

ANIMAL & DAIRY SCIENCES



**MISSISSIPPI
STATE
UNIVERSITY**

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MEMORANDUM OF UNDERSTANDING

Congratulations to **Dr. Memili** on the memorandum of understanding between Bogor Agricultural University (IPB) and Mississippi State University. This is a testament to the quality scholarship of our Department and how we enhance global visibility.



CALF COLLEGE

Calf College 2018

GUEST SPEAKERS

Calf Health

- Dr. Brett and Dr. Tamor

Calf Housing and Behavior

- Dr. Krawczel, University of Tennessee

Calf Nutrition

- To Be Determined



Thursday | 9.20.18

Room 201 of Lincoln County
Extension Office
301 S. 1st Street
Brookhaven, MS 39601
10 AM to 2 PM

Friday | 9.21.18

Room 4044 of Wise Center
240 Wise Center Drive
Mississippi State, MS 39762
10 AM-2 PM

*Lunch will be provided for both
workshops*



MISSISSIPPI STATE
UNIVERSITY

EXTENSION

FOR MORE INFORMATION,
CONTACT AMANDA STONE AT
AMANDA.STONE@MSSTATE.EDU

ADS 8973

Submitted by **Dr. Erdogan Memili**
Developing Frontiers of Scientific Writers

ADS 8973 Scientific Writing course is aimed at providing graduate students and postdoctoral fellows with skills and resources to increase their effectiveness in writing research proposals and manuscripts.

Here is what some of the graduate students who took the class in Spring 2018 have to say:

The skills and knowledge gained from this have already proven to be invaluable. This class has given me the resources and tools to succeed as a scientist by conveying my ideas and findings in an effective format”- Holly Evans, MS student in Agriculture.



“The knowledge and skills I learned in this class gave me great insight into the grant writing process and funding sources. The assignments enabled me to develop my writing style into literature that can be understood and appreciated among diverse audiences”-Alex Shook, MS student in Agriculture.

“Scientific writing is important because better understanding essentials of research proposal, manuscript, and grand proposal helps enhance success in graduate school and beyond”-Muhammet Rasit Ugur, Ph.D. student in Agricultural Science.

In addition to covering the fundamentals of scientific writing, the students have also benefited from the campus resources through the libraries and the Office of the Vice President for Research and Economic Development.

SOUTHERN PRODUCER BRED HEIFER SALE



AUG
25

Southern Producers Bred Heifer Sale

Public · Hosted by Mississippi State University Extension
Beef

★ Interested

✓ Going

➔ Share ▼

⋮

🕒 Saturday, August 25 at 1 PM - 4 PM

📍 Southeast Mississippi Livestock
7677 U S Highway 49, Hattiesburg, Mississippi 39402

Show Map

About

Discussion

COW CAMP 2018



BEARDEN DAIRY RESEARCH CENTER
2128 TURKEY CREEK RD, STARKVILLE, MS 39759

COW CAMP 2018

| JULY 16, 2018 AT 1 PM TO JULY 18, 2018 AT 12 PM |



Don't miss out on the fun!

Registration and a registration fee are **required.**
Both must be received by **June 30th.**

A room block is available at \$99 per night.
Room blocks will be released June 30th.
Breakfast is provided by the hotel.

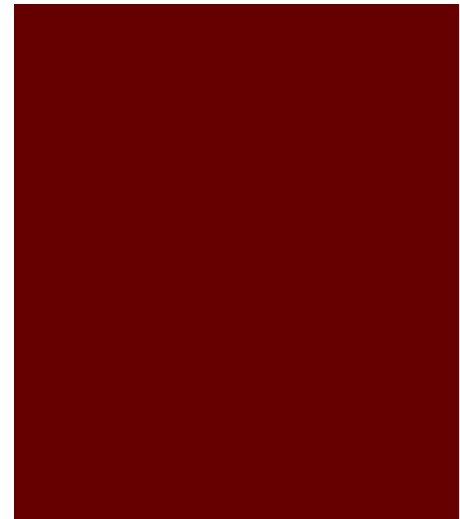
Registration is **\$100 per attendee.**
This includes dinner on 7/16 and lunch and dinner on 7/17.

LEARN HOW TO:

- Properly groom and fit
- Provide calves and cows with proper nutrition
- Prevent and detect common diseases

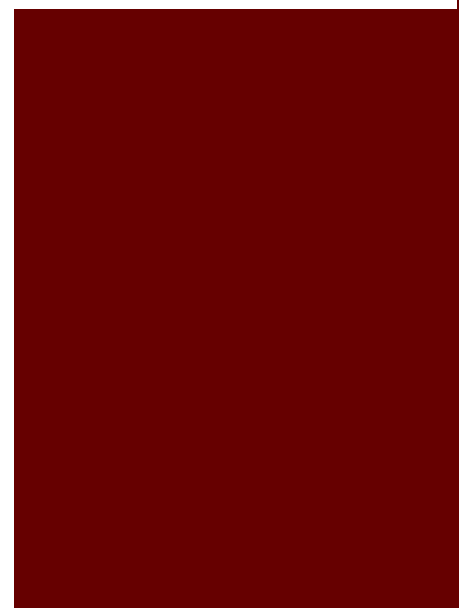
If students would like to bring his/her show animal for the hands-on grooming and fitting activities, please contact Dr. Amanda Stone.

COW CAMP 2018 SCHEDULE



2018 Cow Camp Schedule

Date	Time	Activity	Presenter
Monday July 16	11:00 AM – 12:30 PM	Registration; lunch on own	
	1:00 PM	“Fun with milk” (making liquid nitrogen ice cream and cheese)	Dr. Bob Horton (4H Extension Specialist, Ohio State University)
	3:00 PM	MSU dairy tour	Kenneth Graves (MSU Dairy Manager)
	6:00 PM	Dinner	
Tuesday July 17	6:30 – 8:00 AM	Breakfast	
	8:30 AM	MAFES cheese plant tour	Eric Goan (MSU Cheese Plant Manager)
	10:30 AM	Fitting demo, showmanship and grooming discussion	Wesley Blankenship (Blankenship Jerseys, Jackson, TN)
	12:00 PM	Lunch	
	1:00 PM	Hands-on cow clipping and grooming	Wesley Blankenship (Blankenship Jerseys, Jackson, TN)
	4:00 PM	Quiz Bowl and games Tentative: Charlie Crave speaking	Tentative: Charlie Crave (Owner, Crave Brothers Farmstead Cheese, Waterloo, WI)
	6:00 PM	Dinner	
Wednesday July 18	6:30 – 8:00 AM	Breakfast	
	8:30 AM	Ensuring healthy cattle	Dr. Darren McGee (veterinarian, Elanco Animal Health)
	10:30 AM	Feeding cattle	Scott Hardin (nutritionist, dairy nutrition consultant)
	12:00 PM	End of program; lunch on own	

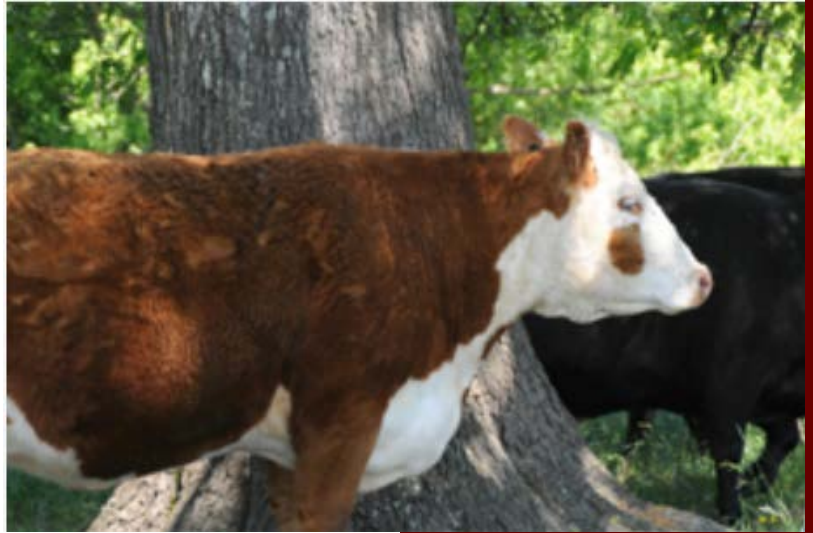


#DIDYOUKNOW

Recent research has demonstrated the value of cattle with calm temperaments and the price producers pay for keeping wilder animals in their herds. A 5-year MAFES study found that cows with poor temperaments could affect an entire herd and reduce producers' bottom lines.

Findings from this research led scientists to conclude that producers should cull bad-tempered cows from their herds.

Researchers measured how a trio of cows behaved while enclosed in a 12-by-12-foot pen. They also studied the behavior of a single cow held in a chute similar to the ones used to hold bulls before they are released at rodeos.



In both cases, the cows' behavior was measured after humans approached them. The research used laser technology to gauge how fast a cow traveled 6 feet after being released from a chute. For each part of the experiment, the cows were scored on a 5-point scale. A score of 1 described cows that were nonaggressive, docile, slow walking, easily approachable and not excited by humans. A score of 5 described cows that were very aggressive, excitable and out of control.

The pen scores and chute scores were nearly identical. Higher-scoring cows almost always ran out of the chutes at accelerated speeds.

The research found that anxious, aggressive cows — those with a pen score of 4 or 5 — present a host of problems. They become sick more often, have more difficulty gaining weight and damage farm equipment.

According to the study, cattle with high pen scores typically incur higher medical expenses than lower-scoring cattle. In addition, ill-tempered cattle typically bring in \$5 or \$6 less per hundred pounds of body weight than do calmer animals.

#DIDYOUKNOW



SAFER HORSE TRANSPORTATION

There has been little research to measure the heat conditions in horse trailers during transport. MAFES scientists recently measured several temperature variables in a fully enclosed four-horse, ant-load trailer with and without animals. Scientists found that trailer temperatures during transport exceeded those recommended for animal housing, although the thermal environment was affected by vehicle speed, vent configuration and presence of animals. They found that temperature increased significantly in transport during relatively mild weather, which indicates that horses could suffer from heat stress during warmer weather. These results show the importance of closely monitoring heat conditions in trailers used to transport horses.

**BEEF EXTENSION - Dr. Brandi Karisch and
Cobie Rutherford**



**June 20-23: Beef Improvement Federation Meetings,
Loveland, CO**

**July 13: Deep South Stocker Conference
Greenboro, AL**

EQUINE EVENTS - Dr. Clay Cavinder



For info on Events, call (662) 325-7466 or email
clay.cavinder@msstate.edu

4-H EVENTS - Dr. Dean Jousan



**June 19-23: Mississippi State 4-H Horse Show
Championship in Jackson, MS**

DAIRY EXTENSION - Dr. Amanda Stone



July 16-July 18: Cow Camp 2018, Bearden Dairy, Starkville
August 25: Ice Cream & a Moo-vie, Bearden Dairy, Starkville
**September 20: Calf College 2018- in Brookhaven &
September 21 in Starkville**
**September 27-29: Breakfast on the Farm, Bearden
Dairy, Starkville**



2018 Refereed Publications

- Sun, Yuhang , Jin Liu, Gengping Ye, Fang Gan, Mohammed Hamid, **Shengfa Liao**, Kehe Huang. Protective effects of zymosan on heat stress-induced immunosuppression and apoptosis in dairy cows and peripheral blood mononuclear cells. *Cell Stress and Chaperones*. <https://doi.org/10.1007/s12192-018-0916-z>.
- Woolums, Amelia R., **Brandi B. Karisch**, Jonathan G. Frye, William Epperson, David R. Smith, **John Blanton Jr.**, Frank Austin, Ray Kaplan, Lari Hiott, Tiffanie Woodley, Sushim K. Gupta, Charlene R. Jackson, Michael McClelland. Multidrug-resistant *Mannheimia haemolytica* isolated from high-risk beef stocker cattle after antimicrobial metaphylaxis and treatment of bovine respiratory disease. *Veterinary Microbiology* 221 (2018) 143-152. <https://doi.org/10.1016/j.vetmic.2018.06.005>.
- Sukumaran, Anuraj T., Alexander J. Holtcamp, Yan L. Campbell, **Derris Burnett**, Mark W. Schilling, **Thu T.N. Dinh**. Technological characteristics of pre- and post-rigor deboned beef mixtures from Holstein steers and quality attributes of cooked beef sausage. *Meat Science*. 145 (2018) 71–78. <https://doi.org/10.1016/j.meatsci.2018.06.001>.
- Hart, CG, BE Voelz, KE Brockus, **CO Lemley**. Hepatic steroid inactivating enzymes, hepatic portal blood flow and corpus luteum blood perfusion in cattle. *Reproduction in Domestic Animals*. 2018;53:751–758.
- Camacho, L.E., **C.O. Lemley**, S.T. Dorsam, K.C. Swanson, K.A. Vonnahme. Effects of maternal nutrient restriction followed by realimentation during early and mid-gestation in beef cows. II. Placental development, umbilical blood flow, and uterine blood flow responses to diet alterations. *Theriogenology*. <https://doi.org/10.1016/j.theriogenology.2018.04.013>.
- Lemley, C.O.**, L.E. Camacho, D.M. Hallford, K.A. Vonnahme. Uteroplacental secretion of progesterone and estradiol 17beta in an ovine model of intrauterine growth restriction. *Animal Reproduction Science*. 193 (2018) 68-78. <https://doi.org/10.1016/j.anireprosci.2018.04.001>.
- T. Williams, **B. Rude**, **S. Liao**, C. Mochal-King, **M. Nicodemus**. Effects of fat supplementation on plasma glucose, insulin and fatty acid analysis in ponies maintained on a forage- based diet. *Journal of Animal Physiology and Animal Nutrition*. 2018;1–8. DOI: 10.1111/jpn.12905.
- Gastal, G.D.A., **J.M. Feugang**, F.L.N. Aguiar, A.P.R. Rodrigues, J.M. Scimeca, G.A. Apgar, W.J. Banz, E.L. Gastal. Cryopreservation and in vitro culture of white-tailed deer ovarian tissue. *Theriogenology*. 113 (2018) 253-260.
- Velho, Ana Luiza Cazaux, Einko Topper, Erika Menezes, **Thu Dinh**, Abdullah Kaya, Arlindo Alencar Moura, **Erdogan Memili**. Metabolomic markers of fertility in bull seminal plasma. *PLOS ONE*. <https://doi.org/10.1371/journal.pone.0195279>.
- Owen, MPT , EN Ferjak, **CA Cavinder**, KJ McCarty, KC Yankey, CG Hart, **DD Burnett**, **TTN Dinh**, **CO Lemley**. Effects of body condition score (BCS) on steroid- and eicosanoid- metabolizing enzyme activity in various mare tissues during winter anoestrus. *Reproduction in Domestic Animals*. 2018;53:296–303. <https://doi.org/10.1111/rda.13104>.
- Park, Seong B., **Scott T. Willard**, Christy S. Steadman, Atul A. Chaudhari, Shreekumar R. Pillai, Shree R. Singh, **Peter L. Ryan** and **Jean M. Feugang**. Proteomic analysis of antimicrobial effects of pegylated silver coated carbon nanotubes in *Salmonella enterica* serovar Typhimurium. *Journal of Nanobiotechnology*. (2018) 16:31 <https://doi.org/10.1186/s12951-018-0355-0>.

2018 Refereed Publications

- Cavinder, C. A., PAS, E. N. Ferjak, C. A. Phillips, D. D. Burnett, and T. T. N. Dinh.** REVIEW: The importance of overall body fat content in horses. *The Professional Animal Scientist* 34:125–132. <https://doi.org/10.15232/pas.2017-01708>.
- Sukumaran, Anuraj T. , Alexander J. Holtcamp, April K. Englishbey, Yan L. Campbell, Taejo Kim, Mark W. Schilling, **Thu T.N. Dinh.** Effect of deboning time on the growth of Salmonella, E. coli, aerobic, and lactic acid bacteria during beef sausage processing and storage. *Meat Science* 139 (2018) 49–55.
- Wang, T., **M. A. Crenshaw**, N. Regmi, **B. J. Rude**, M. S. Hasan, A. T. Sukumaran, **T. Dinh**, and **S. F. Liao**. 2018. Effects of dietary lysine level on the content and fatty acid composition of the intramuscular fat in late-stage finishing pigs. *Canadian Journal of Animal Science*. 98: 241-249. DOI: [dx.doi.org/10.1139/cjas-2017-0083](https://doi.org/10.1139/cjas-2017-0083).
- Owen, M.P.T., K.J. McCarty, C.G. Hart, C.S. Steadman, **C.O. Lemley**. Endometrial blood perfusion as assessed using a novel laser Doppler technique in Angus cows. *Animal Reproduction Science*. 190 (2018) 119-126. <https://doi.org/10.1016/j.anireprosci.2018.01.015>.
- Feugang, Jean M. , Shengfa F. Liao, Scott T. Willard, and Peter L. Ryan.** In-depth proteomic analysis of boar spermatozoa through shotgun and gel-based methods. *BMC Genomics*. (2018) 19:62 DOI 10.1186/s12864-018-4442-2.
- Liao, Shengfa F.**, Naresh Regmi, Guoyao Wu. Homeostatic Regulation of Plasma Amino Acid Concentrations. *Frontiers in Bioscience, Landmark*. 23, 640-655, January 1, 2018.
- Feugang, Jean M. , Shengfa F. Liao, Scott T. Willard, and Peter L. Ryan.** In-depth proteomic analysis of boar spermatozoa through shotgun and gel-based methods. *BMC Genomics*. (2018) 19:62 DOI 10.1186/s12864-018-4442-2.
- Liao, Shengfa F.**, Naresh Regmi, Guoyao Wu. Homeostatic Regulation of Plasma Amino Acid Concentrations. *Frontiers in Bioscience, Landmark*. 23, 640-655, January 1, 2018.

2018 Book Chapters:

Jain, Sapna, Seong B. Park, Shreekmar R. Pillai, Peter L. Ryan, Scott T. Willard and Jean M. Feugang. Applications of Fluorescent Quantum Dots for Reproductive Medicine and Disease Detection. In *Unraveling the Safety Profile of Nanoscale Particles and Materials—From Biomedical to Environmental Applications*, Chapter 6, pp. 133-148, <http://dx.doi.org/10.5772/intechopen.72978>.