



2012

INTERNATIONAL POULTRY SCIENTIFIC FORUM



JANUARY 23-24, 2012
In conjunction with the International Poultry Expo

2012 INTERNATIONAL POULTRY SCIENTIFIC FORUM

Concurrent Meeting of

The Southern Poultry Science Society 33rd Annual Meeting

The Southern Conference on Avian Diseases 53rd Annual Meeting

Co-Sponsored by

U.S. Poultry & Egg Association

January 23 – 24, 2012 / Georgia World Congress Center / Atlanta, Georgia

Registration

You may register on site on Monday, Jan. 23, 7:30 a.m. – 4 p.m., and Tuesday, Jan.

24, 7:30 – 11 a.m., in Registration Lobby- Building B, Georgia World Congress Center.

Program Summary

MONDAY SESSIONS JANUARY 23	ROOM NUMBER	TIME	PAGE
Processing and Products	B-312	8 a.m. – Noon	1
Nutrition I	B-313	8 a.m. – Noon	3
Environment/Management I	B-314	8 a.m. – Noon	5
Physiology - Pathology I	B-315	8 a.m. – Noon	7
Student Luncheon	B-311	Noon – 1 p.m.	
SCAD/Avian Diseases I	B-312	1 – 3:30 p.m.	9
Nutrition II	B-313	1 – 3:30 p.m.	10
Environment/Management II	B-314	1 – 3:30 p.m.	11
Nutrition III	B-315	1 – 3:30 p.m.	12
USPOULTRY Foundation Talk	B-313-314	3:30 – 4 p.m.	
Posters Displayed	B-308 and 309	1 – 5:30 p.m.	21
Poster Reception	B-308 and 309	4 – 5:30 p.m.	
TUESDAY SESSIONS JANUARY 24	ROOM NUMBER	TIME	PAGE
SCAD/Avian Diseases II	B-312	8 – 11 a.m.	14
Nutrition IV	B-313	8 – 11 a.m.	15
Environment/Management III - Pathology II	B-314	8 – 11 a.m.	17
Nutrition V	B-315	8 – 11 a.m.	19
Posters Displayed	B-308 and 309	8 – 11 a.m.	
Milton Y. Dendy Keynote Address	B-313	11 a.m.	
SCAD Business Meeting	B-312	Noon – 1 p.m.	
SPSS Business Meeting	B-313	Noon – 1 p.m.	

Officers of the Southern Poultry Science Society 2011 – 2012

President:	Mike Persia, Iowa State University
First Vice President:	Don McIntyre, Adisseo
Second Vice President:	Susan Watkins, University of Arkansas
Past President:	Joe Hess, Auburn University
Executive Secretary:	Mary Beck PO Box 202 Clemson, South Carolina 29633
Phone:	402.540.9016
Email:	mbeck@clemson.edu

Officers of the Southern Conference on Avian Diseases 2011 – 2012

President	Dr. Patti Miller, SEPRL, USDA/ARS
Directors	Dr. John El Attrache, Ambion Dr. Alejandro Banda, MS State Dr. Blanca Lupiani, Texas A&M Dr. Maricarmen Garcia, UGA Dr. Joe Giambrone, Auburn University Dr. Mary Pantin-Jackwood, SEPRL, USDA/ARS Dr. Holly Sellers, UGA Dr. John Smith, Fieldale Dr. Dennis Wages, NCSU Dr. Susan Williams, UGA
Secretary / Treasurer	Dr. Mark W. Jackwood Department of Population Health University of Georgia 953 College Station Road Athens, Georgia 30602-4875
Phone	706.542.5475
Email	mjackwoo@uga.edu

Processing and Products

Chair: Allen Byrd, Texas A&M University

Room Number, B-312

Monday, January 23

8:15 a.m. M1

Strain and gender effects on broiler meat quality

Melissa Miller^{*TSC}, Mi Yeon Shim², Muhammad Tahir³, Arthur Karnuah², Sammy Aggrey², Gene Pesti², Dean Pringle¹ ¹Department of Animal and Dairy Science, University of Georgia, Athens, ²Department of Poultry Science, University of Georgia, Athens, ³Department of Animal Nutrition, Agricultural University, Peshawar, Khyber Pakhtunkhwa, Pakistan

8:30 a.m. M2

Application of 1, 3-Dibromo-5, 5-Dimethylhydantoin to reduce *Campylobacter jejuni* populations on poultry

Jacob Smith^{*TSC}, Manpreet Singh¹, Jackson McReynolds², Eric Liimatta³ ¹Auburn University, Auburn, AL, ²Elanco Food Solutions, Greenfield, IN, ³Albebarle Corporation, Baton Rouge, LA

8:45 a.m. M3

Effect of selected concentrations and combinations of acetic, citric, and propionic acid solutions on bacterial contamination of raw chicken skin

Anita Menconi^{*TSC}, Srichaitanya Shivaramaiah¹, Angélica Londero², Andressa Reginatto², Neil Pumford¹, Marion Morgan Jr.¹, Amanda Wolfenden¹, Lisa Bielke¹, Billy Hargis¹, Guillermo Tellez-Isaias¹ ¹University of Arkansas, Fayetteville, AR, ²Universidade Federal de Santa Maria, Santa Maria, Brazil

9 a.m. M4

A Chemical Additive to Limit Potential Bacterial Contamination in Chill Tanks

Brad Schambach^{*TSC}, Mark Berrang¹, Mark Harrison² ¹USDA-ARS-Russell Research Center, Athens, GA, ²University of Georgia Food Science and Technology, Athens, GA

9:15 a.m. M5

Alternative to post mortem aging to improve tenderness and deboning yield of whole chickens

Laura Bauermeister^{*SC}, Amit Morey, Gretchen Nagel, Shelly McKee Auburn University, Auburn, AL

9:30 a.m. M6

In-vitro evaluation of the most effective combination of essential oils against *Salmonella* and *Campylobacter* spp

Rajani Thanissery^{*SC}, Sophia Kathariou, Douglas Smith North Carolina State University, Raleigh NC

9:45 a.m. M7

Strain and sex effects on growth performance, and carcass traits of contemporary commercial cross broilers

Mi Yeon Shim¹, Muhammad Tahir², Arthur Karnuah¹, Melissa Miller¹, Dean Pringle¹, Sammy Aggrey¹, Gene Pesti¹ ¹University of Georgia, ²Agricultural University, Peshawar, Khyber Pakhtunkhwa, Pakistan

10 a.m. Break.

10:15 a.m. M8

Generation of Airborne *Listeria* from Floor Drain

Mark Berrang¹, Joseph Frank² ¹USDA-ARS-Russell Research Center, Athens, GA, ²University of Georgia Food Science and Technology, Athens, GA

10:30 a.m. M9

Therapeutic efficacy of polyherbal feed additive against *Salmonella enteritidis* induced enteritis in chicken

Shivi Maini¹, Koundanya Laxmikant², Gangadhar Kulkarni², Avinash Karpe², Sudhir Rajurkar³, Kotagiri Ravikanth¹, Anand Deshpande² ¹Ayurvet Limited, Katha, Baddi, Himachal Pradesh, India, ²College of Veterinary & Animal Sciences, MASFU, Parbhani, Maharashtra, India ³Dept. of Veterinary Pharmacology, College of Veterinary & Animal Sciences, Parbhani, Maharashtra, India

10:45 a.m. M10

Role of polyherbal antistressor product in improving meat quality attributes in broilers
Shivi Maini¹, Sandeep Rindhe², Kotagiri Ravikanth¹, S.U. Suryavanshi², K.K. Khose², R.N. Waghmare² ¹*Ayurvet Limited, Katha, Baddi, Himachal Pradesh, India*, ²*College of Veterinary & Animal Sciences, MAFSU, Parbhani, Maharashtra, India*

11:00 a.m. M11

Aerobic and anaerobic cecal bacterial flora of commercially processed broilers
Arthur Hinton Jr¹, Kimberly Ingram¹, Mollie Jenkins² ¹*Russell Research Center, Athens, GA*, ²*950 College Station Road, Orangeburg, SC*

11:15 a.m. M12

Performance of broiler chickens fed corn-soy diets without or with the inclusion of fibrous protein ingredients, supplemented with carbohydrases and protease
Luis F Romero¹, Ceinwen E Gilbert¹, V Ravindran² ¹*Danisco Animal Nutrition, Marlborough, Wiltshire, United Kingdom (Great Britain)*, ²*Massey University, Palmerston North, Manawatu-Wanganui, New Zealand*

11:30 a.m. M13

Live Production and Carcass Characteristics of Broilers Fed a Blend of Poultry Fat and Corn Oil Derived from Distiller's Dried Grains with Solubles (DDGS)
E.J. Kim¹, J.L. Purswell², J.D. Davis³, R.E. Loar, II⁴, K. Karges⁴ ¹*ARS-USDA, Poultry Research Unit, Mississippi State, MS*, ²*USDA-ARS Poultry Research Unit, Mississippi State, MS*, ³*Department of Agricultural and Bioengineering, Mississippi State University, Mississippi, MS*, ⁴*POET Nutrition, Sioux Falls, SD*

11:45 a.m. M14

Performance of broiler chickens fed a diet supplemented with Zinc (Zn) sourced from polysaccharide complex Zn (SQM® Zn) or inorganic ZnSO4 at levels of 0, 20, 40, 60, 80 and 100 ppm
M. D. Sims¹, J. E. Garrett² ¹*Virginia Diversified Research Corp, Harrisonburg VA*, ²*QualiTech, Inc., Longmont, CO*

Noon Lunch

Nutrition I

Chair: Cesar Coto, Cobb-Vantress

Room Number, B-313

Monday, January 23

8:15 a.m. M15

Effects of phytase and xylanase supplementation on ileal digestibility and growth performance of female broilers from 1 to 32 d of age

Curran Gehring^{*1SC}, Mike Bedford², William Dozier, III¹ ¹*Auburn University, Auburn, Alabama*, ²*AB Vista Feed Ingredients, Marlborough, Wiltshire, United Kingdom (Great Britain)*

8:30 a.m. M16

Effect of a protease on a commercial carbohydrase when fed to broiler chickens.

I B Barasch^{*1SC}, J L Grimes¹, P E Biggs², J D Garlich², J J Wang² ¹*North Carolina State University, Raleigh, NC*, ²*BioResource International, Inc., Morrisville, NC*

8:45 a.m. M17

Dietary calcium, phosphorus and phytase effects on broiler performance during a natural exposure to *Clostridium perfringens*

Diego Paiva^{*1SC}, Carrie Walk², F.W. Pierson³, Rami Dalloul¹, Audrey McElroy¹ ¹*Virginia Tech Department of Animal and Poultry Sciences, Blacksburg Virginia*, ²*AB Vista, Marlborough, Marlborough, United Kingdom (Great Britain)*, ³*Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, Virginia*

9 a.m. M18

Inclusion of Allzyme SSF® in brown layer diets containing up to 30% distillers dried grains with solubles (DDGS) reduces the detrimental effects on shell quality

Anthony D. Quant^{*SC}, Anthony J. Pecatore, James L. Pierce, Tuoying Ao, Austin H. Cantor, Micheal J. Ford, W. D. King *Alltech/University of Kentucky Nutrition Research Alliance, Lexington, KY*

9:15 a.m. M19

The influence of supplemental fat and enzyme inclusion on the performance of Bovan Robust laying hens

Joshua Hamburg^{*SC}, Amy Batal, Robert Beckstead *University of Georgia, Athens, GA*

9:30 a.m. M20

The effect of dietary phytic acid and phytase on performance and small intestinal health of coccidia-vaccinated broilers

Regina Lehman^{*1SC}, Hannah Wladecki¹, Carrie Walk², Aaron Cowieson³, Audrey McElroy^{1C} ¹*Virginia Tech, Blacksburg, Virginia*, ²*AB Vista, Marlborough, United Kingdom (Great Britain)*, ³*The University of Sydney, Camden, NSW, Australia*

9:45 a.m. M21

Effect of low phytate and normal phytate soybean meal and dietary corn particle size on male broiler performance and nutrient digestibility to 21 days of age

B. Nusairat^{*1SC}, R. Qudsieh¹, C. R. Stark¹, V. R. Pantalone², J. Brake¹ ¹*North Carolina State University, Raleigh, NC*, ²*University of Tennessee, Knoxville, TN*

10 a.m. Break.

10:15 a.m. M22

Effect of roller mill ground corn inclusion and litter type on broiler performance and fecal characteristics

Yi Xu^{*SC}, Charles Stark, Peter Ferket, John Brake *Department of Poultry Science, NC State University, Raleigh, NC*

10:30 a.m. M23

Evaluation of ESBM and corn particle size on broiler performance

Wilmer Pacheco^{*SC}, Charles Stark, John Brake, Peter Ferket *North Carolina State University, Raleigh, NC*

10:45 a.m. M24

Effect of incorporation of DDGS and canola meal to turkey diets on the dietary electrolyte balance, performance, and litter moisture

Mahmoud Farahat^{*TSC}, El-Sayed Hassanein², Walaa Abdel-Razik², Sally Noll¹ ¹*University of Minnesota, St. Paul, MN* ²*Faculty of Veterinary Medicine, Zagazig University, Zagazig, Sharkia, Egypt*

11 a.m. M25

Effect of roller mill ground corn inclusion and litter type on broiler performance and fecal characteristics

Charles Stark^{*TSC}, Peter Ferket, John Brake *Department of Poultry Science, NC State University, Raleigh, NC*

11:15 a.m. M26

Evaluation of energy values of various oil sources when fed to broiler chickens

G Raj Murugesan^{*TSC}, Brian Kerr², Michael Persia¹ ¹*Iowa State University, Ames, IA* ²*USDA-ARS-NLAE*

11:30 a.m. M27

Effects of calcium and phosphorus levels during the grower phase for Heritage broilers: bone mineralization, strength and leg health

M.J. Da Costa^{*TSC}, E.O. Oviedo¹, M.R. Dalmagro¹, P.L. Mente², K.N. Claassen¹, A. Mitchell³, H Engster⁴, R. Mitchell⁴ ¹*Department of Poultry Science, North Carolina State University, Raleigh, NC*, ²*Department of Biomedical Engineering, NC State University, Raleigh, NC*, ³*USDA, ARS, ANRI, Beltsville, MD*, ⁴*Perdue Farms Inc., Salisbury, MD*

11:45 a.m. M28

Evaluation of carryover effects of dietary lysine intake by Cobb 500 broiler breeder hens on progeny live performance

Leonel Mejia^{*TSC}, Keyla Lopez, Christopher McDaniel, Holly Parker, Alex Corzo *Mississippi State University, Mississippi State, MS*

Noon Lunch

Environment/Management I

Chair: Nick Anthony, University of Arkansas

Room Number, B-314

Monday, January 23

8:15 a.m. M29

Investigation of *Cambylobacter jejuni* in the air of laying hen flocks

Marwa Ahmed^{*1, 2SC}, Jochen Schulz¹, Jörg Hartung¹ ¹*Institute for Animal Hygiene, Animal Welfare and Farm Animal Behaviour, University of Veterinary Medicine Hannover, Foundation, Germany* ²*Departement of Animal Hygiene and Zoonoses, Faculty of Veterinary Medicine, Mansoura University, Mansoura, Egypt*

8:30 a.m. M30

Effect of 50% coarse corn inclusion in pelleted diets on broiler performance to 49 days of age.

S. Auttawong^{*SC}, Y. M. Lin, X. Yu, P. R. Ferket, C. Stark, J. Brake *North Carolina State University, Raleigh, NC*

8:45 a.m. M31

Efficacy of feed additives to reduce the biological effects of naturally occurring aflatoxin fed to chicks reared to 3 weeks of age.

J E Nixon^{*SC}, J E Grimes, J T Brake, C R Stark *Department of Poultry Science, North Carolina State University, Raleigh, NC*

9 a.m. M32

Effects of high concentration cholecalciferol-enriched diets on long term laying hen production, egg quality, and health

Mallory Higgins^{*SC}, Tong Wang, Linxing Yao, Michael Persia *Iowa State University, Ames, IA*

9:15 a.m. M33

Genomic characterization of growth-selected and randombred local chickens in Egypt

Mostafa Helal^{*SC}, Essam El-Gendy *Cairo University, Giza, Giza, Egypt*

9:30 a.m. M34

Comparison of ammonia emission rates, litter quality and microbiological fluctuations in commercial broiler facilities using a biological and a chemical litter treatment for two consecutive broiler flocks.

D. B. Gholap^{*SC}, K. S. Macklin, J. P. Blake, S. F. Bilgili ¹*Auburn University, Auburn, AL*

9:45 a.m. M35

Efficacy of foam treatments against *Salmonella Typhimurium* on poultry contact surfaces

Martia Ross^{*1SC}, David Caldwell¹, Morgan Farnell² ¹*Department of Poultry Science, Texas AgriLife Research and Extension, Texas A&M System, College Station, TX*, ²*Texas AgriLife Research and Extension, Texas A&M System, College Station, TX*

10 a.m. Break.

10:15 a.m. M36

The impact of divergent selection for ascites incidence on incubation hatch window

Alex Gilley^{*SC}, I. Harford, S. Krishnamoorthy, J.G. Mason, N.B. Anthony *University of Arkansas, Fayetteville, AR*

10:30 a.m. M37

Foot pad dermatitis and experimentally induced coccidiosis in young turkeys housed with/without floor heating

Amr Abd El-Wahab^{*1SC}, Christian Visscher¹, Sonja Wolken², Andreas Beineke³, Martin Beyerbach⁴, Jean-Michel Reperant⁵, Josef Kamphues¹ ¹*Institute of Animal Nutrition, University of Veterinary Medicine Hannover, Germany*, ²*Institute of Parasitology, University of Veterinary Medicine Hannover, Germany*, ³*Institute of Pathology, University of Veterinary Medicine Hannover, Germany*, ⁴*Institute of Biometry and Information Processing, University of Veterinary Medicine Hannover, Germany*, ⁵*French Agency for Food, Environmental and Occupational Health & Safety, ANSES, Maisons-Alfort, France*

10:45 a.m. M38

Concentrations of total aerobic and anaerobic bacteria in broiler litter, at varying locations within the house, conducted over a one year time.

Z. Williams^{*SC}, K. Macklin *Auburn University, Auburn, AL*

11 a.m. M39

Evaluation of stress hormones, gross pathology, and cessation of movement in caged reared layers depopulated with a compressed air foam system

John Hoffman^{*SC}, David Caldwell, Kendre Stringfellow, Daad Abi-Ghanem, Luc Berghman, Jason Lee, Morgan Farnell *Texas A&M University, College Station, TX*

11:15 a.m. M40

Influence on necrotic enteritis (NE) development of Distillers Dried Grains with Solubles (DDGS)

KS Macklin^{*}, WA Dozier III, LN Speegle *Auburn University, Auburn, AL*

11:30 a.m. M41

Evaluation of LED lighting in broiler production

Susan Watkins^{*} *University of Arkansas Division of Ag Center of Excellence for Poultry Science, Fayetteville, AR*

11:45 a.m. M42

Air distribution in broiler houses when tunnel ventilating

Brian Fairchild^{*}, Mike Czarick *University of Georgia, Athens, GA*

Noon Lunch

Physiology - Pathology I

Chair: Chris McDaniel, Mississippi State University

Room Number, B-315

Monday, January 23

8:15 a.m. M43

Effect of Prebiotic, organic trace minerals, and a blend of pre- and probiotics on natural and acquired maternal antibodies in chicken pullets

Juan Carlos Rodriguez-Lecompte^{*}, Peris Munyaka, Harold Echeverry, Mohammed Alizadeh, Alexander Yitbarek, Bill Guenter, James House *University of Manitoba, Winnipeg, Manitoba, Canada*

8:30 a.m. M44

Impact of six different intestinal bacteria on broiler breeder sperm motility in vitro

Melissa Haines^{*SC}, Holly Parker, Chris McDaniel, Aaron Kiess *Mississippi State University, Mississippi State, MS*

8:45 a.m. M45

Enhancement of sperm-mediated gene transfer and semen characteristics by laser irradiation

Mohamed Abdel-Fattah^{*ISC}, Essam El-Gendy¹, Mona Mohamed¹, Yahia Badr¹, Mohamed Salama² *¹Cairo University, Giza, Giza, Egypt, ²Ain Shams University, Cairo, Cairo, Egypt*

9 a.m. M46

Novel method of producing chimeric chicks using piggyBac and JetPEI

Brian Jordan^{*ISC}, Mike Stark², Robert Beckstead¹ *¹University of Georgia, Athens, GA, ²Brigham Young University, Provo, UT*

9:15 a.m. M47

Effects of in ovo injection of 25-hydroxycholecalciferol on bone mineralization in Ross × Ross 708 broilers

A. Bello^{*SC}, D. E. Rowe, M. R. Bricka, A. Parker, W. Zhai, E. D. Peebles *Mississippi State University, Mississippi State, MS*

9:30 a.m. M48

Comparative evaluation of air cell and egg shell temperature measurement methodologies for the estimation of embryo temperature in broiler hatching eggs

W. Zhai¹, E. D. Peebles¹, P. D. Gerard² *¹Mississippi State University, Mississippi State, MS, ²Clemson University, Clemson, SC*

9:45 a.m. M49

Effects of nicarbazin and increased photoperiod on blood glucose and liver glucose and glycogen concentrations in male broilers

E. D. Peebles¹, K. Bafundo², S. K. Womack¹, W. Zhai¹, R. Pulikanti¹, L. W. Bennett¹ *¹Mississippi State University, Mississippi State, MS, ²Phibro Animal Health Corporation, Ridgefield Park, NJ*

10 a.m. Break.

10:15 a.m. M50

The impact of divergent selection for ascites on blood parameters of altitude challenged broilers.

James Mason^{*ISC}, A.D. Gilley¹, I. Harford¹, S. Krishnamoorthy¹, B. Huff², G. Huff², N.B. Anthony¹ *¹University of Arkansas, Fayetteville, AR, ²USDA-ARS, Fayetteville, AR*

10:30 a.m. M51

Preliminary studies in light turkey syndrome: histopathology of select gut and immune tissue.

Alamanda Calvert^{*SC}, Andre Ziegler, Sally Noll *University of Minnesota, St. Paul, MN*

10:45 a.m. M52

Effects of spray dosage of a live attenuated Mycoplasma gallisepticum vaccine on the vaccination efficiency and associated in vivo M. gallisepticum populations in layers

Roy Jacob^{*ISC}, E. David Peebles¹, Spencer Leigh², Scott Branton², Jeff Evans² *¹Mississippi State University, Mississippi State, MS, ²USDA/ARS Poultry Research Unit, Mississippi State, MS*

11 a.m. M53

A comparative study of the virulence of different strains of Histomonas meleagridis in turkeys

Mathew Abraham^{*SC}, Larry McDougald, Robert Beckstead *The University of Georgia, Athens, GA*

11:15 a.m. M54

Oral vaccination with modified chitosan and a synthetic Salmonella peptide induces mucosal immune response

H.M. Fleming^{SC}, O.B. Faulkner, S. Shivaramaiah, M.J. Morgan, N.R. Purnford, C. Lester, A.D. Wolfenden, L.R. Bielke, G. Tellez, B.M. Hargis *University of Arkansas, Fayetteville, AR*

11:30 a.m. M55

The influence of broiler age, sex, and body weight on deep pectoral myopathy induction.

Roger Lien^{*1}, Sacit Bilgili¹, Joe Hess², Kellye Joiner¹ ¹*Auburn University*, ²*Department of Poultry Science, Auburn, AL*

11:45 a.m. M56

Effects of feeding processed cassava waste meal on growth and apparent nutrient digestibility of broiler chickens.

Stanley Omoh Omoikhoje^{*}, Daniel Maya, Clement Ebanehita Isidahomen, Eromosele Theophilus Ehebha *Ambrose Alli University, P.M.B 14, Ekpoma, Edo State, Nigeria.*

Noon Lunch

SCAD/Avian Diseases I

Chair: Patti Miller, USDA/ARS

Room Number, B-312

Monday, January 23

1:15 p.m. M57

The Avian Enteric Tract: Form, Function and Flora

Stephen R. Collett^{*} *University of Georgia, CVM, Athens, GA*

2 p.m. M58

Evaluation of a novel chicken astrovirus isolate in the pathogenesis of Runting Stunting Syndrome in chickens

Kyung-il Kang^{*SC}, Holly Sellers, Erich Linneman, Egbert Mundt *PDRC, University of Georgia, Athens, GA*

2:15 p.m. M59

Immunity against a virulent field isolate of ILTV induced by recombinant and modified live virus vaccines in commercial Layers

Victor Palomino^{*SC}, Guillermo Zavala, Sunny Cheng *University of Georgia, Athens, GA*

2:30 p.m. M60

Continuous passage of low pathogenic avian influenza viruses in ducks resulted in a higher frequency of amino acid mutations in the hemagglutinin of a chicken isolate in comparison to a wild bird isolate

Callie Ridenour^{*1SC}, Les Jones², Mark Tompkins², Ralph Tripp², Egbert Mundt¹ *¹Poultry Diagnostic and Research Center, Department of Infectious Disease, University of Georgia, Athens, GA, ²Department of Infectious Disease, University of Georgia, Athens, GA*

2:45 p.m. M61

Evaluation of immune response to chitosan-based adjuvated Bordetella avium vaccines

R.H. Harris^{*SC}, N.R. Pumford, M.J. Morgan, A.D. Wolfenden, S. Shivaramaiah, O.B. Faulkner, L.R. Bielke, B.M. Hargis *University of Arkansas, Fayetteville, AR*

3:30 p.m. USPOULTRY Foundation Talk

USPOULTRY and its Foundation: Past, Present and Future of the Research Program Presentation.

Dr. John Glisson, USPOULTRY Foundation, Director of Research

Dr. Henry Marks, USPOULTRY Foundation

Dr. John Smith, Fieldale Farms Corporation/USPOULTRY Foundation Research Advisory Committee Member

4 p.m. Poster Reception

Nutrition II

Chair: Benton Hudson, Tyson Foods

Room Number, B-313

Monday, January 23

1 p.m. M62

Effect of different sources and levels of supplemental manganese on growth performance and tissue mineral content of growing broiler chickens

Alyssa Conly^{*1SC}, Daniel Peterson¹, Elizabeth Koutsos² ¹*Animal Science Department, California Polytechnic State University, San Luis Obispo, CA*, ²*Micronutrients, Inc., Indianapolis, IN*

1:15 p.m. M63

Apparent metabolizable energy and standardized ileal amino acid digestibility of low oligosaccharide soybean meals fed to broilers

Kurt Perryman^{*SC}, William Dozier, III *Auburn University, Auburn, AL*

1:30 p.m. M64

Evaluation of feeding different digestible lysine intake levels on semen characteristics of broiler breeders

Chinwendu Obi^{*SC}, Holly Parker, Christopher McDaniel, Alex Corzo *Mississippi State University, Mississippi State, MS*

1:45 p.m. M65

Supplementing 25-hydroxyvitamin D3 in the starter diet vs. all diets in two commercial broiler flocks

Pieter Post^{*1SC}, Joey Bray¹, Brad Turner² ¹*Stephen F. Austin State University, Nacogdoches, TX*, ²*DSM Nutritional Products, LLC., Parsippany, NJ*

2 p.m. Break.

2:15 p.m. M66

A nutritional approach to the use of anticoccidial vaccines in broilers: Glutamine utilization in critical stages for immunity acquisition

F.J. Mussini^{*SC}, S.D. Goodgame, C. Lu, C.D. Bradley, S.M. Fiscus, P.W. Waldroup *Poultry Science Department, University of Arkansas, Fayetteville, AR*

2:30 p.m. M67

Antibody-mediated immune response in chicken pullets fed diets supplemented with prebiotic, organic trace minerals, and a blend of pre- and probiotic

Mohammad Alizadeh^{*SC}, Alexander Yitbarek, Harold Echeverry, Peris Munyaka, Bogdan Slominski, Juan Carlos Rodriguez-Lecompte *University of Manitoba, Winnipeg, Manitoba, Canada*

2:45 p.m. M68

Effects of β -mannanase and a cocktail NSPase separately and in combination in low energy diets on broiler performance and processing yield

Joseph Klein^{*1SC}, Mallori Williams¹, Blyn Brown², Jason Lee¹ ¹*Poultry Science Department, AgriLife Research, Texas A&M System, College Station, TX* ²*Ezyvia LLC, Sheridan, IN*

3 p.m. M69

Metabolizable and net energy values for feed ingredients and an enzyme complex in broiler chicks

S. Cerrate Fernandez^{*}, R. Ekmay, J. England, C. Coon *University of Arkansas, Fayetteville, AR*

3:15 p.m. M70

Economic importance of dietary feed enzymes on the performance of broiler chickens

Muhammad Tahir¹, Amy Batal², Mi Yeon Shim³, Gene Pesti³ ¹*Department of Animal Nutrition, Agricultural University, Peshawar, Khyber Pakhtunkhwa, Pakistan*, ²*Huvepharma, Inc., Peachtree, GA*, ³*University of Georgia, Athens, GA*

3:30 p.m. USPOULTRY Foundation Talk

USPOULTRY and its Foundation: Past, Present and Future of the Research Program Presentation.

Dr. John Glisson, USPOULTRY Foundation, Director of Research

Dr. Henry Marks, USPOULTRY Foundation

Dr. John Smith, Fieldale Farms Corporation/USPOULTRY Foundation Research Advisory Committee Member

4 p.m. Poster Reception

Environment/Management II

Chair: Yi Liang, University of Arkansas

Room Number, B-314

Monday, January 23

1 p.m. M71

A comparison of pine shavings vs. chopped willow as bedding for rearing broiler chickens. Paul Patterson¹, Mike Hulet¹, Terri Cravener¹, Mike Hile², Eileen Wheeler² ¹Department of Poultry Science, The Pennsylvania State University, University Park, PA, ²Dept of Ag and Biological Engineering, The Pennsylvania State University, University Park, PA

1:15 p.m. M72

Implications of the Darkling Beetle Life Cycle and Timing of Treatment Applications on Darkling Beetle Populations in Broiler Grow Out.

J.J. Arends¹, J.D. Skinner², R.H. Stonerock² ¹Jabb of the Carolinas, Inc., Pine Level, NC, ²Terregena, Inc., Raleigh, NC

1:30 p.m. M73

Simple test kit for measuring CO₂ and NH₃ emissions from broiler litter

J. P. Blake^{*}, K. S. Macklin, D. B. Gholap Department of Poultry Science, Auburn University, Auburn, AL

1:45 p.m. M74

Controlling the thermal micro-environment on broiler transport trucks – better welfare – better productivity?

Malcolm Mitchell^{*}, Peter Kettlewell, Marianne Farish SAC, Edinburgh, Midlothian, United Kingdom (Great Britain)

2 p.m. Break.

2:15 p.m. M75

Field evaluation of controlled surface wetting system to cool broiler chickens

Yi Liang¹, Tom Tabler², Susan Watkins¹, Ivan Berry¹ ¹University of Arkansas, ²Former University of Arkansas, Fayetteville, AR

2:30 p.m. M76

Monitoring thermal conditions and egg movement in the nest during natural incubation.

malcolm mitchell¹, Peter Kettlewell¹, Roger Hoxey², John Lowe³ ¹SAC, Edinburgh, Midlothian, United Kingdom (Great Britain), ²University of Birmingham, Birmingham, Warwickshire, United Kingdom (Great Britain), ³Royal Veterinary College, London, Hertfordshire, United Kingdom (Great Britain)

2:45 p.m. M77

The effect of dietary protein, feed ingredient and protease on performance, excreta pH, and nitrogen volatilization

Roselina Angel¹, Wendy Powers², Todd Applegate³, Encarnacion Jimenez-Moreno¹, Sergio Vieira⁴ ¹University of Maryland, College Park, MD, ²Michigan State, East Lansing, MI, ³Purdue University, West Lafayette, IN, ⁴Universidade Federal do Rio Grande Do Sul, Porto Alegre, RS, Brazil

3 p.m. M78

The effects of *Saccharomyces cerevisiae* fermentation products on broiler breeder and progeny performance

Wallace Berry^{*}, S Oates, J Hess, Jonathan Broomhead Auburn University, Auburn, AL

3:15 p.m. M79

A dosimetry study of the effects of canthaxanthin in broiler breeders from 45 to 62 weeks of age

J. Brake^{*} North Carolina State University, Raleigh, NC

3:30 p.m. USPOULTRY Foundation Talk

USPOULTRY and its Foundation: Past, Present and Future of the Research Program Presentation.

Dr. John Glisson, USPOULTRY Foundation, Director of Research

Dr. Henry Marks, USPOULTRY Foundation

Dr. John Smith, Fieldale Farms Corporation/USPOULTRY Foundation Research Advisory Committee Member

4 p.m. Poster Reception

Nutrition III

Chair: Sunday Adedokun, Purdue University

Room Number, B-315

Monday, January 23

1 p.m. M80

Energy use in growing broiler feed increasing levels of dried distillers grains with solubles
R.S. Gomez¹, M.L. Angeles¹, R.E. Ramirez¹, R.M.A. Islas² ¹CENIDFyMA-INIFAP, Ajuchitlan, Queretaro, Mexico, ²FES-Cuautitlan-UNAM, Ajuchitlan, Queretaro, Mexico

1:15 p.m. M81

Broiler responses to reduced protein and energy diets supplemented with lysine, methionine and threonine

A Abudabos^{*} King Saud University, Riyadh, Riyadh, Saudi Arabia

1:30 p.m. M82

Standardized ileal amino acid digestibility of feed ingredients in laying hens and broilers
Sunday Adedokun¹, Patricia Jaynes¹, Robert Payne², Todd Applegate¹ ¹Department of Animal Sciences, Purdue University, West Lafayette, IN, ²Evonik-Degussa Corporation, Kennesaw, GA

1:45 p.m. M83

Effects of calcium and phosphorus levels on heritage broilers from 50 to 63 days of age
E.O Oviedo-Rondón¹, M.R. Dalmagro¹, M.J. Da Costa¹, P.L. Mente², K.N. Claassen¹, A. Mitchell³, H. Engster⁴, R. Mitchell⁴ ¹Department of Poultry Science, North Carolina State University, Raleigh, NC, ²Department of Biomedical Engineering, NC State University, Raleigh, NC, ³USDA, ARS, ANRI, Beltsville, MD, ⁴Perdue Farms Inc., Salisbury, MD

2 p.m. Break.

2:15 p.m. M84

Ileal digestibility of energy, starch, fat, and protein in corn- or wheat-based broiler diets containing exogenous carbohydrases and protease

Luis F Romero¹, Peter W Plumstead¹, V Ravindran² ¹Danisco Animal Nutrition, Marlborough, Wiltshire, United Kingdom (Great Britain), ²Massey University, Palmerston North, Manawatu, New Zealand

2:30 p.m. M85

NIRS calibrations for total and phytate P in poultry feed ingredients

Muhammad Tahir¹, Mi Yeon Shim², Nelson Ward³, Gene Pesti² ¹Department of Animal Nutrition, Agricultural University, Peshawar, Khyber Pakhtunkhwa, Pakistan, ²University of Georgia, Athens, GA ³DSM Nutritional Products Inc, Parsippany, NJ

2:45 p.m. M86

Effect of adding dietary guar bean, guar meal and guar gum on productive performance of broiler chicks

Sherif Hassan¹, S. M. Hassan and Y.M. Al-Yousef² ¹Assistant Professor, ²Animal and fish production Department, King Faisal University, Al-Hufuf, Al-Hassa, 31982, Saudi Arabia

3 p.m. M87

Nitrogen and mineral balance in broiler chickens fed diets supplemented with organic copper
O.L.A. Rodriguez¹, A.M.J. Gonzalez¹, R.S. Gomez², M.L. Angeles² ¹Universidad Autonoma Chapingo, Ajuchitlan, Queretaro, Mexico, ²CENIDFyMA-INIFAP, Ajuchitlan, Queretaro, Mexico

3:15 p.m. M88

Effect of in ovo selenium injection of broiler breeder eggs on tissue selenium concentration, lipid peroxidation, immune response and post hatch development

Lizza Macalintal^{*}, Austin Cantor, Anthony Pescatore, Karl Dawson, James Pierce, Michael Ford, Tuoying Ao, H. David Gillespie, Amber Meredith Alltech-University of Kentucky Nutrition Research Alliance, Lexington, KY

3:30 p.m. USPOULTRY Foundation Talk

USPOULTRY and its Foundation: Past, Present and Future of the Research Program Presentation.

Dr. John Glisson, USPOULTRY Foundation, Director of Research

Dr. Henry Marks, USPOULTRY Foundation

Dr. John Smith, Fieldale Farms Corporation/USPOULTRY Foundation Research Advisory Committee Member

4 p.m. Poster Reception

SCAD/Avian Diseases II

Chair: Susan Williams, University of Georgia

Room Number, B-312

Tuesday, January 24

8:30 a.m. T89

Investigating the turkey gut virome and its role in enteric disease

J. Michael Day^{*} *USDA-ARS, Athens, GA*

9:15 a.m. T90

Rapid and cost-effective molecular Salmonella serotyping assay utilizing Luminex® multiplexing technology.

Gunjot Rana¹, Michaela Hoffmeyer¹, Brad Mire¹, Douglas Waltman² ¹*Luminex Corp., Austin, TX* ²*Georgia Poultry Lab Network, Oakwood, GA*

9:30 a.m. T91

Comparative Efficacy of Citrex Liquid (drinking water) or Citrex Powder (feed additive) for the Reduction of Salmonella in Broiler Chickens

Greg Mathis¹, Brett Lumpkins¹, Charles Hofacre², Manuel Contreras³ ¹*Southern Poultry Research, Inc., Athens, GA* ²*University of Georgia, Athens, GA*, ³*Citrex, Inc., Miami, FL*

9:45 a.m. T92

Assessment of the probability of reassortment between pandemic H1N1 (pH1N1) influenza virus with avian influenza subtype viruses

Jennifer Pfeiffer^{*}, David Suarez *Southeast Poultry Research Laboratory, Athens GA*

10 a.m. Break.

10:30 a.m. T93

Complete genome sequence and dinicopathological characterization of a virulent Newcastle disease virus isolated from poultry in South America

Diego Diel¹, Leonardo Susta², Stivalis Cardenas Garcia³, Mary Lea Killian⁴, Corrie Brown², Patti Miller¹, Claudio Afonso¹ ¹*Southeast Poultry Research Laboratory, Athens, GA*, ²*The University of Georgia, College of Veterinary Medicine, Athens, GA*, ³*Investigación Aplicada S.A., Tehuacán, Puebla, Mexico*, ⁴*USDA, APHIS, Diagnostic Virology Laboratory National Veterinary Services Laboratory, Avian Viruses Section Laboratory, Ames, IA*

10:45 a.m. T94

Generation and characterization of a LaSota strain-based recombinant Newcastle disease virus expressing the red fluorescent protein for use in co-infection studies

Patti Miller¹, Haixia Hu², QIngzhong Yu¹, Diego Diel¹, Jinnan Li³ ¹*Southeast Poultry Research Laboratory, Athens, GA*, ²*Jilin University, Changchun, Jilin, China*, ³*Northeast Agricultural University, Harbin City, Heilongjiang, China*

11 a.m. Dendy Keynote Address

Nutrition IV

Chair: Marnie Mellencamp, Rakco

Room Number, B-313

Tuesday, January 24

8 a.m. T95

Essential oil compounds in combination with benzoic acid as a new feed additive concept: effects on performance of broiler chickens

Cees Kwakernaak¹, Laura S. Star¹, Gilbert M. Weber² ¹*Schothorst Feed Research B.V., Lelystad, AM, Netherlands*, ²*DSM Nutritional Products Ltd., Kaiseraugst, AG, Switzerland*

8:15 a.m. T96

Dose response effects of a formulation of essential oil compounds with an organic acid in broilers

Hervé Juin¹, Gilbert M. Weber² ¹*INRA Magneraud, Surgères, Surgères, France*, ²*DSM Nutritional Products Ltd., Kaiseraugst, AG, Switzerland*

8:30 a.m. T97

Effect of a dietary feed additive with anti-inflammatory properties on growth performance and immune response of chickens

Theo Niewold¹, Kurt Van de Mierop², Anne Goderis² ¹*Catholic University of Leuven, Department Animal-Feed-Quality, Heverlee, Vlaams-Brabant, Belgium*, ²*NUTREX NV, Lille, Antwerp, Belgium*

8:45 a.m. T98

Effect of *Bacillus subtilis* C-3102 (CALSPORIN®) with growth promoting antibiotics on live performance of broiler chickens.

Tomohiro Hamaoka¹, Brian Y. Lee¹, Danny M. Hooge², Michael D. Sims³, Naoki Otomo¹ ¹*Calpis USA, Inc., Mt. Prospect, IL*, ²*Hooge Consulting Service, Inc., Eagle Mountain, UT*, ³*Virginia Diversified Research, Inc., Harrisonburg, VA*

9 a.m. T99

Hypocholesterolemic effect of herbal supplement on serum and egg yolk cholesterol in layers

Shivi Maini¹, Ajay Kanduri², Kotagiri Ravikanth², Vithal Munde¹, Shirish Kokane¹ ¹*College of Veterinary & Animal Sciences, Udgir, Maharashtra, India*, ²*Ayurvet Limited, Baddi, Himachal Pradesh, India*

9:15 a.m. T100

Study of the presence of heavy metals in anti-mycotoxin additives based in aluminosilicates.

Juan Carlos Medina B., Robertina Zuniga, Ruben Perez Franco *NUTEK S.A. de C.V., Tehuacan, Puebla, Mexico*

9:30 a.m. T101

Effects of aflatoxins and fumonisins on performance of broilers and the efficacy of a feed additive containing fumonisin degrading enzyme

Karin Naehrer¹, Carlos Mallmann² ¹*BIOMIN Holding, Herzogenburg, Lower Austria, Austria*, ²*Federal University of Santa Maria, Santa Maria, RS, Brazil*

9:45 a.m. T102

Functional oils are an alternative to pharmaceutical growth promoters in turkeys.

Peter Ferket¹, Ramon Malhieres¹, Vera Moraes², Ayuub Ayoola¹, Ilana Barasch¹, Joan Torrent³ ¹*North Carolina State University, Raleigh, NC*, ²*Sao Paulo State University, Sao Paulo, Brazil*, ³*Oligo Basics USA, Excelsior, MN*

10 a.m. Break.

10:15 a.m. T103

Effects of feeding a mixture of organic acids, a phytochemical and a permeabilising substance on the growth inhibition of bacteria and performance of broilers

Angela Riemensperger¹, Renata Urbaityte¹, Sigrid Pasteiner¹, Fernando Guilherme Perazzo Costa² ¹*Biomim Holdin GmbH, Herzogenburg, Lower Austria, Austria*, ²*Federal University of Paraiba, Paraiba, Areia, Brazil*

10:30 a.m. T104

Broiler chickens performance enhanced through addition of CALSPORIN® or CALSPORIN® plus QMOS to basal or AGP-supplemented.

Troy Lohrmann¹, Karen Christensen², Michael Sims³ ¹*Quality Technology International, Inc, Elgin, IL*, ²*OK Farms, Inc., Mountain View Research, Fort Smith, AR*, ³*Virginia Diversified Research Corp., Harrisonburg, VA*

10:45 a.m. T105

Effect of adding dietary humate on productive performance of broiler chicks

Sherif Hassan^{*}, S. M. Hassan and A.A. Al-Aqil *College of Agriculture and Food Science, King Faisal University, AL-Hassa, Saudi Arabia*

11 a.m. Dendy Keynote Address

Environment/Management III - Pathology II

Chair: Craig Coufal, Texas A&M University

Room Number, B-314

Tuesday, January 24

8 a.m. T106

Prevalence of salmonella on raw poultry in china, colombia, russia, and vietnam
Walid Alali¹, Baowei Yang², JIANGHONG Meng³, Pilar Donado⁴, Roman Gaydashov⁵, Ta Thi Yen⁶, Isabel Walls⁷, Danilo Lo Fo Wong⁸, Michael Doyle¹ ¹University of Georgia, Griffin, GA, ²Northwest A&F University, Yangling Shaanxi, China, ³University of Maryland, College Park, MD, ⁴Colombian National Institute for Agricultural Research, Bogota, Cundinamarca, Colombia, ⁵Consumer Rights Protection Society, Moscow, Russian Federation, ⁶The National Institute For Food Control, Hanoi City, Viet Nam, ⁷USDA-NIFA, Washington, DC, ⁸WHO Regional Office for Europe, Copenhagen, Denmark

8:15 a.m. T107

Effect of Vectormune® Mycoplasma gallisepticum vaccine on egg production and selected egg characteristics

Scott Branton*, Spencer Leigh, Jeff Evans, Joseph Purswell, Elizabeth Kim, Hammed Olanrewaju, Stephanie Collier USDA-ARS Poultry Research Unit, Mississippi State, MS

8:30 a.m. T108

Evaluation of drip water samples versus swab samples for determining level of microbial contamination in poultry drinking water systems

Mary Scantling¹, S.E. Watkins² ¹University of Arkansas System Division of Ag Center of Excellence for Poultry Science, Fayetteville, AR ²University of Arkansas, Fayetteville, AR

8:45 a.m. T109

Novel control of fowl mites

Wallace Berry*, S Oates, J Hess Auburn University, Auburn, AL

9 a.m. T110

Growth pattern of naturally heat resistant of growth-selected and randombred chickens
Essam El-Gendy* Cairo University, Giza, Egypt

9:15 a.m. Break.

9:30 a.m. T111

An in situ broiler model to investigate host-enteric pathogen interactions
malcolm mitchell¹, Spiridoula Athanasiadou¹, Stewart Burgess², Eddie Clutton³, Chris Low¹ ¹SAC, Edinburgh, Midlothian, United Kingdom (Great Britain), ²Moredun Research Institute,, Edinburgh, Midlothian, United Kingdom (Great Britain), ³Royal (Dick) School of Veterinary Studies, Edinburgh, Midlothian, United Kingdom (Great Britain)

9:45 a.m. T112

Evaluation of aqueous solvent extracted aflatoxin contaminated corn fed to day of hatch poult.
J. Allen Byrd¹, Richard Clough², Kyle Uselton³ ¹USDA-ARS, Food and Feed Safety Research Unit, College Station, TX, ²Texas A&M University, College Station, TX, Food Protein Research and Development Center, ³Lynntech Inc., College Station, TX,

10 a.m. T113

Effect of Celmanax® SCP feed supplementation on performance of broilers either fed an anticoccidial drug or vaccinated

Greg Mathis¹, Brett Lumpkins¹, Sangita Jalukar² ¹Southern Poultry Research, Inc., Athens, GA, ²Vi-Cor, Mason City, IA

10:15 a.m. T114

Broiler chickens fed anticoccidial drug feeds supplemented with AGPs and or Actigen®, a specific traceable carbohydrate fraction derived from the cell wall of yeast

Greg Mathis¹, Brett Lumpkins¹, James Pierce², Ted Sefton², Adam Burnsed² ¹Southern Poultry Research, Inc., Athens, GA, ²Alltech, Inc., Nicholasville, KY

10:30 a.m. T115

Evaluation of a multispecies probiotic for the control of *Campylobacter* in poultry
Michaela Mohnl¹, Mar Biarnés², Gerd Schatzmayr³ ¹*BIOMIN Holding GmbH, Herzogenburg, Lower Austria, Austria*, ²*CESAC — Centre de Sanitat Avícola de Catalunya i Aragó, Reus, Catalonia, Spain*, ³*BIOMIN Research Center, Tulln, Lower Austria, Austria*

11 a.m. Dendy Keynote Address

Nutrition V

Chair: Wei Zhai, Mississippi State University

Room Number, B-315

Tuesday, January 24

8 a.m. T116

Evaluation of Poultrygrow 250™ (a protease) supplemented in a broiler diet with decreased levels of Digestible Lysine and Crude Protein from 0 to 42 days of age.

Brett Lumpkins¹, Greg Mathis¹, Robert Gauthier² ¹*Southern Poultry Research, Inc., Athens, GA*, ²*Jefo, Saint-Hyacinthe, Québec, Canada*

8:15 a.m. T117

Efficacy of a modified 6-phytase on apparent P and Ca digestibility in laying hens

Imke Kühn¹, Klaus Männer², Mike R. Bedford³ ¹*AB Vista, Darmstadt, Hessen, Germany*, ²*Institut of Animal Nutrition, Free University Berlin, Berlin, Germany*, ³*AB Vista, Marlborough, UK*

8:30 a.m. T118

Efficacy of non-starch polysaccharide (NSP) degrading enzymes in wheat-based broiler chicken diets with or without metabolizable energy uplift

Yanming Han¹, Angela Gutierrez Del Alamo Oms² ¹*Nutreco Ingredient Research Centre, Boxmeer, North Brabant, Netherlands*, ²*Nutreco Poultry and Rabbit Research Centre, Casarrubios-Toledo, Toledo, Spain*

8:45 a.m. T119

Evaluation of a novel microbial phytase on broiler performance

C. L. Walk¹, M. R. Bedford¹, D. C. Creswell² ¹*AB Vista Feed Ingredients, Marlborough, Wiltshire, United Kingdom (Great Britain)*, ²*Bangkok Animal Research Center, Mosman, NSW, Australia*

9 a.m. T120

Impact of exogenous non-starch carbohydrases and phytase on nutrient digestibility, gut health and integrity in broilers

Hang Lu¹, Kolapo Ajuwon¹, Aurelie Preynat², Veronique Legrand-Defretin², Pierre-André Geraert², Olayiwola Adeola¹ ¹*Purdue University, West Lafayette, IN*, ²*Adisseo, Commentry, France*

9:15 a.m. Break.

9:30 a.m. T121

Effects of a multi-species probiotic to control lameness in broiler chickens using the wire flooring model

Amanda Jordan¹, Robert F. Wideman², Igal Pevzner³ ¹*Biomim USA, San Antonio, TX*, ²*University of Arkansas Department of Poultry Science, Fayetteville, AR*, ³*Cobb-Vantress Inc., Siloam Springs, AR*

9:45 a.m. T122

The role of Peptide YY in the mode of action of dietary xylanase

Helen Masey O'Neill¹, M.R. Bedford¹, Sudipto Halder² ¹*AB Vista Feed Ingredients, Marlborough, Wiltshire, United Kingdom (Great Britain)*, ²*West Bengal University of Animal & Fishery Sciences, Kshudiram Bose Sarani, Kolkata, India*

10 a.m. T123

Development of RONOZYME® ProAct - a unique protease for broiler feed

Katrine Pontoppidan¹, Vibe Glitsoe¹, Dan Pettersson¹, Nelson Ward², Roland Brugger² ¹*Novozymes A/S, Bagsvaerd, Denmark*, ²*DSM Nutritional Products Inc., Parsippany, NJ*

10:15 a.m. T124

Compatibility of RONOZYME® ProAct with phytases and xylanases

Katrine Pontoppidan¹, Vibe Glitsoe¹, Dan Pettersson¹, Nelson Ward², Roland Brugger² ¹*Novozymes A/S, Bagsvaerd, Denmark*, ²*DSM Nutritional Products Inc., Parsippany, NJ*

10:30 a.m. T125

Effect of rovbio and hemicell enzymes on commercial turkey hen performance

J L Grimes¹, C Stark¹, D McIntyre², E Guaiume³, J E Nixon¹, I B Barasch¹ ¹*North Carolina State University, Raleigh, NC*, ²*Adisseo, Alpharetta, GA*, ³*Cargill Meat Solutions, Wichita, KS*

10:45 a.m. T126

Use of xylanase in broiler diets based in corn and soybean meal with different energy levels
Anelcir Scher¹, Alexandre Pires Rosa¹, Roberto Dornelles², Lenise Schröder Boemo¹, Rodrigo Bronzatti¹, Daniele Pozzebon Rosa¹, Camila Borba Santos¹ ¹*Federal University of Santa Maria, Santa Maria, Rio Grande do Sul, Brazil,* ²*Huvepharma, Santa Maria, Rio Grande do Sul, Brazil*

11 a.m. Dendy Keynote Address

POSTER PRESENTATIONS

Room Number, B-308 and 309

Monday, January 23

Posters will be on display Monday, 1—5 p.m. and Tuesday, 8 a.m.—Noon. Authors are asked to be present during the Monday Poster Reception, 3:30 p.m.—5 p.m. Judging for the Student Poster Competition will take place during the Poster Reception, (these students must be present by their poster during this time in order to be judged.)

P127

Effect of pectinase, cellulase and hemicellulase on performance and digestibility of diets in broilers

Fatemeh Alemi¹, Ali Mahdavi², Sirous Eivandji³, Seyed Abdullah Hosseini⁴, Ali Mostafa Tehrani⁴, Vahid Ghasemloo⁴ ¹Ph.D of Poultry Nutrition, Tehran, Iran, ²Semnan University Veterinary Faculty, Tehran, Iran, ³Shooshtar University, Shooshtar, khozestan, Iran, ⁴Animal Science Research Institute, Karaj, Alborz, Iran

P128

Effect of increasing levels of trypsin inhibitors on broilers' performance

Martin Ruiz de Galarreta¹, Bernardo Iglesias², Jorge Azcona², Viviana Charriere² ¹UNNOBA Pergamino, ECANA, Pergamino, Buenos Aires, Argentina, ²INTA - EEA Pergamino, Seccion Aves, Pergamino, Buenos Aires, Argentina

P129

Thermal stability of a bacterial commercial protease (ronozyme® proact) in pelleted feeds.

Nelson E. Ward¹, Marc de Beer, Jon Wilson, Donnie Campbell, Kurt Vogel ^{DSM Nutritional Products Inc., Parsippany, NJ}

P130

Effect of different phytases on the concentration of inositol phosphate isomers and P net absorption in different segments of the digestive tract in broilers

Ellen Zeller¹, Margit Schollenberger¹, Jeannette Boguhn¹, Imke Kühn², Markus Rodehutschord¹ ¹Institute of Animal Nutrition, University of Hohenheim, Stuttgart, BW, Germany, ²AB Vista, Darmstadt, HE, Germany

P131

Effect of dietary α -mannanase and palm kernel meal (PKM) on laying performance and egg quality of older laying hen

Jun Yeob Lee¹, Myoung Ho Lee¹, Jeong Heon Lee², Jae Hwan Lee³, Sang Jip Ohh⁴ ¹College of Animal Life Science, Kangwon National University, Chuncheon-si, Gangwon-do, Republic of Korea, ²Hanil Feed Co., Yongin-si, Kyonggi-do, Republic of Korea, ³CTC BIO Co., Seoul, Republic of Korea, ⁴Kangwondaehak-gil, College of Animal Life Science, Kangwon National University, Chuncheon-si, Gangwon-do, Republic of Korea

P132

Efficiency of a thermotolerant phytase on turkey performance

Imke Kühn¹, Maria Francesch² ¹AB Vista, Darmstadt, Hessen, Germany ²IRTA, Monogastric Nutrition, Constantí, Tarragona, Spain

P133

Evaluation of high dose phytase and NSPase inclusion in diets varying in energy level on broiler performance and carcass yield

Jacob Prukop¹, Blyn Brown², Jason Lee¹ ¹Poultry Science Department, Agrilife Research, Texas A&M System, College Station, TX ²Enzyvia, LLC, Sheridan, IN

P134

Effect of a protease on a phytase when fed to broiler chickens

Patrick Biggs¹, Brian Spencer¹, Bonnye Talbot¹, Jim Garlich², JJ Wang¹ ¹BioResource International, Inc., Morrisville, NC, ²North Carolina State University, Raleigh, NC

P135

Effects of xylanase and dietary energy on first cycle laying hen production

N.A. Nachtrieb¹, A.B. Batal², M Persia¹ ¹Iowa State University, Ames, IA, ²Huvepharma Inc., Peachtree, GA

P136

Effect of pelleting temperature on the recovery and efficacy of a xylanase in a corn-soybean-dogs-based diet

Byoungyun Jung¹, Amy Batal² ¹The University of Georgia, Athens, GA, ²Huvepharma, Inc., Peachtree, GA

P137

Energy evaluation of cottonseed meal with or without exogenous enzymes for broilers

Alcilene Maria Andrade Tavares-Samay¹, Andrew Henrique da Silva Cavalcanti Andrew Henrique da Silva Cavalcanti Coelho¹, Wilson Moreira Dutra Júnior¹, Carlos Bôa-Viagem Rabello¹, Cláudia Costa Lopes¹, Elaine Cristina Lopes¹, Camilla Roana Costa de Oliveira¹, Emanuela Nathaly Ribeiro Barbosa¹, Costa Fernando Guilherme Perazzo² ¹Universidade Federal Rural de Pernambuco, Recife, Pernambuco, Brazil, ²Universidade Federal da Paraíba, Areia, Paraíba, Brazil

P138

Broiler responses to corn-soybean diets having phytase and protease in single or combined supplementations

sergio vieira¹, Andre Favero¹, Roselina Angel², Henrique Cemin¹ ¹Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil, ²University of Maryland, College Park, MD

P139

Meta-analysis of the effects of a phytogetic feed additive on performance in broiler

Leopold Jungbauer¹, Kenneth Purser², Karola Renate Wendler¹ ¹Delacon, Steyregg, Austria, Steyregg, Upper Austria, Austria, ²Nutriquest, Quincy, IL

P140

Effect of graded inclusion levels of a novel bacterial 6- phytase on apparent ileal digestibility of phosphorus in laying hens

R. Aureli¹, M. Umar Faruk¹, Fidelis Fru¹, J. Broz² ¹DSM, St. Loius, France, ²DSMNutritional Products Ltd, Basel, Switzerland

P141

Evaluation of multiple energy enzyme inclusion in reduced energy diets on broiler growth performance and processing yield

Joseph Klein^{1SC}, Mallori Williams^{1SC}, Blyn Brown², Jason Lee¹ ¹Poultry Science Department, AgriLife Research, Texas A&M System, ¹Poultry Science Department, AgriLife Research, Texas A&M System, College Station, TX, ²Enzyvia, LLC, Sheridan, IN

P142

Effect of a novel bacterial phytase on broiler performance, tibia ash and mineral digestibility

Andre Favero^{1SC}, Sergio Vieira¹, Roselina Angel², Jaime Ernesto Pena^{1SC} ¹Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil, ²University of Maryland, College Park, MD

P143

Nutritional values of co-products of cocoa and kola as poultry feedingstuff

Rasheed Adedayo Hamzat^{1, 2}, O. Adeola¹ ¹Department of Animal Sciences, Purdue University, West Lafayette, IN, ²Department of Biological Sciences, Crescent University, Abeokuta, Ogun State, Nigeria

P144

Nutritional value of full fat soybean deactivated by different processes

Bernardo Iglesias¹, Martin Ruiz de Galarreta², Jorge Azcona¹, Viviana Charriere¹ ¹INTA - EEA Pergamino, Seccion Aves, Pergamino, Buenos Aires, Argentina, ²UNNOBA Pergamino - ECANA, Pergamino, Buenos Aires, Argentina

P145

Apparent digestibility of crude protein of soy bean meal estimated from ileal digesta of intact and total excreta collection of cecectomized laying hens

Eustace Iyayi¹, Oghenemega Eyarefe, Oluwatobi Onarinde ¹University of Ibadan, Ibadan, Oyo, Nigeria

P146

Absorption and skin deposition of pigment in broilers fed various levels of yellow xanthophylls from *Tagetes erecta*

María de los Angeles Tepox-Pérez¹, Benjamín Fuente-Martínez¹, Xóchitl Hernández-Velasco², Manuel Quiroz-Pesina³, Ernesto Ávila-González¹ ¹*Centro de Enseñanza, Investigación y Extensión en Producción Avícola (CEIEPAv), Mexico City, México DF. Del. Coyoacán, Mexico,* ²*Departamento de Medicina y Zootecnia de Aves, Mexico City, México DF. Del. Coyoacán, Mexico FMVZ, UNAM,* ³*Independent Asesor, Mexico City, México DF. Del. Coyoacán, Mexico*

P147

Evaluation of de-oiled DDGS products in laying hens

Brett Kreifels^{SC} *Graduate Student, Department of Animal Science, University of Nebraska, Lincoln, NE*

P148

Quality and egg production of red hens fed different levels of meat flour and supplemented with basil

Ibiara Correia de Lima Almeida Paz, Fábio Luiz da Silva, Rodrigo Garófallo Garcia^{*}, Fabiana Ribeiro Caldara, Viviane Maria Oliveira dos Santos Ferreira, Leonardo de Oliveira Seno, Leonardo Willian de Freitas, João Dimas Graciano *Universidade Federal da Grande Dourados, Dourados, Mato Grosso do Sul, Brazil*

P149

The use of canola meal in broiler diets. 2. Formulated to optimum density with constant level of poultry oil

C. D. Bradley^{1SC}, S.D. Goodgame², F.J. Mussini², C. Lu², P.W. Waldroup² ¹*University of Arkansas Poultry Science Department, Fayetteville, AR* ²*Poultry Science Department University of Arkansas, Fayetteville, AR*

P150

Nutritional composition of low-oil corn distillers dried grains with solubles

Ahmet Guney^{SC}, Byoungyun Jung, Amy Batal, University of Georgia Poultry Science Department, Athens, GA

P151

Evaluating the effect of feeding up to 30% distillers dried grains with solubles (DDGS) and Allzyme SSF® on egg production and egg quality of white layers through 60 weeks production

Anthony D. Quant^{*}, Anthony J. Pescatore, James L. Pierce, Tuoying Ao, Austin H. Cantor, Micheal J. Ford, W. D. King *Alltech/University of Kentucky Nutrition Research Alliance, Lexington, KY*

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The use of canola meal in high energy broiler diets

C.D. Bradley^{SC}, S.D. Goodgame, F.J. Mussini, N. Comert, C. Lu, P.W. Waldroup *University of Arkansas, Fayetteville, AR*

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Validation of dicalcium phosphate anhydrous (DCPA) as source of P and Ca for broilers.

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Use of yeast in broiler diets

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Effect of a wheat-based diet supplemented with a formulation of benzoic acid and essential oils compounds on broiler performance

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Mycotoxin binders as feed additives in the European Union

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The effects of different levels of Aloe vera gel powder on antibody titer against Newcastle disease virus and performance in Broilers

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Effect of a formulation of benzoic acid with essential oil compounds on performance of broiler chicks

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Evaluation of the nutrient matrix values of a novel bacterial 6-phytase in broiler chickens

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Evaluation of the toxicity of aflatoxins in broilers and the efficiency of two antimycotoxin agents to decrease their toxic effects

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Effect of organic preservatives on the stability of feed additives

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Evaluation of mycotoxin-deactivator product on the egg production, Vitamin A concentration and total cholesterol in laying hens

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Crina Poultry Plus® as an alternative feed additive to antibiotic growth promoters in broiler diets

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Effects of mycotoxin-deactivation product supplementation into mycotoxins contaminated diets in broiler breeders

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Efficacy of curcumin, supplied by turmeric (*Curcuma longa*) powder, in ameliorating the toxic effects of aflatoxin in young turkeys.

B. R. Landers^{SC}, L. M. Brand, R.A. Murarolli, D. R. Ledoux, G.E. Rottinghaus, A.J. Bermudez *University of MO, Columbia, MO*

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Supplementing coccidiosis vaccinated broilers with Hy-D[®] to overcome performance losses
Joey Bray^{ISC}, Katie Banks¹, Pieter Post¹, Bradley Turner² ¹*Stephen F. Austin State University, Nacogdoches, TX*, ²*DSM Nutritional Products, LLC, Parsippany, NJ*

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Effects of supplementing diets with CALSPORIN[®], Q-MOSTM, BMD[®]/Stafac[®] or QMOS plus BMD[®]/Stafac[®] on live performance of broiler chicks.

Troy Lohrmann¹, Michael Sims² ¹*Quality Technology International, Inc., Elgin, IL*, ²*Virginia Diversified Research Corp., Harrisonburg, VA*

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Effects of diets supplemented with CALSPORIN[®], QMOS, or both compared to basal diets on live performance of broiler chicks in a 42-day pen trial with relatively high stocking density and recycled litter.

Troy Lohrmann¹, Michael Sims² ¹*Quality Technology International, Inc., Elgin, IL*, ²*Virginia Diversified Research Corp., Harrisonburg, VA*

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Ratios of methionine and total sulfur amino acids to lysine in broiler finisher diets

C. Lu^{SC}, S.D. Goodgame, F.J. Mussini, C.D. Bradley, N. Comert, P.W. Waldroup *Poultry Science Department University of Arkansas, Fayetteville, AR*

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Effect of optimal levels of vitamins and of combination of essential oils on the performance of broiler chickens

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Combined dietary effects of threonine and purified fiber on growth performance and intestinal health of young chicks

Emma Wils-Plotz^{SC}, Ryan Dilger *University of Illinois, Urbana, IL*

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Relative bioavailability value of zinc proteinate (Bioplex Zn[®]) compared with zinc methionine for chicks

Tuoying Ao^{*}, James Pierce, Marquisha Paul, Kristen Brennan, Anthony Pescatore, Austin Cantor, Mike Ford, Karl Dawson *Alltech-University of Kentucky Nutrition Research Alliance, Lexington, KY*

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Early life trace mineral nutrition affects growth performance and mineral deposition in broilers through 21 d

Ryan Samuel^{*}, Tuoying Ao, Marquisha Paul, Mike Ford, Kristen Brennan, Malinda Spry, Anthony Pescatore, Austin Cantor, James Pierce *Alltech-University of Kentucky Nutrition Research Alliance, Lexington, KY*

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Effects of calcium and phosphorus levels during the grower phase for Heritage broilers: live performance and mineral retention

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Effect of dietary lysine intake on the reproductive performance of Cobb 500 broiler breeder hens
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Effect of dietary metabolizable energy (ME) levels on growth performance of both male and female Korean native chicken

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Effect of Protein Source on the Development of Footpad Dermatitis in Broiler Chickens Reared on Different Flooring Types

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Effect of dietary energy density on performance, carcass measures, serum cholesterol and glucose in broilers at d 56

Eustace Iyayi^{*}, Samuel Akosu *University of Ibadan, Ibadan, Oyo, Nigeria*

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Influence of vitamin supplementation on the first week of life and breeder age on the performance of broilers

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N,N-dimethyl glycine on feed broiler

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The effect of supplemental amino acids in broiler finisher diets formulated with ideal protein concept

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Evaluation of ideal ratios to lysine for starting broilers

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Comparative response of different broiler genotypes to dietary energy levels

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Tryptophan levels on performance of white layers diets

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Nutritional requirement of available phosphorus for laying hens post-peak production

Almir Ferreira da Silva¹, Carlos Bôa-Viagem Rabello¹, Cláudia Costa Lopes¹, Marcos José Batista dos Santos¹, Wilson Moreira Dutra Júnior¹, Edney Pereira da Silva², Ednardo Rodrigues de Freitas³, Costa Fernando Guilherme Perazzo⁴ *¹Universidade Federal Rural de Pernambuco, Recife, Pernambuco, Brazil, ²UNESP, Jaboticabal, SP, Jaboticabal, São Paulo, Brazil, ³Universidade Federal do Ceará, Fortaleza, Ceará, Brazil, ⁴Universidade Federal da Paraíba, Areia, Paraíba, Brazil*

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Digestible Threonine: lysine ratio to layers diets in third cycle of production

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Performance of chicks fed diets with different levels of sodium and electrolyte balance in pre-starter phase.

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Digestible tryptophan:lysine to layers in third cycle of production

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Reduce feed cost and maintain performance
Anée Berg Kehlet* *Chr. Hansen A/S, Denmark*

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Accuracy of nonlinear feed formulation for broiler chickens: Maximising broiler profit
Manoel Garcia-Neto*, Camila Angélica Gonçalves, Sergio Vieira-Filho, Max José de Araujo Faria-Junior, Marcos Franke Pinto *UNESP - Univ Estadual Paulista, Araçatuba, SP, Brazil*

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Effects of aflatoxin on growth performance, organ weights, and serum chemistry of broilers, and the efficacy of Calibrin-A and Calibrin-Z enterosorbents to ameliorate those effects.
S. L. Johnston¹, L. M. Brand², D. R. Ledoux², G. R. Goss¹, E. D. DeBoer¹, F. Chi¹ *¹Amlan International, Vernon Hills, IL ²University of Missouri, Colombia, MO*

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Increasing productive performance of Bovans White hen at the beginning of the cycle
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Growth modulation as an alternative for the control of ascites syndrome at 2700 M.A.S.L.
Diego Rodríguez-Saldaña¹, Carlos Lopez-Coello² *¹Balanceados El Granjero, Cuenca, Azuay, Ecuador, ²Dpto. de Medicina y Zootecnia de Aves, Mexico City, Distrito Federal, Mexico*

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Utilization of the Maxi-Mil® program to enhance feed manufacturing profitability.
Ferdie Nel, Simon Parker, Richard Oldman, Jose Ramirez, Dale Kotzur, Jim Wilson* *Anitox Corporation, Lawrenceville, GA*

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Wet feed nutrition to broiler chickens
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Validating the fung double tube for use with broiler chicken intestinal contents
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A rapid in vitro method for visualization of lactic acid bacteria attachment to enteric mucosal cells
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The effect of *Bacillus subtilis* on mucosa immune response of broilers challenged with *Salmonella* Minnesota

Larissa Pickler*, Mariana Lourenço, Leonardo Miglino, Eduardo Muniz, Antônio Leonardo Kraieski, Elizabeth Santin *Federal University of Parana, Curitiba, Parana, Brazil*

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Bacillus subtilis significantly reduces *Salmonella* Minnesota in broilers and in the surrounding environment

Larissa Pickler*, Mariana Lourenço, Leonardo Miglino, Leandro Kuritza, Patrick Westphal, Eduardo Muniz, Elizabeth Santin *Federal University of Parana, Curitiba, Parana, Brazil*

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Development of a real time PCR for salmonella gallinarum detection in mexican poultry
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Effect of hyperimmune egg yolk immunoglobulin Y in Broiler chickens

Nancy Christy*, Daniel Marrufo *Investigación Aplicada S.A. de C.V., Puebla, Tehuacan, Mexico*

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Comparison of two different Newcastle vaccines formulated with Genotype II and Genotype V virus in Broilers

Nancy Christy*, Daniel Marrufo *Investigación Aplicada S.A. de C.V., Puebla, Tehuacan, Mexico*

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Infrared thermography applied to the evaluation of metabolic heat loss of chicks fed with different energy densities

Irenilza de Alencar Naas*, Viviane Maria Oliveira dos Santos Ferreira, Fabiana Ribeiro Caldara, Rodrigo Garófallo Garcia, Ibiara Correia de Lima Almeida Paz *Universidade Federal da Grande Dourados, Dourados, Mato Grosso do Sul, Brazil*

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Field evaluation of a protected combination of sodium butyrate and essential oils (Natesse®)

Juan José Mallo*, Mónica Puyalto, Iván Kis *Norel S.A., Madrid, Spain*

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An improved procedure for enumeration of Clostridia from Feeds

Lenka Derome*, Lenka Guarino, Julio L Pimentel, Kurt Richardson, Don Wilson *Anitox, Lawrenceville GA*

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Production characteristics of Hy-Line W36 laying hens hatched from white and discolored eggs
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Evaluation of the adjuvant properties of chitosan in combination with a *Salmonella enteritidis* bacterin

Srichaitanya Shivaramaiah*, Neil Pumford, Marion Morgan, Amanda Wolfenden, Guillermo Tellez, Billy Hargis *University of Arkansas, Fayetteville, AR*

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Palatability of Tannin-rich *Sericea Lespedeza* fed to broilers

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Furazolidone-induced cardiomyopathy in broiler chickens

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Effect of environmental temperature variation during the brooding period on the performance of broiler chicks

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Type of litter and incidence of carcass lesions in broilers chickens

Irenilza de Alencar Naas^{*}, Rodrigo Garófallo García, Ibiara Correia de Lima Almeida Paz, Fabiana Ribeiro Caldara, Leonardo Willian de Freitas, João Dimas Graciano, Silvana Simm, Ana Flávia Basso Royer, Rodrigo Borille, Nilsa Duarte da Silva Lima *Universidade Federal da Grande Dourados, Dourados, Mato Grosso do Sul, Brazil*

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Choosing the most appropriate bedding material for broiler production using multicriterial analysis

Irenilza de Alencar Naas^{*}, Rodrigo Garófallo García, Ibiara Correia de Lima Almeida Paz, Fabiana Ribeiro Caldara, João Dimas Graciano, Rodrigo Borille, Ana Flávia Basso Royer *Universidade Federal da Grande Dourados, Dourados, Mato Grosso do Sul, Brazil*

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Which is the most adequate bedding material for broiler chicken production in Brazil?

Irenilza de Alencar Naas^{*}, Rodrigo Garófallo García, Ibiara Correia de Lima Almeida Paz, Fabiana Ribeiro Caldara, Viviane Maria Oliveira dos Santos Ferreira, João Dimas Graciano, Leonardo Willian de Freitas, Nilsa Duarte da Silva Lima, Rodrigo Borille, Ana Flávia Basso Royer *Universidade Federal da Grande Dourados, Dourados, Mato Grosso do Sul, Brazil*

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Effect of Nipple Drinker Height on Productive Parameters of Broiler chickens

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Effect of perches during pullet rearing on bone and muscle traits in White Leghorns

K- M. Moss^{SC}, S. A. Enneking, P.Y. Hester *Purdue University, West Lafayette, IN*

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Effects of cage-free housing system on performance, egg quality, and bone health in White Leghorn laying hens.

P. E. Eusebio-Balkazar^{SC}, S. E. Purdum *University of Nebraska-Lincoln, Lincoln, NE*

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Effects of environmental enrichment strategies on floor eggs and heterophil to lymphocyte ratio of broiler breeders reared under thermoneutral and heat stress conditions

Oluwatoyin Adeniji^{SC}, Michael Smith *Department of Animal Science, University of Tennessee, Knoxville, TN*

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Most Frequent Diseases, Probable Causes and Their Effects on Companion Birds' Behavior.

Lorena Moreno-Soto^{*}, Jose A. Quintana, Juan Carlos Morales, Alberto Tejeda, Karina Acevedo-Whitehouse *Universidad Nacional Autonoma de Mexico, Mexico D. F. Mexico*

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A novel chromogenic plating medium for the isolation of *Campylobacter jejuni* and *Campylobacter coli*

Lawrence Restaino^{*} *R & F Laboratories/Products, Downers Grove, IL*

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Relationship of daily egg moisture loss during incubation to hatch time and egg size in experiments evaluating storage temp and warm-up of broiler eggs

M. J. Wineland^{*}, D. T. Ort, K. M. Mann, F. W. Edens *North Carolina State University, Raleigh, NC*

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The age of the breeder and egg storage time on the performance and carcass yield of broilers
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Influence of incubation temperature on susceptibility to poult enteritis and post-hatch intestinal
development of commercial turkeys

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The effects of egg room temperature and pre-warming prior to incubation on embryo growth
and broiler performance

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The age of the breeder and egg storage time on the embryonic development of broilers
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Specific gravity, shell thickness and calcium level of egg shells prior to and after incubation of
eggs from 46 weeks-old Leghorn hens

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The effect of pre-storage warming on pre-peak broiler breeder eggs

Rachael Horil^{*SC}, Dennis Ingram *Louisiana Agricultural Experiment Station Louisiana State
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Effects of photoperiod and light intensity on growth performance and carcass characteristics of
broilers grown to heavy weights.

Hammed A. Olanrewaju^{*}, Joseph L. Purswell, Stephanie D. Collier, Scott L. Branton *USDA-
ARS, Strakville, AR*

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Histological changes in the broiler embryonic pipping muscle between days 15 and 19 of
incubation

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Increased Co2 During Early Stages of Incubation Changes the Plasma Cortisol Profile and
Embryonic Developmental of the Chicks

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Parthenogenetic development in incubated unfertilized Chinese Painted Quail eggs alters pH
and ion concentrations in egg albumen

Priscilla Rosa^{*SC}, Holly Parker, Aaron Kiess, Chris McDaniel *Mississippi State University,
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Proteome profile of pipping muscle lymph in the broiler embryo

A. O. Sokale^{*SC}, E. D. Peebles, R. Pulikanti, K. Pendarvis, T. Pechan *Mississippi State University,
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Effects of in ovo injection of caffeine and theophylline on hatchability of broilers
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²Mississippi State University, Mississippi, MS

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Persistence of Salmonella Typhimurium on chicken carcasses exposed to kosher salt
 Erin Bilgili^{SC}, Manpreet Singh Auburn University, Auburn, AL

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Extrinsic factors affectig water absorption in chilling of broiler chicken carcasses
 Marcos Franke Pinto^{*}, Juliana Pampana Nicolau, Elisa Helena Giglio Ponsano, Silvia Helena Venturoli Perri, Manoel Garcia-Neto Univ Estadual Paulista, Araçatuba, São Paulo, Brazil

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Bacterial oxycarotenoids added into broiler chickens ration modify breast meat color
 Elisa H. G. Ponsano¹, Saulo V. Avanço², Manoel Garcia-Neto², Maria Clara S. Minello², Thiago L. M. Grassi², Edson F. E. Santo², Alstyn W. M. Costa², Marcos F. Pinto² ¹UNESP, Univ Estadual Paulista, Araçatuba, Brazil, ²Univ Estadual Paulista, Araçatuba, Brazil

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Frequency of black bone syndrome in drumsticks of broilers
 Rodrigo Garófallo Garcia¹, Ibiara Correia de Lima Almeida Paz¹, Fabiana Ribeiro Caldara², Grace Alessandra Araújo Baldo¹, Carlos William Gamilan¹, Marília Carvalho Figueiredo Alves¹, Viviane Maria Oliveira dos Santos Ferreira¹, Márcio Pilleco¹ ¹Universidade Federal da Grande Dourados, Dourados, Mato Grosso do Sul, Brazil, ²Universidade Federal da Grande Dourados - Faculdade de Ciências Agrárias, Dourados, Mato Grosso do Sul, Brazil

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Anti-listerial effects of sodium metasilicate in pure Listeria monocytogenes culture suspensions and on ready-to-eat turkey ham
 Chander Shekhar Sharma¹, Sally Williams², Gary Rodrick² ¹Mississippi State University, Mississippi, MS ²University of Florida, Gainesville, FL

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Effect of different levels of dietary vitamin E (DL- α -tocopherol acetate) on the occurrence of three degrees of white striping on broiler breast fillets
 Vivek A. Kuttappan^{SC}, Sarah Goodgame, Danny Bradley, Andy Mauromoustakos, Billy Hargis^{SC}, Park Waldroup, Casey Owens University of Arkansas, Fayetteville, AR

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Evaluation of the stability of B. subtilis and B. licheniformis in pelleted feed at different temperatures
 Anée Berg Kehler¹, Merete Moerk Jensen¹, Alicia Lay², Robert Lantz², Adam Fahrenholz³ ¹Chr. Hansen A/S, 2970 Hoersholm, Denmark, ²Chr. Hansen A/S, Milwaukee, WI, ³Department of Grain Science and Industry, Kansas State University, Manhattan, KS

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Qualitative aspects of commercial eggs subjected to different storage conditions
 Rodrigo Garófallo Garcia^{*}, Ibiara Correia de Lima Almeida Paz, Fabiana Ribeiro Caldara, Leonardo Willian de Freitas, Leonardo de Oliveira Sena, Viviane Maria Oliveira dos Santos Ferreira, Gisele Aparecida Felix Universidade Federal da Grande Dourados, Dourados, Mato Grosso do Sul, Brazil

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The role of house fly act as a vector of avian influenza subtype H5N1
 Somsak Pakpinyo^{*}, Suwarak Wanaratana, Jiroj Sasipreeyajan Chulalongkorn University, Patumwan, Bangkok, Thailand

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The pathogenesis of low pathogenic avian influenza viruses in Mallards
 Monique Franca^{SC}, Justin Brown, David Stallknecht, Rebecca Poulson, Elizabeth Howerth UGA, Lawrenceville, GA

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Are Vaccine Viruses Developed for Pandemic Preparedness a Risk for Poultry?

Mariana Sa e Silva¹, Larisa Rudenko², Irina Isakova-Sivak², Tung Nguyen³, Yuelong Shu⁴, Claire Cornelius⁵, Ruben Donis⁶, David Swayne⁷ ¹USDA, Agriculture Research Service, Southeast Poultry Research Laboratory, Athens, GA, ²Institute of Experimental Medicine, Department of Virology, Saint Petersburg, Russian Federation, ³National Center for Veterinary Diagnosis, Hanoi, Viet Nam, ⁴National Institute for Viral Disease Control and Prevention, ⁵Dept. of Virology, NAMRU-3, Cairo, Egypt. Viral and Zoonotic Disease Research Program NAMRU-3, Cairo, Egypt, ⁶Influenza Division - Centers for Disease Control and Prevention, Beijing, China, ⁷Southeast Poultry Research Laboratory - USDA - Agricultural Research Service, Athens, GA

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Development of a novel in vivo experimental model to determine antigenic differences between infectious bursal disease viruses

Vijay Durairaj^{SC}, Holly Sellers, Egbert Mundt *The University of Georgia, Athens, GA*

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Vector HVT-IBDV efficacy against classical, variant and vIBDV in SPF birds and commercial layers.

Francisco Perozo^{*} *Universidad del Zulia, Maracaibo, Zulia, Venezuela*

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Persistence of IBV Arkansas vaccine virus and the genetic characterization of S1 gene

Ha-Jung Roh^{SC}, Deborah Hilt, Mark Jackwood *University of Georgia, Poultry Diagnostic and Research Center, Athens, GA*

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Newcastle Disease Post-Challenge Antibody Response in Vaccinated White Leghorn Laying Hens - Higher GMT at 10 to 15 Weeks Maintains Healthy Egg Production Levels

Ruben Merino¹, Alejandro Rojas², Ramon Ochoa² ¹Departamento de Medicina y Zootecnia, FMVZ, UNAM, Coyoacan, Mexico, ²Meril Mexico, El Marques, Queretaro

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Exchange of Newcastle disease virus F and HN genes into a vaccine backbone: effects on virulence

Stivalis Cardenas Garcia¹, Leonardo Susta², Diego Diez³, Eduardo Lucio Decanini¹, Angel Absalón⁴, Corrie Brown², Qingzhong Yu³, Patti Miller³, Claudio Afonso³ ¹Investigación Aplicada S.A, Tehuacán, Puebla, Mexico ²The University of Georgia, College of Veterinary Medicine, Athens, GA ³Southeast Poultry Research Laboratory, Athens, GA ⁴Centro de Investigación en Biotecnología Aplicada del Instituto Politécnico Nacional. Carretera Estatal Santa Inés Tecuexcomac-Tepetitla, Tepetitla, Tlaxcala, Mexico

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The development of a multiplex PCR to identify *plc*, *cpb*, *iA*, *etx*, *cpe*, *tpel* and *netB* toxin encoding genes in *Clostridium perfringens*

MA Bailey^{SC}, KS Macklin, MA Liles, JT Krehling, ZT Williams *Auburn University, Auburn, AL*

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The requirement for mixing live *Mycoplasma gallisepticum* vaccines during spray administration to maintain vaccine homogeneity

Spencer Leigh^{*}, Jeff Evans, Scott Branton *USDA-ARS Poultry Research Unit, Mississippi State, MS*

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Decay of maternal antibodies against a group of pathogens in broiler chickens

Saad Gharaibeh^{*}, Kamel Mahmoud *Jordan University of Science and Technology, Irbid, Jordan*

Milton Y. Dendy Keynote Address

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11 a.m. Dr. E.T. Moran, Jr., Auburn University
Egg, Embryonic Reserves, and First Feed for the Broiler

SCAD Annual Business Meeting

Chair: Dr. Patti Miller, SCAD President, USDA/ARS

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12 p.m. SCAD Annual Business Meeting

SPSS Annual Business Meeting

Chair: Dr. Mike Persia, Iowa State University

B-313

12 p.m. SPSS Annual Business Meeting

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