

- Teaching
- Research
- Extension
- Departmental Activities

Mississippi 4-H/FFA Replacement Heifer Development Contest

4-H programs are a great way for youth to become involved in the management of their cattle. Here Lincoln County 4-H member, Claire Posey watches as her heifer is ultrasounded to confirm pregnancy.





Mississippi State University Equestrian Team

Posted to Facebook:



Mississippi State University Equestrian Team

August 30 at 4:34pm · 🌐

The MS State Equestrian Team would like to welcome Savanna Blackburn! Savanna will compete in the Walk Trot division.




Mississippi State University Equestrian Team

August 30 at 8:54am · 🌐

Please welcome Cecilia Collins to the MS State Equestrian Team! She will be competing in the Beginner Walk Trot Canter.

Mississippi State University Equestrian Team



 **Mississippi State University Equestrian Team**
Yesterday at 9:49am · 🌐

Congratulations to Tatem Reynolds! She will be joining the equestrian team to compete in the Novice division.



Posted to Facebook:

 **Mississippi State University Equestrian Team**
6 hrs · 🌐

Please welcome Betsey Munday To the MS State Equestrian Team! Betsey





STUDENT SPOTLIGHT

Posted to Facebook:



Mississippi State University Extension Dairy

5 hrs · 🌐

Meet [Rebecca Keefer](#) (aka Keefer)! She is a senior Agbusiness Major in the Ag Economics department at Mississippi State University. This summer she worked with Dr. Stone on a research project that tested the effectiveness of a feed additive on feed efficiency. She also worked on an economics study evaluating the necessary returns for producers to be able to implement a center pivot irrigation system on their own farms. She co-authored an Extension publication on this topic, due to come out soon.

She will be continuing her economics studies this semester by working with Dr. Stone and Dr. [Josh Maples](#) to create some Mississippi-specific dairy budgets.

Her ultimate career goal is to become the commissioner of Agriculture for whatever state she ends up living.

Welcome to the dairy group, Keefer!



Breakfast on the Farm



MISSISSIPPI STATE UNIVERSITY
DEPARTMENT OF ANIMAL
AND DAIRY SCIENCES

BOO!

FRIDAY, OCTOBER 27 | 9 A.M.-NOON

open to school groups & field trips

SATURDAY, OCTOBER 28 | 9 A.M.-NOON

open to the public & families

BEARDEN DAIRY RESEARCH CENTER | STARKVILLE

2128 Turkey Creek Road

\$5 per person

Breakfast, milk, and ice cream included

DAIRY TOUR

TRICK-OR-"TEAT"

COW COSTUME CONTEST (11 a.m. daily)

HALLOWEEN ACTIVITY

HAUNTED PARLOR

AND MORE!

Registration required by **OCTOBER 20**

extension.msstate.edu/breakfast



MISSISSIPPI STATE UNIVERSITY
EXTENSION

For more information, contact Amanda Stone
at 662-769-9941 or amanda.stone@msstate.edu.



Upcoming Extension Events

Beef Extension – Dr. Brandi Karisch Cobie Rutherford



- **Mississippi State University Artificial Insemination School, October 26-28**, Animal and Dairy Sciences Department, Mississippi State, MS

Equine Events – Dr. Clay Cavinder



- **Upcoming Programs** and publications are online at: <http://extension.msstate.edu/agriculture/livestock/equine/upcoming-programs>
- For more info, contact Dr. Cavinder at clay.cavinder@msstate.edu

4-H Events – Dr. Dean Jousan



- **Retinal Image/Classify** for 2017 Mississippi State Fair and 2018 District Dixie National Junior Round-up, **September 12-15**, Various Locations
- **Mississippi State Fair, October 4-15**, Jackson, MS
- For publications and upcoming events, go to: <http://extension.msstate.edu/4-h> or contact Dr. Dean Jousan at dj230@msstate.edu

Dairy Events – Dr. Amanda Stone



- **Breakfast on the Farm**, dairy tours with a Cow Costume Contest, a “Haunted Parlor, Breakfast with Milk & Ice Cream. **October 27-29**, MSU Bearden Dairy Research Center. \$5 pp; Register by Oct. 20 at extension.msstate.edu/breakfast

2017 Refereed Publications:

Liao, Shengfa F., Martin Nyachoti. Using probiotics to improve swine gut health and nutrient utilization. *Animal Nutrition*. (2017) 1-13. <http://dx.doi.org/10.1016/j.aninu.2017.06.007>.

Kutchy, Naseer A., Ana Velho, Erika S. B. Menezes, Marie Jacobsen, Giselle Thibaudeau, Arlindo Moura, Abdullah Kaya, Andy Perkins, and **Erdogan Memili**, Robert W. Wills. Testis specific histone 2B is associated with sperm chromatin dynamics and bull fertility-a pilot study. *Journal of Reproductive Biology and Endocrinology*. (2017) 15:59. DOI 10.1186/s12958-017-0274-1.

Lemley, Caleb O. Investigating reproductive organ blood flow and blood perfusion to ensure healthy offspring. *Animal Frontiers*. doi:10.2527/af.2017-0124.

Keomanivong, F. E., L. E. Camacho, **C. O. Lemley**, E. A. Kuemper, R. D. Yunusova, P. P. Borowicz, J. D. Kirsch, K. A. Vonnahme, J. S. Caton and K. C. Swanson. Effects of realimentation after nutrient restriction during mid- to late gestation on pancreatic digestive enzymes, serum insulin and glucose levels, and insulin-containing cell cluster morphology. *Journal of Animal Physiology and Animal Nutrition*. 101 (2017) 589–604. DOI: 10.1111/jpn.12480.

Menezes, E.B., R.V. de Oliveira, M.F. van Tilburg, E.A. Barbosa, N.V. Nascimento, A.L.M.C.S. Velho, F.B. Moreno, R.A. Moreira, A.C.O. Monteiro-Moreira, G.M.C. Carvalho, A.F. Ramos, **E. Memili**, A.A. Moura. Proteomic analysis of seminal plasma from locally-adapted “Curraleiro Pé-Duro bulls” (*Bos taurus*): identifying biomarkers involved in sperm physiology in endangered animals for conservation of biodiversity. *Animal Reproduction Science*. <http://dx.doi.org/10.1016/j.anireprosci.2017.05.014>.

Cavinder, C. A., A. Sear, R. Valdez, L. White. Utilization of Social Media as a Marketing Tool for Equine Businesses: An Exploratory Study. *North American Colleges and Teachers of Agriculture Journal*. June 2017, Vol 61(2).

Gastal, G. D. A., A. Hamilton, B. G. Alves, S. G. S. de Tarso, **J. M. Feugang**, G. A. Apgar, C. K. Nielsen, E. L. Gastal, W. J. Banz. Ovarian features in white-tailed deer (*Odocoileus virginianus*) fawns and does. *PLOS ONE*. 12(5):30177357. <https://doi.org/10.1371/journal.pone.0177357>.

Aguiar, F.L.N., G.D.A. Gastal, G.M. Ishak, M.O. Gastal, D.I.A. Teixeira, J.R. Figueiredo, E.L. Gastal, **J.M. Feugang**. Effects of FSH addition to an enriched medium containing insulin and EGF after long-term culture on functionality of equine ovarian biopsy tissue. *Theriogenology* 99 (2017) 124-133.

Feugang, Jean M. Novel agents for sperm purification, sorting and imaging. *Molecular Reproduction Development*. 2017. 9999:1-10. DOI: 10.1002/mrd.22831.

Borchers, M. R., Y. M. Chang, K. L. Proudfoot, B. A. Wadsworth, **A. E. Stone**, and J. M. Bewley. Machine-learning-based calving prediction from activity, lying, and ruminating behaviors in dairy cattle. *Journal of Dairy Sciences*, Vol.100:1-11. 2017. <https://doi.org/10.3168/jds.2016-11526>.

Lemley, C. O. and K. A. Vonnahme. PHYSIOIOGY AND ENDOCRINOLOGY SYMPOSIUM:

Alterations in uteroplacental hemodynamics during melatonin supplementation in sheep and cattle. *Journal of Animal Science* 2017.95:2211-2221. doi:10.2527/jas2016.1151.

Gastal, G.D.A., F.L.N. Aguiar, B.G. Alves, K.A. Alves, S.G.S. de Tarso, G.M. Ishak, **C.A. Cavinder**, **J.M. Feugang**, E.L. Gastal. Equine ovarian tissue viability after cryopreservation and in vitro Culture. *Theriogenology* 97 (2017) 139-147.

Maki, C R, S Allen, M Wang, SH Ward, **BJ Rude**, HR Bailey, RB Harvey and TD Phillips. Calcium Montmorillonite Clay for the Reduction of Aflatoxin Residues in Milk and Dairy Products. *Journal of Dairy and Veterinary Sciences*. 2017; 2*3): 555587.

Regmi, N., T. Wang, **M. A. Crenshaw**, **B. J. Rude**, **S. F. Liao**. Effects of dietary lysine levels on the concentrations of selected nutrient metabolites in blood plasma of late-stage finishing pigs. *Journal of Animal Physiology and Animal Nutrition*. 2017; 1-7. DOI: 10.1111/jpn.12714.

Wang, Taiji, **Jean M. Feugang**, **Mark A. Crenshaw**, Naresh Regmi, **John R. Blanton Jr.** and **Shengfa F. Liao**. A Systems Biology Approach Using Transcriptomic Data Reveals Genes and Pathways in Porcine Skeletal Muscle Affected by Dietary Lysine. *International Journal of Molecular Sciences* (2017) 18, 885.

Cain, Amanda J., **Caleb O. Lemley**, F. Kevin Walters, David L. Christiansen, E. Heath King, Richard M. Hopper. Pre-breeding beef heifer management and season affect mid to late gestation uterine artery hemodynamics. *Theriogenology* 87 (2017) 9–15.

Jones, Barbara W., **Amanda E. Stone**, Connie L. Wood, Kristen J. McQuerry, Joey D. Clark, Denise L. Ray, and Jeffrey M. Bewley, PAS. Case Study: Characterization of milk yield, lying and rumination behavior, gait, cleanliness, and lesions between 2 different freestall bases. *The Professional Animal Scientist* 33:140–149. <https://doi.org/10.15232/pas.2016-01548>.

Stone, A. E., B. W. Jones, C. A. Becker, and J. M. Bewley. 2017. Influence of breed, milk yield, and temperature-humidity index on dairy cow lying time, neck activity, reticulorumen temperature, and rumination behavior. *Journal of Dairy Sciences* 100:1–9. <https://doi.org/10.3168/jds.2016-11607>.

Hodge, Lauren B., **Brian J. Rude**, **Thu N. Dinh**, **Caleb O. Lemley**. Effect of u-3 Fatty Acid Supplementation to Gestating and Lactating Mares: On Milk IgG, Mare and Foal Blood Concentrations of IgG, Insulin and Glucose, Placental Efficiency, and Fatty Acid Composition of Milk and Serum From Mares and Foals. *Journal of Equine Veterinary Science* 51 (2017) 70–78.

Littlejohn, B. P., M. C. Roberts, M. N. Bedenbaugh, A. W. Lewis, D. A. Neuendorff, D. G. Riley, J. A. Carroll, **R. C. Vann**, M. Amstalden, R. D. Randel, T. H. Welsh, Jr. (2017). Evaluation of the influence of prenatal transportation stress on GnRH-stimulated luteinizing hormone and testosterone secretion in sexually mature Brahman Bulls. *Journal of Animal Science* 95, 129-138. www.animalsciencepublications.org/publications/jas.

Gastal, G D A , B G Alves, K A Alves, M E M Souza, A D Vieira, A S Varela Jr, J R Figueiredo, **J M Feugang**, T Lucia Jr and E L Gastal. Ovarian fragment sizes affect viability and morphology of preantral follicles during storage at 4°C. *Reproduction*, (2017) 153, 577-587.

2017 Book Chapters:

- Greene, Jonathan M. and **Peter L. Ryan**. L-Arginine in the Uterus and Placenta and During Gestation in Mammals. In *L-Arginine in Clinical Nutrition*, Nutrition and Health, Chapter 22. 2017. V.B. Patel et al. (eds.). DOI 10.1007/978-3-319-26009-9_22.
- Stone, A. E.** Precision dairy monitoring technology implementation opportunities and challenges. In *Large Dairy Herd Management*, 3rd Edition. (Edited by David K. Beede).
- Wang, Taiji, **M. A. Crenshaw**, M. S. Hasan, G. Wu and **S. F. Liao**. 2017. Effects of dietary lysine levels on the plasma concentrations of growth-related hormones in late-stage finishing pigs. In T. Asao and M. Asaduzzaman. eds. *Amino Acid - New Insights and Roles in Plant and Animal*. Chapter 13. pp. 259-271. InTech, Rijeka, Croatia. DOI: 10.5772/intechopen.68545.