

# Heritage

MISSISSIPPI STATE  
UNIVERSITY™

**Animal and Dairy**  
SCIENCES



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# Hands on Horses

## HANDS ON HORSES

Join us **Saturday March 24<sup>th</sup>, 2018** at the MAPES Horse Unit for a hands-on day of practical horse management techniques!

### Hay is for Horses

nutritional management

### Looking Past Papers

equine athlete conformation

### Straight from the Horse's Mouth

dental care

### If the Shoe Fits

practical farrier work

### What's that Doohickey Do?

bits, bridles, and training tools

### My Horse is just "Big-Boned"

body condition scoring

### Vital Signs are Good

vital signs and how to take them

### What's My Alternative?

alternative sports medicine therapies

**Cost: \$45**

lunch and manual provided!

To Register Contact:

**Dr. Clay Cavinder**

[clay.cavinder@msstate.edu](mailto:clay.cavinder@msstate.edu) or

662-325-7466; **By March 16th**



**MISSISSIPPI STATE**  
UNIVERSITY

**EXTENSION**



# 2018 MSU Horse Judging Camp



MISSISSIPPI STATE UNIVERSITY™  
EXTENSION

## 2018 MSU Horse Judging Camp

**What:** Horse Judging Camp instructed by Dr. Clay Cavinder and the MSU Horse Judging Team! Up-to-date industry instruction on halter and performance classes to improve the understanding of beginners and advanced judges. Additionally, instruction on reasons will be conducted.

**When:** June 1-3, 2018

**Where:** Mississippi State University, Starkville

**Who:** Youth (experienced or beginners) interested in horse judging

**Cost:** \$275/person to include: all meals, dorms, and 100+ page judging manual

For program itinerary and to register, please visit: <https://techoutreach.msucare.com/annual-msu-horse-judging-camp-registration>

For further information contact Dr. Cavinder, Extension Horse Specialist, Mississippi State University, [clay.cavinder@msstate.edu](mailto:clay.cavinder@msstate.edu)



# Horse Management 101

## Horse Management 101:

### *RANCH HORSE SERIES*

#### 6-week course- Courtland, MS

6:00-9:00 p.m. Triple W Farms, 2049 Hughes Rd.  
1 hour of classroom followed by 2 hours of riding  
Every Tuesday from March 27<sup>th</sup> to May 1<sup>st</sup>, 2018



**MISSISSIPPI STATE**  
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#### EXTENSION

##### Participants will learn:

- Proper Feeding and Nutrition
- Tack and Equipment Function
- Safety with Horses
- Exercise & Conditioning
- Selecting the Equine Athlete
- Anatomy of the Hoof & General Care
- Position and Control while Working Cows
- Developing Softness in the Horse
- Effective Horsemanship
- ....and more!

**Cost: \$200**

(riders limited to 15; all may watch riding session)

**Deadline to Register is April 10th**

To register contact Dr. Cavinder

clay.cavinder@msstate.edu

or by calling 662-325-7466

Riding demonstrations include topics related to Ranch and Performance Horses:  
**Ranch Riding – Reining – Cowhorse – Trail**





# NRHA Futurity



The Mississippi State Horse Judging team just finished competing at the NRHA Futurity in OKC. Mississippi State was 4th overall behind Oklahoma State and West Texas.

Mary Claire Cornett was High Individual Overall

# Upcoming Extension Events

## BEEF EXTENSION - DR. BRANDI KARISCH & COBIE RUTHERFORD



December 7-8 Grass Fed Beef Conference,  
Purvis

February 28 MBCIA Annual Membership  
Meeting,

March 1, Hinds/MBCIA Spring Bull Sale, Raymond

March 15-17 MSU Spring Artificial Insemination School

## EQUINE EVENTS - DR. CLAY CAVINDER



March 24 Hands on Horses, MAFES Horse Unit

March 27-May 1 Horse Management 101, Triple W Farms

June 1-3 MSU Horse Judging Camp, Starkville

For more info, contact Dr. Cavinder at [clay.cavinder@msstate.edu](mailto:clay.cavinder@msstate.edu)

## 4-H EVENTS - DR. DEAN JOUSAN



February 1-8 Dixie Nationals, Jackson

February 9-10 Dixie National Judging Contest, Jackson

For publications and upcoming events: <http://extension.msstate.edu/4-h>

## DAIRY EVENTS - DR. AMANDA STONE



Upcoming programs/publications: [http://  
extension.msstate.edu/dairy](http://extension.msstate.edu/dairy)

Contact Dr. Stone at [amanda.stone@msstate.edu](mailto:amanda.stone@msstate.edu)

# Christmas Dinner



The Department of Animal and Dairy Sciences  
Cordially Invites You to Our

## ANNUAL CHRISTMAS DINNER

December 14 at  
6:00 p.m.

MAFES Conference Center (Bull Barn)  
601 Hwy 182 East, Starkville, MS 39759

Please R.S.V.P. by December 4, 2017 to  
Mari Quinn at  
m.quinn@msstate.edu or  
call (662) 325-3516.



# Helpful Tech Tips



- [HTTPS://QUIZLET.COM/LATEST](https://quizlet.com/latest)  
-YOUR STUDENTS CAN CREATE STUDY SETS AND ALL STUDENTS CAN HAVE ACCESS TO IT AND EVEN EDIT IT IN REAL TIME.
- **WORD COMMENTING**  
-STUDENTS CAN COMMENT ON EACH OTHERS PAPERS.  
-HIGHLIGHT THE SECTION OF THE PAPER YOU WANT TO COMMENT ON, RIGHT CLICK, CLICK COMMENT, AND THEN YOU CAN PUT A COMMENT TO THE SIDE BAR.
- [HTTPS://WWW.CANVA.COM](https://www.canva.com)  
-LETS YOU CREATE POSTERS, NEWS LETTERS, FLYERS, AND SOCIAL MEDIA POSTS FOR YOUR DEPARTMENT

## TECH TIPS



# ADS Department Heads

INFORMATION ON HISTORY OF ADS DEPT HEADS BY BOB ROGERS FROM BOOK  
"A HISTORY OF THE ANIMAL SCIENCE DEPT"  
MAFES CENTENNIAL 1888-1988  
BY BOB ROGERS AND HENRY LEVECK

1. 1ST HEAD WAS ARCHIBOLD SMITH UNTIL 1908
2. J. A. McLEAN—HEAD 1909
3. R. L. SHIELD—HEAD 1910
4. DR. E. BARNETT, DVM—HEAD 1915-1922
5. GEORGE S. TEMPLETON—HEAD 1923-1929
6. D. S. BUCHANAN—HEAD 1929-1931
7. C. J. GOODELL—HEAD 1932-1936
8. E. W. SHEETS—HEAD 1936-1939
9. HENRY LEVECK—HEAD 1939
10. R. H. MEANS—ACTING HEAD WHILE LEVECK WAS IN THE ARMY
11. HENRY LEVECK—RETURNED AS HEAD 1945-1951
12. BEN BARRENTINE—ACTING HEAD 1951-1952
13. CHUCK LINLEY—HEAD 1952-1969
14. BOB ROGERS—ACTING HEAD 1969
15. STEWART FOWLER—HEAD 1969-1973
16. BILL TURNER—HEAD 1973-1978
17. BRYAN BAKER—1978-1986
18. BILLY GENE DIGGS—ACTING HEAD 1986-1988
19. JIM COLLINS—ACTING HEAD 1989-1990
20. BILL ABLE—HEAD 1990-1995
21. WERNER ESSIG—ACTING HEAD 1995-1997
22. TERRY KISER—HEAD 1997-2011
23. MARK CRENSHAW—ACTING HEAD 2011-2012
24. JOHN BLANTON—HEAD 2012-PRESENT IN 2017

## 2017 Refereed Publications

- Phillips, C. A., PAS, **C. A. Cavinder, PAS**, D. H. Sigler, and J. D. Fluckey. Effect of Various Levels of Dietary Starch on Glycogen Replenishment in the Light Working Horse. *The Professional Animal Scientist*. 33:729–738. <https://doi.org/10.15232/pas.2017-01651>.
- Kaya, Abdullah, Hakan Sagirkaya, Müge Misirlioglu, Ahmet Gümen, John J. Parrish, **Erdogan Memili**. Leptin and IGF-I improve bovine embryo quality in vitro. *Animal Reproduction*. Oct./Dec. 2017, v.14, n.4, p.1151-1160.
- Ferjak, E. N. , **C. A. Cavinder, D. D. Burnett**, C. Mc. Argo, and **T. T. N. Dinh**. Body fat of stock-type horses predicted by rump fat thickness and deuterium oxide dilution and validated by near-infrared spectroscopy of dissected tissues. *Journal of Animal Science*. 2017.95:4344–4351. doi:10.2527/jas2017.1676
- 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.

## 2017 Refereed Publications:

- 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. 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.

## 2017 Refereed Publications:

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](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.