



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.***

- **Dr. Tabler** visited a farm in Kokomo with personnel from BankPlus to assess its suitability for purchase.
- **Mrs. Wells**, assisted by **Addie Davis**, delivered incubators with hatching eggs and presented the lecture for the Hatch-Out Program at North Jones Elementary, Aug. 29-Sept 2.
- **Dr. Tabler** attended the MS Farm Bureau Federation's Mississippi Agricultural Tour for Congressional Staffers and presented a talk on "Misconceptions, Biosecurity and Food Safety in the Poultry Industry," Aug 29-30.
- **Dr. Wamsley** hosted representatives from Micronutrients for research discussions, Sept. 1.

Farewell and Best Wishes to...

- **Dr. Xingyong Chen** and her family, who are returning to China at the end of her year as a Visiting Scientist in Poultry Science

Recent Presentations and Publications...

- **Tom Tabler**, News Release: MSU researchers cool poultry with sprinklers
By [Ms. Bonnie A. Coblentz](#), MSU Extension Service, Senior Extension Associate
<http://extension.msstate.edu/news/feature-story/2016/msu-researchers-cool-poultry-sprinklers>
- **Tom Tabler**, Jim Watson, Brigid Elchos, and **Jessica Wells**, "Poultry Growers Should Maintain Heightened Biosecurity Practices,"
<http://extension.msstate.edu/sites/default/files/publications/publications/p2995.pdf>
- **Tom Tabler**, "Misconceptions, Biosecurity and Food Safety in the Poultry Industry," MSFBB's Mississippi Agricultural Tour for Congressional Staffers, Aug 30.

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.com/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

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- **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>
The following oral talks and posters were presented at the Poultry Science Association Meeting in New Orleans; * indicates the presenting author and the abstracts may be found at
 - Effects of antibiotic alternatives and Eimeria challenge on growth and carcass yields of male broilers. **Xi Wang*¹**, **E. David Peebles¹**, **Aaron S. Kiess¹**, **Kelley G. S. Wamsley¹**, **Wei Zhai¹**, ¹*Department of Poultry Science, Mississippi State University, Mississippi State, MS.*
<http://m.poultryscience.org/PresDetail.aspx?presID=67980&prestyle=abs&prevpage=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*¹**, Rama Nannapaneni¹, **Chander S. Sharma¹**, ¹*Mississippi State University, Starkville, MS.*
<http://m.poultryscience.org/PresDetail.aspx?presID=68091&prestyle=abs&prevpage=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*¹**, **Pedro Mota¹**, **Christopher McDaniel¹**, **David Peebles¹**, Alfred Blanch², Mickaël Rouault², **Kelley Wamsley¹**, **Aaron S. Kiess¹**, ¹*Mississippi State University, Mississippi State, MS*, ²*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*¹, Rama Nannapaneni¹, **Chander Shekhar Sharma¹**, ¹*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*¹**, **Christopher D. McDaniel¹**, Joseph S. Moritz², **Kelley G. S. Wamsley¹**, ¹*Department of Poultry Science, Mississippi State University, Mississippi State University, MS*, ²*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*¹**, J. DuCray², A. Cox², **K. G. S. Wamsley¹**, ¹*Mississippi State University, Mississippi State, MS*, ²*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*¹, Omar Gutierrez², **Christopher D. McDaniel¹**, **Aaron S. Kiess¹**, ¹*Mississippi State University, Mississippi State, MS*, ²*Huvepharma Inc, Austin, TX.*
<http://m.poultryscience.org/PresDetail.aspx?presID=68015&prestyle=abs&prevpage=Search.aspx%3fquery%3dMississippi+State+U>

meat quality of male broilers. **Xingyong Chen**^{*1,2}, **Xi Wang**¹, Kezhou Cai³, Mark W. Schilling⁴, **Wei Zhai**¹, ¹Department of Poultry Science, Mississippi State University, Mississippi State, MS, ²College of Animal Science and Technology, Anhui Agricultural University, Hefei, Anhui, China, ³School of Biotechnology and Food Engineering, Hefei University of Technology, Hefei, Anhui, China, ⁴Department 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>

- **P. Santa Rosa, H.M. Parker, A.S. Kiess, C.D. McDaniel**, 2016. Parthenogenetic embryos from unfertilized Chinese Painted Quail eggs alter albumen pH, gases, and ion concentrations during incubation. *Theriogenology*, 85:2:275-281. Doi:10.1016/j.theriogenology.2015.09.023. <http://www.sciencedirect.com/science/article/pii/S0093691X1500494X>
- **P. Santa Rosa, H.M. Parker, A.S. Kiess, C.D. McDaniel**, 2016. Parthenogenesis in mated Chinese Painted Quail (*Coturnix chinensis*) hens decreases sperm-egg penetration and alters albumen characteristics. *Theriogenology*. Doi:10.1016/j.theriogenology.2016.05.025. <http://www.sciencedirect.com/science/article/pii/S0093691X16302266>
- **Kelley G.S. Wamsley**, 2016. Building US & European Collaborations: Antibiotic Use for Poultry in the US. Invited presentation, Bern, Switzerland. August 2016
- **Tom Taber, C. Reagan Sadler, and Jessica Wells**, "Gangrenous Dermatitis in Broilers," <http://extension.msstate.edu/sites/default/files/publications/publications/p2990.pdf>
- **Kiess, A. S.*, J. Hirai, M. D. Triplett, H. M. Parker, and C. D. McDaniel**, 2016. Impact of Oral Lactobacillus Gavage on Rooster Seminal and Cloacal Lactobacilli Concentrations. *Poult. Sci.* 95 (8): 1934-1938.
- **Triplett M. D., H. M. Parker, C. D. McDaniel, and A. S. Kiess***. 2016. Influence of 6 different Intestinal Bacteria on Beltsville Small White Turkey Semen. *Poult. Sci.* 95 (8): 1918-1926.

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:
 - 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.
- *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^{*1}, Scott L. Branton¹, Joseph L. Purswell¹, Spencer A. Leigh¹, Stephanie D. Collier¹, ¹USDA-ARS Poultry Research Unit, Mississippi State, MS. <http://m.poultryscience.org/PresDetail.aspx?presID=68041&prestyle=abs&prevpage=Search.aspx%3fquery%3dDirect+and+indirect+transmissibility+of>

L. Purswell¹, Stephanie D. Collier¹, ¹USDA-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^{*1}, Michael E. Persia², Jon Broomhead³, Xuimei Li³, Philip Lessard³, Mike Lanahan³, ¹ARS-USDA Poultry Research Unit, Mississippi State, MS, ²Virginia Tech University, Blacksburg, VA, ³Agrivida Inc, Medford, MA.

<http://m.poultryscience.org/PresDetail.aspx?presID=67781&prestype=abs&prevpage=Search.aspx%3fquery%3dNitrogen-corrected>