



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 Foundation Board of Directors Meeting in Atlanta, September 18.
- **Dr. Tabler** gave three invited talks to the Iowa Poultry Association Fall Meeting in West Des Moines, IA, September 20:
  - *Animal welfare from the broiler industry perspective*
  - *Litter management and ventilation*
  - *Cage-free production: What egg farmers can learn from broiler growers*
- **Mrs. Wells** and **Dr. Beck** visited Forrest County Agricultural High School in Brooklyn, MS, where **Mrs. Wells** gave a poultry science career presentation to ~40 students, September 21

***Kudos to...***

- **Dr. Wamsley (PI)** and **Courtney Ennis (Co-PI; PhD grad student with Dr. Wamsley)**, for their grant proposal, "Response of broilers fed phytase enzymes of different optimal pH ranges alone or in combination," with C.K. Gehring (Co-PI), funded by USPoultry, \$80,000.

***Remember – Homecoming Tailgate***

***Outside Hill Poultry Science***

***Nov. 3, 2018***

***Cumulative List of Scientific and Extension Publications, 2018***

New at end of 2017:

- **DK Dittoe, CD McDaniel, T. Tabler and AS Kiess**, 2017. Windrowing poultry litter after a broiler house has been sprinkled with water. J of Appl. Poult. Res. <http://dx.doi.org/10.3382/japr/pfx034>
- F. Dustan Clark, Douglas Aldridge, **Tom Tabler**, and Jon Moyle, Poultry Farm Winterization Suggestions, Dec. 2017. [https://poultry-science.uark.edu/resources/PDFs/AvianAdvice\\_December2017.pdf](https://poultry-science.uark.edu/resources/PDFs/AvianAdvice_December2017.pdf)
- ***Abstracts of the following presentations at the International Poultry Scientific Forum, Atlanta, GA, Jan 29-30 are available at:***  
<http://www.ippexpo.org/ipsf/docs/IPSF-Abstract-Book.pdf>
  - ***Undergraduate Student Presentations at IPSF, Atlanta, GA, Jan 29***
    - **Tiffani Allen\***, **Aaron Kiess**, **Christopher McDaniel** Broiler hatchability following in ovo injection of *Lactobacillus animalis* or *Bacillus licheniformis*
    - **Chrysta Beck\***, **Kelley Wamsley**, **Christopher McDaniel**, **Aaron Kiess** 21 day broiler performance after in ovo injection of individual or multiple probiotic bacteria
  - ***Graduate Student Presentations at IPSF, Atlanta, GA, Jan 29***
    - **Reshma Ramachandran\***, **Christopher McDaniel**, Live pigeon pox virus increases parthenogenesis of in vitro cultured Chinese painted quail eggs
    - **Reshma Ramachandran\***, Midian Nascimento dos Santos, **Christopher McDaniel** Live pigeon pox virus vaccination increases parthenogen size in virgin Chinese painted quail (*Coturnix chinensis*)
    - **Andrew Brown\***, Omar Gutierrez, **Mark Lemons**, Staci Loop, **Kelley Wamsley** Effects of energy density and enzyme inclusion strategy on 0-60 d Ross x Ross 708 male broiler performance, foot pad dermatitis, woody breast severity, and breast yield.
    - **Courtney Ennis\***, **Kelley Wamsley** Growth performance and amino acid digestibility coefficients of broilers fed vegetarian versus conventional diets reared in a research and commercial setting during a 62 day grow-out
      - ***Note: Courtney received an Award of Excellence for scientific content and quality of presentation for her poster presentation.***
    - **Rosana Hirai\***, Leonel Mejia, Cesar Coto, Justina Caldas, **Christopher McDaniel**, **Kelley Wamsley** Determining the digestible lysine requirement of Cobb MV Å~ Cobb 500 male broilers during the first fourteen days of age
    - **Rosana Hirai\***, Leonel Mejia, Cesar Coto, Justina Caldas, **Christopher McDaniel**, **Kelley Wamsley** The impact of feeding varying starter digestible lysine levels to Cobb MV Å~ Cobb 500 male broilers on growth performance and processing yields
    - **Saman Fatemi\***, **Katie Collins Elliott**, Abiodun Bello, **Oluwaseun Durojaye**, Haijun Zhang, Bradley Turner, **E. David Peebles** Effects of in ovo-injected vitamin D3 sources on eggshell temperature and the early

- post-hatch performance of Ross 708 broilers
- **Seyed Fatemi\***, Haijun Zhang, **Katie Elliott**, **Oluwaseun Durojaye**, **E.David Peebles** Effects of in ovo injection of L-ascorbic acid on early growth performance and systemic antioxidant capacity in broiler chickens
  - **Abdulmohsen Alqhtani\***, **Tomi Obe**, **Christopher McDaniel**, **Aaron Kiess** Identifying new antimicrobials that may improve broiler litter quality
  - **Bo Zhang\***, **Kacey O'Donnell**, **Xi Wang**, **Wei Zhai** Effects of antibiotics and probiotic additives on the intestinal morphology of d 28 male broilers
  - **Kacey O'Donnell\***, **Wei Zhai** Effects of Eimeria challenges and dietary additives on mortality and growth performance of broilers
    - *Note: Kacey received an Award of Excellence for scientific content and quality of presentation for her oral presentation*
  - **Claudia Castaneda\***, **Dana Dittoe**, **Kelley Wamsley**, **Christopher McDaniel**, Alfred Blanch, Dorthe Sandvang, **Aaron Kiess** Discovering the optimal concentration of Gallipro Hatch® that enhances broiler hatchability and live performance
  - **Dana Dittoe\***, **Claudia Castaneda**, **Kelley Wamsley**, **Chris McDaniel**, Alfred Blanch, Dorthe Sandvang, **Aaron Kiess** Changes to the gastrointestinal tract and yolk sac of broilers previously in ovo injected with different concentrations of Gallipro Hatch®
- **Faculty Presentations at IPSF, Atlanta, GA, Jan 29**
- **Katie Elliott**, Scott Branton, Jeffrey Evans, Spencer Leigh, Elizabeth Kim, Hammed Olanrewaju, Gregory Pharr, Sharon Heins-Miller, Donald McIntyre, Hillary Pavlidis, **Edgar Peebles\*** Production and humoral immune effects of dietary Original XPC in layer pullets challenged with Mycoplasma gallisepticum
  - **E. Peebles\***, Hammed Olanrewaju, Scott Branton, Jeffrey Evans, Spencer Leigh, Elizabeth Kim, Gregory Pharr, **Katie Elliott** Blood variables of commercial egg-laying pullets following a field-strain Mycoplasma gallisepticum challenge
- **MN dos Santos**, **R Ramachandran**, **AS Kiess**, **KGS Wamsley**, **CD McDaniel**, 2018. Impact of in vitro inoculation and dietary supplementation with Bacillus subtilis on sperm quality of aged White Leghorn roosters, J. of Appl. Poult. Res. <https://doi.org/10.3382/japr/pfx072>
  - **Reshma Ramachandran** and **CD McDaniel**, Parthogenesis in birds: A review. Reproduction, The Journal of the Society for Reproduction and Fertility. Advance Publication. 19 March 2018. <http://dx.doi.org/10.1530/REP-17-0728>; <http://www.reproduction-online.org/content/early/2018/03/19/REP-17-0728.full.pdf+html>
  - **Tom Tabler**, **Jessica Wells** and Nikki Jefcoat, "Infectious Bursal Disease (Gumboro) in Backyard Chickens," Publication 3211 (POD-04-18) [http://extension.msstate.edu/sites/default/files/publications/publications/P3211\\_web.pdf](http://extension.msstate.edu/sites/default/files/publications/publications/P3211_web.pdf)
  - **Tom Tabler**, Jonathan R. Moyle, F. Dustan Clark, Yi Liang, and **Jessica Wells**, "Setback Distances for Poultry Houses," Publication 3209 (POD-03-18). [http://extension.msstate.edu/sites/default/files/publications/publications/P3209\\_web.pdf](http://extension.msstate.edu/sites/default/files/publications/publications/P3209_web.pdf)
  - **Tom Tabler**, "Practice Makes Perfect – Backyard biosecurity critical to flock health,"

<http://www.chickenwhisperermagazine.com/articles/practice-makes-perfect-backyard-biosecurity-critical-flock-health>. April 2, 2018

- **Tom Tabler**, “Proper water pressure, volume essential to good flock performance,” <http://www.thepoultrysite.com/articles/3787/proper-water-pressure-volume-essential-to-good-flock-performance/>. April 3, 2018.
- **R. Ramachandran**, M. Nascimento dos Santos, H.M. Parker, and **C.D. McDaniel**, Parental sex effect of parthenogenesis on progeny production and performance of Chinese Painted Quail (*Coturnix chinensis*); *Theriogenology*, Volume 118, 15 September 2018, Pages 96-102; <https://www.sciencedirect.com/science/article/pii/S0093691X18302474>
- **R. Ramachandran**, M. Nascimento dos Santos, H.M. Parker, and **C.D. McDaniel**, Roles of the sire and dam quail in egg, yolk, albumen, and shell weight alterations due to the parthenogenetic trait. *Theriogenology*, Volume 118, 15 September 2018, Pages 103–109; <https://www.sciencedirect.com/science/article/pii/S0093691X18302462>
- News release featuring **Dr. Tabler** written by Bonnie Coblentz, MSU-ES, on keeping backyard chickens safe: <http://extension.msstate.edu/news/feature-story/2018/use-precautions-keep-backyard-chickens-safe>
- **Tom Tabler**, “Proper water pressure, volume essential to good flock performance,” [https://poultryhealthtoday.com/proper-water-pressure-volume-essential-to-good-flock-performance/?utm\\_source=Poultry+Health+Today+Newsletter&utm\\_campaign=f38c6acf08-News\\_you\\_might\\_have\\_missed\\_PHT\\_12\\_19\\_2017\\_COPY\\_01&utm\\_medium=email&utm\\_term=0\\_5ac605299a-f38c6acf08-315442097](https://poultryhealthtoday.com/proper-water-pressure-volume-essential-to-good-flock-performance/?utm_source=Poultry+Health+Today+Newsletter&utm_campaign=f38c6acf08-News_you_might_have_missed_PHT_12_19_2017_COPY_01&utm_medium=email&utm_term=0_5ac605299a-f38c6acf08-315442097)
- **Xi Wang Aaron S Kiess E David Peebles Kelley G S Wamsley Wei Zhai**, , 2018. Effects of *Bacillus subtilis* and zinc on the growth performance, internal organ development, and intestinal morphology of male broilers with or without subclinical coccidia challenge. *Poultry Sci.*, <https://academic.oup.com/ps/advance-article-abstract/doi/10.3382/ps/pey262/5045361?redirectedFrom=fulltext>

**Abstracts Presented at the Poultry Science Association Annual Meeting can be found at:** <https://www.poultryscience.org/psa18/docs/2018-PSA-Abstracts.pdf>

#### **Oral Presentations, Undergraduate:**

- **(#31): M. Fulton, A. Brown, C. McDaniel and P. Adhikari**, “Effect of house type and strain on hen-day egg production, egg quality and tibial bone breaking strength in commercial egg-laying hens in the late phase of production.”
- **(#162): J. Sousa, C. Castaneda, O Gutierrez, C. McDaniel and A. Kiess**, “In vitro evaluation of six commercially available Bacillus based probiotic supplements and their effects on an antibiotic resistant strain of *Clostridium bifermentens*.”

#### **Oral Presentations, Graduate/Faculty:**

- **(#24): S. Fatemi, KEC Elliott, W. Zhai, A. Bello, B. Turner, and ED Peebles**, “Effects of the in ovo injection of vitamin D3 and 25-hydroxyvitamin D3 on meat yield and woody breast incidence in broilers fed commercial or calcium and phosphorus-restricted diets.”
- **(#33): A. Alqtani, T. Tabler, K. Wamsley, P. Adhikari, C. McDaniel and A. Kiess**, “Evaluating alternative litter amendments in an attempt to improve broiler litter quality.”
- **(#112): M. Lemons, C. McDaniel, J. Moritz, and K. Wamsley**, “Determining the effects of feeding two broiler strains varied crumble size and intact pellets (d 0-18) on starter and overall (d 0-62) performance”

- **Note: This presentation received a Graduate Student Award of Excellence for scientific merit and quality of presentation**
- **(#126): B. Zhang**, X. Wang, and **Wei Zhai**, “Effects of amino acid reduction on growth performance of 6 strains of broilers.”
- **(#153): T. Obe**, R. Nannapaneni, W. Schilling, **C. McDaniel**, and **A. Kiess**, “The persistence of Salmonella after completion of sanitization procedures of a poultry processing plant.”
- **(#324): Wei Zhai**, **K. O’Donnell** and K. Herrick, “Using yeast from ethanol production as a protein source in broiler diets on growth and meat yields.”  
**Presented by B. Zhang**

***Poster Presentations, Undergraduate:***

- **(#399P): M. Fulton**, C. Domenech, T. Dinh, **A. Kiess**, and **P. Adhikari**, “Effect of a pronutrient (Alquernat Nebsui L) on feed consumption, egg production, egg quality and total carotenoids in laying hens supplemented via drinking water.”
- **(#409P): EH Lovelace**, **B. Zhang** and **Wei Zhai**, “Effects of dietary amino acid reduction on the meat yield of six strains of broilers.” **Presented by B. Zhang**
- **(#496P): A. Ruzicka**, **M. Lemons**, **C. Ennis**, **C. McDaniel**, J. Moritz, and **K. Wamsley**, “Determining the effects of feeding two broiler strains varied crumble size and intact pellets (d0-18) on gastrointestinal measurements.”

***Poster Presentation, Graduate:***

- **(#477P): M Lemons**, **C. McDaniel**, J. Moritz, and **K. Wamsley**, “Determining the effects of feeding two broiler strains varied crumble size and intact pellets (d0-18) on d63 processing characteristics.”
- **(#479P): R. Hirai**, L. Mejia, C. Coto, J. Caldas, **C. McDaniel** and **K. Wamsley**, “The impact of varying starter digestible lysine and energy levels on male Cobb MV x Cobb 500 broiler 42 day growth performance and processing parameters.”
- **(#510P): A. Brown**, **M. Lemons**, K. Perryman, **A. Kiess**, and **K. Wamsley**, “Interactive effects of probiotics and copper inclusion on 42 d male broiler performance.”
  
- Mohit Bansal, Ramakrishna Nannapaneni, Chander Shekhar Sharma and **Aaron Kiess**, “Listeria monocytogenes response to sublethal chlorine induced oxidative stress on homologous and heterologous stress adaptation,” *Frontiers in Microbiology*, doi: 10.3389/fmicb.2018.02050.  
<https://www.frontiersin.org/articles/10.3389/fmicb.2018.02050/abstract>