



MISSISSIPPI STATE  
UNIVERSITY™  
**Animal and Dairy**  
SCIENCESSCIENCES

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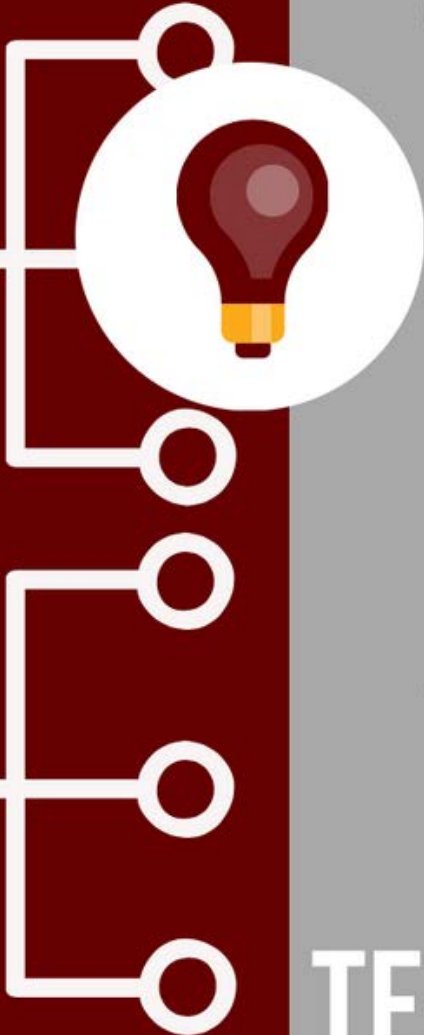
# AQHA SUCCESS

A big congratulations to the team! The bulldogs made their presence known in the limited division at the AQHA World Show! All team members were in the top 10 overall! Hail state!! Dr. Cavinder and assistant coach Courtney Phillips are very proud!



Halter	Performance	Reasons	Overall
5th- Mary Claire Cornett	1st- Rachel McDaniel	1st- Rachel	1st- Rachel
	2nd- Tori Stroupe	6th- Alex	2nd- Cheyenne
	3rd- Cheyenne Jones	9th- Tori	3rd- Mary Claire
	4th- Shawna Downs		5th- Tori
	6th- Mary Claire		6th- Shawna
	7th- Alex Blackburn		9th- Alex

# Helpful Tech Tips



- **[HTTPS://WWW.SIGNUPGENIUS.COM](https://www.signupgenius.com)**
  - GOOD WAY TO SIGN UP YOUR ADVISEES
  - ALLOWS YOUR ADVISEES TO SELECT A DAY AND TIME FROM AVAILABLE TIME SLOTS AND THEN CREATES YOU A CALENDAR
- **[HTTPS://VENMO.COM](https://venmo.com)**
  - THIS IS A WEBSITE AS WELL AS AN APP
  - YOU CAN USE THIS FOR A DEPARTMENT, CLUB, OR PERSONAL USE
  - ALL YOU HAVE TO DO IS ATTACH A BANK ACCOUNT, DEBIT, OR CREDIT CARD AND YOU CAN SEND AND RECEIVE WITHOUT THE HASSLE OF KEEPING UP WITH CASH
- **[HTTP://SITELOCATOR.FLEETCOR.COM/SITE/INDEX?  
NETWORK=FUELMAN](http://sitelocator.fleetcor.com/site/index?network=fuelman)**
  - YOU CAN USE THIS LINK TO SEARCH FOR FUEL MAN LOCATIONS WHEN YOU TRAVEL OUTSIDE STARKVILLE

## TECH TIPS

TECH NEED-TO-KNOWS TO MAKE YOUR LIFE EASIER



# Horse Unit Open House and Horse Sale

## MSU Horse Sale Bid November 24-26, 2017

Viewing at Horse Unit Open House 11/18 from 9-11 am

Athleticism

Quality

Versatility



Facebook: Mississippi State University Horse Unit  
Contact: Ashley Shiffler - (580) 795-4349 - [aes779@msstate.edu](mailto:aes779@msstate.edu)  
Quick, Convenient Bidding At [AUCTION.MSUCARES.COM](http://AUCTION.MSUCARES.COM)

Bidding begins at 8 am the 24th and closes at 8 pm the 26th

# Trail Clinic

## Trail Clinic

**Saturday, December 2, 2017**

Prepare- Practice - Accomplish

49 Equine Arena

2285 Hwy 49 South, Florence, MS

**Shawn Hays: AQHA/NSBA Judge**

2 sessions: Youth 9am-noon; Adults 1pm-4pm

\$60 per person: 8 spots available for each session

**deadline to register & pay is November 20th**

There will be a waiting list for each group in case we have cancellations,  
but money must be sent in by deadline

for more information contact Katrina Owens 662-746-2453/ [katrina.owens@msstate.edu](mailto:katrina.owens@msstate.edu)



We are an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, or any other characteristic protected by law.

Mississippi State University Extension will provide reasonable accommodations to persons with disabilities or special needs. Please contact the Yazoo County office of MSU Extension at 662-746-2453 prior to a program or event to request reasonable accommodation.



# Crossbreeding Fact Sheet

A structured, well planned crossbreeding program can play a significant role in the profitability of a commercial cattle operation. Crossbreeding allows producers to complement the strengths of two or more breeds. For example, one parent breed might excel for muscling and growth, while the other parent breed is more maternal. In addition, a crossbred calf will have additional production from heterosis.

Heterosis is reported as a percentage improvement in the trait of interest.

Heterosis improves the performance of lowly heritable traits, like reproduction.

Heterosis will not overcome poor breed choices or sire and replacement selection.

Crossbred cows have more lifetime production from maternal heterosis.



Source: Beef Sire Selection Manual online at [www.nbccc.org](http://www.nbccc.org).

For more information on Mississippi Beef Production, visit our website [www.extension.msstate.edu/beef](http://www.extension.msstate.edu/beef) to contact a statewide specialist.



# Ryegrass Pasture Tour

## Ryegrass Pasture Management Field Day/Tour December 1, 2017

LSU AgCenter Southeast Research Station, 41217 Par Rd 139, Franklinton,  
LA 70438



Coffee and Donuts beginning at 10 a.m.

### Topics to be discussed by Specialists:

- Welcome, Dr. Charlie Hutchison, LSU AgCenter Southeast Research Station Director – 10:10 am
- Load up trailers for tours – 10:15 am
  1. Ryegrass variety plots, Dr Ed Twidwell, LSU AgCenter Professor, School of Plant, Environmental and Soil Sciences
  2. Rotational Grazing of Beef Herds, Mr. Wedge Barthe, Clinton, LA.
  3. Managing the Dairy Herd utilizing ryegrass pastures, Dr Mike McCormick, Kentwood Coop
- Jambalaya Lunch by Mike Smith - Noon

Sponsored by the LSU AgCenter, the LSU AgCenter Southeast Research Station, and the Kentwood Coop.  
For additional info, Contact Ronnie Bardwell , Ph.D. Ag Educator, 985-320-8978,  
[ronniebardwell@gmail.com](mailto:ronniebardwell@gmail.com)



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If you should need any special accommodations, please contact the LSU AgCenter Southeast Research Station at least 2 weeks prior to the event. The LSU AgCenter is a statewide campus of the LSU System and provides equal opportunities in programs and employment.

# Holiday Meat Sale

MISSISSIPPI STATE UNIVERSITY  
**MEAT CHEMISTRY AND CUISINE**  
HOLIDAY PACKAGE DEAL

Happy Holidays!  
from Meat Chemistry and Cuisine

**ONLY \$40**

**Our Package Includes:**

- 5 lbs. Ground Beef
- 6 lbs. Dry-rub Pork Chops
- 3 lbs. Edam Cheese Bratwurst Sausage

**We Also Have:**  
Edam Cheese Bratwurst Sausage: 12 lbs. or more for **\$4/lb.**  
Ground Beef Package: 10 lbs. or more **\$2.50/lb.**

PICK UP FROM NOV. 14 TO NOV. 21  
PAYMENT: CASH, CHECK, OR PAYPAL  
MSMEATCHEMANDCUISINE@GMAIL.COM



# Equestrian Team Success



## Mississippi State University Equestrian Team

November 13 at 11:49am · 🌐

The Equestrian Team had another successful weekend at Berry College to finish out the fall semester! Congratulations to Madison Eckloff, our 4th western rider to qualify for the Regional Championships!

English-

Madi Robbins-6th and 6th Intermediate Equitation on the flat  
Betsey Munday-4th Novice Equitation over fences  
Katie Rose Anthony- 5th Novice Equitation over fences, 2nd and 6th Novice Equitation on the flat  
MaeLena Apperson-4th and 6th Novice Equitation over fences, 4th Equitation on the flat  
Alyson Addy-1st Advanced WTC  
Juliann Scott-4th Advanced WTC  
Emili McClure-3rd and 5th Advanced WTC  
Mary Allison Page-5th Beginner WTC  
Brantley McGee-2nd and 2nd WT  
Savanna Blackburn -1st and 3rd in WT

Western-

Hart Daniels-3rd Open horsemanship, 2nd in Reining  
Anna Claire Tucker-4th Open horsemanship  
Juliann Scott-2nd Intermediate 2 horsemanship  
Ashley Ackerman- 4th Intermediate 2 horsemanship  
Tatem Reynolds- 5th Novice horsemanship  
Madison Eckloff-3rd Intermediate 2 horsemanship  
Savannah Yonge- 6th Intermediate 2 horsemanship  
Brantley McGee-4th WT horsemanship  
Joshua Bryant- 6th WT horsemanship



# Upcoming 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
- Grass Fed Beef Conference, Purvis, December 7-8



## 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](mailto:clay.cavinder@msstate.edu)



## 4-H EVENTS - DR. DEAN JOUSAN

- For publications and upcoming events go to: <http://extension.msstate.edu/4-h>
- Or contact Dr. Dean Jousan at [dj230@msstate.edu](mailto:dj230@msstate.edu)



## DAIRY EVENTS - DR. AMANDA STONE

- Upcoming programs and publications are online at <http://extension.msstate.edu/dairy>
- For more info, contact Dr. Stone at [amanda.stone@msstate.edu](mailto:amanda.stone@msstate.edu)





## 2017 Refereed Publications

- Hergenreder, J. E. , J. F. Legako, T. T. N. Dinh, P. R. Broadway, K. S. Spivey, J. O. Baggerman, J. P. Hutcheson, M. E. Corrigan, and B. J. Johnson. Zilpaterol Hydrochloride affects Cellular Muscle Metabolism and Lipid Components of 10 Different Muscle in Feedlot Heifers. *Meat Science and Muscle Biology*. 1:192–206 (2017) doi:10.22175/mmb2017.02.0013.
- Kutchy, N.A. , E. S. B. Menezes, A. Chiappetta, W. Tan, R. W. Wills, A. Kaya, E. Topper, A. A. Moura, A. D. Perkins, E. Memili. Acetylation and methylation of sperm histone 3 lysine 27 (H3K27ac and H3K27me3) are associated with bull fertility. *Andrologia*. 2017;e12915. <https://doi.org/10.1111/and.12915>.
- Durfey, Casey L., **Derris D. Burnett, Shengfa F. Liao, Christy S. Steadman, Mark A. Crenshaw**, Henry J. Clemente, **Scott T. Willard, Peter L. Ryan, Jean M. Feugang**. Nanotechnology-based selection of boar spermatozoa: growth development and health assessments of produced offspring. *Livestock Science*. 205 (2017) 137-142. <http://dx.doi.org/10.1016/j.livsci.2017.09.024>
- 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>.

## 2017 Refereed Publications:

- 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. PHYSIOLOGY 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.



## 2017 Refereed Publications:

- 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](http://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.