



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:

- **Activities this week**
 - **Dr. Tabler** visited a Sanderson Farm in Laurel to assess light levels associated with 6 and 10 Watt LED lights, March 24.'
 - **Mrs. Wells** participated in the Extension planning meeting for the Sunbelt Expo, where Mississippi is to be the featured state this year, March 23.
 - **Dr. Wamsley** gave an invited presentation, "Feed form impacts on broiler production," at the Mid-Atlantic Nutrition Conference in Maryland, March 23-25.
 - **Mrs. Wells** and **Dr. Beck** attended the Livestock Council Meeting to answer questions about including production poultry in the Dixie National Junior Roundup, March 24.
 - **Dr. Beck** attended the US Poultry & Egg Association's Feed Mill Managers Conference in Nashville, March 25-26.
 - **Drs. Tabler** and **Farnell** and **Mrs. Wells**, assisted by other faculty, staff and students, cooked chicken and served at the CALS/MAFES Faculty and Staff Spring Meeting, March 25.
 - **Mrs. Christensen** and **Ms. Wooten** participated in the DAFVM Support Staff Conference, March 26.
 - Representatives from Mar-Jac Poultry visited Poultry Science to interview students, March 27.
 - **Mrs. Wells**, assisted by faculty, staff and students, conducted the state FFA poultry judging contest in Hill Poultry Science, March 27.
 - **Will Stuart**, senior undergraduate poultry science major, assisted by faculty, staff, and students is cooking crawfish for our annual Spring Function/Crawfish Boil, March 27; the winner of the Faculty Pie Contest will be announced later.
 - **Ben Sellers** (MS student with **Dr. Wamsley**) presented Habit 2 and **Cam Cardenas** and **Xianjiang Wen** (MS student with **Dr. Wamsley** and PhD student with **Dr. Zhai**, respectively) presented Habit 4 from Stephen Covey's book.

- **Welcome to...**
 - **William "Billy" Young**, from Tuscaloosa, who has accepted the position of Research Program Manager and beginning April 1, 2015.

- ***New Publication:***
 - **Tom Tabler**, Kelly Loftin, **Morgan Farnell**, **Jessica Wells**, and Haitham Yakout, “Bed Bugs: Difficult Pests to Control in Poultry Breeder Flocks,” <http://msucares.com/pubs/publications/p2881.pdf>

Running Cumulative List of Scientific and Extension Publications, 2015

Poultry Science:

Refereed manuscripts inadvertently omitted in 2014:

- **Bello, A., W. Zhai, P. D. Gerard, and E. D. Peebles.** 2014. Effects of the commercial in ovo injection of 25-hydroxycholecalciferol on broiler posthatch performance and carcass characteristics. *Poultry Science* 93: 155-162. <http://dx.doi.org/10.3382/ps.2013-03389>
- **Bello, A., M.R. Bricka, P.D. Gerard, and E.D. Peebles.** Effects of commercial in ovo injection of 25-hydroxycholecalciferol on broiler bone development and mineralization on d 0 and 21 post-hatch. *Poultry Science*, Vol. 93:1055-1058. <http://dx.doi.org/10.3382/ps.2013-03608>
- **Peebles, E. D., R. Pulikanti, W. Zhai, and P. D. Gerard.** 2014. Relationships of incubational hatching egg characteristics to posthatch body weight and processing yield in Ross × Ross 708 broilers. *Journal of Applied Poultry Research*. 23:34-40. <http://dx.doi.org/10.3382/japr.2013-00784>
- **Zhai, W., E. D. Peebles, L. Mejia, C. D. Zumwalt, and A. Corzo.** 2014. Effects of dietary amino acid density and metabolizable energy level on the growth and meat yield of summer-reared broilers. *Journal of Applied Poultry Research*. 23 :501–515 <http://dx.doi.org/10.3382/japr.2014-00961>
- **Wang*, X., E. D. Peebles, and W. Zhai.** 2014. Effects of protein source and nutrient density in the diets of male broilers from 8 to 21 days of age on their subsequent growth, blood constituents, and carcass compositions. *Poultry Science*. 93:1463-1474. <http://dx.doi.org/10.3382/ps.2013-03838>.
- **Bello, A., P. Y. Hester, P. D. Gerard, W. Zhai, and E. D. Peebles.** 2014. Effects of commercial in ovo injection of 25-hydroxycholecalciferol on bone development and mineralization in male and female broilers. *Poultry Science* 93:2734–2739. <http://dx.doi.org/10.3382/ps.2014-03981>
- **Nair, D.V., C.S. Sharma, R. Nannapaneni, B.S. Mahmoud, and A.S. Kiess.** Reduction of Salmonella on turkey breast cutlets by plant derived compounds. *Foodborne Pathogens and Disease* 11:981-987. http://online.liebertpub.com/doi/abs/10.1089/fpd.2014.1803?url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Acrossref.org&rfr_dat=cr_pub%3Dpubmed

2015 Papers and Abstracts

2015 International Poultry Scientific Forum and International Production and Processing Expo Abstracts: (www.southernpoultrysciencesociety.org)

- Comparative effects of in ovo versus subcutaneous vaccination and pre-placement holding time on post-hatch broiler performance **E. David Peebles, Taylor Barbosa, Timothy Cummings, John Dickson, Sharon Womack**
- Use of histomorphometric area measurements for determination of intestinal villus/crypt ratios in broiler chickens: comparisons to routine linear methods and documentation of age-associated intestinal changes **Floyd Wilson, Timothy Cummings, Taylor Barbosa, Chris Williams, John Dickson, Amanda Lawrence, David Peebles,**
- Effects of the in ovo injection of organic zinc, manganese, and copper on the hatchability and bone parameters of broiler hatchlings **Tiago Oliveira, Elizabeth Kim, Anna Caixeta, E. David Peebles**
- Parental sex effect of parthenogenesis on hatchability of Chinese Painted quail **Holly Parker, Aaron Kiess, Chris McDaniel**
- Nutrient analysis of Mississippi broiler litter **Tom Tabler, Ashli Brown, Gale Hagood, Morgan Farnell, Chris McDaniel, Jon Kilgore**
- Effect of pullet limestone particle size on performance and bone health of pullets and laying hens raised in deep litter systems **Pamela Eusebio-Balcazar, Sheila Purdum, Kathryn Hanford, Mary Beck**

- Effects of in ovo injection of Inovocox EM1 vaccine and turn-out times on broiler performance **Adebayo Sokale, E. David Peebles**, Christopher Williams.
 - Both Bifidobacterium animalis and its metabolites impact broiler breeder sperm motility **Melissa Triplett, Christopher McDaniel, Aaron Kiess**.
 - Effect of sub-lethal oxidative stress of chlorine on biofilm forming ability of various Salmonella strains **Janak Dhakal, Chander Sharma**
 - Liquid application method (LAM), feed form (FF) and feed pan location effects on D28-56 Ross x Ross 708 male broiler performance and processing characteristics **Robert B Sellers**, John Boney, **Chris McDaniel**, Joseph S. Moritz, **Kelley G. S. Wamsley**
 - **Ben Sellers won a graduate student certificate of excellence award for this presentation and received a cash award of \$500.**
 - Effects of varying coccidiosis control and inclusions of algal beta-1,3-glucan (ABG) on D0-59 Ross x Ross 708 male broiler performance and processing **Cameron Cardenas, Wei Zhai**, Robert Levine, **Kelley Wamsley**
 - Effects of commercially available antibiotic alternatives on 0 to 41 d male broiler chicken intestinal morphology and microflora **Xi Wang, Yuhua Farnell, Aaron Kiess, Kelley Wamsley, Wei Zhai**
 - Relationship among feed form, behavior and welfare, and growth performance using male broilers **Xianjiang Wen**, A.F. Liu, **M.M. Beck, K.G.S. Wamsley, B. Sellers, X. Wang, W. Zhai**
 - Strain and feed form (FF) effects on D28-49 male broiler performance and D43 and 50 processing characteristics **Robert B. Sellers**, Paul B. Tillman, Joseph S. Moritz, **Kelley G. S. Wamsley**
 - Parental sex effect of parthenogenesis on egg weight in mated Chinese Painted quail. **Courtney Wade, Holly Parker, Aaron Kiess, Chris McDaniel**
 - Impact of oral Lactobacillus gavage on seminal and cloacal Lactobacillus concentrations in roosters **Juliana Hirai, Melissa Triplett, Christopher McDaniel, Aaron Kiess**
 - Reduction of Salmonella on chicken skin by the sequential application of chemical treatments and Salmonella lytic bacteriophage preparation **Anuraj Theradiyil Sukumaran*GS, Chander Shekhar Sharma**
 - Relationships of eggshell, air cell, and cloacal temperatures of embryonated broiler hatching eggs during incubation. **Opeyemi Olojede, Katie Collins, Sharon Womack**, Patrick Gerard, **David Peebles**
 - Effect of in ovo injection of F-strain Mycoplasma gallisepticum on the survivability of commercial layer embryos and chicks. **Katie Collins**, Scott Branton, Jeff Evans, **Sharon Womack, E. David Peebles**
 - Commercially available mastic gum derived feed additive effects on zone of inhibition testing and phosphorus sparing using D3-21 male chick performance/tibia ash. **Jared Chandler, Aaron Kiess, Kelley Wamsley**
 - **Jared Chandler won a Don R. Sloan Undergraduate Research Award for this presentation and received a cash award of \$500.**
 - Effects of commercially available Bacillus subtilis or B. licheniformis-based probiotics used alone or in combination with an antibiotic on 0-64 d broiler performance and processing. **Priscila Zorzetto, Wei Zhai**, David Harrington, **Aaron Kiess, Kelley Wamsley**.
- The January issue (Vol. 10, Number 4) of **Landmarks Magazine**, published by the Division of Agriculture, Forestry and Vet Medicine, contains two articles about the Poultry Science Department at <http://www.dafvm.msstate.edu/landmarks/15/jan2015.pdf> :
 - P. 14, “Poultry Teaching, Research, Extension, and Diagnostics The MSU Department of Poultry Science supports Mississippi’s top agricultural commodity.”
 - P. 18, “Parchman Poultry MSU Extension poultry specialists are addressing a growing fly and mosquito problem at the Mississippi State Penitentiary.”
 - **Tom Tabler**, Ashli Brown, Gale Hagood, **Morgan Farnell, Chris McDaniel**, and Jon Kilgore, “Nutrient Content in Mississippi Broiler Litter” (study

funded by the Mississippi Farm Bureau Federation);
<http://msucares.com/pubs/publications/p2878.pdf>.

- **Wang*, X., E. D. Peebles, T. W. Morgan,** R. L. Harkess, and W. **Zhai.** 2015. Protein source and nutrient density in the diets of male broilers from 8 to 21 d of age: Effects on small intestine morphology. Poultry Science 94:61–67. <http://dx.doi.org/10.3382/ps/peu019>.

USDA-ARS

- Olanrewaju, H. A., J. L. Purswell, W. R. Maslin, S. D. Collier, and S. L. Branton. 2015. Effects of color temperatures (kelvin) of LED bulbs on growth performance, carcass characteristics, and ocular development indices of broilers grown to heavy weights. Poultry Science 94:338-344. <http://dx.doi.org/10.3382/ps/peu082>
- 2015 IPSF Abstracts: (www.southernpoultrysciencesociety.org)
 - Effects of light sources and intensity on growth performance and carcass characteristics of heavy broilers at 56 days of age. H. A. Olanrewaju, J. L. Purswell, S. D. Collier, and S. L. Branton.
 - E.J. Kim, J.L. Purswell, and S.L. Branton. 2015. Optimal inclusion rates of low-fat distiller's dried grains with solubles (LF-DDGS) in male broilers aged 28 to 42 d of age