



## 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** attended a Sanderson Farms grower meeting in Laurel and presented, "Winter Management and Paw Quality," Oct 3
- **Mrs. Wells** attended a recruiting event for 8<sup>th</sup> graders, "Imagine the Possibilities," at Tupelo, Oct 3-5.
- **Drs. Beck and Tabler** participated in the quarterly MS Board of Animal Health meeting, Jackson, Oct. 4
- **Dr. Tabler** attended the Monroe County Board of Supervisors meeting in Aberdeen and presented research showing lack of odor emissions from poultry houses, based on wind speed and distance from houses relative to MDEQ-mandated set-backs, Oct. 5.
- **Dr. Peebles** represented Poultry Science at the CALS Department Heads meeting in **Dr. Beck's** absence, Oct 6.
- **Dr. Zhai** participated in a research planning conference call with U. of TN, Oct 9
- **Dr. Tabler** met with LED personnel, Oct 10-11.
- **Drs. Beck, Wamsley and Kiess** met with students interested in the Maymester 2018 Study Abroad trip to New Zealand, Oct 10, 11, 12.
- **Mrs. Wells, Mrs. Christensen,** and undergraduate **Kelsey Faulkner** traveled to Jackson to set up the State Fair 4-H Poultry Chain Project, Oct 12; MS grad student **Kaela Johnson,** and undergrads **Caleb Marshall, DJ Grandberry,** and **Blake Campbell;** and **Dr. Tabler,** traveled to Jackson to assist with the show competition, Oct 13.
- **Drs. Zhai, Beck, Kiess, Wamsley, McDaniel, Peebles, Tabler,** and **Adhikari;** **Mrs. Starkey, Mrs. Morgan, Kacey O'Donnell, Bo Zhang,** and **Xi Wang** attended the memorial dedication of the Dr. Lei Zheng Conference Room at nSPARC, Oct. 12.

### ***Congratulations to...***

- **Mark Lemons,** PhD graduate student with **Dr. Wamsley,** for the successful completion of his oral preliminary exam and admission to candidacy, Oct 10

**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>
- **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>