



MISSISSIPPI STATE UNIVERSITY™

DEPARTMENT OF ANIMAL AND DAIRY SCIENCES



Our Mission:

Our faculty are committed to serving the citizens of this state through teaching, research and extension programs. Research and extension centers are located strategically throughout the state. Animal research facilities at the Leveck Animal Research Center, Bearden Dairy Cattle Research Center, Prairie Research Unit, Brown Loam Research Station, and the White Sands Unit give faculty opportunities to investigate the challenges facing the livestock industry.

Our Mission is to provide science-based solutions for animal agriculture through innovative and effective education, research and extension programming. Our Vision is Building the Future of Agriculture.

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Guatemala has a rich and distinctive culture from the long mix of elements from Spain and the native Maya people. This diverse history and the natural beauty of the land have created a destination rich in interesting and scenic sites.

Mississippi State University: Having an impact!

During this Spring Break, a group of our students and faculty traveled to Guatemala to train local families in meat rabbit production as a means of improving household nutrition.

The Guatemala Rabbit Project, a "farm-to-fork" educational program, provides hands-on training in the Western Highlands of Guatemala.





With faculty mentor, Dr. Anastasia Elder, 14 Provost Scholars, among MSU's brightest minds, visited the Department of Animal and Dairy Sciences (ADS) to explore research on Monday March 4, 2019.

The group toured the research laboratories in the Department, observed demonstrations, and attended short presentations.

Provost Scholars visit ADS to Explore Research

Dr. Thu Dinh spoke on Meat Science, Dr. Jean Feugan presented reproductive biotechnology and biophotonics, and Ph.D. student, Muhammet Ugur, spoke about sperm fertility.

Ph.D. students, Mauricio Oliveira, from Dr. Amanda Stone's research group, and Courtney Heaton from Dr. Clay Cavinder's research group, respectively discussed contemporary research on dairy cattle and horse physiology.

Dr. Henry Paz has presented his research on microbiome of digestive systems in cattle. Dr. Erdogan Memili shared his research on functional genomics and epigenomics of bull fertility and research opportunities for undergraduates.

Dr. Elder explained how the Provost Scholars Program identifies promising young adults and encourages their engagement in undergraduate research.



The now combined field of Animal and Dairy Sciences is a multidisciplinary science that focuses on livestock and companion animal growth, health and safety, as well as food and fiber production.

Thank you, Dr. Mary Beck

We would like to thank Dr. Mary Beck of Poultry Science for gifting us with this treasure from our past! This is a cheese container from when the Department of Dairy Sciences was separate from the Department of Animal Sciences.



Mississippi State University Extension Dairy

The Jersey is a breed of small dairy cattle. Originally bred in the Channel Island of Jersey, the breed is popular for the high butterfat content of its milk and the lower maintenance costs attending its lower bodyweight, as well as its genial disposition.

Day at the Farm

There is nothing better than driving into a field and being bombarded by curious Jersey Cows.

We are finally getting some sunshine for our farm visits!



HANDS ON HORSES

Join us **Saturday April 6th, 2019** at the MAFES Horse Unit for a hands-on day of practical horse management techniques! The day begins at 8:30 a.m.!

Hay is for Horses
properly feeding the equine athlete

Looking Past Papers
equine athlete conformation

Heels Down, Eyes Up
the importance of good horsemanship

Pain in the What?
evaluating lameness

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 Going On?
current/ongoing research at MSU

Cost: \$45

lunch and manual provided!

To Register Contact:

Dr. Clay Cavinder

clay.cavinder@msstate.edu or

662-325-7466; By **April 1st**





Saturday March 23

Mississippi State University Bearden Dairy Research Center,
2128 Turkey Creek Rd, Starkville MS 39759

EVENTS SCHEDULE

10:00 a.m. - The Dairy Alliance -
Mekenzie Panhans

10:30 a.m. - Dairy market outlook and how
to determine the right time to sell animals -
Dr. Josh Maples and Tori Marshall

11:00 a.m. - Prioritizing mental health along
with animal health - Dr. Amanda Stone

11:30 a.m. - Lunch and Dairy research
updates - Dr. Amanda Stone, Dr. Henry
Paz, Mauricio Xavier, Carly Becker

12:00 p.m. - Tour of MSU Bearden Dairy
Research Center - Kenneth Graves, Carly
Becker, Colby Hardin

12:30 p.m. - Leave for baseball game

All farm families are invited to join The Dairy Alliance at the baseball field to teach consumers about all things dairy. We will then enjoy watching Mississippi State Bulldogs take on the Auburn Tigers at 2 p.m. Admission to the game is covered by The Dairy Alliance.

RSVP to Mekenzie Panhans by March 20th | 404.210.4504 | mpanhans@thedairyalliance.com





Tadlock Stockyards Early Spring Stock Sale

Join us for our first stock cow sale of the year.

When: March 30th, 12 p.m.

Where: Forest, MS

Consignments are now open. Contact Charley at 601-863-9019.





MS STATE MANRRS RIB SALE

**SUPPORT THE MS STATE MANRRS CHAPTER
DURING SUPER BULLDOG WEEKEND!**

FULL SLABS: \$20

HALF SLABS: \$10

SALE DATES: NOW - APRIL 10

PICK UP OR DELIVERY: APRIL 12, 2 pm - 4 pm



For more info, visit
MSSTATEMANRRS.BIGCARTEL.COM or
scan the QR Code



MISSISSIPPI STATE UNIVERSITY



A SAFE, WHOLESOME AND HEALTHY BEEF SUPPLY

Become BQA Certified!

Thursday April 4, 2019

Tadlock Stockyard

Forest, MS

Meal sponsored by Community Bank

Certification class starts at 6:30 p.m.

Cost is only \$15 and includes BQA manual, vaccine cooler, and 3-year certificate. Topics covered in the program include: Animal selection and breeding, vaccine care, judicious drug use, animal care and handling, culling decisions, and more!

Pre-registration required by 12pm on Monday April 1st through the MSU Extension Service at 662-325-3516 or mquinn@ads.msstate.edu.

Visit <http://extension.msstate.edu/content/beef-quality-assurance> for more information or contact Dr. Carla Huston (huston@cvm.msstate.edu, 662-325-1183) or Dr. Brandi Karisch (brandi.karisch@msstate.edu, 662-325-7465)



Mississippi Beef Quality Assurance Program

MISSISSIPPI STATE UNIVERSITY

UPCOMING EXTENSION EVENTS

Beef Extension - Dr. Brandi Karisch

April 26-27: ADS Alumni Weekend, Mississippi State, MS

May 17: Beef 101, MSU Meat Science Laboratory, Mississippi State, MS

Phone: (662) 325-7465 Email: brandi.karisch@msstate.edu

Beef Calendar: <http://extension.msstate.edu/livestock/beef/beef-calendar>

Dairy Extension - Dr. Amanda Stone

March 23: Dairy Day at the Park, Bearden Dairy Research Center, Starkville

Phone: (662) 325-8773 Email: amanda.stone@msstate.edu

Website: <http://extension.msstate.edu/dairy>

4-H Events - Dr. Dean Jousan

March 26: Mississippi Livestock Council Meeting, Wise L2503, MSU Campus

April 5: State 4-H Dairy Judging Contest, MSU Bearden Dairy, Starkville

Phone: (662) 325-2424

Email: dj230@msstate.edu www

Website: <http://extension.msstate.edu/4-h>

Equine Events - Dr. Clay Cavinder

April 6: HANDS ON HORSES, MAFES Horse Unit, Starkville, MS

Contact Dr. Cavinder for information about programs and events at (662) 325-7566 or

Email: clay.cavinder@msstate.edu

Website: <http://extension.msstate.edu/agriculture/livestock/equine/upcomingprograms>

2019 Refereed Publications

- Ferjak, E.N., **C.A. Cavinder**, A.T. Sukumaran, **D.D. Burnett**, **C.O. Lemley**, **T.T.N. Dinh**. Fatty acid composition of mesenteric, cardiac, abdominal, intermuscular, and subcutaneous adipose tissues from horses of three body composition scores. *Livestock Science* 223 (2019) 116-123. <https://doi.org/10.1016/j.livsci.2019.02.01>
- Dutra, G. A., G. M. Ishak, O. Pechanova, T. Pechan, D. G. Peterson, J. C. F. Jacob, **S. T. Willard**, **P. L. Ryan**, E. L. Gastal, and **J. M. Feugang**. Seasonal variation in equine follicular fluid proteome. *Reproductive Biology and Endocrinology*. (2019) 17:29. <https://doi.org/10.1186/s12958-019-0473-z>
- Casey L. Durfey, Sabrina E. Swistek, **Shengfa F. Liao**, **Mark A. Crenshaw**, Henry J. Clemente, Rooban V. K. G. Thirumalai, Christy S. Steadman, **Peter L. Ryan**, **Scott T. Willard** and **Jean M. Feugang**. Nanotechnology-based approach for safer enrichment of semen with best spermatozoa. *Journal of Animal Science and Biotechnology*. (2019) 10:14. <https://doi.org/10.1186/s40104-018-0307-4>.
- Mayo, L. M., W. J. Silvia, D. L. Ray, B. W. Jones, **A. E. Stone**, I. C. Tsai, J. D. Clark, J. M. Bewley, and G. Heersche Jr. Automated estrous detection using multiple commercial precision dairy monitoring technologies in synchronized dairy cows. *Journal of Dairy Sciences*. 2019. J. Dairy Sci. 102:1–12. <https://doi.org/10.3168/jds.2018-14738>
- Yang, Zhongyue, Md. Shamimul Hasan, John K. Htoo, **Derris D. Burnett**, **Jean M. Feugang**, **Mark A. Crenshaw**, and **Shengfa F. Liao**. Effects of dietary supplementation of L-methionine vs. DL-methionine on performance, plasma concentrations of free amino acids and other metabolites, and myogenesis gene expression in young growing pigs. *Translational Animal Science*. *Transl. Anim. Sci.* 2019.3:113–123. doi: 10.1093/tas/txy109.
- Gastal, G.D.A., **J.M. Feugang**, F.L.N. Aguiar, G.M. Ishak, **C.A. Cavinder**, **S.T. Willard**, **P.L. Ryan**, E.L. Gastal. Effect of cryopreservation techniques on proliferation and apoptosis of cultured equine ovarian tissue. *Theriogenology*. <https://doi.org/10.1016/j.theriogenology.2018.11.034>.