



## *Friday Notes* from *MSSTATE Poultry Science*

**Friday Notes** - to keep you informed about noteworthy news from Poultry Science at Mississippi State....and let us hear from you as well!

### *Poultry Science Department News: Faculty, Staff, and Student Travel and Activities.*

- **Drs. Beck, Peebles, Tabler, Kiess, Wamsley, Zhai and Chen**, accompanied by grad students (**Courtney Ennis, Rosana Hirai, Mark Lemons, Xi Wang, Claudia Castaneda, Janak Dhakal, Tomi Obe, Alisha Moore**); undergrad students (**Chrysta Beck** and **Andrew Brown**); and international intern (**Pedro Mota**) participated in the Poultry Science Association's Annual Meeting in New Orleans, July 10-15, with the following duties:
  - **Dr. Beck:** Editorial Board, PSA Foundation Board, Past-Presidents' Meeting;
  - **Dr. Peebles:** PSA Board of Directors; student paper evaluator; Constitution Committee; Hy-Line International Research Award Committee (Board Liaison); NTF Award, Maple Leaf Farms Duck Award Committee (Board Liaison); co-author; co-moderator, symposium on embryo nutrition
  - **Dr. Tabler:** Program Chair for Management and Production; student paper evaluator;
  - **Dr. Wamsley:** Program Chair for Metabolism and Nutrition; co-author
  - **Dr. Zhai:** Session Moderator; student paper evaluator; co-author
  - **Dr. Kiess:** co-author
  - **Dr. Chen:** presenter
- **Poultry Science Abstracts Presented:**
  - Effects of antibiotic alternatives and Eimeria challenge on growth and carcass yields of male broilers. **Xi Wang<sup>\*1</sup>, E. David Peebles<sup>1</sup>, Aaron S. Kiess<sup>1</sup>, Kelley G. S. Wamsley<sup>1</sup>, Wei Zhai<sup>1</sup>**, <sup>1</sup>*Department of Poultry Science, Mississippi State University, Mississippi State, MS.*  
<http://m.poultryscience.org/PresDetail.aspx?presID=67980&prestyle=abs&pr evpage=Search.aspx%3fquery%3dMississippi+State+U>
  - Comparison of thermal resistance of rugose phenotype of Salmonella Typhimurium with normal smooth morphology at different growth phases. **Janak Dhakal<sup>\*1</sup>, Rama Nannapaneni<sup>1</sup>, Chander S. Sharma<sup>1</sup>**, <sup>1</sup>*Mississippi State University, Starkville, MS.*  
<http://m.poultryscience.org/PresDetail.aspx?presID=68091&prestyle=abs&pr evpage=Search.aspx%3fquery%3dMississippi+State+U>
  - Injecting GalliPro Hatch into fertile broiler hatching eggs using commercial in ovo technology and its effect on hatchability and early chick mortality. **Chrysta Beck<sup>\*1</sup>, Pedro Mota<sup>1</sup>, Christopher McDaniel<sup>1</sup>, David Peebles<sup>1</sup>, Alfred Blanch<sup>2</sup>, Mickaël Rouault<sup>2</sup>, Kelley Wamsley<sup>1</sup>, Aaron S. Kiess<sup>1</sup>**, <sup>1</sup>*Mississippi State University, Mississippi State, MS,* <sup>2</sup>*Chr. Hansen, Hørsholm, Denmark.*

<http://m.poultryscience.org/PresDetail.aspx?presID=68113&prestyle=abs&prevpage=Search.aspx%3fquery%3dMississippi+State+U>

- Development of rugose morphotype of Salmonella Typhimurium following exposure to sub-inhibitory chlorine concentrations that exhibit chlorine resistance and strong biofilm forming ability.

**Tomilola Obe**\*<sup>1</sup>, Rama Nannapaneni<sup>1</sup>, **Chander Shekhar Sharma**<sup>1</sup>,  
<sup>1</sup>Mississippi State University, Mississippi State, MS.

<http://m.poultryscience.org/PresDetail.aspx?presID=68017&prestyle=abs&prevpage=Search.aspx%3fquery%3dMississippi+State+U>

**Note: Tomi received a Student Award of Excellence for this presentation!**

- Influence of feed form and diet phase on day 46 to 53 broiler performance and processing. **Mark E. Lemons**\*<sup>1</sup>, **Christopher D. McDaniel**<sup>1</sup>, Joseph S. Moritz<sup>2</sup>, **Kelley G. S. Wamsley**<sup>1</sup>, <sup>1</sup>Department of Poultry Science, Mississippi State University, Mississippi State University, MS, <sup>2</sup>Department of Animal and Nutritional Sciences, West Virginia University, Morgantown, WV.

<http://m.poultryscience.org/PresDetail.aspx?presID=68042&prestyle=abs&prevpage=Search.aspx%3fquery%3dMississippi+State+U>

- Effects of ButiPearl supplementation on broiler performance, blood chemistry, and cecal fatty-acid analysis. **C. E. Ennis**\*<sup>1</sup>, J. DuCray<sup>2</sup>, A. Cox<sup>2</sup>, **K. G. S. Wamsley**<sup>1</sup>, <sup>1</sup>Mississippi State University, Mississippi State, MS, <sup>2</sup>Kemin Industries Inc, Des Moines, IA.

<http://m.poultryscience.org/PresDetail.aspx?presID=67921&prestyle=abs&prevpage=Search.aspx%3fquery%3dMississippi+State+U>

- In vitro evaluation of four commercially available Bacillus spp. probiotic supplements and their effect on an antibiotic resistant strain of Salmonella Heidelberg.

**Claudia D. Castañeda**\*<sup>1</sup>, Omar Gutierrez<sup>2</sup>, **Christopher D. McDaniel**<sup>1</sup>,  
**Aaron S. Kiess**<sup>1</sup>, <sup>1</sup>Mississippi State University, Mississippi State, MS,  
<sup>2</sup>Huvepharma Inc, Austin, TX.

<http://m.poultryscience.org/PresDetail.aspx?presID=68015&prestyle=abs&prevpage=Search.aspx%3fquery%3dMississippi+State+U>

- Effects of dietary supplementation of antibiotic, anticoccidial, probiotic, and zinc on meat quality of male broilers. **Xingyong Chen**\*<sup>1,2</sup>, **Xi Wang**<sup>1</sup>, Kezhou Cai<sup>3</sup>, Mark W. Schilling<sup>4</sup>, **Wei Zhai**<sup>1</sup>, <sup>1</sup>Department of Poultry Science, Mississippi State University, Mississippi State, MS, <sup>2</sup>College of Animal Science and Technology, Anhui Agricultural University, Hefei, Anhui, China, <sup>3</sup>School of Biotechnology and Food Engineering, Hefei University of Technology, Hefei, Anhui, China, <sup>4</sup>Department of Food Science, Nutrition and Health Promotion, Mississippi State University, Mississippi State, MS.

<http://m.poultryscience.org/PresDetail.aspx?presID=67924&prestyle=abs&prevpage=Search.aspx%3fquery%3dMississippi+State+U>

### **Congratulations and Kudos to....**

- **Tom Obe** (MS grad student with **Dr. Sharma**) for receiving a Student Award of Excellence for her presentation (above) at the PSA Annual Meeting New Orleans, July 15.

### **USDA-ARS Poultry Research Unit Publications:**

- Abstracts presented at the PSA Annual Meeting, New Orleans, July 10-15:
  - Direct and indirect transmissibility of attenuated and virulent Mycoplasma gallisepticum strains among caged layers. Jeffrey D. Evans\*<sup>1</sup>, Scott L. Branton<sup>1</sup>, Joseph L. Purswell<sup>1</sup>, Spencer A. Leigh<sup>1</sup>, Stephanie D. Collier<sup>1</sup>,  
<sup>1</sup>USDA-ARS Poultry Research Unit, Mississippi State, MS.

<http://m.poultryscience.org/PresDetail.aspx?presID=68041&prestype=abs&prevpage=Search.aspx%3fquery%3dDirect+and+indirect+transmissibility+of>

- Assessing the efficacy of a newly developed micro-aerosol for disinfection of the avian respiratory pathogen *Mycoplasma gallisepticum*. Jeffrey D. Evans<sup>\*1</sup>, Joseph L. Purswell<sup>1</sup>, Stephanie D. Collier<sup>1</sup>, <sup>1</sup>USDA-ARS Poultry Research Unit, Mississippi State, MS.  
<http://m.poultryscience.org/PresDetail.aspx?presID=68045&prestype=abs&prevpage=Search.aspx%3fquery%3dAssessing+the+efficacy>
- Nitrogen-corrected apparent metabolizable energy of an exogenous carbohydrase added to diets formulated with low-fat distillers dried grains with solubles (LF-DDGS) from 0 to 28 d in broilers.  
Elizabeth J. Kim<sup>\*1</sup>, Michael E. Persia<sup>2</sup>, Jon Broomhead<sup>3</sup>, Xuimei Li<sup>3</sup>, Philip Lessard<sup>3</sup>, Mike Lanahan<sup>3</sup>, <sup>1</sup>ARS-USDA Poultry Research Unit, Mississippi State, MS, <sup>2</sup>Virginia Tech University, Blacksburg, VA, <sup>3</sup>Agrivida Inc, Medford, MA.  
<http://m.poultryscience.org/PresDetail.aspx?presID=67781&prestype=abs&prevpage=Search.aspx%3fquery%3dNitrogen-corrected>

***Reminder: Starkville Farmers Market:  
Poultry Science eggs, sold by the PS Club as a fundraiser,  
and  
NOW  
Poultry Science eggs are also in the MAFES Store***

***Running Cumulative List of Scientific and Extension Publications, 2016***

***The following oral talks and posters were presented at the IPSF, Atlanta, GA; \* indicates the presenting author and the abstracts may be found at***

***[http://www.ippexpo.org/ipsf/docs/2016SPSS\\_AbstractBook.pdf](http://www.ippexpo.org/ipsf/docs/2016SPSS_AbstractBook.pdf)***

- **M65: Rosana Hirai\***, Omar Gutierrez, **Kelley Wamsley, Ana Oliveira**, “Effects of varying phytase inclusion in conjunction with xylanase supplementation on 0-56 d male broiler performance.”
- **M83: Dima White\***, Aaron Kiess, Tom Tabler, Chris McDaniel, Yuhua Farnell, Shailesh Gurung, Marcelo Moreira, Dan Zhao, **Morgan Farnell**, “Application of a commercially available cleaner and disinfectant via a compressed air foam system to decrease aerobic bacteria in pullet and layer houses.”
- **M84: Katie Collins\***, Scott Branton, Jeff Evans, **E. David Peebles**, “Evaluation of the potential influence of the disinfection cycle on the efficacy of F-strain Mycoplasma gallisepticum vaccine administered by in ovo injection to layer hatching eggs.”
- **M122: Mark Lemons\***, Christopher McDaniel, Joseph Moritz, **Kelley Wamsley**, “Influence of feed form (FF) and diet phase effects on 0-46 d broiler performance.”
- T146: Ivan Alvarado\*, **Kelley Wamsley**, Alejandro Banda, “Evaluation of the synergistic effect of the live attenuated infectious bursal disease vaccine 89/03 and a recombinant HVT-IBD against early infectious bursal disease challenge in commercial broilers.”
- **P200: Katherine Lott\***, AJ Kawaoku, Holly Parker, Chris McDaniel, “The male and female contribution to parthenogenesis-induced infertility in quail.”
- **P201: AJ Kawaoku\***, Katherine Lott, Holly Parker, Chris McDaniel, “Roles of the male and female quail in egg component alterations due to the parthenogenetic trait.”
- **P202: Pedro Mota\***, Melissa Triplett, David Peebles, Christopher McDaniel, Aaron Kiess, “Investigating the potential to introduce Lactobacillus acidophilus and Bacillus subtilis to the broiler embryo through commercial in ovo technology.”
- **P204: Edgar Peebles\***, Floyd Wilson, Taylor Barbosa, Timothy Cummings, John Dickson, **Sharon Womack**, “Comparative effects of in ovo versus subcutaneous vaccination and pre-placement holding time on scanning electron micrograph and histomorphometric measurements of small intestinal villus length and villus/crypt ratios in broiler chickens.”
- **P210: Alisha Moore\***, Chander Sharma, “Antimicrobial efficacy of acidified lactic acid, propionic acid, and lauric arginate against Salmonella in ground chicken frames.”
- **P318: Ana Beatriz Oliveira\***, Wei Zhai, **Kelley Wamsley**, “Feasibility of using Elusieve processing to improve the nutritional profile of feed ingredients used in commercial poultry diet formulation.”
  - **NOTE: Ana received an Honorable Mention in the Don R. Sloan Undergraduate Research Competition for this presentation and a check for \$250.**
- Jason Barrett and **George Thomas Tabler**, “Private water well placement and sizing for poultry production,”  
<http://extension.msstate.edu/sites/default/files/publications/publications/p29>

[53.pdf](#)

- **Tom Tabler**, Jonathan Moyle, **Jessica Wells**, Morgan Farnell, “Composting Poultry Mortality: A Critical Daily Management Chore”  
<http://extension.msstate.edu/sites/default/files/publications/publications/p2960.pdf>

***USDA-ARS Poultry Research Unit Publications:***

- Abstracts presented at the International Poultry Scientific Forum, Atlanta GA, Jan. 25-26;  
[http://www.ippexpo.org/ipsf/docs/2016SPSS\\_AbstractBook.pdf](http://www.ippexpo.org/ipsf/docs/2016SPSS_AbstractBook.pdf):
  - J.L. Purswell and S.L. Branton. 2016. Performance of an automated whole-house vaccination system.
  - J.E. Linhoss, J.L. Purswell, and J.D. Davis. 2016. Preferences of young chicks for varying radiant fluxes.
  - H. Olanrewaju, Influence of light sources and photoperiod on growth performance and carcass characteristics of heavy broilers at 56 days of age.