



## 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!

### **Faculty and Staff Travel and Activities:**

- **Dr. Tabler** sampled litter at Sanderson Farms in Laurel, Sept. 2, and at Wayne Farms with **Marcelo Moreira** in Ellisville, Sept. 5.
- **Drs. Tabler** and **Farnell**, with **Marcelo Moreira** and Linda Breazeale, did restricted use pesticide training and visited Parchman Prison, Sept. 3.
- **Dr. Beck** participated in the USPOULTRY Foundation Board meeting in Atlanta, Sept. 10.
- **Drs. Beck, Tabler, Wamsley, and Farnell** attended and participated in the MPA annual convention in Destin, FL, Sept. 11-14.
  - **Many thanks to**
    - **BankPlus** for their sponsorship of the Student Broiler Barn renovation and a graduate travel award;
    - **First Financial Bank** and **MPA** for undergraduate scholarships;
    - **International Paper** for graduate scholarships.
- **Dr. Tabler** attended the MPA Grower Advisory Committee meeting, Magee, Sept. 16; judged the Oktibbeha County poultry Show, Starkville, Sept. 18; and sampled litter at Wayne Farms in Ellisville with **Marcelo Moreira**, Sept. 19.
- **Dr. Tabler** gave an invited presentation entitled, "Sprinklers cool broilers, conserve water, and maintain performance," at the 2014 Texas Broiler Symposium in Center, TX, Sept. 23-24.
- **Mrs. Wells** provided hatching eggs and poultry biology lessons, assisted by **Holli Nutt** and **Laikyn Starkey**, to 1<sup>st</sup> and 2<sup>nd</sup> graders at West Point, MS, Sept. 22-26.
- **Mrs. Wells** participated in FARMtastik in Southhaven, Sept. 25, where ~400 3<sup>rd</sup> graders were introduced to a wide range of agricultural commodities.
- **Dr. Tabler** met with representatives of Sanderson Farms at Collins to discuss LED lighting and possible future research endeavors, Sept. 25.

### \*\*\*\*\*4-H Poultry Chain Funding Needs\*\*\*\*\*

**This fall we have 65 youth showing chickens at the State Fair. We need industry sponsors to bid on these birds at the auction on October 11, beginning at 5:00pm. There is no obligation to take the birds that will likely sell for ~\$150-\$300 per lot. We also need sponsors for the prize awards that range from \$150-\$1,000. Donors of trophies (~\$120 each) will have their names inscribed on the trophy plate. All donors of cash or trophies will be widely recognized and published. We need \$3,600 for trophies and \$10,900 for prize awards. Any and all donations will be gratefully accepted!**

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**Recent Publication:**

- **Tom Tabler**, Jonathan Moyle, F. Dustan Clark, Yi Liang, **Jessica Wells**, and **Morgan Farnell**, "Protect Backyard Birds from Predators," <http://msucares.com/pubs/publications/p2853.pdf>

**Thank you!**

- To everyone who sent get well wishes and condolences during my mother's final illness and death on September 15. *Mary Beth Lassetter Beck Pearson*, originally of Scott County and Clinton, MS, had lived in Hattiesburg since 2002.

**Running Cumulative List of Scientific and Extension Publications, 2014**

- **Tom Tabler**, F. Dustan Clark, Jonathan R. Moyle, Yi Liang, **Jessica Wells**, and **Morgan Farnell**, “Windrow Composting Broiler Litter between Flocks,” <http://msucares.com/pubs/publications/p2818.pdf>.
- C.L. Williams, **G.T. Tabler** and S.E. Watkins, 2013. Comparison of broiler flock daily water consumption and water-to-feed ratios for flocks grown in 1991, 2000-2001, and 2010-2011. *J Appl Poultry Research*, 22:934-941. <http://dx.doi.org/10.3382/japr.2013-00767>
- Abstracts from the 2014 IPSF: <http://www.ippexpo.org/ipsf/docs/2014%20IPSF%20Abstracts.pdf>
  - M6 Detection of parthenogenesis in mated quail hens and its impact on fertilization  
**Priscila Santa Rosa\***, **Holly Parker**, **Aaron Kiess**, **Chris McDaniel**
  - M9 Physiological responses of broiler hatchlings to commercial in ovo coccidiosis vaccine administered on days 18.5 and 19.0 of incubation  
**Adebayo Sokale\***, **E. David Peebles**, **Wei Zhai**, Timothy S. Cummings, Christopher J. Williams
  - M24 Apparent ileal amino acid digestibility (AIAAD) of various animal by-product blends (ABB) in broilers aged 21 and 42 d of age  
**Cameron Cardenas\***, Elizabeth Kim, Bob Hill, **Kelley Wamsley**
  - M36 Effects of limestone particle size in pullet diets on hen performance, bone mineral density and keel bone deformities in aviaries or conventional cages  
Pamela Eusebio-Balcazar\*, **Mary Beck**, Sheila Purdum
  - M48 Antimicrobial activity of carvacrol against Salmonella on turkey breast cutlets packaged under modified atmosphere  
**Divek V. T. Nair\***, **Chander Shekhar Sharma**
  - M66 Effects of diet type and nutrient density from day 8 to 21 on bone morphology, breaking strength, and mineral density in male broilers  
**Xi Wang\***, **E. David Peebles**, Mark Bricka, **Wei Zhai**
  - T137 Effects of dietary lysine and methionine supplementation on growth performance and meat yield of male broilers  
**Wei Zhai\***, **E. David Peebles**, Wes Schilling, Yves Mercier
  - P205 Effects of the in ovo injection of 25-hydroxylcholecalciferol on the yolk characteristics of embryonated broiler hatching eggs  
**Nayara Pelici\***, **Wei Zhai**, **Sharon Womack**, **E. David Peebles**
  - P206 Effects of the in ovo injection of 25-hydroxylcholecalciferol on serum calcium and phosphorous concentrations in broiler embryos  
**Midian Nascimento\***, **Wei Zhai**, **Sharon Womack**, **E. David Peebles**
  - P211 Effects of the raising model on semen quality and fertility of male Sichuan White Geese  
**Anfang Liu\***, Mingjun Chen, Jing Zhang, Wang Xi, Jie Liu, Xia Qiu, Hongpeng Ma, Wei Zhai
  - P212 Effects of single nucleotide polymorphism of H-FABP gene on carcass traits in Sichuan White Geese  
**Anfang Liu\***, Shukai Yuan, Jing Zhang, Jie Liu, Xia Qiu, Hongpeng Ma
  - P235 The effect of varying the inclusion of two different anticoccidials into a commercial diet on D0-49 Ross 708 bird performance  
**Rosana Hirai\***, Timothy Cummings, **Kelley Wamsley**
  - P241 Dietary Alterations with Live Coccidiosis Vaccine (LCV) Response and D0-46 Ross 708 Broiler Performance  
**Robert Sellers\***, **Wei Zhai**, Carla Price, Phil Stayer, **Tom Tabler**, **Kelley Wamsley**.
- **Tom Tabler**, **Morgan Farnell**, **Jessica Wells**, **Haitham Yakout**, and Yi Liang, “Controlling Rodents on the Poultry Farm,” <http://msucares.com/pubs/publications/p2824.pdf>
- **Tom Tabler**, news release on litter sampling: <http://msucares.com/news/releases/14/nr20>.

- **Tom Tabler**, F. Dustan Clark, Jonathan R. Moyle, **Morgan Farnell**, and **Jessica Wells**, “Managing Manure from the Backyard Flock,” <http://msucares.com/pubs/infosheets/is1973.pdf>
- **H. M. Parker**, **A. S. Kiess**, **P. Santa Rosa**, and **C. D. McDaniel**, 2014. Selection for the parthenogenetic trait in Chinese Painted Quail (*Coturnix chinensis*) affects hatchability parameters. Poultry Science 93(3): 664-672 <http://dx.doi.org/10.3382/ps.2013-03527>
- **Tom Tabler**, Dustan Clark, Jonathan R. Moyle, **Jessica Wells**, and **Morgan Farnell**, “Composting Manure from Small Poultry Flocks,” <http://msucares.com/pubs/infosheets/is1975.pdf>
- **News Release - Tabler and Farnell:** <http://www.wcbi.com/wordpress/okolona-poultry-farmer-learns-from-msu>
- **Tom Tabler**, F. Dustan Clark, Jonathan R. Moyle, **Morgan Farnell**, and **Jessica Wells**, “Deep Pectoral Myopathy (Green Muscle Disease) in Broilers,” <http://msucares.com/pubs/infosheets/is1976.pdf>
- Liu, X., J.A. Byrd, **M. Farnell**, and C.A. Ruiz-Feria, 2014. Arginine and vitamin E improve the immune response after a Salmonella challenge in broiler chicks, Poultry Sci. 93:882-890. <http://dx.doi.org/10.3382/ps.2013-03723>.
- **Tom Tabler**, **Morgan Farnell** and **Jessica Wells**, “Poultry Water Line Sanitation,” <http://msucares.com/pubs/publications/p2839.pdf>.
- Jonathan Moyle, Jennifer Rhodes, Brigid McCrea, **Tom Tabler**, and Dustan Clark, “Rodent Control on Small Poultry Farms,” [www.poultry.msstate.edu/pdf/extension/rodents.pdf](http://www.poultry.msstate.edu/pdf/extension/rodents.pdf).
- Y. Liang, **G.T. Tabler**, T.A. Costello, I.L. Berry, S.E. Watkins, Y.V. Thaxton, 2014. Cooling broiler chickens by surface wetting: Indoor thermal environment, water usage, and bird performance. ASABE, Vol 30(2): 249-258. <http://dx.doi.org/10.13031/aea.30.10103> (for the abstract only); for a copy of the full manuscript, please contact **Dr. Tabler** ([ttabler@poultry.msstate.edu](mailto:ttabler@poultry.msstate.edu))
- **Poultry Science Abstracts 2014:** <http://m.poultryscience.org/Search.aspx> and then search by author name:
  - # 357P The effects of different enzyme complexes on nutrient digestibility, performance, and processing yield in male broilers. L. V. Teixeira<sup>1</sup>, **T. F. B. Oliveira**<sup>\*1,2</sup>, **D. E. Peebles**<sup>2</sup>, A. G. Bertechini<sup>1</sup>, <sup>1</sup>Universidade federal de Lavras, Brazil, <sup>2</sup>Mississippi State University
  - # 358P The effects of different enzyme complexes on nutrient digestibility and performance in female broilers. **T. F. B. Oliveira**<sup>\*1,2</sup>, L. V. Teixeira<sup>1</sup>, **D. E. Peebles**<sup>2</sup>, A. G. Bertechini<sup>1</sup>, <sup>1</sup>Universidade federal de Lavras, Brazil, <sup>2</sup>Mississippi State University
  - # 482P Effects of dietary lysine and methionine supplementation on serum metabolites, hormones, and their relationship with the growth performance of male broilers. **W. Zhai**<sup>\*1</sup>, **E. D. Peebles**<sup>1</sup>, **X. Wang**<sup>1</sup>, Y. Mercier<sup>2</sup>, <sup>1</sup>Mississippi State University, <sup>2</sup>Adisseo France
  - # 131 Effects of dietary lysine and methionine supplementation on the breast meat quality of male broilers. **W. Zhai**<sup>\*1</sup>, M. W. Schilling<sup>1</sup>, **E. D. Peebles**<sup>1</sup>, Y. Mercier<sup>2</sup>, <sup>1</sup>Mississippi State University, <sup>2</sup>Adisseo France
  - # 132 Cost effectiveness of supplemental dietary lysine and methionine for meat yield in male broilers. **W. Zhai**<sup>\*1</sup>, **E. D. Peebles**<sup>1</sup>, Y. Mercier<sup>2</sup>, <sup>1</sup>Mississippi State University, <sup>2</sup>Adisseo France
  - # 179 Comparative effects of in ovo versus subcutaneous vaccination and pre-placement holding time on early post-hatch broiler chick quality. **E. D. Peebles**<sup>\*1</sup>, T. M. Barbosa<sup>2</sup>, T. S. Cummings<sup>2</sup>, J. Dickson<sup>2</sup>, **S. K. Womack**<sup>1</sup>, <sup>1</sup>Department of Poultry Science, Mississippi State University, <sup>2</sup>Zoetis, Research Triangle Park, NC.

- # 49 Effects of commercially available antibiotic alternatives on 0- to 41-d-old male broiler chicken growth performance. **X. Wang<sup>\*1</sup>, K. Wamsley<sup>1</sup>, A. Kiess<sup>1</sup>, W. Zhai<sup>1</sup>**, <sup>1</sup>Mississippi State University
- # 52 Effects of various antibiotics, anticoccidials, and antibiotic alternative products on gut characteristics and performance using broilers given a 10x live coccidiosis vaccine.  
**C. Cardenas<sup>\*1</sup>, W. Zhai<sup>1</sup>, K. Wamsley<sup>1</sup>**, <sup>1</sup>Mississippi State University
- # 286P Effects of the raising model on carcass traits and muscle nutrition composition in Landaise geese. **A. Liu<sup>\*1,2</sup>**, J. Zhang<sup>1</sup>, J. Liu<sup>1</sup>, W. Xi<sup>1</sup>, X. Qiu<sup>1</sup>, H. Ma<sup>1</sup>, **W. Zhai<sup>2</sup>**, <sup>1</sup>Southwest University, Chongqing, China, <sup>2</sup>Mississippi State University
- # 386P Evaluating the impact of dietary mannan-oligosaccharides (MOS) on broiler performance and intestinal microflora. R. A. Silva<sup>\*1</sup>, H. M. Yakout<sup>1</sup>, **W. Zhai<sup>1</sup>, M. B. Farnell<sup>1</sup>, C. S. Sharma<sup>1</sup>, C. D. McDaniel<sup>1</sup>, A. S. Kiess<sup>1</sup>**, <sup>1</sup>Mississippi State University
- # 482P Effects of dietary lysine and methionine supplementation on serum metabolites, hormones, and their relationship with the growth performance of male broilers. **W. Zhai<sup>\*1</sup>, E. D. Peebles<sup>1</sup>, X. Wang<sup>1</sup>**, Y. Mercier<sup>2</sup>, <sup>1</sup>Mississippi State University, <sup>2</sup>Adisseo France
- # 67 Feed form and liquid application method effects on feed augering segregation. **R. B. Sellers<sup>\*1</sup>**, J. Boney<sup>2</sup>, **C. McDaniel<sup>1</sup>**, J. S. Moritz<sup>2</sup>, **K. G. S. Wamsley<sup>1</sup>**, <sup>1</sup>Mississippi State University, <sup>2</sup>West Virginia University
- # 83 Evaluating the effect of de Man, Rogosa, Sharpe medium and byproducts of Lactobacillus acidophilus on rooster sperm quality. **M. D. Triplett<sup>\*1</sup>, C. D. McDaniel<sup>1</sup>, A. S. Kiess<sup>1</sup>**, <sup>1</sup>Mississippi State University
- # 295P Use of a compressed air foam system to rapidly clean and disinfect a broiler hatchery. V. S. Godoy<sup>\*1</sup>, C. H. Chisholm<sup>1</sup>, **A. S. Kiess<sup>1</sup>, Y. Z. Farnell<sup>1</sup>, G. T. Tabler<sup>1</sup>, C. D. McDaniel<sup>1</sup>, M. B. Farnell<sup>1</sup>**, <sup>1</sup>Mississippi State University
- # 97 Evaluation of compatibility of Salmonella lytic bacteriophage with different antimicrobials and their combinations on reduction of Salmonella in vitro and on chicken breast fillets. **A. T. Sukumaran<sup>\*1</sup>, C. S. Sharma<sup>1</sup>**, <sup>1</sup>Mississippi State University
- # 99 Antimicrobial efficacy of carvacrol against Salmonella, Campylobacter, and lactic acid bacteria on turkey breast cutlets stored under modified-atmosphere packaging.  
**D. V. T. Nair<sup>\*1</sup>, C. S. Sharma<sup>1</sup>**, <sup>1</sup>Mississippi State University
- # 264 Prevalence, serotypes, and antibiotic-resistant phenotypes of Salmonella enterica isolates in retail poultry products. **C. S. Sharma<sup>\*1</sup>, A. Ates<sup>1</sup>**, <sup>1</sup>Mississippi State University
- **Tom Tabler**, F. Dustan Clark, Jonathan R. Moyle, **Jessica Wells, Morgan Farnell**, “Feather Pecking and Cannibalism in the Backyard Flock,” <http://msucares.com/pubs/publications/p2848.pdf>
- **Mary M. Beck**, Three agricultural research priorities to feed the planet: Critical focus areas for future agriculture research are food security, “one health,” and stewardship. <http://www.wattpoultryusa-digital.com/#&pageSet=13>.
- **Tom Tabler, Jessica Wells, and Morgan Farnell**, “Potential Contract Growers Face Important Decisions.” <http://msucares.com/pubs/publications/p2850.pdf>

