



## 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. Beck** participated in the USPoultry & Egg Foundation Board meeting to discuss recruiting funds for poultry science programs, Atlanta, Sept 13
- **Drs. Beck, Tabler, Wamsley and Mrs. Wells** participated in the MPA annual convention, including Business Meetings and Auction Fundraiser, Destin, FL, Sept 14-16. Undergraduates **Ty Fulton, Cassidy Catrett** and **Vivian Purvis**; and graduate students **Claudia Castaneda** and **Courtney Ennis**; assisted with the auction set up and function.
- **Dr. Tabler** visited a poultry farm at Soso, MS, to troubleshoot performance issues, Sept 20.
- **Dr. Tabler** attended the MPA Grower Advisory Meeting in Magee, Sept 21.
- **Dr. Tabler** assisted with an HPAI training through the CVM at the MS Poultry Research Farm, Sept 23
- **Dr. Tabler** attended a Sanderson Farms grower meeting, Collins, Sept 27.
- **Drs. Adhikari and Tabler** traveled to Edwards, MS, to meet with Cal-Maine personnel, Sept 29

### ***Recent Publications***

- **Tom Tabler, Jessica Wells** and Nikki Jefcoat, "Fowl Pox in Backyard Flocks," <http://extension.msstate.edu/sites/default/files/publications/publications/p3131.pdf>
- **Tom Tabler, Jessica Wells** and Nikki Jefcoat, "Coccidiosis in Backyard Chickens," <http://extension.msstate.edu/sites/default/files/publications/publications/p3140.pdf>
- **Tom Tabler, Jessica Wells** and Nikki Jefcoat, "Marek's Disease in Backyard Chickens," <http://extension.msstate.edu/sites/default/files/publications/publications/p3133.pdf>

### ***Thanks and Kudos to...***

- **The Poultry Science Club**, who donated the \$1500 from their chicken plate sales fundraiser to the Jesse and Sophia Zheng Education Fund, Sept 22.

**Cumulative List of Scientific and Extension Publications, 2017**

- **Tom Tabler**, F. Dustan Clark, and **Jessica Wells**, "Choosing the right breed of backyard poultry."  
<http://extension.msstate.edu/sites/default/files/publications/publications/p3036.pdf>

**Abstracts presented at the IPSF, Jan 30-Feb 3, 2017; complete abstracts may be found at <http://southernpoultrysciencesociety.org/pdfs/2017AbstractBook.pdf>**

- **Tomi Obe**, MS grad student with **Dr. Kiess** (originally with **Dr. Sharma**), won a **Graduate Student Award of Excellence** for her presentation at the IPSF entitled, "Homologous stress adaptation, antibiotic resistance, and biofilm formation of *Salmonella Heidelberg* on different food-contact surfaces following exposure to sub-lethal chlorine concentrations," **Tomi Obe, Rama Nannapaneni, Chander Sharma**; Jan 31.
- **Mohit Bansal**, MS grad student with **Dr. Kiess** (originally with **Dr. Sharma**), won a **Graduate Student Award of Excellence** for his presentation at the IPSF entitled, "Influence of chlorine induced sub-lethal oxidative stress on homologous stress adaptation and biofilm formation in *Listeria monocytogenes*," **Mohit Bansal, Rama Nannapaneni, Chris McDaniel, Chander Sharma**; Jan 31.
- **Midian Nascimento dos Santos**\*GS, **Reshma Ramachandran, Kelley Wamsley, Aaron Kiess, Christopher McDaniel**, "The impact of a dietary yeast fermentation product derived from *Saccharomyces cerevisiae* on semen quality and semen microbiota of aged White Leghorn roosters"; Midian is an MS grad student with **Dr. McDaniel**
- **Reshma Ramachandran**\*, **Midian Nascimento Dos Santos, Christopher McDaniel**, "Relationship between sperm-egg penetration and the duration of fertility in Chinese painted quail hens (*Coturnix chinensis*); Reshma is a PhD grad student with **Dr. McDaniel**
- **Mary Beck**\*, **G. Tabler, Kelley Wamsley, Aaron Kiess**, "MSU Poultry Science takes New Zealand!"
- **Oluwaseun Durojaye**\*, **Katie Elliot, Edgar Peebles**, "Air cell size profile and its relationship to eggshell temperature and water loss in broiler hatching eggs through day 12 of incubation"; Seun is an MS grad student with **Dr. Peebles**.
- **Dana Dittoe**\*, **Chris McDaniel, Aaron Kiess** "Effects of lactic acid bacteria and organic acids on the concentration of an antibiotic resistant strain of *Salmonella Heidelberg*, in vitro"; Dana is an MS grad student with **Dr. Kiess**
- **Claudia Castaneda**\*, **Omar Gutierrez, Christopher McDaniel, Aaron Kiess**. "In vitro evaluation of seven commercially available *Bacillus* spp based probiotic supplements and one *Saccharomyces cerevisiae* based prebiotic supplement and their effects on an antibiotic resistant strain of *Salmonella Heidelberg*"; Claudia is an MS grad student with **Dr. Kiess**
- **Kacey O'Donnell**\*, **Xi Wang, Kelley Wamsley, Aaron Kiess, E. Peebles, Wei Zhai**. "Effects of replacing antibiotics and anticoccidials with probiotics in broiler diets on growth performance"; Kacey is an MS grad student with **Dr. Zhai**
- **Chrysta Beck**\*, **Pedro Mota, Kelley Wamsley, Christopher McDaniel, Aaron Kiess** "Proving the concept that commercial in ovo delivery of a prebiotic and probiotics can positively impact broiler performance"; Chrysta is an undergrad student working with **Dr. Kiess**
- **Alfred Blanch**\*, **Line Skjoet-Rasmussen, Elke Brockmann, Jannie Schnabl, Mickael Rouault, Dorthe Sandvang, Frank Jin, Aaron Kiess**, "Confirmation of the presence of *Enterococcus faecium* M74 in the gastrointestinal tract of young chicks from eggs inoculated with *GalliPro Hatch*"
- **Oluwaseun Durojaye**\*, **Edgar Peebles** 'Relationships of eggshell thickness to

- *thermal gradients across the shell at the large and equatorial regions of embryonated broiler hatching eggs*; Seun is an MS grad student with **Dr. Peebles**
- **Na Dong\***, **Xi Wang**, **Wei Zhai** “Effects of various levels of low-fat distiller’s dried grains with solubles on intestinal developments of broilers from 28 to 54 days of age” Dr. Dong is a visiting scientist working **Dr. Zhai**
- **Edgar Peebles**, Tiago Oliveira, Antonio Bertechini, Elizabeth Kim, Opeyemi Olojede, **Sharon Womack**, Patrick Gerard, “Effects of post-hatch holding time before placement on broiler body temperature during grow-out.”
- **Tom Tabler**, Jim Watson, Brigid Elchos, and **Jessica Wells**, “Backyard Biosecurity is the Best Defense Against Avian Influenza,”  
<http://extension.msstate.edu/sites/default/files/publications/publications/p3059pdf>
- **Tom Tabler** and **Jessica Wells**, “Avian Influenza 2017: Frequently Asked Questions.”  
<http://extension.msstate.edu/sites/default/files/publications/publications/p3060.pdf>
- **Tom Tabler**, F. Dustan Clark, Jonathan Moyle, Jason R. Barrett, Yi Liang, and **Jessica Wells**, “How Total Farm Water Pressure and Volume Affect Commercial Poultry Production,”  
<http://extension.msstate.edu/sites/default/files/publications/publications/p3058.pdf>
- **Tom Tabler** and **Jessica Wells**, “Benefits and Challenges of Reusing Broiler Litter,”  
<http://extension.msstate.edu/sites/default/files/publications/publications/p3066.pdf>
- **Tom Tabler** contributed to MSU Feature Story on AI:  
<http://extension.msstate.edu/news/feature-story/2017/poultry-growers-urged-follow-biosecurity>
- Alfred Blanch, Herb Kling, **Aaron Kiess**, “In ovo probiotic injection linked to higher post-hatch performance,” International Hatchery Practice, Vol 31, Number 3, p. 15; please contact us if you’d like a copy.
- **A. Moore**, R. Nannapaneni, **A. Kiess**, and CS Sharma, 2017. Evaluation of USDA approved antimicrobials on the reduction of Salmonella and Campylobacter in ground chicken frames and their effect on meat quality. Poultry Sci.  
<http://dx.doi.org/10.3382/ps/pew497>.
- **Tom Tabler** and **Jessica Wells**, “Economic Impact of Mississippi’s Poultry Industry,”  
<http://extension.msstate.edu/sites/default/files/publications/publications/p3048.pdf>

Abstracts Presented at the PSA Annual Meeting: Congratulations to our four (4) graduate student awards of excellence for scientific merit and presentation quality, noted below (~13% of all student awards given by PSA this year!).

- **Dr. Kiess’s Students:**
  - **Mohit Bansal**, “Biofilm inactivation of two morphotypes of two Salmonella enterica serovars by sodium hypochlorite on different surfaces”
  - **Claudia Castaneda**, “Evaluating bacterial colonization of a developing broiler embryo after in ovo injection with a bioluminescent bacteria”
  - **Dana Dittoe**, “Effects of ButiPEARL and Primalac used alone on in combination on 57-3 broiler intestinal morphology and immune tissue”
  - **Dana Dittoe**, “Effects of ButiPEARL and Primalac used alone or in combination on 57-d performance and processing”
- **Dr. Peebles’s Student:**
  - **Saman Fatemi**, “Effects of different levels of in ovo-injected vitamin D sources on the hatchability and serum 25-hydroxycholecalciferol concentrations of Ross 708 broilers”  
§ **NOTE:** Saman received an award of excellence for this presentation!
- **Dr. Wamsley’s Students:**
  - **Mark Lemons**, “Effects of crumble particle size on d10-14 Ross x Ross 708 male broiler performance”  
§ **NOTE:** Mark received an award of excellence for this presentation!
  - **Courtney Ennis**, “Determining the efficacy of two carbohydrase enzymes in commercial diets on d0-57 broiler performance”
  - **Rosana Hirai**, “Evaluating the performance of Cobb 500 x MV broilers to varying amino acid density regimens for a small bird program”
- **Dr. Zhai’s Student:**
  - Kacey O’Donnell, “Effects of replacing antibiotics and anticoccidials with probiotics in broiler diets on processing yields”

§ NOTE: Kacey received an award of excellence for this presentation!

- **Dr. McDanial's Students:**
  - **Midian Nascimento dos Santos**, "Impact of in vitro inoculation and dietary supplementation with *Bacillus subtilis* on sperm quality of aged White Leghorn roosters"

§ NOTE: Midian received an award of excellence for this presentation!
  - **Reshma Ramachandran**, "Relationships among sperm-egg penetration, fertility and egg components of Chinese painted quail hens (*Coturnix chinensis*)"

**Faculty Presentations:**

- **Dr. Zhai**, "Effects of replacing antibiotics and anticoccidials with probiotics in broiler diets on intestinal coccidial lesion development"
- **Dr. Zhang**, "Effects of in ovo administration of l-ascorbic acid on broiler hatchability"
  
- **Peebles III**, Edgar David (copyrighted), 2017 (Submitted for Publication-9/30/15; Date Proof was Posted-9/23/16). Mycoplasmosis in Egg-Laying Flocks. Chapter 50, Pages 537-546 in *Egg Innovations and Strategies for Improvement*. First Edition. P. Y. Hester, ed., Oxford: Academic Press, Elsevier Inc., New York, NY. ISBN 978-0-12-800879-9
- **Peebles**, E. David. The chicken in the egg: Hacking early development to improve adult chicken health. [www.SCIENTIA.GLOBAL](http://www.scientia.global), Scientia, pp.128-131, Issue #113, Summer, 2017. <http://www.scientia.global/wp-content/uploads/2017/07/Scientia-mag-113-web.pdf>