



• Teaching • Research • Extension • Departmental Activities

2016 Swine Research and Education Experience Program



Submitted by Dr. Derris Burnett

Dr. Derris Burnett was awarded funding for the 2016 Swine Research and Education Experience Program sponsored by the National Pork Board. This proposal entitled “**Effect of Weaning Age and Lactose Levels on Health Status and Growth Performance of Weaned Pigs: An Undergraduate Experience**” is a collaboration with Dr. Marcio Goncalves, Global Nutrition Specialist at PIC (Pig Improvement Company, Hendersonville, TN) and will facilitate an experiential research/learning opportunity for an undergraduate student in the Department of Animal and Dairy Sciences interested in commercial swine production.

This is the second year in a row that Dr. Burnett has submitted a successful proposal through this funding mechanism. This program is designed to provide an integrated research and education experience for the student and will help to increase networking and notoriety for our teaching and research programs in the Department.

These types of opportunities are consistent with Dr. Burnett’s philosophy of learning outside of the classroom and training the next generation of Animal Scientists to be career ready upon graduation.



ADS Capstone Service-Learning Project

Submitted by Jessica Graves and Dr. Brandi Karisch

Since the fall semester of 2014, seniors enrolled in ADS 4221 Capstone have been challenged with many “real-world” service-learning projects. In this course, instructors **Jessica Graves** and **Dr. Brandi Karisch** identify “community partners” who are willing to work with senior students, providing them with expertise for the service-learning project.

This semester’s community partner is **Mississippi Farm Bureau Federation (MSFB)** where the “advocacy” service-learning project challenged student groups to disseminate sound information to a public audience related to an assigned “hot topic” or common misconception related to livestock production. In addition to having access to Extension specialists for insight and expertise, students have also been able to work with **MSFB Communications Coordinator, Mr. Greg Gibson**.



On Wednesday, November 2nd, students spent time at the Colvard Student Union providing peers, faculty and staff with truthful information about their assigned topic. While there, Mr. Gibson was able to capture some footage about this project. ADS student, Sydney McConnell (pictured), was interviewed about her experience for this service-learning project and did a great job articulating the importance of the project. Additionally, interviews with non-ADS students were captured in an effort to learn more about the impact of this project.

All-in-all, ADS senior students have learned to work together as a group, hone their written and oral communication skills, and think critically about the importance of impactful advocating and promoting the truth about animal agriculture.

Ag Tour for Saltillo High School Students



Submitted by Jessica Graves

On Thursday, November 3rd, 48 students, teachers and counselors from Saltillo High School visited the MSU Dairy, Cheese Plant and Meat Laboratory. This hands-on, interactive tour provided many students, teachers and counselors with a variety of novel experiences as many have never been afforded the chance to touch and milk a live dairy cow or take in the smells of a dairy operation.

Mr. Kenneth Graves played an instrumental role in providing the group with just that. For some teachers and counselors, being on the farm allowed them to reminisce childhood memories. After the visiting the MSU Dairy, the group was able to get a thorough tour of the MSU Meat Laboratory.

Dr. Thu Dinh provided the group with a “chilly” experience as they were able to see a few beef carcasses in the cooler where they learned more about



inspection and other important facts about meat industry. Saltillo High School’s agriculture teacher, Ms. Laurie Baggett, brings a group of students each year to see what Mississippi State University has to offer, especially in the area of Animal and Dairy Sciences. Many thanks to **Kenneth Graves** and **Dr. Thu Dinh** for providing this group with great insight!



White Sands Cattle Research

South MS Branch Experiment Station, Poplarville, MS

Submitted by Dr. Daniel Rivera



We are currently conducting a receiving study examining the use of yeast and yeast by products fed in a supplement to see if the yeast products have a positive effect on health and performance.

Previous data collected at USDA ARS in Lubbock determined that these same treatments resulted in better immune response and better stress response to heat and immunological challenge in beef cattle. The next step would be to apply those treatments in a real world scenario.

Cattle are fed supplemental feed along

with remaining warm season pastures (pastures are in really bad shape due to excessive drought conditions), with either control (rice hull carrier) or yeast treatments. Cattle displaying symptoms of bovine respiratory disease (BRD) are pulled and treated if rectal temperature is 104 degrees F or greater. Block one is currently 47 d into the study (56 d study) and Block 2 is 40 d into the study. Blood samples were collected at arrival, at d 28 and will be collected at d 56 and will be analyzed for titers to infectious bovine rhinotracheitis (IBR).



Mississippi

BEEF CATTLE IMPROVEMENT ASSOCIATION

Fall Bull & Heifer Sale

**NOON - THURSDAY
NOVEMBER 10, 2016
RAYMOND, MISSISSIPPI**

Featuring **PROVEN GENETICS**
with **DOCUMENTED PERFORMANCE**
from Mississippi's **TOP PRODUCERS!**

**DATE: THURSDAY, NOVEMBER 10TH
TIME: NOON
WHERE: HINDS COMMUNITY COLLEGE
- RAYMOND, MS.**

SALE FEATURES INCLUDE:

--- BULLS MANY BREEDS REPRESENTED ---
--- THIRTY ELITE BRED HEIFERS ---
--- REGISTERED OPEN HEIFERS ---

**MAKE PLANS TO JOIN US FOR DINNER
& MEETING AT 6:30 P.M. ON
WEDNESDAY, NOVEMBER 9TH IN THE
SALES ARENA. PLEASE R.S.V.P. TO
M.QUINN@MSSTATE.EDU.**

**VISIT EXTENSION.MSSTATE.EDU/BEEF
FOR MORE INFORMATION ON SALE
CRITERIA. TO VIEW THE CATALOG
AND FIND CONSIGNOR INFORMATION.**



**FOR MORE INFORMATION OR TO RECEIVE CATALOG, CONTACT:
DR. BRANDI KARISCH - (662) 325-7465 - BRANDI.KARISCH@MSSTATE.EDU
COBIE RUTHERFORD - (662) 325-4344 - COBIE.RUTHERFORD@MSSTATE.EDU**


**MISSISSIPPI STATE
UNIVERSITY**
EXTENSION

**MISSISSIPPI
BCIA**
BEEF CATTLE IMPROVEMENT ASSOCIATION



MSU BLOCK & BRIDLE PLEDGE SALE

**NOVEMBER 11, 2016
5 PM
113 WISE CENTER**

**Need help with
yard work?**

**Need help moving
boxes?**

**Need a ride to
Walmart?**

Buy a pledge!!

**Pledges will work
up to 8 hours**



Upcoming Extension Events

Beef Extension – Dr. Brandi Karisch Cobie Rutherford



- **BCIA Bull and Heifer Sale, Nov. 10, 2016**, Hinds Sale Facility, Raymond, MS
For more info, copy/paste this link: <http://extension.msstate.edu/content/bull-and-heifer-sale>

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

- **National 4H Congress**, Nov. 25-29, 2016, Atlanta, GA



Dairy Events – Dr. Amanda Stone

- **Dairy Science Field Day:** March 17, 2017, Starkville
- **Bearden Dairy Research Center Open House:** May 20, 2017





Animal Agriculture in China

Program Description:

Stationed at China Agricultural University in Beijing, the capital of the world's second-largest economy (after the US), for 3 weeks, students will learn a great deal of China's animal agricultural practices, animal product consumption patterns, and its veterinary service. Fantastic lectures will be delivered by the top Chinese faculty members and industry leaders in the fields. Experts in the allied American companies in China will also come to the sites to give seminars on their foreign business development and management. Several excursions will be arranged to explore Chinese livestock and poultry farms. In addition, students will be escorted by their Chinese counterparts to experience the country's culture, cuisine, language, and several very attractive sights during this program. In short, this program will provide students with informative, educational, valuable, enjoyable, and memorable international experiences to well prepare them ahead of time for their careers related to animals and animal products.

Program Dates:

May 8 – May 31, 2017

Course:

ADS 4990/6990 Special Topics in Animal and Dairy Sciences (3 credit hours)

Requirements:

All undergraduate and graduate students with at least a 2.5 GPA are welcome to participate in this program, which is especially a great option for those students with animal-related interests not only in the College of Agriculture and Life Sciences but also in the College of Veterinary Medicine. For ADS students this course can be used to meet their major requirement for "Experiential Learning".



Application Deadline:

March 3, 2017

Price: \$1,950 *

March 3, 2017 - \$150 (non-refundable)

March 17, 2017 - Payment #1: \$900

March 31, 2017 - Payment #2: \$900

*All program fees are charged to MSU student accounts. Once each payment deadline has passed and the student's account has been charged, the fee is non-refundable.

Program cost includes:

- International Health and Emergency Assistance insurance
- Lodging
- Some meals
- In-country travel
- Entrance Fees
- 4 Excursions

Cost does not include:

- MSU Tuition and Fees
- OSA Software Fee (\$28)
- Chinese visa application fee
- International round-trip airfare
- Some meals

For more information contact Program Director :
Shengfa Liao, s.liao@msstate.edu

Office of Study Abroad

116 Allen Hall

662-325-8929

studyabroad@msstate.edu

MSU scholarships available

www.studyabroad.msstate.edu



MISSISSIPPI STATE UNIVERSITY™
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Office of Study Abroad

Mississippi State University Equestrian Team



The MSU Equestrian Team recently competed at Auburn and continues being successful! Both English and Western teams competed and came away with good rides. The Western team finished off their semester strong with a team placing of third overall. The English team is preparing for their last show of the semester at Georgia College Saturday the 12th. The Western team is coached by Ashley Shiffler, the

Horse Unit manager. The English team is coached by Courtney Phillips, a PhD student in ADS. To find out more information about the team, email Ashley at aes779@msstate.edu or Courtney at cap659@msstate.edu. Hail State!

Western Team Results

Ashley Beyer - 1st place in Beginner Horsemanship

Ashley Greene - 1st in Intermediate 2 Horsemanship

Gentry Clark - 2nd and 5th in Reining, 5th and 5th in Open Horsemanship

Hart Daniels - 1st and 4th in Advanced Horsemanship

Joshua Boyd - 4th and 4th in Beginner Horsemanship

Juliann Scott - 1st and 4th in Intermediate 1 Horsemanship

Madison Eckloff - 6th and 6th in Intermediate 2 Horsemanship

Mary Claire Cornett - 3rd and 5th in Advanced Horsemanship

Sabrina Turner - 6th in Advanced Horsemanship

Taylor McNair - 2nd and 3rd in Intermediate 2 Horsemanship

English Team Results

Casey-Lynn Jarrell - Reserve Beginner Walk, Trot Equitation

Devin Parrish - 6th in Novice Equitation and 4th in Novice Over Fences

Emili McClure - 6th in Beginner Walk, Trot, Canter Equitation

Katie Rose Anthony - 6th in Novice Over Fences

Maelena Apperson - 2nd in Novice Equitation

Sydney Bauer - 4th in Intermediate Equitation and 5th in Intermediate Over Fences

Mississippi State University Horse Unit

Sale Preview!



MSU Cashin the Acres-2016 bay colt by Abilene Acre, out of Nu Poco Cash. Abilene Acre is the son of Bob Acre Doc with LTE of \$381,000, and offspring earnings of over \$4.5 million NCHA and \$30,000 NRHA. The dam is by Bueno Cash Quixote (NRHA LTE \$2,256.84). Bueno Cash Quixote earned his ROM and superior in reining. He won the 2004 AQHA Hi-Point all-age and Jr. reining.

This colt is very good minded and has plenty of athleticism. He leads, ties, bathes and trailers. He has been gelded. Auction.msucares.com will be available for viewing on November 5th.

MSU Horse Sale

Bid November 14-19, 2016

Quick, Convenient Bidding At AUCTION.MSUCARES.COM

Athleticism

Versatility



Quality



Viewing by appointment

Contact: Ashley Shiffler - (580) 795-4349 - aes779@msstate.edu

Bloodlines Including

Sixes Pick - Dash for Cash - Captain Courage - Sun Frost - SR Instant Choice
And More!

ADS CLUBS and ORGANIZATIONS

MSU Meat Chemistry and Cuisine Club Fundraiser

Our meatheads will be outside of Ballew Hall cooking some samples and selling ready-to-cook meats and pork-stuffed spring rolls every Tuesday at 4 PM. If you would like to purchase our products, please come during the sampling event every Tuesday or email Alex Holtcamp (ajh420@msstate.edu) or Anuraj Sukumaran (at1179@msstate.edu). Meats and spring rolls will be available for pick up from Monday to Friday in Ballew Hall.

SAMPLE MENU:

6 4-oz dry-rub pork chops in vacuum package for \$8

6 spring rolls in vacuum package for \$6

FREE SAMPLES

EVERY TUESDAY at 4 pm outside BALLEW HALL



2016 Refereed Publications:

- Greene, Jonathan M. and **Peter L. Ryan**. L-Arginine in the Uterus and Placenta and During Gestation in Mammals. *L-Arginine in Clinical Nutrition*. 2017. Chapter 22, 285-299.
- Larson, J.E.** Incorporating Writing-to-Learn Strategies into an Animal Reproduction Course. *NACTA Journal*, September 2016, Vol 60(3), 303-306.
- 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 insulin-containing 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.