poultry Science, University of Georgia

Effect of ultraviolet radiation on reducing airborne Escherichia coli carried by poultry litter particles

Xuan Dung Nguyen1, Yang Zhao1, Jeffrey Evans2, Jun Lin1, Brynn Voy1, Joseph Purswell2
1 Department of Animal Science, The University of Tennessee, 2 Poultry Research Unit, Agriculture Research Service, United States Department of Agriculture (USDA)

Effect of dimming wave characteristics on lamp performance

Joseph Purswell*1, Jeremiah Davis2, Jesse Campbell2, Matthew Rowland, Klinton McCafferty1
1 USDA-ARS Poultry Research Unit, 2 Auburn University

Potential epigenetic effects of heat stress on ACTH response in F1 offspring of breeder Pekin ducks.

Esther Oluwagbenga1, Jenna Schober1, Victoria Tetel1, Daniel Shafer2, Steven Corbitt2, Gregory Fraley*1
1 Purdue University, 2 Maple Leaf Farms, Inc.

Effect of some phytogenics on growth performance, serum biochemistry, and antioxidant status in broilers during summer stress

Mounika Thota1, Srilatha Mangalam1, Srinivas Gurram1, Bhaskar Ganguly*2
1 P. V. Narasimha Rao Telangana Veterinary University, 2 Ayurvet Limited

Environmental conditions shape the gut microbiome of broiler chickens

Benjamin Zwirzitz1, Adelumola Olaadeinde*2, Jasmine Johnson1, Gregory Zock1, Marie Milfort2, Lorraine Fuller2, Ahmed Ghareeb2, James Foutz2, Jose Teran2, Reed Woya2, Zaid Abdo1, Jodie Lawrence1, Denice Cudnik2, Samuel Aggrey3
1 University of Natural Resources and Life Sciences, 2 US National Poultry Center, 3 University of Georgia, 4 Boehringer Ingelheim Animal Health (BIAH), 5 Colorado State University

Monday, January 23, 2023

12:00 PM Lunch
Environment/Management III Animal Well-being
Moderator: Dr. Victoria Ayres, TN Tech
Room Number: B315
Monday, January 23, 2023

1:00 PM M130
Heating system and feed additive effects on foot pad quality, broiler performance, and immune status
Victoria Ayres*1, Timothy Boltz2, Shawn Grushecky2, Jingxin Wang3, Joseph Moritz3 1Tennessee Tech University, 2Mississippi State University, 3West Virginia University

1:15 PM M131
Effect of environmental enrichments on behavior, leg and mental health of broilers in the commercial houses
Seong Kang**, Karen Christenson*, Michael Kidd Jr1, Sara Orłowski, James Clark2 1University of Arkansas, 2Tyson Foods, Inc.

1:30 PM M132
Prevalence of antimicrobial resistant Escherichia coli in broiler litter decreases with consecutive reuse of litter
Reed Woyda1, Adelumola Oladeinde**2, Dinku Endale3, Timothy Strickland3, Kimberly Cook3, Jodie Lawrence2, Denice Cudnik2, Zaid Abdo1 1Colorado State University, 2US National Poultry Center, 3Southeast Watershed Research, USDA-ARS, 4Nutrition, Food Safety/Quality, USDA-ARS-ONP

1:45 PM M133
Efficacy of novel phytogenic feed additive for prevention of wooden myopathy in broilers and for improving meat quality attributes
A Devangare1, Shivi Maini**2, Mohd Razuddin1, R Kulkarni1 1Department of Veterinary Livestock Products Technology, College of Veterinary and Animal Sciences, MAFSU, 2General Manager, Technical, Indian Herbs Specialities

2:00 PM M134
Effects of Transportation on Broiler Blood Physiology
Matthew Livingston**1, Chelsea Phillips2, Aaron Cowieson3 1DSM Animal Nutrition - Precision Services, 2DSM Animal Nutrition - Bioscience and Process Innovation, 3DSM Animal Nutrition - Nutritional Health Innovation
Environment/Management IV Environmental Impacts
Moderator: Dr. Kelley Wamsley, MSSTATE
Room Number: B315
Monday, January 23, 2023
2:15 PM M135
Repellency of Eastern Redcedar (Juniperus virginiana) to darkling beetles
Catherine Fudge*GS, Chongxiao Chen University of Georgia

2:30 PM M136
Effect of thermal variation during late-stage incubation on broiler chicken growth performance, carcass characteristics, and meat quality defects
Jorge Banegas*1GS, Brittany Wall1, Martha Rueda2, Jeremiah Davis2, Joseph Purswell1, Charles Starkey1, Jessica Starkey1 1Department of Poultry Science, Auburn University, 2National Poultry Technology Center, Auburn University, 3USDA ARS Poultry Research Unit

2:45 PM M137
Effect of novel litter amendments on d 0-59 litter quality and broiler performance
Jorge Urrutia*1GS, Dalton Dennehy1, Hudson Thames1, Kelley Wamsley1, Jessica Wells1, Anuraj Sukumaran1, Tom Tabler1, John Linhoss2 1Department of Poultry Science, Mississippi State University, 2Department of Animal Science, The University of Tennessee, 3Bio system Engineering, Auburn University,

3:00 PM M138
Effects of yeast cell wall on performance, immune response, and cecal colonization of Campylobacter jejuni inoculated broilers
Luis Munoz*1GS, Marquisha Paul2, James Krehling1, Matthew Bailey1, William King2, Cesar Escobar1, Leticia Orellana1, Yagya Adhikari1, Ken Macklin1 1Auburn University, 2Alltech, Inc.

3:15 PM M139
Application of Carvacrol nanoemulsion as a natural sanitizer for controlling Salmonella Enteritidis biofilm in poultry farm environment.
TRUSHENKUMAR SHAH*GS, Chen Zhu, Chetna Shah, Abhinav Upadhyay University of Connecticut

3:30 PM M140
Stimulation of red and green light with different intensities during incubation influence hatching traits and post-hatch performance
Shaheryar Ali*, Sohail Ahmad, Mohammad Usman, Waleed Khalid University of Veterinary and Animal Sciences, Lahore, Pakistan

3:45 PM M141
Prenatal dichromatic light exposure to japanese quail eggs influence hatching traits and post-hatch performance
Muhammad Safwan*, Sohail Ahmad, Mohammad Usman, Shaheryar Ali, Waleed Khalid University of Veterinary and Animal Sciences, Lahore, Pakistan

4:00-6:00 Poster Reception
Metabolism & Nutrition VII General Nutrition
Moderator: Dr. Klint McCafferty, USDA ARS
Room Number: B311
Tuesday, January 24, 2023

8:00 AM T142
Variability in energy value, nutrient and trypsin inhibitor content of extruded full-fat soybeans due to genetics and agronomic conditions
Nicolas Mejia-Abaunza*, Paula Lozano-Cruz1, Joaquín Cabanas-Ojeda1, Valmiro Lima Aragão Neto1, Michael Joseph1, Danny Patino1, Rachel Vann2, Edgar Oviedo-Rondon1 1Prestage Department of Poultry Science, North Carolina State University, 2Department of Crop and Soil Sciences, North Carolina State University

8:15 AM T143
Effect of combined doses of fumonisin, deoxynivalenol and zearalenone on production performance and amino acid digestibility in broiler chickens
Revathi Shanmugasundaram*, Mary Davis1, Walid Hakeem2, Shahna Fatihima2, Bikas Shah2, Anthony Pokoo-Aikins1, Oluyinka Olukosi2, Todd Applegate2, Anthony Glenn1 1Toxicology and Mycotoxin Research Unit, US National Poultry Research Center, Agricultural Research Service, 2Department of Poultry Science, University of Georgia

8:30 AM T144
Body composition and fasting heat production of modern broilers and their relationship with dietary productive energy (Arkansas Net Energy)
Diego Martinez*, Nawin Suesuttajit, Katie Hilton, Jordan Weil, Cole Umberon, Abdullah Scott, Craig Coon 1Department of Poultry Science, University of Arkansas

8:45 AM T145
Energy and nutrient composition of corn particle fractions generated by three hammer mill settings
Paula Lozano-Cruz, Nicolas Mejia-Abaunza, Joaquin Cabanas-Ojeda, Edgar Oviedo-Rondon* Prestage Department of Poultry Science, North Carolina State University

9:00 AM T146
Effects of feeding varying proportions of pellets and fines on growth performance and carcass yield of broilers during a 63-day production period
Klint McCafferty*, Joseph Purswell USDA-ARS Poultry Research Unit

9:15 AM Break
Metabolism & Nutrition VII General Nutrition
Moderator: Dr. Klint McCafferty, USDA ARS
Room Number: B311
Tuesday, January 24, 2023

9:30 AM T147
The detection and co-occurrence of mycotoxins in feed corn using HPLC/MS analysis
Anthony Pokoo-Aikins*, Callie McDonough, Jaci Hawkins, Trevor Mitchell, Revathi Shanmugasundaram, Scott Gold, Anthony Glenn United States National Poultry Research Center, Toxicology and Mycotoxin Research Unit, USDA-ARS

9:45 AM T148
Dose dependent responses of young broilers to soy β-conglycinin in mash and pelleted diets
Kyle Teague*, Guillermo Tellez-Isaias¹, Alfred Blanch², Simone Rasmussen², Samuel Rochell¹
¹University of Arkansas System Division of Agriculture, ²Hamlet Protein, ³Auburn University

10:00 AM T149
Effect of emulsifier supplementation on growth, performance nutrient digestibility, fecal microbial, fecal gas emission, and blood profiles in growing pigs.
In Ho Kim¹, Srijit Tripathi²*, Dilraj Bhatia² ¹DANKOOK UNIVERSITY, ²VETLINE, A DIVISION OF SIMFA LABS PVT. LTD.

10:15 AM T150
Productive energy (Ark NE), apparent metabolizable energy (AMEn) and net energy (NE) values for diets and ingredients for 5- 56 d broiler grow-out studies
Nawin Suesuttajit*, Jordan Weil, Cole Umberson, Diego Martinez, Abdullah Scott, Criag Coon Center of Excellence for Poultry Science, University of Arkansas

10:30 AM T151
Dietary hemp seed cake enhances performance and egg quality parameters in white caged laying Hens.
Fausto Solis¹*, Rajasekhar Kasula¹, Byron Shaffer², Frank Connnett², Chris Barrett², Rodney Cocker², Eric Willingham³ ¹Wenger Animal Nutrient & Technology Innovation Center, The Wenger Group, ²Kreider Farms, 1461 Lancaster Rd, Manheim, PA 17545, ³Winfield Veterinary Consulting, Inc.

Dendy Keynote Lecture
Moderator: Dr. Danielle Graham, UARK
Room Number: B313
Tuesday, January 24, 2023

11:00 AM
Update on the highly pathogenic avian influenza outbreak in the United States
Mary Pantin-Jackwood* Southeast Poultry Research Laboratory, U.S. National Poultry Research Center, U.S. Dept. of Agriculture, Agricultural Research Service

12:00 PM SCAD Business Meeting
Room Number: B312

12:00 PM SPSS Business Meeting
Room Number: B314
SCAD II
Moderator: Dr. Rocio Crespo, NCSU
Room Number: B312
Tuesday, January 24, 2023
7:30 AM T152
Characterization of fowl typhoid outbreaks occurring in Latin America
Martha Pulido-Landinez* Mississippi State University
7:45 AM T153
Behavior of naturally occurring recombinant infectious bronchitis viruses
Camila Cuadrado*GS, Cassandra Breedlove, Haroldo Toro Auburn University
8:00 AM T154
Impact of embryonic exposure to Enterococcus cecorum strains isolated from field outbreaks on early performance and septicemia in broiler chickens
Marcela Arango*GS, Latasha Gray, Randy Moore, Abdiel Atencio, Carolina Trujillo, Aaron Farga, Guillermo Tellez-Isaías, Billy Hargis, Juan Latorre, Danielle Graham Department of Poultry Science, University of Arkansas Division of Agriculture
8:15 AM T155
Effects of monoglycerides of butyric, caprylic, and capric fatty acids on the performance of pullets vaccinated with a commercial coccidiosis vaccine
Gerald Self, Jr.*1GS, Adebayo Sokale2, Michael Elliot3, Daniel Chesser4, Kelley Wamsley5, Pratima Adhikari1 1Poultry Science, Mississippi State University, 2BASF Corporation-Animal Nutrition, North America, 3A&E Nutrition Services, LLC, 4Agricultural and Biological Engineering, Mississippi State University
8:30 AM T156
Transcriptomic analysis of chicken harderian gland, trachea, cecal tonsil and spleen after vaccination with the LaSota Newcastle Disease Virus
Jannis Nankemann*GS, Andrea Pietruska, Raimundo Espejo, Cassandra Kitchens, Haroldo Toro, Rüdiger Hauck Auburn University
8:45 AM T157
Bacteriology findings and microbiological composition analysis of Focal Duodenal Necrosis (FDN)
Yu-Yang Tsai*GS, Sonsiray Narvaez, Nicolle Barbieri, Catherine Logue Poultry Diagnostic and Research Center, Department of Population Health, The University of Georgia
9:00 AM Break
SCAD III
Moderator: Dr. Andrea Zedek, Zedek Consulting
Room Number: B312
Tuesday, January 24, 2023

9:15 AM T158
Using the Waterfowl Alert Network to Model Waterfowl Density Near Commercial Poultry in the Atlantic Flyway and Beyond
Maurice Pitesky*1,2, Joseph Gendreau1,2, Tristan Bond1, Shane Feirer1,3, Jady Smolinsky1,4, Jeff Buler1,5
1AgriNerds Inc, 2University of California, Davis, 3University of California-Agriculture Natural Resources, 4Cherokee Nation System Solutions, 5University of Delaware

9:30 AM T159
Molecular characterization of Mycoplasma gallisepticum on poultry farms in Nigeria
Eniope Oluwayinka*1, Oni Oluwole2, Kadiri Amina2, Steven Fini1, Marianne Dos Santos1, Jin Qian1, Noala Ferguson-Noel1
1Poultry Diagnostic and Research Center, University of Georgia, 2College of Veterinary Medicine, Federal University of Agriculture Abeokuta

9:45 AM T160
Chicken lymphoid cellular immune responses against necrotic enteritis producing Clostridium perfringens strains
Ravi Kulkarni*1, Carissa Gaghan1, Khaled Abdelaziz2 1North Carolina State University, 2Clemson University

10:00 AM T161
Effects of quorum sensing inhibition product on broilers in necrotic enteritis challenge.
Charles Hofacre*, Alain Labbe2, Matthew Jones1, Thomas Coulson2, Ana Jaramillo1
1Southern Poultry Research Group, Inc, 2MicroSintesis Inc

10:15 AM T162
Applications of online data for understanding backyard poultry distributions.
Joseph Gendreau*, Maurice Pitesky University of California, Davis School of Veterinary Medicine

10:30 AM T163
Protection studies of recombinant HVT-IBD and/or live IBD vaccine against 14-day or 25-day AL2 challenge in commercial broilers
Kalen Cookson*, Manuel Da Costa, John Dickson, Jon Schaefier Zoeis

10:45 AM T164
Evaluation of NutriQuest® NUQuest AC-e™ with a coccidiosis vaccine during an Eimeria challenge in broilers
Charles Hofacre1, Matthew Jones1, Gregory Mathis2, Ran Song3, Kim Friesen3, Chet Wiernusz3, Lorraine Fuller4, Myrna Olvera5, Julio Baltazar2, Gonzalo Villar2
1Southern Poultry Research Group, Inc, 2Southern Poultry Research, Inc., 3Nutriquest, 4The University of Georgia, 5NUTEC

Dendy Keynote Lecture
Moderator: Dr. Danielle Graham, UARK
Room Number: B313
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12:00 PM SCAD Business Meeting
Room Number: B312

12:00 PM SPSS Business Meeting
Room Number: B314
Metabolism and Nutrition VIII Feed Additives
Moderator: Dr. Cristiano Bortoluzzi, DSM
Room Number: B313
Tuesday, January 24, 2023

7:45 AM T166
Comparative evaluation of scent leaf meal (Ocimum grattissimum) and antibiotic growth promoter on broiler performance and blood components
AKINTUNDE ADEDOYIN* UNIVERSITY OF IBADAN NIGERIA

8:00 AM T167
Comparative evaluation of various hepato-stimulants on growth, immunity, carcass traits, histology and cost economics in Broiler birds.
Srijit Tripathi**, Mukund Kadam1, A.B. Mandal1, Dilraj Bhatia1 1VETLINE, A DIVISION OF SIMFA LABS PVT. LTD., 2Maharashtra Animal & Fishery Sciences University, 3CENTRAL AVIAN RESEARCH INSTITUTE

8:15 AM T168
Effect of herbal liver tonic and growth promoter (Livoliv DS) on meat quality attributes of chicken and lean meat production
A Devangre1, Shivi Maini**2, Mohd Raziuddin1, G Gadegaonkar1, R Kulkarni1 1Department of livestock products technology, College of Veterinary and Animal Sciences, MAFSU, 2General Manager Technical, Indian Herbs Specialities

8:30 AM T169
Microbiome Modulation, Microbiome Protein Metabolism Index, and growth performance of broilers supplemented with a precision biotic
Cristiano Bortoluzzi*1, Jose Sorbara1, Ian Tamburini2, Jack Geremia1 1DSM Nutritional Products, 2University of California

8:45 AM T170
Efficiency trial of 4 different technological toxin binders against mycotoxins multiple contamination in broiler diets.
Jose Fierro*, Patricia Gómez, Juan Medina, Elizabeth Rodríguez Sanfer Animal Health

9:00 AM T171
Effect of different probiotics and EnzaPro® on growth performance, and gut health parameters of broiler raised under mild coccidia challenge
Moderator: Dr. Cristiano Bortoluzzi, DSM

9:15 AM Break
Metabolism and Nutrition VIII Feed Additives
Moderator: Dr. Cristiano Bortoluzzi, DSM
Room Number: B313
Tuesday, January 24, 2023

9:30 AM T172
Data for food use authorization for use of recombinant live biotherapeutics to prevent/control necrotic enteritis in poultry
Kathryn Kruziki, Yiannis Kaznessis* General Probiotics Inc.

9:45 AM T173
Effect of inactivated Pichia guilliermondii postbiotic on performance parameters in broilers: systematic review and multiple trial analysis
Clementine Oguey*, Mohamad Mortada1 1ADM International, 2ADM Animal Nutrition

10:00 AM T174
Effect of supplementing a proprietary yeast-based product on the efficacy of a live salmonella vaccine in broilers
Sharon Miller*, Charles Hofacre, Muhammed Shameer Abdul Rasheed, Chris Rude1, Mark LaVorgna1, Mahmoud Masadeh1, Kristy Dorton1 1Devenish Nutrition, 2Southern Poultry Research Group

10:15 AM T175
Effect of a proprietary oregano product on weight gain, feed conversion, and intestinal lesions of Cobb 500 broilers during a mixed Eimeria challenge infection
Muhammed Shameer Abdul Rasheed*, Greg Mathis1, Brett Lumpkins2, Kristjan Bregendahl1, Mark LaVorgna1, Mahmoud Masadeh1, Kristy Dorton1 1Devenish Nutrition, 2Southern Poultry Feed and Research

10:30 AM T176
Determining the effect of a proprietary all-natural feed additive on the performance of Ross 708 broilers to 35 days of age under a coccidiosis challenge
Michael Blair*, Mark LaVorgna, Mahmoud Masadeh, Muhammed Shameer Abdul Rasheed, Kristy Dorton Devenish Nutrition

10:45 AM T177
Effects of a commercial triple-strain Bacillus-based probiotic on broiler performance and welfare
Eric Sobotik*, Steve Lerner, Rogerio Frozza1, Alberto Inoue1, Antoine Meuter1,2, Ibiara Almeida Paz1 1Animal and Plant Health & Nutrition, Ch. Hansen, Inc., 2Animal and Plant Health & Nutrition, A/S, 3Department of Animal Production and Preventative Veterinary Medicine, São Paulo State University

Dendy Keynote Lecture
Moderator: Dr. Danielle Graham, UARK
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Tuesday, January 24, 2023

12:00 PM SCAD Business Meeting
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12:00 PM SPSS Business Meeting
Room Number: B314
Metabolism and Nutrition IX Feed Additives
Moderator: Dr. Christi Swaggerty, USDA
Room Number: B314
Tuesday, January 24, 2023

7:45 AM T178
Efficacy evaluation of supplementing novel phytogenic feed additive for prevention of wooden myopathy in fast growing broiler birds
Shivi Maini*, Sanjay Suradker, Deepak Singhare  
1 General Manager- Technical, Indian Herbs Specialities Pvt. Ltd., 2 Scientist, Institute of Poultry Management and Technology (IPMT), Urulikachan,

8:00 AM T179
Broiler gut barrier function enhancement by a synergistic in-feed technology under dietary-induced chronic inflammation in real farming conditions
Alireza Khadem*, Eirini Griela, Milena Sevastiyanova, Konstantinos C. Mountzouris, DON Ritter, Christos Gougoulas  
1 Ghent University, 2 Innovad SA, 3 Department of Animal Science, Agricultural University of Athens

8:15 AM T180
Effect of activated diatoms on the regulation of intestinal passage rate, digestibility, and performance in broiler chicken
Felipe Mendy*, David Diez, Anna Tesouro, Maria Soriano, Connie Gallardo  
1 IFTA USA Inc, 2 Biovet S.A., 3 Universidad Científica del Sur

8:30 AM T181
IMW50® improves immune modulation response in aflatoxin challenge broilers
Melina Bonato*, Max Ingbergman, Bruno Beirão, Fernando Souza  
1 ICC Industrial Comércio Exportação e Importação SA, 2 Imunova Analises Biológicas Ltda ME.

8:45 AM T182
Effects of a phytogenic blend on broiler growth performance with used litter challenge
Meghan Schwartz*, Stacie Crowder  
PMI

9:00 AM T183
Macroalgae extracts limits Marek’s disease virus replication and cell-to-cell spread in vitro.
Maria RODRIGUEZ*, Frédérick Bussy, Pi Nyvall-Collen, Laëtitia Trapp-Fragenet  
1 Olmix S.A., 2 INRAE

9:15 AM  Break
Metabolism and Nutrition IX Feed Additives
Moderator: Dr. Christi Swaggerty, USDA
Room Number: B314
Tuesday, January 24, 2023

9:30 AM T184
Feeding a protected complex of biofactors and antioxidants to breeder hens provides transgenerational protection against Salmonella enterica serovar Enteritidis to progeny chicks Christi Swaggerty1, Ramon Malheiros2, Casey Johnson1, Ludovic Lahaye3, Hector Salgado3, J Byrd1, Kenneth Genovese1, Haiqi He1, Elizabeth Santin1, Michael Kogut1 1U.S. Department of Agriculture, Agricultural Research Service, 2North Carolina State University, 3Jefo Nutrition, Inc.

9:45 AM T185
Effect of dietary supplementation of Solergy as a replacement of soybean oil on productive performance, egg quality traits and liver function parameters in laying hens from 32 to 47 weeks of age. Juan Miguel Ruiz Rodríguez*, Octavi Colom, Ignacio Josa Prado, Carlos Domènech Igusol Advance S.A.

10:00 AM T186
EVALUATION OF CELLUTEIN® ON TURKEY GROWTH PERFORMANCE AND FEED EFFICIENCY
Mathew Vaughn1, Michael Barnas2, James McNaughton2, John Gonzalez1 1Puretein Bioscience, 2AHPPharma, 3University of Georgia

10:15 AM T187
Evaluation of the effect of Balancius on growth performance of commercial turkeys Shelby Corray*, April Levy, Jeffre Firman2, Randy Mitchell1 1DSM Nutritional Products, 2Missouri Contract Poultry Research, 3Perdue Research Farm

10:30 AM T189

10:45 AM T190
Blood indices, oxidative status, microbial load and tissues histomorphology of growing Japanese quail fed diets supplemented with cinnamon and ginger oils as antibiotic alternatives Abdulmohsen Alqhtani1, Mohamed Abd El-Hack2, Adel Attia2, Zenat Ibrahim2, Mohamed El-Saadony2, Mohamed Abo El Maati2, Naif Al-Gabri2, Ayman Swelum1 1King Saud University, 2Zagazig University, 3Thamar University

Dendy Keynote Lecture
Moderator: Dr. Danielle Graham, UARK
Room Number: B313
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12:00 PM SCAD Business Meeting
Room Number: B312
12:00 PM SPSS Business Meeting
Room Number: B314
Metabolism and Nutrition X Enzymes
Moderator: Dr. Yemi Burden, United Animal Health
Room Number: B315
Tuesday, January 24, 2023
7:45 AM T191
Evaluating the benefits of a novel multi-component protease supplementation on broiler chicken in a commercial organic production system
Anhao Wang1, Aizwarya Thanabalani2, Rob Patterson*1, Paul Garvey3, Mike Edwards2, Elijah Kiarie1
1CBS Bio-Platforms, 2University of Guelph, Animal Biosciences, 3Jones Feed Mill
8:00 AM T192
Use of a novel mannanase isolated or in combination on broilers performance
Rodrigo Messias*1, Rita Vieira2, Anna Fickler3, Bruno Wernick1, Michele Lima1, Edney Silva2
1BASF SA, 2UNESP, 3BASF SE, 4Universidade Brasil
8:15 AM T193
Measuring the in vitro anti-clostridial activity of a phage endolysin expressed in Saccharomyces cerevisiae.
Gregory Siragusa*1, Mike Barnas2, Wendy Attuquayefio2, Jennifer Timmons2, Chris Skory1, Rose Hammond4, David Donovan2, James McNaughton1
1Scout Microbiology, 2AHPharma, Inc, 3University of Maryland Eastern Shore, 4USDA Agricultural Research Service, 5Morgan State University
8:30 AM T194
Effect of supplementing a multi-carbohydrase enzyme in conjunction with phytase to broiler chickens on growth performance and carcass traits
Hector Leyva-Jimenez, Yemi Burden*, Carlos Soto, Katherine McCormick, Adrienne Woodward
United Animal Health Inc.
8:45 AM T195
Application of full matrix for a novel consensus bacterial 6-phytase variant alone and in combination with a xylanase-amylase-protease mixture in broilers improved economic benefit and sustainability
A. Bello*1,2, R. D. Gimenez-Rico2, S. Gilani2, B. C. Hillen2, K. M. Venter3, P Plumstead2, Y. Dersjant-Li2
1Danisco Animal Nutrition & Health, IFF - USA, 2Danisco Animal Nutrition & Health, IFF - Netherlands, 3Neuro Livestock Research, South Africa
9:00 AM T196
Effect of new generation bacterial 6-phytase on recovery in feed and performance, bone mineralization and calcium and phosphorus apparent ileal digestibility in 21-day-old broilers.
Mohamad Mortada*, Amanda Hesse, Cole Schralla, Grant Scheuermann, Nathan Martin, Laura Griffith, Ayoub Mousstaaid
ADM Animal Nutrition
9:15 AM Break
Metabolism and Nutrition XI Vitamins and Minerals
Moderator: Dr. Juxing Chen, Novus International
Room Number: B315
Tuesday, January 24, 2023

9:30 AM T197
Maternal supplementation of different levels bis-chelated trace minerals on reproductive performance of broiler breeder and growth performance of progeny subjected to coccidia challenge
Song Bin¹, Shiping Bai¹, Keying Zhang¹, Xuemei Ding¹, Jianping Wang¹, Qiufeng Zeng¹, Quan Tan¹, Yuyun Mu², Juxing Chen*²
¹Animal Nutrition Institute, Sichuan Agricultural University,
²Novus International Inc

9:45 AM T198
Maternal supplementation of trace mineral minerals on breeder production and progeny growth and health
Juxing Chen*¹, Raquel Araujo², Fabria Roque², Guilherme Silva², Cristiane Araujo², Bruna Leite², Lúcio Araujo², David Torres², Mercedes Vazquez-Anon¹
¹Novus International Inc.,
²Universidade de São Paulo

10:00 AM T199
Comparative efficacy evaluation of natural choline (BioCholine) and synthetic choline chloride on grower performance, growth and meat quality attributes
A Devangare¹, Shivii Maini*², Mohd Razuiddin¹, G Gadegaonkar¹, R Kulkarni¹
¹Department of livestock products technology, College of veterinary and animal sciences, MAFSU, ²General Manager technical, Indian Herbs Specialities

10:15 AM T200
Effect of calcium pidolate dietary supplementation in a context of phosphate withdrawal in broiler feed
Clémence Marecaille¹, Julián Melo*², Samuel Roulleau², Xavier Roulleau¹
¹Dietaxion SAS,
²Universidad Nacional de Luján, ³MG2MIX

10:30 AM T201
Effect of plant-based 1,25(OH)2D3-glycosides cross-supplementation to breeders and broiler offspring on zootechnical performance, bone ash and intestinal integrity
Ricardo Nunes¹, Jonivan Paloschi², Javier Gonzalez*², Marine Dewez², Valentin Bartholomey², Jan Dirk Van der Klis², Kathrin Buehler², Katia Pedrosa², Thiago dos Santos Andrade¹, Nilton Rohloff Junior¹, Edevaldo Iachinski¹
¹Universidade Estadual do Oeste do Paraná, ²Nuproxa Switzerland, ³Herbonis

10:45 AM T202
In vivo amino acid digestibility is inversely correlated to the trypsin and chymotrypsin inhibitor contents of commercial solvent extracted soybean meal
Nelson Ruiz*¹, Carl Parsons², Benjamin Parsons², Keshun Liu²
¹Nelson Ruiz Nutrition, LLC, ²Department of Animal Sciences, University of Illinois, ³Department of Poultry Science, University of Arkansas, ⁴Grain Chemistry and Utilization Laboratory, National Small Grains and Potato Germplasm Research Unit, USDA

Dendy Keynote Lecture
Moderator: Dr. Danielle Graham, UARK
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12:00 PM SCAD Business Meeting
Room Number: B312

12:00 PM SPSS Business Meeting
Room Number: B314
POSTER SESSIONS
Moderators: Dr. John Linhoss, Auburn and Dr. Ryan Dilger, Illinois
Monday January 23, 2023
Room Number: B313 Foyer

Physiology, Endocrinology and Reproduction: Broilers, Turkeys

P203
Effects of antibiotic growth promoters on growth and metabolism in broilers of high or low feed efficiency
Charles Meeks*, Laura Ellestad University of Georgia

P204
Understanding the impact of selection for water conversion ratio in broilers
John Helt*, Travis Tabler, Sara Orlowski, Kirsten Shafer, Maricela Maqueda
1Department of Animal Science, University of Tennessee, 2Department of Poultry Science, Division of Agriculture, University of Arkansas

P205
The impact of pre-lay inseminations on the sperm storage tubule transcriptome in turkey hens
Kristen Brady*, Julie Long Animal Biosciences and Biotechnology Laboratory, BARC, ARS, USDA
Physiology, Endocrinology and Reproduction: Layers, Breeders

P206
Effects of sampling methodologies on Mycoplasma gallisepticum tissue populations in commercial egg-laying pullets
Sethulakshmi Sasidharan*1GS, Jeffrey Evans2, Katie Elliott2, Quentin Read2, E. David Peebles1
1Department of Poultry Science, Mississippi State University, 2USDA-ARS, Poultry Research Unit, USDA-ARS, Southeast Area, North Carolina State University

P207
Effect of preincubation heating, turning and physiological zero on hatchability rate and post hatch growth performance of broiler from a 37-week old flock
Jordan Smith*3GS, Oscar Tejeda Southern Arkansas University

P208
Changes of nutritional absorption-related genes and intestinal histology in laying Japanese quail (Coturnix japonica) at different ages
Hamid reza Rafieian-Naeini*1GS, Mahdi Zhandi2, Maryam Taghipoor-Shahbandi2, Amir Reza Sabzian3, Ali Reza Yousefi4, Woo Kim1
1Department of Poultry Science, University of Georgia, 2Department of Animal Science, College of Agriculture and Natural Resources, University of Tehran, Alborz, Karaj, Iran, 3Department of Biotechnology, College of Agriculture and Natural Resources, University of Tehran, 4Department of Pathology and Experimental Animals, Razi Vaccine and Serum Research Institute, Agricultural Research Education and Extension Organization (AREEO)

P209
Effects of herd and sex on telomere length among three chicken herds
Sang-Hyon OH*, Sea-Hwan Sohn Gyeongsang National University

P210
Effects of four Gallus gallus domesticus strains on body weight gain and vital internal organs allometry
Lizia Carvalho*1, Dimitri Malheiros2, Emmillie Boot2, Benjamin Alig3, Kari Karding2, Kenneth Anderson2, Ramon Malheiros2
1UNESP, 2Prestage Department of Poultry Science - NCSU
Processing and Products

P211
- Rapid Detection of Septicemia-Toxemia in Eviscerated Carcasses Using a Handheld Fluorescence Imaging System
Micah Black*1GS, Bet Wu Alvarado1, Luis Guzman1, Aftab Siddique1, Laura Garner1, Amit Morey1, Jianwei Qian2, Diane Chan1, Insuck Baek1, Moon Kim2, Nicholas MacKinnon2, Stanislav Sokolov3, Alireira Aklhardeh3, Fartash Vasefi3
1Auburn University, 2USDA-ARS, 3SafetySpect Inc.

P212
Phenotypic variations of woody and normal condition in broiler breast meat
Sang-Hyon Oh*1, Euyeon Noh2, Byungrook Min2
1Gyeongsang National University, 2University of Maryland Eastern Shore

P213
Buffered peptone water formulation does not influence growth of pESI-positive Salmonella serovar Infantis
Elizabeth McMullan1, Mark Berrang1, Quentin Read2, Surendra Rasamsetti2, Amber Richards3, Nikki Shariat1, Jonathan Frye1
1United States Department of Agriculture, Agricultural Research Service, U.S. National Poultry Research Service, Poultry Microbiological Safety and Processing Research Unit, 2United States Department of Agriculture, Agricultural Research Service, Southeast Area, 3Department of Population Health, University of Georgia

P214
Chicken packed in chicken: Developing a fully biodegradable packaging film for poultry meat.
Katherine Sierra*1GS, Amit Morey Auburn University

P215
Rapid assessment of flavor profiles of raw and cooked chicken meat by electronic tongue and electronic nose
Linda Barahona1,2, Michelle Hayden1, Md. Moazzem1, Sungeun Cho1
1Auburn University, 2Zamorano University

P216
Identifying Signature Micro-Wave Frequencies for the Non-invasive, Rapid Detection of Woody Breast Myopathy in Live and Processed Broilers Using Machine Learning Algorithms
Aftab Siddique*1GS, Laura Garner1, Wilmer Pacheco2, Ryan Freeman2, Amit Morey1
1Auburn University, 2Compass Technology Group, LLC

P217
Changes in the quality of eggs during storage depending on the laying hen rearing system at 30 weeks of age
Serkan BÜYÜKÜNAL1, Karlo MURATOĞLU1, Ali ÇALIK2, Abdurrahman KIZIL2, Mustafa ALATAS3, Ozguzhan KAHRAMAN4, Ahmet PEKEL2,3
1Department of Food Hygiene and Technology, Faculty of Veterinary Medicine, Istanbul University-Cerrahpaşa, 34320, 2Department of Animal Nutrition and Nutritional Diseases, Faculty of Veterinary Medicine, Ankara University, 06110, 3Department of Animal Nutrition and Nutritional Diseases, Faculty of Veterinary Medicine, Istanbul University-Cerrahpaşa, 34320, 4Department of Animal Nutrition and Nutritional Diseases, Faculty of Veterinary Medicine, Selçuk University, 42003

P218
Interactions between high pressure processing and natural antimicrobials in ground white-meat chicken: An analysis of microbial and physicochemical changes
Amalia Diaz, Belinda Cochran, Julie Northcutt, Paul Dawson, George Cavender* Clemson University

P219
Efficacy of atmospheric-pressure plasma jet to eliminate Salmonella Typhimurium, Heidelberg and Enteritidis inoculated on chicken skin
Bet Wu1 GS, Amit Morey1*, Aftab Siddique1, Charles Herron1, Garret Royster1, Katherine Sierra1, Laura Garner2, Luis Guzman1, Micah Black1, Ryan Sheinberg1, Saikat Chakraborty Thakur2
1Poultry Science Department, Auburn University, 2Physics Department, Auburn University
P220
Impacts of acidified peracetic acid on the survival of Salmonella and Campylobacter on poultry thighs
Jessica Brown*120, Dana Dittoe1, C.B. Austin1, Kara Mikkelson2, Billy Hughes2, Steven Ricke1
1University of Wisconsin-Madison, 2Hydrite
Pathology

P221
Respiratory Cryptosporidiosis in commercial broiler chickens in northern Georgia.
Silvia Carnaccini*, Maurice Raccoursier Frost, Jenny Nicholds, John French, Karen Grogan
University of Georgia

P222
Botanical solution in feed additive for intestinal release to control blackhead disease
(Histomoniasis) in turkeys
Sebastian Decap*, Hans Konsens1, Victoria Tapia1, Rosa Navarro1, Miguel Guzman2
Plantae Labs SpA, 1Avian Pathology Lab, Universidad de Chile

P223
Analysis of serum biochemistry profile in turkeys challenged with Histomonas meleagridis
Vijay Durairaj*, Ryan Vander Veen
Huvepharma, Inc.,

P224
Assessment of mRNA abundance of key cytokines during histomoniasis in turkey poults in a
lateral transmission model
Abhisek Niraula*65, Candice Blue, Davis Fenster, Nima Emami, Rami Dalloul
University of Georgia

P225
In-vitro and In-vivo evaluations of plant bio-actives to directly inhibit the growth of Histomonas
Meleagridis
Bertrand Medina*, Ivan GIRARD1, Chongxiao (Sean) CHEN2-1, Probiotech International Inc.,
1Dept. of Poultry Science, University of Georgia, 2North Carolina State University

P226
Productive monitoring of a complete cycle of broilers subjected to an infection process with field
strains of Eimeria spp. under experimental farm conditions
Jenny Chaparro Gutiérrez*, Carolina Mesa Pineda2, Oscar Múnera Bedoya2, Jorge Duque
Noreña2, Sara López Osorio1 1Grupo de Investigación CIBAV, Facultad de Ciencias Agrarias,
Universidad de Antioquia, 2Grupo de Investigación Nutri-Solla, SOLLAS.A

P227
Eimeria infection with different doses in broilers raised in floor pens for 35 days
Janghan Choi*, Doyun Goo, Milan Sharma, Hansoo Ko, Thiago Belem, Jihwan Lee, Woo Kyun
Kim Department of Poultry Science, University of Georgia

P228
Establishment of chicken apical-out three-dimensional enteroids
Bingqi Dong*, Rami Dalloul
University of Georgia

P229
Understanding the adhesion and invasion characteristics of avian E. coli isolated from clinical
and non-clinical samples using avian macrophages cell line HD11
Priyanka Devkota*105, Linan Jia1, Yue Zhang2, Anuraj Sukumaran1, Aaron Kiess3, Jeffrey
Evans3, Reshma Ramachandran1, Pratima Adhikari1, Li Zhang1 1Department of Poultry Science,
Mississippi State University, 2Department of Food Science, Nutrition and Health Promotion,
Mississippi State University, 3Prestage Department of Poultry Science, North Carolina State
University, 4USDA, Agriculture Research Service, Poultry Research Unit

P230
Avian polyclonal B-cell lymphocytosis-a stress indication or a consequence of infection?
P.F. Cotter
Cotter Laboratory

P231
Comparison of the efficacy of a live bivalent Salmonella vaccine with a monovalent vaccine
against a challenge with a Salmonella Typhimurium field strain
Priscilla Koerich*, Doris Doblies2 1Elanco, 2Elanco Austria GmbH
P232
Understanding the adhesion and invasion characteristics of avian E. coli isolated from clinical and non-clinical samples using avian macrophages cell line HD11
Priyanka Devkota*1GS, Linan Jia1, Xue Zhang2, Anuraj Sukumaran1, Aaron Kies3, Jeffrey Evans4, Rashna Ramachandran1, Pratima Adhikari1, Li Zhang1, 1Department of Poultry Science, Mississippi State University, 2Department of Food Science, Nutrition and Health Promotion, Mississippi State University, 2Prestage Department of Poultry Science, North Carolina State University, 4USDA, Agriculture Research Service, Poultry Research Unit

P233
High-throughput avian pathogenic Escherichia coli (APEC) multilocus sequence typing (MLST) using Oxford Nanopore Technologies
Linan Jia*1, Mark Arick II2, Chuan-Yu Hsu2, Daniel Peterson2, Jeffrey Evans3, Anuraj Sukumaran1, Rashna Ramachandran1, Pratima Adhikari1, Li Zhang1, 1Department of Poultry Science, Mississippi State University, 2Institute for Genomics, Biocomputing, and Biotechnology, Mississippi State University, 3USDA, Agriculture Research Service, Poultry Research Unit

P234
Relation between ISI Sys macroscopic lesion results and performance in commercial broilers flocks of South America
Igor Soares*, Bruna Belote, Otto Figueiró, Elizabeth Santin ISI Institute

P235
Effect of phytogenic water supplement on Campylobacter colonization in broiler challenged with Campylobacter jejuni
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Postbiotic as a potential substitute for the use of growth promoters in broilers
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School of Animal Husbandry and Food Engineering, University of São Paulo (USP), Diamond V, Department of Animal Nutrition and Production, University of São Paulo (FMVZ-USP)

Standardized citrus extract combination with probiotic to improve broiler chicken's performances
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In vitro and in vivo efficacies of a fatty acids esters association against Clostridium perfringens
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Performance and carcass characteristics in broilers fed with postbiotics: alternative to the use of growth promoting antibiotics
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School of Animal Husbandry and Food Engineering, University of São Paulo (USP), Diamond V, Department of Animal Nutrition and Production, University of São Paulo (FMVZ-USP)

Antioxidant diversification in broiler diet, an effective strategy in heat stress conditions
Paul Englar, Cedric Vandenbossche, Mohammed BENARBIA
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Multi-strain Q-Biotic® Bacillus and combination multi-strain Bacillus plus yeast cell wall BacPack® improve performance of turkeys under coccidial stress
Miloud Araba, Troy Lohrmann, Miguel Ruano, Brett Lumpkins, Greg Mathis

A natural coccidiostat, Phylox Feed, improves performance, intestinal lesion scores, and fecal oocyst shedding of Eimeria-infected broilers
San Ching, LeAnn Johnston, Brett Lumpkins
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The effect of a Lactobacillus LB fermentate postbiotic on the performance of commercial male broilers
Erik Eckhardt, Janet Snow, Hilary Pavlidis, Gregory Archer
Adare Biome, CSA Animal Nutrition, Texas A&M University

Home-made liquid probiotic reduced egg yolk cholesterol and improved bird performance
Adekojeyo Oyegunwa, Gbenga Kassim, Oluwole Banjo Tai Solarin University of Education

Evaluating the effects of a synbiotic (probiotic + prebiotic) alone or in combination with a precision-biotic on broiler performance
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Ashley Wagner*1, Bertrand Medina1, Ivan Girard1, Jessica Suagee-Bedore2 1Probiotech International Inc., 2Virginia Tech

P334 A triple strain probiotic demonstrates high siderophore activity: a new step towards the understanding of pathogen inhibition in poultry
Antoine Meuter*1, Line Skjoet Rasmussen Chr. Hansen, A/S

P335 Supporting normal function of the gastro-intestinal tract with effective probiotics
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P336 Effects of dietary supplementation of medium chain fatty acids on gut health in broilers challenged with Salmonella heidelberg
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P337 Effects of Phytogenic feed-additives on growth performance, carcass parameters, and meat quality of male broilers.
Garrett Mullenix*, Sami Dridi University of Arkansas

P338 Effect of the probiotic strain Enterococcus faecium 669 on intestinal colonization and influence on the microbiome composition of broiler chickens.
Antoine Meuter*1, Christophe Bostvironnois1, Dorthe Sandvang1, Eric Sobotik1 1Animal and Plant Health & Nutrition, Chr. Hansen, A/S, 2Animal and Plant Health & Nutrition, Chr. Hansen, Inc.

P339 Effect of an energetic metabolism enhancer on laying hens' growth and performance
Juan Miguel Ruiz Rodriguez*1, Hasiza Abu Hassim2, Annas Salleh2, Octavi Colom1 1Igusol Advance S.A., 2Universiti Putra Malaysia

P340 Effects of various concentrations of supplemental biochar on ileal digestible energy and live performance of broilers during an 8-week production period
Klint McCafferty*, Joseph Purswell USDA-ARS Poultry Research Unit

P341 Stacking feed and water additives to reduce Salmonella shedding in broilers
Wendy Attuquayefio, James McNaughton* AHPPharma, Inc.

P342 Effects of Yuca schidigera plant extract on the performance and blood gases of broiler chickens
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P343 Mitigation of Salmonella Typhimurium in an in vitro broiler cecal culture with a yeast fermentate
Dana Dittoe1, Lindsey Wythe1, Abe Scheaffer2, Steven Riche*1 1Meat Science and Animal Biologies Discovery, University of Wisconsin-Madison, 2SweetPro LLC.

P344 Impact of a yeast fermentate on Salmonella Typhimurium control in an in vitro broiler intestinal model
Dana Dittoe1, Lindsey Wythe1, Abe Scheaffer2, Steven Riche*1 1Meat Science and Animal Biologies Discovery, University of Wisconsin-Madison, 2SweetPro LLC.
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Lindsey Wythe¹, Dana Dittoe¹, Abe Scheaffer², Steve Ricke*¹
¹Meat Science and Animal Biologics Discovery Program, Department of Animal and Dairy Science, University of Wisconsin, ²Harvest Fuels Inc

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Matheus Ramalho Lima¹, Isabelle Kaneko², Adiel de Lima², Lucas de Melo², Mário de Lima², Anna Neusa Brito², Fernando Perazzo Costa², Andreia Villas Boas*², Ana Toledo³, Sigfrido Ferree³, Saravana Kumar⁴, Ajay Kumar⁴, Archibald Netto³
¹Universidade Federal Rural do Semi-Árido, ²Universidade Federal da Paraíba, UFPB, ³Indukern do Brasil Química Ltda, ⁴Natural Remedies Private Limited

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Oregano essential oil improves performance and survivial rate in turkeys challenged with Eimeria spp., Cochlosoma anatis or Histomonas
Chongxiao Chen¹, Anna-Lena Beckmann², Thilo Borchardt*²
¹University of Georgia, ²Dostofarm GmbH
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Influence of feed form and corn particle size on growth performance and meat quality of broiler chickens
Basheer Nusairat*1, Mohammad Qaddoura alhaj2, Wilmer Pacheco3, kamel Mahmoud1
1 Jordan University of Science and Technology, 2Auburn University

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Determining an ideal dietary combination of starch, amino acids, and oil levels during the grower phase of broilers infected with coccidiosis
Juliana Jespersen*1, Juliano de Paula Dorigam2, Rose Whelan3, Max Oelschläger1, Kaitlyn Sommer1, Bradley Gorencz1, Robin White2, Ryan Dilger1
1University of Illinois, 2Evonik Nutrition & Care GmbH, 3Virginia Tech

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The impact of retention time during the conditioning process of a starter diet on broilers grown to 21 days
Rachel Strobeck*1, Abigail McDonnell1, Cecilia Broadwater1, Joseph Gulizia1, Wilmer Pacheco2, Kevin Downs1
Middle Tennessee State University, Auburn University

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Determining an ideal dietary combination of starch, amino acids, and oil levels during the grower phase of broilers infected with coccidiosis
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Middle Tennessee State University, Auburn University

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Energy and nutrient utilization of corn varieties differing in endosperm hardness and dried at two temperature levels, evaluated by two methods in broilers

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Paige Gott*, Lan Zheng, Chasity Pender, Ursula Hofstetter-Schahs, April Levy
DSM Nutritional Products, DSM Austria GmbH
Metabolism and Nutrition: Vitamins and Minerals

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Karsten Kjeldsen*, Grete Brunsgaard¹, Klaus Manner* ¹R2 Agro A/S, ²Freie Universität Berlin

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Effects of the in ovo administration of L-ascorbic acid on the tissue L-ascorbic acid concentrations, plasma nitric oxide and mineral concentrations, and tracheal histomorphology of Ross 708 broilers subjected to elevated levels of atmospheric ammonia
Ayoub Mousstaaid¹, Saman Fatemi*¹, April Levy², Joseph Purswell³, Hammed Olanrewaju³, Britanny Baughman¹, Kaylin McNulty¹, Patrick Gerard³, Edgar Peebles¹ ¹Mississippi State University, Department of Poultry Science, ²DSM, ³USDA-ARS, ‘Mississippi State University, Department of Pathobiology and Population Medicine, College of Veterinary Medicine, ‘Clemson University, Department of Mathematical Sciences

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Effects of the in ovo administration of the Marek’s Disease vaccine alone or in combination with the in ovo and dietary administration of supplemental 25-hydroxyvitamin D3 on the innate and adaptive splenic gene expression of 41-day-old Ross 708 broilers
Saman Fatemi*¹, ayoub Mousstaaid¹, April Levy², Sabin Poudel¹, Ishab Poudel¹ ¹Mississippi State University, Department of Poultry Science, ²DSM Nutritional Products

P361 Evaluation of transgenic Chlamydomonas reinhardtii for carotenoid and phytase production
Alessandro Rocchi*¹UG, Beth Ahner², Mohammed Yazdani³, Indira Tjorkorda², Walter Bottje¹ ¹Department of Poultry Science, University of Arkansas, ²Department of Biological and Environmental Engineering, Cornell University

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Effect of in-feed inclusion of monovalent copper on performance, intestinal lesion score, and oocyst count in coccidiosis challenged broiler chickens
Nasima Akter*, Thi Dao¹, Afsana Jahan¹, Alip Kumar¹, Shubiao Wu¹, Sukirno Sukirno¹, David Cadogan², Alessandra Monteiro³, Ian Cockshott³, Amy Moss¹ ¹University of New England, ²Feedworks Pty. Ltd., ³Animine

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Evaluation of the stability of Vitamin A acetate concentrates mixed in a vitamin-trace mineral premix over a 56-day high temperature and humidity storage stress
Rosana Hirai*, Daniel De Leon¹, Marey Randig-Biar¹, Austin Silva¹, Ervey Sanchez¹, Audrey McElroy¹, Christopher Bailey¹, Nicolas Martinez¹, Adebayo Sokale², Lawrie Musici² ¹Department of Poultry Science, Texas A&M University, ²BASF Corporation

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Effect of different levels calcium and phosphorus and their interaction with bone darkening on refrigerated and frozen storage cooked chicken leg quarters.
Luis Guzman*, Amit Morey, Laura Garner, Charles Herron, Aftab Siddique, Katherine Sierra, Bet Wu, Micah Black Auburn University

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Evaluation of boron supplementation to a semi-purified diet fed to broiler chicks on growth performance, tibia mineral composition, and apparent total tract digestibility of nutrients.
Tyler Chevalier*, Sunday Adedokun, Merlin Lindemann University of Kentucky
Poster Reception  
Monday, January 23  
4:00 – 6:00 p.m.

Milton L. Dendy Keynote Address  
B313  
Tuesday, January 24  
11:00 a.m.  
Dr. Mary Pantin-Jackwood, USDA ARS  
Chair: Dr. Danielle Graham, UARK

SCAD Business Meeting  
B312  
Tuesday, January 24  
Noon  
Chair: Dr. Danielle Graham, UARK

SPSS Business Meeting  
B314  
Tuesday, January 24  
Noon  
Chair: Dr. Curran Gehring, Tucker Milling
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- Allison Pullin, UC-Davis (M. Makagon)

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- Micaela Sinclair-Black, UGA (L. Ellestad)

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- Alison Ramser, UARK (S. Dridi)

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- Leopoldo Almeida, Auburn (W. Pacheco)

**Travel Awards**
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- Joshua Flees, Auburn
- Caitlin Evans, KSU
- Stephanie Philpot, Auburn

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- Milan Sharma, UGA

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- Poster: Samantha Plocher, MSTATE (K. Wamsley)

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- Madelyn Jennings, MSTATE
- Lauren Evans, VT
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- Sophie Chance, NCSU
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