



Teaching Research Extension Departmental Activities

Expanding International Opportunities for Students (Guatemala)



Submitted by Jessica Graves

Collaboration efforts between the Department of Animal and Dairy Sciences and the School of Human Sciences are will provide students, in both areas, with international experiences specifically as it relates to livestock capacity development. Jessica Graves and Susan Seal visited Momostenango, Guatemala for a survey trip where they had meetings with the Ministry of Agriculture, local government officials of Momostenango, and many farmer and/or livestock owners in the area. The trip provided insight related to the educational needs of livestock owners and Extension personnel. Graves and Seal will lead a study abroad during Spring Break 2017 that will allow students to immerse themselves in a rich culture with picturesque landscapes while working alongside farmers and Extension personnel to enhance facilities and management practice techniques that will enhance the lives of many.



Cattle Research at White Sands



Submitted by Dr. Daniel Rivera

A study is being conducted at the MAFES White Sand Branch Unit as a follow up to work conducted by Joe Buntyn for his MS Thesis in ADS at MSU. In the Buntyn et al. (2016) study, it was determined that that cattle with higher genetic potential for marbling had better response to stress and immune challenge. One criticism of that study however, was that actual marbling values were never determined on the cattle. Therefore in the current study, our scope was to determine if marbling score at weaning would affect their response to the stress of weaning. Dr. Vann ultrasounded calves two weeks prior to weaning. Cattle were sorted into two groups (low and high marbling) based upon ultrasound. At weaning, following vaccination and de-worming, heifers and steers were separated into those two groups and moved into eight pastures (4 pastures per marbling group). Cattle were moved into stockpiled perennial grasses and were given a feed supplement at about 1% of BW. Supplement was added if the animals consumed feed offered the previous day. Cattle were weighed on d 14 and blood was collected to determine serum urea nitrogen, NEFA and antibody titer against IBR. Currently, the cattle are on day 22 (as of 9/23/16). Data measured will be performance, blood parameters and supplement consumption.



Mississippi State University Beef Unit

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Mississippi State University Beef Unit 18 hrs · 🛞

Corey White explaining the importance udder, teat, and body condition scoring at calving.



🕐 You, John Blanton Jr, Julie Broussard White and 37 others

3 shares

Upcoming Extension Events

Beef Extension – Dr. Brandi Karisch, Cobie Rutherford

• BQA Meeting: Sept. 29th in Tylertown, MS

Equine Events – Dr. Clay Cavinder

 Ranch Horse Clinic series is coming to Starkville in Spring 2017. Be on the lookout for the official dates.

4-H Events – Dr. Dean Jousan

• Mississippi State Fair: October 6 - 17

Dairy Events – Dr. Amanda Stone

Dairy Science Field Dary

Come learn about what goes on inside a dairy cow and on a dairy farm—from anatomy to how milk is produced!

This full event is open to all 4-H and FFA members!

extension.msstate.edu/dairy





MISSISSIPPI STATE UNIVERSITY DEPARTMENT OF ANIMAL AND DAIRY SCIENCES

For more information, contact Amanda Stone at 662-325-8773 or amanda.stone@msstate.edu.











ADS CLUBS and ORGANIZATIONS



Mississippi State University Horse Judging Team September 17 at 1:48pm · 🚱

The team had an excellent day yesterday at the University of Tennessee-Knoxville first annual horse judging contest. It was a great learning experience in preparation for the All-American Quarter Horse Congress coming up in just a few short weeks! Looking forward to a successful rest of the season, Hail State!



Top Comments *

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Johnny Post Nice going! Like · Reply · September 17 at 2:01pm



Joni Higdon Post Impressive! Congrats! Like · Reply · September 17 at 11:51pm

Lynn Kemplay Way to go girls! Congratulations!

Like · Reply · September 17 at 2:12pm

2016 Refereed Publications:

- Lamb, G. C., PAS, V. R. G. Mercadante, D. D. Henry, P. L. P. Fontes, C. R. Dahlen, J. E. Larson, and N. DiLorenzo. Invited Review: Advantages of current and future reproductive technologies for beef cattle production. *The Professional Animal Scientist* 32 (2016):162–171; http://dx.doi.org/10.15232/pas.2015-01455.
- Regmi, Naresh, Taiji Wang, Mark A. Crenshaw, Brian J. Rude, Guoyao Wu, Shengfa F. Liao. Effects of dietary lysine levels on plasma free amino acid profile in late-stage finishing pigs. *SpringerPlus* (2016) 5:888, DOI 10.1186/s40064-016-2463-3.
- Mayer, J. J., J. D. Davis, J. L. Purswell, E. J. Koury, N. H. Younan, J. E. Larson, and T. M. Brown-Brandl. 2016. Development and characterization of a continuous tympanic temperature logging (CTTL) probe for bovine animals. *Transactions of the ASABE*. 59:703-714. (DOI: 10.13031/trans.59.11367).
- Gilfeather, CL and **CO Lemley**. 2016. Effects of Interferon-Tau and Steroids on Cytochrome P450 Activity in Bovine Endometrial Epithelial Cells. *Reproduction in Domestic Animals*, *51*, *415–420 (2016); doi: 10.1111/rda.12695.*
- Prezotto, L. D., L. E. Camacho, C. O. Lemley, F. E. Keomanivong, K. A. Vonnahme and K. C. Swanson, J. S. Caton. Nutrient restriction and realimentation in beef cows during early and mid-gestation and maternal and fetal hepatic and small intestinal in vitro oxygen consumption. The Animal Consortium 2015. doi:10.1017/S1751731115002645.
- Ye, G., J. Liu, Y. Liu, X. Chen, **S. F. Liao**, D. Huang, and K. Huang. 2016. Feeding glycerol-enriched yeast culture improves lactation performance, energy status, and hepatic gluconeogenic enzyme expression of dairy cows during the transition period. *J. Anim. Sci.* doi: 10.2527/jas.2015-0021.
- Cline, G. F., A. M. Muth-Spurlock, B. E. Voelz, **C. O. Lemley**, and **J. E. Larson**. 2016. Evaluating blood perfusion of the corpus luteum in beef cows during fescue toxicosis. *J. Anim. Sci.* 94:90-95.
- Brockus, K. E., C. G. Hart, C. L. Gilfeather, B. O. Fleming, **C. O. Lemley** (2016). Dietary melatonin alters uterine artery hemodynamics in pregnant Holstein heifers. *Domestic Animal Endocrinology*, 55, 1-10.
- Kaya, A., **E. Memili**. Sperm macromolecules associated with bull fertility. *Animal Reproduction Science*. (2016), http://dx.doi.org/10.1016/j.anireprosci.2016.02.015
- Hunt, M.R., J.F.Legako, T.T.N. Dinh, A.J.Garmyn, T.G.O'Quinn, C.H. Corbin, R.J. Rathmann, J.C. Brooks, M.F. Miller. Assessment of volatile compounds, neutral and polar lipid fatty acids of four beef muscles from USDA Choice and Select graded carcasses and their relationships with consumer palatability cores and intramuscular fat content. *Meat Science* 116 (2016) 91–101.
- Keomanivong, F. E., C. O. Lemley, L. E. Camacho, R. Yunusova, P. P. Borowicz, J. S. Caton, A. M. Meyer, K. A. Vonnahme and K. C. Swanson. Influence of nutrient restriction and melatonin supplementation of pregnant ewes on maternal and fetal pancreatic digestive enzymes and insulincontaining clusters. *Animal* (2016), 10:3, pp 440–448.

- Brockus, KE, CG Hart, BO Fleming, T Smith, **SH Ward** and **CO Lemley**. Effects of Supplementing Holstein Heifers with Dietary Melatonin during Late Gestation on Growth and Cardiovascular Measurements of their Offspring. *Reproduction in Domestic Animals*. 51, 240–247 (2016); doi: 10.1111/rda.12672 ISSN
- Vasquez, Erick S., Jean M. Feugang, Scott T. Willard, Peter L. Ryan and Keisha B. Walters. Bioluminescent magnetic nanoparticles as potential imaging agents for mammalian spermatozoa. *Journal of Nanobiotechnology.* (2016) 14:20.