



TEXAS A&M
UNIVERSITY

Texas A&M Animal Science

MONTHLY

MAY 2012 | A monthly publication from the Department of Animal Science at Texas A&M University.

Earning the highest honor:

Distinguished Professor

INSIDE:

- **Farmers Fight movement unites agriculture community**
- **New course gives students hands-on animal, research experiences**
- **2012 Texas A&M Beef Cattle Short Course set for Aug. 6-8**



Our core values

The success of this great department has been and will continue to be based on our group's commitment to adhering to our core values - integrity, excellence, scholarship, leadership, selfless service and respect for animals. In the past several weeks, several of our faculty members have been honored who exemplify these very characteristics.

As you see on the cover of this newsletter, Dr. Guoyao Wu has been named a University Distinguished Professor. This is the highest honor offered by our university. Our college now has six Distinguished Professors and two are from our

department, Dr. Wu and Dr. Fuller Bazer. Also this month, we received news that six of our faculty will be promoted in rank with tenure.

For the past several months, we have spent time developing the department's strategic plan and we are getting ready to move into "launch" mode. Much work has gone into this plan from the theme teams, the team leaders and especially Dr. Tom Welsh. I thank all of them for contributing to the development of this critical plan. As I indicated from the beginning of this process, our plan will be a living plan. We will now begin to hear about progress regarding goals and the actions necessary to complete each goal.

Many of you have followed the "Pink Slime" stories. Once the story broke, it was impossible to get in front of the story, regardless of what science might say. Our industry got a first-hand look at what TV, print and social media can do even if the story is wrong. Over the past 30 years, our industry has made tremendous strides in using science to produce more beef with fewer resources. Unfortunately, we have not been telling our customers what or why in regard to this science. We should begin to think about how best to get ahead of the curve. Perhaps students and faculty should expand their use of the social media to create more understanding of production agriculture and be more proactive in avoiding the next Pink Slime? The student-led movement Farmers Fight is an excellent example of what can be done.

I have received several calls and e-mails regarding the first *Animal Science Monthly* newsletter. I appreciate the positive feedback, and I would like to thank Courtney Coufal for her outstanding efforts.

H. Russell Cross, Ph.D.
Professor and Head
Department of Animal Science

Texas A&M Animal Science MONTHLY

Published monthly by the Department of Animal Science within the College of Agriculture and Life Sciences at Texas A&M University to keep current and former students, stakeholders, industry and trade organizations, and friends of the department informed on the accomplishments and discoveries achieved by one of the nation's most prominent and complex departments of its kind.

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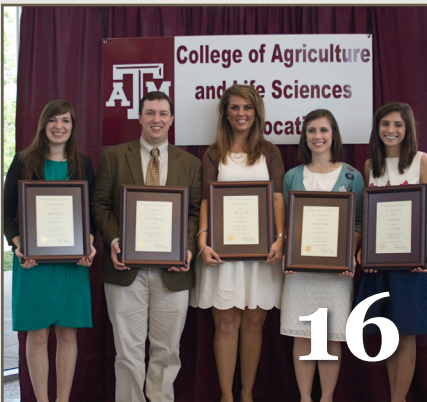
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Amino acid biochemistry and nutrition program makes seminal contributions to field worldwide

New metabolic pathways and novel mechanisms for regulation of animal growth and development, successful outcomes of pregnancy and strategies to reduce adverse effects of metabolic diseases such as cardiovascular disease, diabetes and obesity through nutrition have been discovered by scientists at Texas A&M University.

These are only a few of the contributions made to science by faculty members in the Department of Animal Science working in the field of amino acid biochemistry and nutrition. This group of faculty members, undergraduate and graduate students, technicians, postdoctoral fellows and visiting scholars have provided practical solutions to solving major problems in animal agriculture worldwide. These findings from animal studies have important implications for improving human health.

Dr. Guoyao Wu, professor and university and AgriLife research faculty fellow in the Department of Animal Science, was hired in 1991 to lead the effort in developing a strong basic science program in protein and amino acid biochemistry as related to animal nutrition and growth. His work has earned him numerous awards and accolades including University Faculty Fellow, AgriLife Research Faculty Fellow and, most recently, University Dis-

tinguished Professor, the highest honor bestowed upon a faculty member at Texas A&M. (see related story on page 14).

“With the support of the departmental leadership over the past 21 years, our research team has made seminal contributions to the field of amino acid biochemistry and nutrition. These colleagues include Drs. Fuller W. Bazer, Robert C. Burghardt, Douglas G. Burrin, Raymond J. Carroll, Timothy A. Cudd, Teresa A. Davis, Kathrin A. Dunlap, William C. Ellis, Susan K. Fried, Wayne L. Greene, Gregory A. Johnson, Sung Woo Kim, Darrell A. Knabe, Joanne R. Lupton, Catherine J. McNeal, Cynthia J. Meininger, Sidney M. Morris Jr., Wilson G. Pond, Peter J. Reeds, J. Marc Rhoads, M. Carey Satterfield, Stephen B. Smith, Thomas E. Spencer, Nancy D. Turner, Malcolm Watford, Shannon Wilson, and Huaijun Zhou.”

With the rapid advancements in science and technologies, the team takes an interdisciplinary approach to pursue research on amino acid biochemistry and nutrition in collaboration with interested faculty members working in such fields as biochemistry, bioinformatics, cancer biology, genetics, meat science, nutrition, pediatrics, pharmacology, reproductive biology, statistics, and vascular physiology.

Discoveries

■ **Glutamine metabolism.** Discovered the biochemical pathways whereby glutamine metabolism involves: a) the glutamine-glutamate cycle in skeletal muscle; and b) citrulline and arginine synthesis from glutamine and glutamate via pyrroline-5-carboxylate synthase in the small intestine.

■ **Arginine degradation.** Discovered that biochemical pathways for arginine degradation in mammals includes the arginine-citrulline cycle for nitric oxide synthesis in macrophages, endothelial cells, enterocytes, and mammary tissue, and that two arginase isoforms in these cells regulate generation of both nitric oxide and polyamines.

■ **Proline oxidation.** Discovered that proline oxidation is initiated by mitochondrial proline oxidase to produce: a) citrulline, arginine, and polyamines in the small intestine; and b) ornithine and polyamines in ovine and porcine placentae, the organs that exhibit high rates of growth.

■ **Ammonia detoxification.** Discovered that amino acid catabolism includes a functional urea cycle in mammalian enterocytes for ammonia detoxification and established that the liver is not the only organ for ureagenesis in mammals.

■ **Neonatal growth.** Discovered that: a) neonatal growth is significantly affected by arginine deficiency due to low concentrations of arginine in milk and inadequate endogenous synthesis because of low expression of mitochondrial N-acetylglutamate synthase in enterocytes; and b) arginine is a major limiting factor for maximal protein synthesis and maximal growth of milk-fed piglets.

■ **Fetal growth.** Discovered that fetal growth is influenced by an unusual abundance of the arginine-family of amino acids (glutamine, arginine, ornithine and citrulline) in allantoic fluid, with arginine being nutritionally essential for placental and fetal development by activating the mammalian target of rapamycin signaling pathway and protein synthesis.

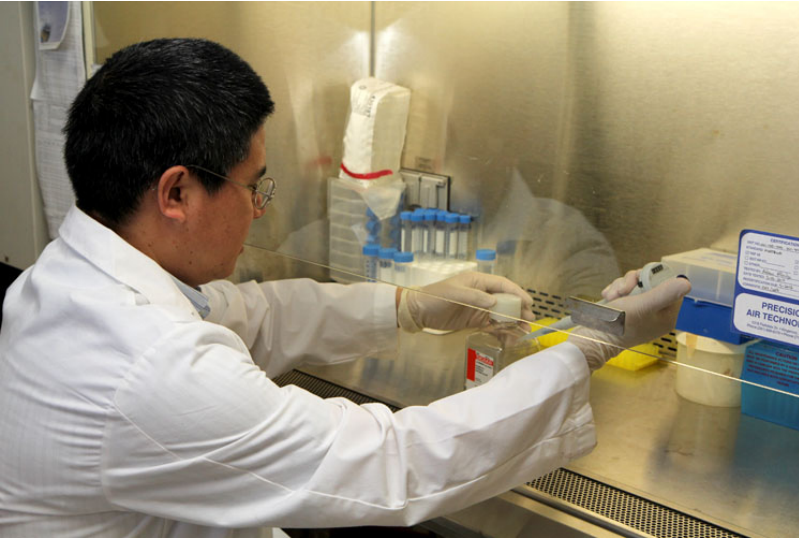
■ **Intrauterine growth restriction (IUGR) and early weaning.** Discovered that IUGR and early weaning (current practice in the U.S. swine industry) of piglets adversely affect expression of genes and proteins in small intestine, liver, and skeletal muscle of piglets that regulate cellular signaling, immune response, oxidative defense, protein turnover, and cell proliferation, which can be ameliorated by dietary supplementation with glutamine.

■ **Pregnancy.** Seminal contributions to reproduction of mammals (including swine and sheep) include the finding that fetal and neonatal survival is improved by dietary arginine supplementation that enhances placental angiogenesis and transport of nutrients.

■ **Vascular biology.** Discovered that maintenance of blood vessels is dependent on arginine-induced expression of GTP-cyclohydrolase I, the first and rate-controlling enzyme for de novo synthesis of tetrahydrobiopterin (an essential cofactor for all three isoforms of nitric oxide synthase) in endothelial cells.

■ **Fat metabolism.** Discovered that metabolism of fat is affected by dietary citrulline and arginine supplementation which selectively reduces white-fat accretion and increases skeletal muscle mass in animals by: a) stimulating phosphorylation of AMP-activated protein kinase; b) enhancing expression of key genes for fatty acid oxidation; and c) promoting development of brown adipose tissue.

“Our research is conducted primarily with agriculturally important and laboratory animals (including pigs, sheep, chickens and rats) at molecular, cellular, tissue and whole-body levels. Some of our projects involve healthy and obese human subjects. Cell culture models are also used in our studies. Collectively, we focus on fundamental and discovery research but also perform mechanism-based experiments with animals to test novel hypotheses,” Wu said.



Dr. Guoyao Wu conducts a cell culture experiment to grow porcine intestinal epithelial cells.

The team’s innovative research on metabolism and physiological functions of amino acids has caused a paradigm shift in understanding of protein nutrition, changed the course of research in this discipline, positively impacted animal production, and improved human health worldwide. Specific examples of these impacts are highlighted in this article.

In addition to the research program, the Department of Animal Science educates and trains students both through classroom instruction and research who are preparing for a career in amino acid biochemistry and nutrition.

Texas A&M is among only a few universities in the United States that offers a graduate course in Protein Metabolism. Taught by Wu, the course covers the basic concepts and recent advances on protein metabolism, as well as its physiological and nutritional significance; assists students in developing an ability to critically evaluate the scientific literature on protein metabolism and nutrition.

Departmental research facilities are available to support both undergraduate and graduate education. Wu and his team have provided 35 undergraduates with research experiences, and have trained 27 graduate students (M.S. or Ph.D. degrees) in nutrition, reproduction and biomedicine. Additionally, 44 graduate students and 18 visiting scholars have benefited from the use of equipment in the Department of Animal Science to conduct their research projects. Eight postdoctoral fellows with diverse academic backgrounds ranging from nutrition to statistics and proteomics have completed their training here.

“We are very pleased that our former students now have leadership positions in animal agriculture, health science centers, medical schools, academic institutions, and industry nationally and internationally,” he said.

Impacts

- Discoveries of the abundance of free and peptide-bound glutamine and glutamate in sow’s milk and the porcine conceptus as well as the nutritional significance of these amino acids resulted in: a) the revolutionary recognition that gestating, growing, and lactating swine require traditionally classified “dispensable” amino acids in diets to achieve their maximum production performance; and b) the historic transformation of glutamine from a substance not described in classical animal nutrition textbooks to a major nutrient that is now recognized to effectively improve growth, development, lactation, and health of animals.

- Results from studies of amino acid metabolism in pigs led to: a) modifications in recommendations for protein nutrition in swine (Nutrient Requirements of Swine, 10th revision, 1998; National Research Council, USA); and b) the far-reaching recognition of arginine and glutamine in diets conditionally essential amino acids for both pregnant sows and neonatal pigs.

- Research on glutamine metabolism resulted in the commercial development and availability of feed-grade glutamine (AminoGut) as a nutritional supplement to prevent intestinal atrophy, improve feed efficiency, and enhance growth performance in early-weaned pigs worldwide.

- Identification of arginine deficiency in sow-reared piglets led to the use of arginine or N-carbamoylglutamate (a metabolically stable activator of arginine synthesis) to improve skeletal muscle growth in both milk-fed and post-weaning pigs.

- Novel findings on arginine metabolism in the conceptus led to the commercial development and availability of feed-grade arginine (Progenos) as a nutritional supplement to improve pregnancy outcome by increasing litter size and neonatal survival in swine worldwide. Additionally, intravenous administration of arginine has been used as a new and effective means to enhance fetal growth in both underfed and prolific ewes, as well as pregnant women.

- Using the neonatal piglet model, our research established the basis for use of arginine and glutamine to prevent intestinal damage in neonates, as well as to prevent necrotizing enterocolitis (the most common severe intestinal disease in preterm neonates), thereby reducing infant morbidity and mortality associated with premature births.

- The finding that citrulline is synthesized exclusively by the small intestine in neonatal pigs led to the clinical use of citrulline levels in plasma as a noninvasive biomarker for enteral tolerance and intestinal function in preterm infants and children with short-bowel syndrome.

- The discovery that glutamine inhibits nitric oxide synthesis in endothelial cells by producing glucosamine-6-phosphate that blocks the pentose cycle for NADPH generation led to pharmaceutical targeting of this metabolic cycle for preventing and treating hyperammonemia-induced neurological toxicity as well as vascular dysfunction in diabetes.

- The discovery that arginine induces endothelial GTP cyclohydrolase expression led to the development of dietary supplementation with arginine or citrulline-rich watermelon juice by the U.S. National Watermelon Promotion Board to improve cardiovascular function in humans.

- The discovery that the arginine-nitric oxide pathway regulates oxidation of energy substrates led to the practice of dietary arginine supplementation as a new and effective means to partition dietary energy toward muscle gain, reduce excess body-fat mass, and improve insulin sensitivity in animals and in obese humans with type-2 diabetes.

Summer Horsemanship School Program entering 40th year of training young horse riders



Photo courtesy of Uvalde County 4-H.

Helen Hardy still remembers how proud she felt the first time she executed a flying lead change. She was in high school and participating in a horsemanship clinic as a member of the Williamson County 4-H Hoofpicks Club in Georgetown, Texas.

Now a sophomore animal science student at Texas A&M University, Hardy has a chance to pass that same feeling of accomplishment on to other participants as an instructor of the very program that taught her so much as a 4-Her.

The Summer Horsemanship School Program offered by the Texas AgriLife Extension Service trains young people like Hardy as well as parents and youth leaders in county 4-H clubs across Texas. The program provides education on horse safety, general riding practices, equipment and problem solving, and to improve overall confidence and ability when working with horses.

Teri Antilley, Extension horse program specialist in the Department of Animal Science, runs the Summer Horsemanship School Program, and says in addition

to providing a structured horsemanship education, the program offers much more.

“The horsemanship clinics support volunteer leaders and help to strengthen the educational value of 4-H clubs. We are there to provide a foundation for their county programs,” Antilley said.

“Our instructors are there to show the participants the skills they need, how to do them and how to practice, so after they leave, the youth leaders can continue to build on this training.”

This year, 18 counties from as far away as Hansford County on the Texas-Oklahoma state line have requested horsemanship clinics. The counties select either a 2- or 3-day clinic and then organize the venue and registration of the participants. Participants work for eight hours a day and cover specific topics such as safety, types of reins, horse theft awareness and bits, stopping and backing, rollbacks and turnarounds, gaits and leads, speed control, simple lead changes and flying lead changes, showmanship and ground safety.

Above photo:
Participants of
the 2011 Summer
Horsemanship
School Clinic in
Uvalde County.



Participants of the Summer Horsemanship School Program spend most of their time on horseback viewing demonstrations by the instructors and practicing their own horsemanship skills. Focus is given to horse safety, types of reins, basic and advanced maneuvers, and showmanship.

The clinics are taught by college-aged students who have been trained to teach the maneuvers and skills. Students interested in becoming Extension Horse Program Assistants train with Antilley and start basic maneuver training in January and practice until tryouts in March. After the instructors are selected, a more comprehensive training continues through May to finalize teaching methodology and standardize the lesson-plan approach to be used across the state. The instructors then travel in pairs teaching the clinics during June.

“In the second half of training, we concentrate on mastery of advanced horsemanship skills for demonstration purposes as well as improving public speaking, analytical evaluation of situations and problem solving and information communication with leaders, parents and youth,” Antilley said.

In addition to Hardy, instructors for this year are animal science majors Courtney Phillips, a junior from San Antonio; Caitlin Noble, a junior from McKinney; Hannah Neuenschwander, a sophomore from Boerne; Ashley Heinen, a freshman from Medina; and kinesiology major Amy Peterson, a sophomore from Sugar Land.

As someone who’s participated in the clinic herself, Hardy is looking forward to being an instructor this summer.

“What I learned at this clinic in high school did not stop the day the instructors left. I continue to use their methods, to this day, in training my own horses. No matter what type of horse you have or what discipline you ride, you will take away from this clinic something that can be applied to benefit your specific needs,” Hardy said. “I am very excited to give back to this program because I took away so much from it. It made me a more confident rider and gave me the foundation to train my own horses. I really wish to give to each kid I instruct the experience that was given to me.”

Over the past 39 years, the Summer Horsemanship School Program has trained 45,560 youth, parents and volunteer leaders in 1,327 different clinics, and 230

college students have served as instructors. Entering the 40th year this summer, Antilley is excited about the progress the program has made and the current strength of the program.

“This is a great program that makes a difference. It’s especially rewarding to see kids you taught in the clinics at the State 4-H Show and to see how much they’ve improved,” Antilley said. “From year to year, most of the 4-Hers who attend say they ride with more confidence, can perform advanced maneuvers, make better and quicker decisions and enjoy their horse more, and that is what this program is all about.”

For more information on the Summer Horsemanship School Program or to plan a clinic in your local county next year, go to <http://animalscience.tamu.edu/academics/equine/summer-horsemanship/index.htm>.



In 2011, 10 Extension Horse Program Assistants were trained to give 25 clinics across the state of Texas. This year six instructors have been selected and the first team will begin training in Andrews County on May 30.

Farmers Fight

movement unites agriculture community

COLLEGE STATION -- Texas A&M University agriculture students united on April 12 across campus promoting and educating people on the importance of agriculture by using live demonstrations of animals, fruits, vegetables and other agricultural products.

These students are part of the Farmers Fight Advocacy Group at Texas A&M, a student-led movement formed to reconnect society with American agriculture that has gained notable attention and has challenged others in the agricultural community to speak out and stand up for agriculture.

Farmers Fight was formed in January and has gained astounding momentum in a short amount of time. Mason Parish, a freshman agricultural economics major, founded the group and together with eight lead advocates they have united 220 agricultural students from 22 student organizations within the College of Agriculture and Life Sciences.

Lead advocates are Parish, Jasmine Dillon, graduate student in animal breeding; Victoria Pilger, freshman animal science; Caroline Black, graduate student in agricultural leadership, education and communication; Josh Hardcastle, sophomore agricultural communications and journalism; Eric Evans, agronomy; Bo/David Wiliford, junior agriculture business; Bobbi Frieda, freshman ag leadership and development; and Leighton James, sophomore ag business.

Parish, who grew up on a Santa Gertrudis cattle operation near Cut-n-Shoot, Texas, has a great appreciation for his agricultural background. His passion for agriculture along with his desire to correct misinformation about agriculture inspired him to start the Farmers Fight movement.

"Farmers Fight was started because there were a lot of students in the agriculture community who were frustrated with the myths that were being told about agriculture but they really didn't

know how to direct their passion. It was created after there was some negative publicity both on campus and in the media across the nation. We realized we need to be telling our story because if we don't someone else will, and they will tell it wrong," Parish said.

Training, Outreach, Connect

Through a three-phase process including training advocates, community outreach "Ag in the Classroom" and the campus connect day, the group has raised awareness about agriculture on campus and within the community, encouraging consumers to ask where their food comes from and to give students, faculty, public officials, farmers and ranchers an opportunity to become "advocates" for the agriculture community.

Students participated in advocate training on March 21. Three community and industry leaders, Gene Hall, Texas Farm Bureau, Misty Martin, Texas Beef Council, and Anne Kimmey, Cultivate Agency, spent an evening preparing the students on how to become effective advocates and the proper ways on engaging consumers in discussions about agriculture.

"Ag in the Classroom" was presented to first graders at College Station elementary schools. Advocates discussed what agriculture is and brought samples of wool, hay, egg cartons and milk cartons and also presented each first graders with a coloring book featuring images of animals, farms and agricultural products. The coloring book was created by Aggies Jacy Johnson, Rachel Bedinger, Molly Dutton and Victoria Pilger.

"I believe it is extremely important that these students begin to learn about agriculture at a young age. They need to know that their food does not come from the grocery store but rather that there is a process for each commodity," said Pilger. "An additional bonus to the coloring book for this age group is that they enjoy



FARMERS FIGHT



Southwest Dairy Farmers joined Farmers Fight advocates on campus April 12 and brought the Mobile Dairy Classroom for milking demonstrations.



220 Aggies representing 22 College of Agriculture and Life Sciences student organizations set up booths across campus complete with posters, educational material and agricultural products.

Farmers Fight advocates presented Ag in the Classroom to College Station first graders. The advocates discussed agriculture and brought samples of wool and hay, egg cartons and a milk carton. In addition, each first grader received a coloring book about agriculture called "Reveille's Picnic." The coloring book was created by Texas A&M students and Farmers Fight advocates Jacy Johnson, Rachel Bedinger, Molly Dutton and Victoria Pilger.

coloring and this physical interaction requires them to focus on the material at hand."

For the culminating Farmers Fight event, campus connect on April 12, the student organizations set up booths around campus and showcased agricultural products and distributed educational material.

In addition to these efforts, lead advocate Jasmine Dillon has grabbed the attention of more than 27,000 people on YouTube with her performance of Stand Up for Agriculture, a spoken word poem written and performed by Dillon.

In a powerful performance of Stand Up, Dillon challenges agriculturalists to stand up and advocate for agriculture. Through this non-traditional form of advocacy, the video has sparked excitement with students and the agricultural community.

"This is a nonconventional way to reach groups we normally do not reach. Spoken work (also called slam poetry) gets a message to someone in a different way. It gets people to think about things in different ways. Stand Up encourages people to reconnect in our circle and what agriculture does for them," Dillon said.

On April 24, Dillon performed Stand Up for Agriculture live during a flash mob held outside of the newly renovated Memorial Student Center.

"The flash mob was another nontraditional way to bring awareness to Farmers Fight, to agriculture students and to the Texas A&M campus," Dillon said.

Support from Community

Support for the Farmers Fight effort has been strong on campus and with department heads and administrators in the College of Agriculture and Life Sciences, the Bourlaug Institute, the Aggie Yell Leaders, the President of the TAMU student body Jeff Pickering and President of Texas A&M University Dr. R. Bowen Loftin.

Dr. Russell Cross, head of the Department of Animal Science, said the students showed outstanding initiative and should be encouraged to move forward.

"Farmers Fight is a prime example of how our students can play a major role in informing our consumers as

to how agriculture feeds the world. Imagine the impact they can make if this effort was spread on a national level."

In addition, Farmers Fight has garnered quite a support system off campus from agriculture groups like the Texas Farm Bureau and Southwest Dairy Farmers and has been popular among online social media sites and news organizations. The movement received an overwhelming message of support from Texas Agricultural Commissioner Todd Staples (Fightin' Texas Aggie Class of '84).

In a video message, Staples said, "It makes me proud to hear of events like Farmers Fight where Aggies are taking the lead to educate all consumers that agriculture is your culture. In a world where feeding and clothing 7 million people continues to be a noble profession, it is crucial that we keep the public informed on where our food and clothing come from and how these items are produced."

Parish and other lead advocates are thrilled to have received this support and are motivated by this following.

"The response has been resounding, all the way from department heads to the board of regents. We've truly been motivated to continue this because people on the outside are looking in and realizing that students are coming together to tell the story of ag," Parish said. "These people are uniting behind the students of the College of Ag and Life Sciences and are saying 'keep going, don't quit'."

Lead advocates already are making plans for next year and hope the movement spreads nationally across college campuses.

"We hope to increase this movement into a place where people can come for honest and truthful information along side empowering organizations and campuses across the nation to do an event either similar to Farmers Fights or to take the name of Farmers Fight," Parish said.

For more information, go to <http://tamufarmersfight.blogspot.com>, email farmersfight2012@yahoo.com or follow them on Facebook and Twitter. ■

Lead advocate Bobbi Frieda.





New course gives students hands-on animal, research experiences

Working newborn pigs, ultrasounding goats and measuring sarcomere lengths are typically skills an agriculture student does not learn until their third or fourth year in college, but for a group of Animal Science freshman and sophomores these experiences came early.

A new course offered by the Department of Animal Science called Basic Animal and Research Experiences aims to bridge the gap between introductory animal science courses and upper-level specialized courses as well as basic science to applied science. Mainly designed for students with little agricultural background, this course provides students with hands-on experiences of domestic farm animals and laboratory work.

The course, taught by Dr. Kathrin Dunlap, research assistant professor, and Dr. Shawn Ramsey, associate professor, was offered for the first time this spring to students who have already completed their first semester of animal science introductory courses.

“We have an increasing number of students who come from non-agricultural backgrounds, yet they still have a genuine interest in pursuing careers in Animal Science. This course was designed to foster their interest in Animal Science by exposing them to opportunities available through the department as well as providing hands-on laboratory and animal experience that they would not receive otherwise,” Dunlap said. “Dr. Ramsey and I were also hopeful that via completion of this course students would have developed skills in critical thinking, communication and self-awareness that will be necessary for their future success, regardless of discipline.”

The students were taught a broad range of topics and activities. During classroom lectures, the group discussed the scientific method, formulation of a hypothesis, data collection, data analysis and

Above photo: Basic Animal and Research Experiences students, front left, Itzel Rios, Melissa Glenn, Maury Porter, back left, Xochitl Castillo, Abby Watkins, Amanda Willis, Nicole Enas, Emily Montgomery and Gracie Valdez at the Sheep and Goat Center. Not pictured is Dawn Mangum.



Left photo: Melissa Glenn captures histology images on her smart phone. **Middle photo:** Nicole Enas, left, and Amanda Willis examine histology slides. **Right photo:** Emily Montgomery, front, and Dawn Mangum palpate ram testicles as part of a breeding soundness exam under the supervision of Dr. Shawn Ramsey.

interpretation, reading a scientific manuscript, writing a non-technical scientific article, ethics in science, reproductive technologies, perceptions of science by scientists, stakeholders and the public, and assessing validity and recognizing bias of information sources. Information learned during these discussions was then applied during laboratory exercises relating to such topics as flight zone, palpating cows, freezing semen samples, clicker dog training, haltering and grooming horses, applying the scientific method, designing an experiment, and staining and analyzing slides under the microscope.

During one lab, the students conducted a series of tests on beef products while working with two graduate students, Adria Grayson and Pilar Orozco, from Dr. Rhonda Miller's meat science lab.

"While the experiments were very simple, for many of these students, this was their first time working in a research lab and provided them a window into that environment," Dunlap said.

Similarly, the students spent time at the Sheep and Goat Center and had a chance to ultrasound a pregnant doe, give injections to newborn lambs and take jugular blood samples from adult animals.

"As this class is comprised of mainly freshmen and sophomore students, these are experiences that they would not otherwise have had a chance to receive until they were upperclassmen and then only if they elected to take a spe-

cialized course such as Sheep and Goat Production," Dunlap said. "This course is giving students the experiences that will hopefully help them to discover their individual interest area or at least reinforce the breadth of opportu-

nities available within the discipline of animal science."

Gracie Valdez, a freshman animal science major from San Antonio, said taking this class has reassured her decision to major in Animal Sci-

ence and has broadened her knowledge of careers available in this field.

"In this class, we were able to gain the practical knowledge we had only read about in books in our prior semester, and it helped give us an idea of what species of animals we would like to work with in our future careers," Valdez said. "After graduation, my plans were to go to graduate school and pursue a career as a food inspector. Having taken this class, I now want to explore more career options, such as nutrition of large livestock animals.

"I am very appreciative of the opportunity Dr. Dunlap and Dr. Ramsey have given me to broaden my skills with livestock animals and for having convinced me through this class that Texas A&M is the school where I am meant to be."

"In this class, we were able to gain the practical knowledge we had only read about in books in our prior semester, and it helped give us an idea of what species of animals we would like to work with in our future careers"

► Gracie Valdez



FORMER STUDENT

STEVEN C. GOLLA, DVM, MS

“The network the Animal Science degree offers with people across the United States and the experiences on how to be successful in a career of animal agriculture are second to none!”



A four-time graduate of Texas A&M University, Dr. Steven C. Golla could not be more proud of the education and training he received as an Aggie. He graduated with a bachelors degree in Animal Science in 1996; a bachelors degree in Veterinary Science in 1998; a master's degree in Animal Science in 2000; and doctorate of Veterinary Medicine in 2001. He now owns and operates Chisolm Trail Veterinary Clinic, PC, with two locations in Lockhart and Luling, Texas, employing four veterinarians and 24 staff members. He works as a mixed animal practitioner serving clients with their veterinary needs ranging from food animals, equine and companion animals. He started his business with his wife Christie, and together they manage and operate the practices with their four young children at their sides. In 2011, he was named the Texas Veterinary Medical Association Food Animal Practitioner of the Year.

As an Animal Science student, Steven was involved with the judging teams for four years, was a Saddle & Sirloin Club officer, served as an Aggie REPS, worked at the Swine Center, conducted undergraduate research and graduate research in the meat science section, and coached the junior Meats Team.

Here's what Steven has to say about Texas A&M:

Why did you choose to attend Texas A&M and major in Animal Science?

My passion for understanding animal agriculture, the science and why behind it combined with my goal of becoming a practicing veterinarian are the main reasons I chose Texas A&M. The opportunity to mix with people just like myself with different backgrounds and experiences to share was another epic reason. Dr. Howard Hesby's and Dr. Chris Skaggs' influence as recruiters and advisors was a huge reason to choose Animal Science at A&M. I wanted to compete in collegiate judging and earn that extracurricular education that comes with it and to see animal agriculture across the United States.

Do you feel your degree in Animal Science and your time at Texas A&M helped you get to where you are today?

It was the basic foundation for my success as a veterinarian as I was exposed and educated to the world known as Animal Science and created relationships to this day that propel my career forward. The network the Animal Science degree offers with people across the United States and the experiences on how to be successful in a career of animal agriculture are second to none!

Is there anything or anyone specific in Animal Science that influenced your career?

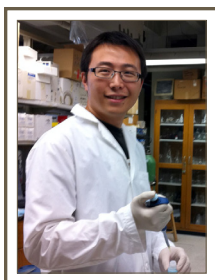
Dr. Jeff Savell trained me to be a professional, Dr. Howard Hesby taught me to be responsible and Dr. Chris Skaggs influenced me to achieve and be great. Dr. Larry Boleman taught me to know people. Misty Pfeiffer Skaggs taught me to enjoy people. Dr. Russell Cross to be exact. Dr. Bill Mies to be sincere and Dr. Dan Hale to keep God and faith in my career. Kenton Lilie taught me to work smarter, not harder. The four years of judging and all those involved taught me to be passionate and excel, and most importantly how to evaluate and make the right decision quickly the first time. This is the most important and useful tool I use everyday in life whether its with a critical case, handling a client, dealing with an employee or educating my children and is the sole advantage I have over many with whom I compete.

If you could offer advice to a prospective student interested in Animal Science, what would you say?

With an Animal Science degree from Texas A&M, the doors for any direction you choose are available. Everything starts with animal agriculture and everything can be related to it from accounting to medicine to education to politics and points in between. For those who are looking to create a life-long network of friends and contacts within a family environment, this is the place.

About our VISITING SCHOLARS

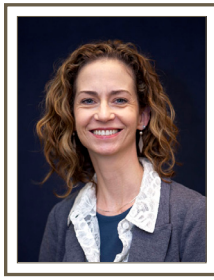
Faculty in the Department of Animal Science are pleased to host scientists from around the world to work in their research programs at Texas A&M. Through these collaborations, animal science faculty and the visiting scholars can exchange knowledge and share expertise in their fields. By hosting visiting scholars, faculty can showcase their discoveries, scholarship and world-class research facilities, as well as bring cultural diversity to the campus which can enhance the educational experiences and international awareness of Aggie students.



■ Kang Yao, Ph.D.

Institute of Subtropical Agriculture, Chinese Academy of Science
Dr. Kang Yao is an associate professor at the Engineering and Research Center of Animal and Poultry Science and Key Laboratory for Agro-ecological Processes in Subtropical Region, Institute of Subtropical Agriculture, Chinese Academy of Sciences. He recently

joined the laboratory of Dr. Guoyao Wu as a visiting scholar. His research focuses on “Amino Acid Nutrition in Pigs” supported by the National Natural Science Foundation of China. This work is expected to provide new knowledge about the utilization of dietary protein and supplemental amino acids in animals.



■ Patricia Baynham, Ph.D.

St. Edward's University, Austin, Tx
Dr. Patricia Baynham, associate professor of biology at St. Edward's University in Austin, Texas, visited the Departments of Animal Science and Poultry Science during the 2011-12 academic year. Her work here was supported by a strengthening grant from the USDA awarded to her and co-PDs

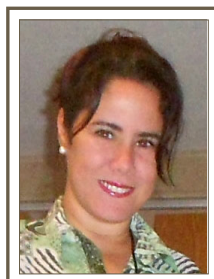
Dr. Matthew Taylor and Dr. Alejandro Castillo, animal science, and Dr. Tri Duong, poultry science. Baynham worked to develop a food microbiology course for St. Edward's University and became more familiar with food safety. She audited the various microbiology classes of her collaborators as well as those of Dr. Elsa Murano and Dr. Suresh Pillai. Additionally, she worked on food microbiology research to examine possible sanitation measures for cantaloupe tainted with *Listeria monocytogenes* strains and papaya and mango contaminated with *Salmonella enterica* strains.



■ Xiuqi Wang, Ph.D.

South China Agricultural University

Dr. Xiuqi Wang is from Guangzhou, Guangdong Province, China and works as a professor of molecular nutrition in the College of Animal Science at South China Agricultural University. He's working with Dr. Guoyao Wu and is researching amino acid transporters and protein synthesis.



■ Karla Andrade, Ph.D.

Federal Rural University of Pernambuco

Dr. Karla Andrade is an associate professor of animal nutrition at Federal Rural University of Pernambuco at the Garanhuns campus in Brazil. She has worked with Dr. Luis Tedeschi in the Department of Animal Science since July 2011 and will return to Brazil this July. Her research here includes

studying in vitro gas production to estimate the quality of native forages species and diet of animals grazing in the semiarid regions of Brazil. This work will be used to develop models and equations to estimate the nutritional values and performance of the animals living in these conditions.



■ Marco Bomfim, Ph.D.

Brazilian Agricultural Research Organization

Dr. Marco Bomfim works as a research scientist for the National Center for Goat and Sheep Research of the Brazilian Agricultural Research Organization - Embrapa, Brazil, a research organization linked to the Brazilian Ministry of Agriculture. Bomfim

has been a visiting scholar in the department since July 2011 and works with Dr. Luis Tedeschi, animal science, and with Dr. Jay Angerer at the Blackland Research and Extension Center in Temple. Together, they are working to develop a system to advise farmers how to supplement efficiently grazing small ruminants in native pastures. For that, they work in estimates of intake and nutrients requirements and on estimates of the quality of diet the animals are eating in pastures using near infrared spectroscopy (NIRS). This work will be used to develop a service for Brazilian farmers, a project funded by Embrapa, which will start August 2012 and has the partnership of Texas A&M through Tedeschi and Angerer.



■ Ying Yang, Ph.D.

China Agricultural University

Dr. Ying Yang is an associate professor in the Department of Animal Feed Science and Technology at China Agricultural University and her research focuses on poultry nutrition and physiology. She's currently working with Dr. Guoyao Wu in the Department of Animal Science and conducting research

about the effects of leucin on the function of endothelial cells and nitric oxide synthesis as well as expression of GFAT, mTOR, 4EBP1, S6K1, IRS-1, Akt-2 and eNOS proteins.

Wu earns highly coveted honor

University Distinguished Professor

When Guoyao Wu, Ph.D., joined the Department of Animal Science in 1991 as an assistant professor, he simply wanted to develop a strong research and teaching program in protein and amino acid nutrition at Texas A&M University.

Now, almost 21 years later, there's nothing simple about the comprehensive program he's established.

Wu, a professor of animal science and nutrition, is known around the world for the seminal contributions his research and teaching program has made to the field of amino acid biochemistry and nutrition and is recognized at Texas A&M University among the top ranking professors. He is a Texas AgriLife Senior Faculty Fellow and a University Faculty Fellow. He holds a joint appointment with the Department of Medical Physiology in the Texas A&M Health Science Center College of Medicine and the Department of Veterinary Medicine and Biomedical Sciences.

are considered pre-eminent in their field and have made major impacts.

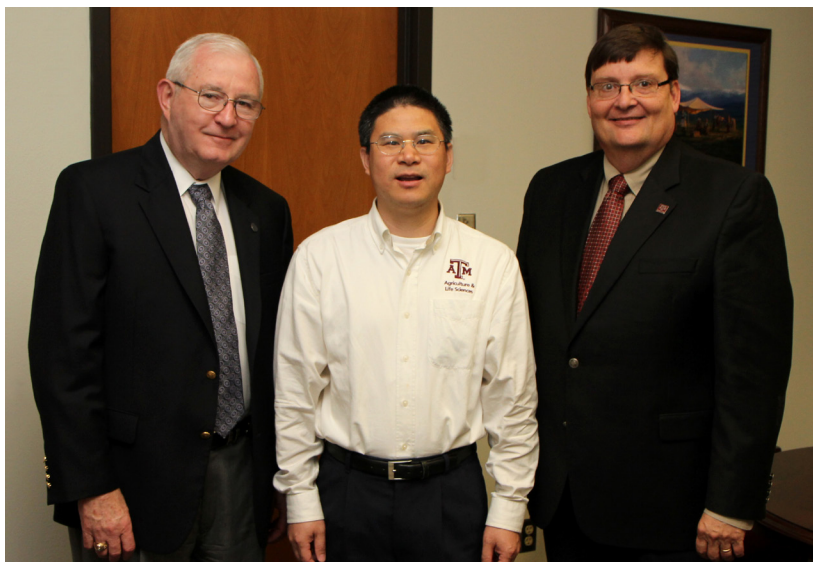
At Texas A&M, a maximum of five faculty members are awarded this rank each year. Wu joins a select group of 64 current faculty members who hold this prestigious title including Dr. Fuller Bazer, regents fellow, distinguished professor and O.D. Butler Chair holder in the Department of Animal Science.

"University Distinguished Professors represent the highest level of achievement for our faculty," said Dr. Karan L. Watson, provost and executive vice president for academic affairs. "Their scholarship will have a lasting impact on their respective fields of study for many generations to come, and it demonstrates to the world the high quality of scholarship underway at Texas A&M University."

Wu teaches two graduate courses, Protein Metabolism and Nutritional Biochemistry, and undergraduate courses, Problems in Animal Science and Nutrition and Biochemistry. His research centers on protein and amino acid nutrition and metabolism, a vast field that straddles basic biology, agriculture and medicine. His discoveries relating to the physiological, nutritional and regulatory roles of amino acids have significantly changed the views of professionals in the global animal feed industry, veterinary medicine, human nutrition, and the pharmaceutical industry. In addition, Wu's work on prevention and treatment of obesity, diabetes and fetal growth retardation has had major influence well beyond the bounds of normal amino acid metabolism.

Wu has published 348 journal articles and 46 book chapters, and is among the top one percent of the most cited authors in the field of agricultural sciences worldwide. He's served as chair or co-chair of committees for 27 graduate students, committee member for 44 graduate students and mentor for 26 postdoctoral fellows and visiting scholars.

Among Wu's greatest contributions to the field of amino acid biochemistry and nutrition are the development of the concept of functional amino acids in animal and human nutrition and creation of a paradigm shift in our understanding of the important roles for the traditionally classified "nutritionally nonessential" amino acids in improving animal growth, development, reproduction, lactation and health.



Dr. Mark Hussey, dean of the College of Agriculture and Life Sciences, *right*, announced to Dr. Guoyao Wu, *center*, that Wu has been selected a University Distinguished Professor. Dr. Russell Cross, Animal Science department head, was present for the announcement.

In April, Wu received notice that he will be awarded the highest ranking honor for any professor at Texas A&M University. Effective Sept. 1, 2012, Wu will become a University Distinguished Professor, a much-coveted ranking given to professors whose work has caused a substantial intellectual leap forward in their discipline,

Wu considers his recent appointment to be a recognition of seminal contributions by his fellow faculty members and their students to the field of amino acid biochemistry and nutrition and is pleased to be able to work together to advance the field of animal science and benefit mankind.

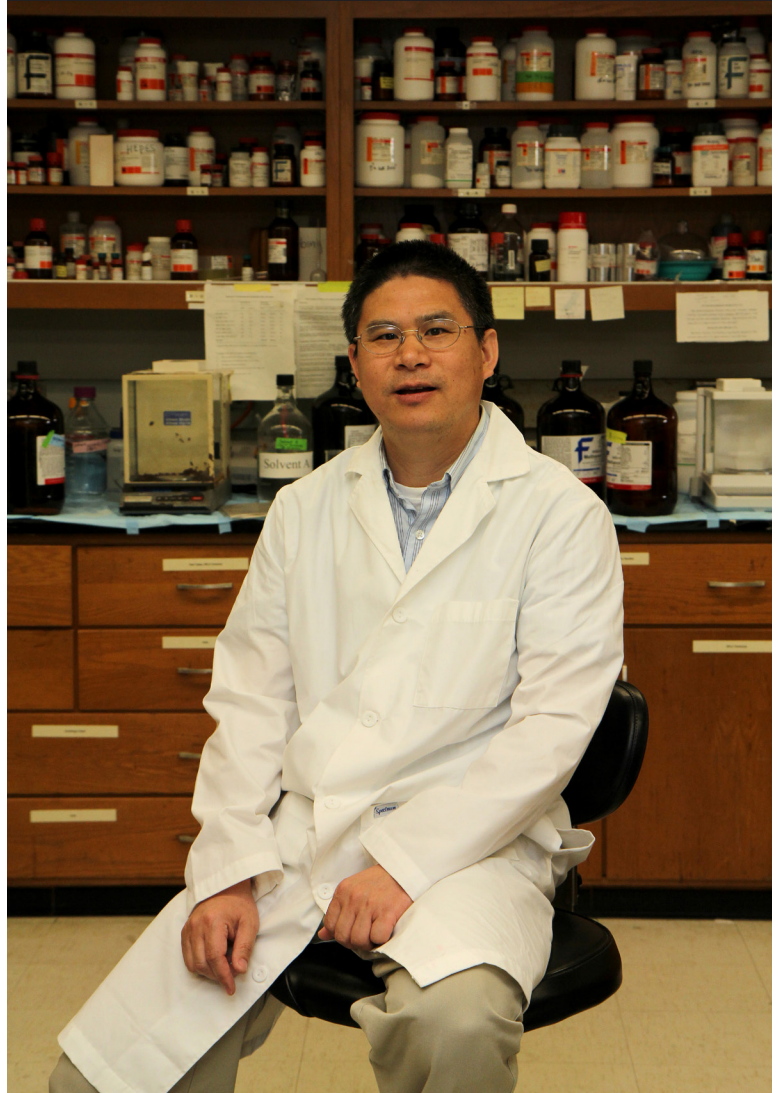
“Many of my colleagues at Texas A&M University, in the United States and overseas, as well as their graduate students have made tremendous contributions to our research program in amino acid biochemistry and nutrition. Team work is the key to the success,” Wu said. “Our interdisciplinary research has led to many serendipitous discoveries which have greatly advanced the field of amino acid biochemistry and nutrition and which also have broad important implications for animal production and human health.”

In addition, Wu also credits his program's success to the support he's received from the Department of Animal Science leadership, faculty and staff as well as the dedication and contributions made by the undergraduate and graduate students, postdoctoral fellows, visiting scholars and research assistants.

“The Department of Animal Science and Texas A&M University have world-class facilities and equipment for both basic and applied research. The department and the university have outstanding faculty members with both national and international recognition in their fields of research. We also have many outstanding graduate students and postdoctoral fellows who make us very proud,” Wu said.

Moving forward, Wu plans to use these world-class resources to continue training undergraduates, graduate students and postdoctoral fellows to be future leaders in animal science and nutrition and to advance his efforts and contributions to help Texas A&M University's reach its goals.

“Working with colleagues at and outside Texas A&M University, I will aspire to achieve a higher level of excellence in our research and education, and contribute to the University's goals of becoming a top 10 public university in the United States by 2020,” he said.



“Our interdisciplinary research has led to many serendipitous discoveries which have greatly advanced the field of amino acid biochemistry and nutrition and which also have broad important implications for animal production and human health.”

-- Dr. Guoyao Wu

Animal Science faculty, students honored at College Convocation

COLLEGE STATION -- The Department of Animal Science was well-represented at the 2012 College of Agriculture and Life Sciences Convocation with faculty and students receiving several awards. The ceremony was held at the AgriLife Center on March 31, 2012.

Dr. Jim Sanders, professor in the Department of Animal Science, was presented the Honor Professor Award by the College Student Council. This award is given to a faculty member who has made outstanding contributions to undergraduate education. Sanders teaches undergraduate and graduate courses in animal breeding and conducts research in beef cattle genetics and breeding.

Dr. Glenn Holub, instructional assistant professor, received the Gail W. and David P. Marion '65 Teaching Award given in memory of Dr. Richard C. Potts '45. The recipient for this award is nominated by students to recognize professors who go above and beyond in the classroom. Holub teaches introductory animal science, career preparation in the field of animal science and upper level dairy management classes.

Five students in the Department of Animal Science were honored with the Senior Merit Award. The Senior Merit Award, based on leadership, scholarship and service at the department, college and university level, is the highest award given to undergraduate students by the College.

The award was presented to Kirbie Day, from Waxahachie; Henry Hilscher, from Shiner; Alyzabeth Looney, from Denton; Darby Sherrod, from Conroe; and Megan Webb, from Burlington, W.Va.

Day served as the 2011-2012 vice president of the Saddle & Sirlain Club and was a member of the Alpha Zeta Honor Society, Aggie REPS and the Aggie Diamond Darlings. She volunteered with Meals on Wheels and in the nursery at St. Joseph's Hospital in Bryan. She served as the National Polled Hereford Queen her freshman year. Day graduated in May and would like to conduct research to improve animal production, product quality and animal health within the beef industry.

Hilscher served as president of the Saddle & Sirlain Club this past year as well as the Aggie REPS, the Aggie Honor Council and the Alpha Zeta Honors Fraternity. He was a member of the Texas A&M Wool Judging Team and the Texas A&M Meat Judging Team. Hilscher worked as a student worker in the animal science animal breeding and genetics section. He interned with Cactus Feeders Wrangler Yard, Eslabon Ranch, Cattle Associates and Pinheiro Ranches in Brazil. Hilscher graduated in May and will study ruminant nutrition in graduate school.

Looney served as chancellor of the Alpha Zeta Honors Fraternity and was actively involved in the Saddle & Sirlain Club. She was a member of the Aggie REPS and the Pre-Vet Society. Looney was involved in the Red Angus Association of America and Texas Junior Red Angus Association. She worked as a student worker for Dr. David Forrest and interned a number of times at the Houston Livestock Show and Rodeo. She received the Howard Hesby Spirit Award and is a member of the Gamma Sigma Delta Honor Society. Looney graduated in May and will

attend veterinary school with hopes to work with a mixed animal practice specializing in reproductive physiology.

Sherrod was a member of the Texas A&M NCAA Equestrian Team and was the president of the Student Athlete Advisory Council. She has served as the program chair for Aggies CAN and was appointed to the student board for the Kyle Field Renovation plans. Sherrod was a member of Fields of Faith and the Voices for

Children Operation Rebuild Project. Last summer, she shadowed veterinarians at Gulf Coast Veterinary Specialists and also interned at Just Cats Veterinary Services and Conroe Veterinary Clinic. She received the Texas A&M Equestrian Aggie Heart Award and is the editor of the SAAC Newsletter. After graduation in May, Sherrod hopes to attend veterinary school.

Webb is a member of the Texas A&M NCAA Equestrian Team, the Texas A&M Livestock Judging Team, the Animal Science Aggie REPS and was the 2011-2012 reporter for the Saddle & Sirlain Club. She is a member of the American Angus Association National Cattlemen's Beef Association

and the West Virginia Cattlemen's Beef Association. Webb was selected to participate in the 2012 International Livestock Congress in Denver and worked as an intern for the NCBA Government Affairs Public Policy office in Washington, D.C. last summer. She received the National Cattlemen's Foundation Bright Futures Scholarship and was inducted into the Texas A&M Society of Leadership and Success. This summer, Webb will intern for Meat & Livestock Australia and Meat Standards Australia in Queensland. Upon graduation in December, Webb will pursue a master's degree in meat science and hopes to work for the United States Meat Export Federation upon completion of her graduate degree.

Also recognized at Convocation, Alpha Zeta named Animal Science students Justin Casares as the Outstanding Freshman and Lauren Thompson as the Outstanding Sophomore. This is the highest award given to non-seniors.

Casares, a freshman from Mission, maintains a 4.0 grade point average. He is an active member of the MSC FISH Organization, Saddle & Sirlain Club, the Pre-Vet Society and MSC Open House. Last year, he was recognized for his scholastic and extracurricular achievements as the Pre-Vet Society's Fall 2011 Distinguished Member Award winner. He also served as an intern at the 2012 Houston Livestock Show and Rodeo.

Thompson, a sophomore from Grandview, holds a 3.67 grade point average. She is a member of the Aggie Scholars Promoting Incentive, Resources and Encouragement group, serves as the service chair of the Terry Foundation Student Organization, is an Aggie REPS and a member of the 2012 Meat Judging Team. She has been involved with the Texas Junior Shorthorn Association and the American Shorthorn Association since 2008 and has experience with undergraduate research.

In addition, animal science junior Catherine Moore was recognized as Outstanding Junior by the Gamma Sigma Delta honor society. Selection for this award is based on student academic achievement, and involvement and leadership in extracurricular activities.



Front left, Megan Webb, Alyzabeth Looney, Lauren Thompson, Darby Sherrod and Kirbie Day. Back left, Donna Witt, Kelly Essler, Henry Hilscher, Dr. Jim Sanders, Justin Casares, Dr. Chris Skaggs, Dr. Russell Cross and Dr. Glenn Holub.

AgriLife Extension hosts Beef Improvement Federation Meeting

HOUSTON -- The 44th Beef Improvement Federation (BIF) Research Symposium and Annual Meeting was held in Houston April 18-21. This year's hosts were Texas A&M University, Texas AgriLife Extension and the American Brahman Breeders Association (ABBA).

Event planning began two years ago when Chris Shivers, ABBA, and Joe Paschal, Texas AgriLife Extension, approached the BIF Board of Directors requesting permission to host the event in the Lonestar State. Both men recognized the importance of *Bos indicus* cattle in the U.S. beef industry and wanted to showcase that for all industry members to see.

"Our goal with the 2012 annual meeting was to bring it back to the southern region, really showcase what *Bos indicus* cattle have to offer today and the strides we are making with our genetics — not only here in Texas, but throughout the southern United States," said Shivers. "We encourage all attendees to be understanding of environmental climatic regions and appreciate the Brahman's role and efficiency in today's beef industry."

Texas AgriLife Extension provided a very integral part of the educational content during the meeting. Several professors from the Texas A&M Department of Animal Science presented valuable research presentations.

"Texas AgriLife is focused on providing adults an educational outlet," Paschal said. "We want our industry members to have opportunities to go and network with people from all over the country."

The first general session was welcomed by Russell Cross, professor and department head, Department of Animal Science. Cross had two major messages for attendees — be prepared to stand up for this industry in order to combat issues such as lean, finely textured beef, called "pink slime" by the popular press, and he stressed the importance of university agricultural departments, especially departments of animal science.

Also addressing the attendees were Drs. Jim Sanders, Ron Randel, Stephen Hammack, David Riley, Andy Herring and Ron Gill, who also conducted a low stress cattle handling demonstration.

On the final day of the event, many of those in attendance toured several Texas livestock operations including J.D. Hudgins, Inc., V8 Ranch, Wendt Santa Gertrudis Ranch, Vineyard Cattle Company, Graham Land and Cattle Company Feedyard and Collier Beefmaster Farms.

Next year's event will be held June 12-15 in Oklahoma City, Okla.

Hammack receives Continuing Service Award

HOUSTON -- The Beef Improvement Federation (BIF) honored Dr. Stephen P. Hammack with the Continuing Service Award during the organization's 44th annual meeting and research symposium in Houston, Texas, April 18-21. The award recognizes those who have made a significant contribution to the industry.

Hammack is professor and Extension beef cattle specialist emeritus in the Department of Animal Science. He served as the beef cattle specialist for District 8 in Stephenville, Texas, from 1973 until 2003. As a beef cattle specialist, Hammack's Extension responsibilities were primarily in beef cattle, but included both adult and 4-H educational activities. His primary areas of interest included animal breeding and genetics, but also included ruminant nutrition, growth and health.

Hammack served as a beef cattle superintendent for the Texas State Fair, Fort Worth Livestock Show and the Houston Livestock Show and Rodeo for 25 years until his retirement. He continues to attend and collect data on the market steers in Houston, which he summarizes in an annual publication to assist exhibitors in producing a quality product.

Since the 1980s, Hammack has written a monthly electronic newsletter called *Beef Cattle Browsing*. This newsletter was initially written as a series of summary articles that Hammack had read in various research, extension and popular press articles that he thought would be useful and educational to county extension agents in Texas and the Gulf Coast region.

Hammack developed the "Texas Adapted Genetic Strategies" Extension bulletin series that takes a systems approach to how animal breeding and genetic principles apply to cow calf production. He was coordinator of the "Animal Breeding and Genetics" session at the annual TAMU Beef Cattle Short Course and was responsible for developing topics, selecting speakers and conducting the session.

Hammack was the Texas AgriLife Extension official representative to BIF for 20 years, during which time he attended annual symposia to provide details on Extension efforts in Texas and to report back on symposium presentations and information shared.

In addition to Hammack's award, Paschal and Shivers were presented BIF Appreciation Awards for their work in organizing the 2012 Beef Improvement Federation Research Symposium and Annual Meeting. Paschal is an Extension Livestock Specialist with the Department of Animal Science and is stationed in Corpus Christi, serving 37 counties in the Gulf Coast and South Texas Extension districts.



Photos by Angus Production Inc.

Left, 2011-2012 BIF President Larry Mehlhoff presents the 2012 Continuing Service Awards to Brian McCulloh, Woodhill Farms, Viroqua, Wis.; Stephen Hammack, Texas AgriLife Extension; Larry Olson, Olson Cattle Research, S.C.; and Tom Field, University of Nebraska-Lincoln.



Larry Mehlhoff, left, BIF president, and Joe Cassady, right, BIF executive director, present Chris Shivers, American Brahman Breeders Association, and Joe Paschal, Texas AgriLife Extension, appreciation awards for their work in organizing the 2012 Beef Improvement Federation Research Symposium and Annual Meeting in Houston, Texas.

Texas A&M Stock Horse Team wins national championship

AMARILLO -- The Texas A&M Stock Horse Team remains undefeated for the year after winning the American Stock Horse Association National Championship Intercollegiate Stock Horse Show held April 13-14, 2012 in Amarillo.

The Stock Horse Team consists of six members who ride individual horses and compete in four separate events: stock horse pleasure, trail, reining and working cow horse. Students are divided into three separate divisions, based on their previous showing experience and years of riding. Students can also compete as individuals.

Aggie team members are Anna Haines, a sophomore animal science major from San Antonio; Calla Walker, a senior animal science major from Redmond, Ore.; Shellie Dalluge, a senior agricultural communications major from Fallon, Nev.; Melanie Armstrong, a junior animal science major from Dime Box; Amy Peterson, a sophomore kinesiology major from Sugarland; Sally Sanford, a junior animal science major from College Station; Kyle Birkenfield, a junior agricultural engineering major from Nazareth; and Ryan Birkenfield, a sophomore agricultural business major from Nazareth.

Dr. Dennis Sigler, Extension Horse Specialist, is coach and is assisted by Raul Valdez, animal science graduate assistant.

Texas A&M captured four out of six individual rider division high point champion and reserve champion honors and numerous class wins to capture the team trophy over second place Texas Tech University.

Individual results are:

Open/Non-Pro Division

- **Ryan Birkenfield** – reserve champion high point overall, champion in pleasure, reserve champion in reining
- **Melanie Armstrong** – fourth high point overall, champion in reining

Limited Non-Pro Division

- **Anna Haines** – reserve champion high point overall, reserve champion in trail
- **Shellie Dalluge** – sixth high point overall, reserve champion in reining
- **Kyle Birkenfeld** – 11th high overall

Novice Division

- **Sally Sanford** – champion high point overall, champion in cow horse, reserve champion in trail, reserve champion in reining
- **Amy Peterson** – reserve champion high point overall, champion in pleasure
- **Calla Walker** – 13th high overall

Texas A&M competed against 13 colleges and 107 individual competitors from across the country.

This is the first national stock horse team championship for Texas A&M, which won the reserve champion team at the



Front, left, Kyle Birkenfield, Ryan Birkenfield, Raul Valdez and Dr. Dennis Sigler. Back, left, Anna Haines, Calla Walker, Shellie Dalluge, Melanie Armstrong, Amy Peterson and Sally Sanford.

2011 national show. Sigler credits this success to each team member's hard work and dedication.

"The success of this year's team has been a result of their exceptional hard work and their willingness to improve their riding and showing skills. The team devoted their time to attending practice for six to eight hours per week, attending weekend clinics, ranch horse competitions and other activities, many times at their own expense," Sigler said.

The ASHA National Championship Collegiate Stock Horse Show was managed by the American Stock Horse Association and the local host college, West Texas A&M University.

In addition to the show, students attended an educational horse training clinic on April 12 taught by professional horse trainer Todd Crawford, the earner of more than \$2 million in reined cow horse competition.

The AQHA Foundation and Museum also hosted all teams to a special invitational showing of the AQHA Hall of Fame on April 14 at the conclusion of the show.

"This was a special treat for Texas



The Texas A&M Stock Horse Team along with the other teams at the ASHA National Championship Intercollegiate Show enjoyed a tour of the AQHA Hall of Fame.

A&M students, as Mr. B.F. Yeates, retired Horse Extension Specialist and AQHA Hall of Fame Honoree was in attendance with them," Sigler said. "The Aggies also had the opportunity to stop at the historic Matador Ranch for a tour and to work their horses on cattle. They got to spend the night in the renovated Matador Hotel (originally built in 1914) in downtown Matador."

This national championship marks the last contest for this team, which has gone undefeated. In the fall of 2011, the Stock Horse Team won competitions at North Central Texas College and Tarleton State University. Earlier this year, they brought home a win from competition at Stephen F. Austin University.

Department, Saddle & Sirloin Club host Parents' Weekend events

COLLEGE STATION -- The Texas A&M University Saddle & Sirloin Club Spring Banquet was held at the Brazos County Expo Complex on March 31, 2012 during the Texas A&M University Parents' Weekend. The banquet is the culminating event for the club's year of activities, and many members and contributors are recognized for their accomplishments. Highlights include:

2012 honorary members named

Dr. Kenneth Eng, Dr. R. Hollis Klett and Leroy Shafer were each named 2012 honorary members in recognition of their support and contributions to the Department of Animal Science and the Saddle & Sirloin Club.

Eng received his bachelor's and master's degrees from the University of Nebraska and a doctorate in animal nutrition from Oklahoma State University. After graduation, he joined the Texas A&M University Department of Animal Science faculty and authored many articles on ruminant nutrition and beef cattle management. In 1969, he formed Eng, Inc., a beef cattle research and consulting company active throughout North America and overseas. Most recently, Eng formed the Dr. Kenneth and Caroline McDonald Eng Foundation, in memory of his wife Caroline, intended to provide scholarships and research grants related to the development of semi-confined beef cow production systems.

Klett earned a bachelor's and master's degrees from Texas A&M University and doctorate in ruminant nutrition from Oregon State University. Klett joined Nutrition Service Associates as a consulting nutritionist in charge of the southwest and western territories where he handled all aspects of animal nutrition and management. In 1986, he purchased NSA and its related companies and currently serves as president of XF Enterprises, Inc., where he continues to expand the business across the country and in Canada, Australia and Southeast Asia.

Shafer is the vice president and chief operating officer for the Houston Livestock Show and Rodeo™. Under his direction, the HLSR has developed a complete in-house advertising and marketing agency, a radio and television production facility, and a sponsorship program considered among the best in the sports and entertainment industry. He also developed a student intern program that has benefited hundreds of students from Texas A&M University. Shafer holds a bachelor's degree in agricultural journalism from Texas A&M University and a master's degree in technical journalism from Iowa State University.

2012 distinguished service award

Grace Glenn and Courtney Coufal were each presented the 2012 Distinguished Service Award in recognition of their support and assistance to the club and the officer team throughout the year. Glenn works as the senior administrative coordinator and Coufal is the communications coordinator for the Department of Animal Science.

Student awards presented

Several students were presented the following Saddle & Sirloin Club awards for their outstanding involvement in the club. These include:

Workhorse Award - Jacob Brown and Courtney Grape

Hesby Spirit Award - Josh Hardcastle

Dr. Ronnie Edwards Service Award - Callie McCullough

Outstanding Member Award - Freshman, Kayley Wall; Sophomore, Whitley James; Junior, Katy Knox; and Senior, Megan Webb

■ Each member, coach and the assistant coaches of the Aggie Judging Teams were recognized. These include the junior and senior Livestock, Horse and Meat Judging Teams and the Wool Judging Team.

■ The 2012-2013 Saddle & Sirloin officer team was announced. The incoming officers are Katie Muehlstein, president; Ashleigh Sowell, vice president; Jenny Bohac, secretary; Katie Moore, treasurer; Kristen Burger, reporter; Brent Hale, public relations; William Whitworth and Courtney Grape, ag council representatives; and Christine Mesecher, sweetheart.

Hilscher presented Brewer Award



Photo by Joelynn Donough.

Henry Hilscher from Shiner was presented the Department of Animal Science Brewer Award. This award was established in 1948 and is given to an outstanding senior in the department. As a student, Hilscher served as president of the Saddle & Sirloin Club, was an Aggie REPS and a member of the Wool Judging Team and Meat Judging Team. He also was involved with the Freshman Leadership Experience and the Aggie Honor Council. After graduation in May, Hilscher plans to attend graduate school and study ruminant nutrition.

Event Results

Little Southwestern

Grand Champion Overall

Shelly Sutton

Reserve Champion Overall

Graham Blagg

Ham Auction

Grand and Reserve

Champion Ham Buyer

Haas-Litterst Foundation

L.D. Wythe Memorial

Judging Contest

Grand Champion Team

Kirbie Day, Ashleigh Sowell,

Claire Luensmann and Cheryl

Medders

Reserve Champion Team

Katie Fritz, Katie Muehlstein,

Alyssa Looney and Megan

Webb



Ham Sales

Awards

Grand Champion Salesman

Henry Hilscher

Reserve Champion

Salesman

Cari Klostermann

Winsco recognized for excellence in teaching

COLLEGE STATION -- Kelly Winsco, a graduate student in the Department of Animal Science, is a recipient of the 2011-2012 Association of Former Students' Distinguished Graduate Student Award for Excellence in Teaching presented April 10, 2012 in College Station.

This award recognizes Winsco's outstanding academic record and excellence in teaching. In addition, the awards program, created in 1965, recognizes the important role graduate students play in the mission of Texas A&M. Each recipient was presented a framed certificate and a custom watch which will be lasting mementos of this award.

Winsco, from Snellville, Ga., is pursuing a doctoral degree in equine nutrition under the direction of Dr. Josie Coverdale. She completed her bachelor's degree in animal science and dairy science from the University of Georgia in 2007 and master's degree in animal science from Texas A&M in 2009.

Winsco has served as a teaching assistant at Texas A&M since she joined the department in 2007. She taught Biology 111 and 112 for two semesters in the Department of Biology. Since then she has taught numerous laboratory sections for equine courses in the Department



From left, Dr. Martha Vogelsang, senior lecturer of equine science; Kelly Winsco; and Dr. Josie Coverdale, assistant professor of equine science.

of Animal Science including ANSC 108, 201, 311, 420 and 421. Winsco currently serves as the primary instructor for ANSC 201 and ANSC 311.

TAMU Equestrian Team wins championship

WACO -- The Texas A&M equestrian team, under the direction of Tana McKay '00, recently completed a historic weekend at the National Collegiate Equestrian Association championships in Waco.

The squad brought the coveted overall national title home to Aggieland for the second time in school history and the first since 2002. The Aggies also claimed the national championship in western for an unprecedented fourth consecutive season.

Several animal science students are members of the winning team including Lindsey Bernbaum, Shelby Lawson, Paige Linne, Cassie Mantor, Jess McMullen, Becca Murray, Emma Myers, Darby Sherrod, Megan Webb, Erica Whaley, Amanda Whitney and Brittany Williams.

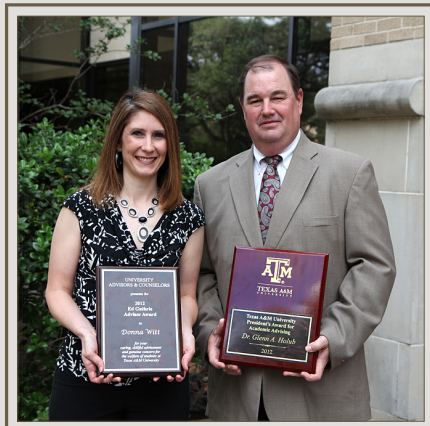
The equestrian team originated in the late 1980s through the Texas A&M Horseman's Association under the supervision of the Department of Animal Science. In an effort to advance the program, animal science worked with the athletic department to develop the program into an NCAA emerging sport.

After quickly establishing itself as one of the premier competitive collegiate equestrian programs in the country upon reaching varsity status in the fall of 1999, the Aggies have maintained that level of excellence ever since. Texas A&M can boast a total of 11 national championships in the sport.

Not only did the Aggies win this year's overall national title, but A&M became the first program in NCEA history to advance to the finals in both disciplines and the first to win four consecutive western crowns.



Holub, Witt receive advising awards



Left, Donna Witt received the 2012 Ed Guthrie Advising Award and Dr. Glenn Holub was presented the President's Award for Academic Advising.

COLLEGE STATION -- Two academic advisors in the Department of Animal Science were honored at the University Advisors and Counselors Awards Breakfast on May 2, 2012.

Dr. Glenn Holub, instructional assistant professor and academic advisor, was named a winner of the President's Award for Academic Advising. Established in 2004, this award recognizes outstanding individuals who exemplify the qualities and practices of exceptional academic advising and service to students.

Holub joined the department in 2006 and has won several advising and student-selected awards including most recently the 2011 Margaret Annette Peters Advising Award and 2012 Fish Camp Namesake.

Donna Witt, senior academic advisor, was presented the Ed Guthrie Advising Award. This award recognizes the efforts of faculty and staff members who demonstrate spirit and concern for students' welfare combined with skillful and insightful advisement.

Witt has been with the department since 2006 and also has been recognized for her work with student relations including the 2011 Vice Chancellor's Award in Excellence for student counseling and relations.

"Our department has traditionally been known for having strong academic advisors who genuinely care for their students," said Dr. Shawn Ramsey, assistant head for undergraduate programs. "I'm proud of Dr. Holub and Donna for carrying on this tradition of advising excellence."

2012 Texas A&M Beef Cattle Short Course set for Aug. 6-8

COLLEGE STATION – The 58th annual Texas A&M Beef Cattle Short Course, conducted by the Texas AgriLife Extension Service, is scheduled for Aug. 6-8 at Texas A&M University in College Station.

A variety of cattle production management topics will be presented at this year's short course including a weather outlook, said Dr. Jason Cleere, AgriLife Extension beef cattle specialist and conference coordinator.

"Our topics this year will fit right into what Texas beef producers are experiencing with forage management, beef cattle management and beef cattle marketing," Cleere said.

"The long-term cattle market outlook is one of many other topics that will be discussed in the 22 different cattleman's college sessions at the short course."

The general session will feature a virtual tour of a U.S. feedyard and U.S. beef packing plant, a presentation on what consumers want to know about raising beef, as well as challenges and opportunities for ranchers in the next 20 years. Sessions will be held at various locations on the Texas A&M campus with the main general sessions at Rudder Auditorium.

"Planning committee members from around the state have met with us and helped us put together another outstand-

ing program," he said. "The short course has become one of the largest and most comprehensive beef cattle educational programs in the U.S."

The cattleman's college portion of the three-day short course provides participants with an opportunity to choose workshops based on their level of production experience and the needs of their ranch, Cleere said.

"These concurrent workshops will feature information on introductory cattle production, management practices in the areas of forage, nutrition and reproduction, record keeping, brush-busting, cattle handling, landowner issues and much more," he said.

In addition to classroom instruction on Aug. 6-7, participants can attend one of the popular demonstrations on the morning of Aug. 8.

"There will be demonstrations on chute-side calf working, cattle behavior, penning, selection and brush-busting," Cleere said. "These provide an opportunity for ranchers to see beef cattle production practices put to use.

"The goal of the short course each year is to provide the most cutting-edge information that is needed by beef cattle

producers, and this year is no exception."

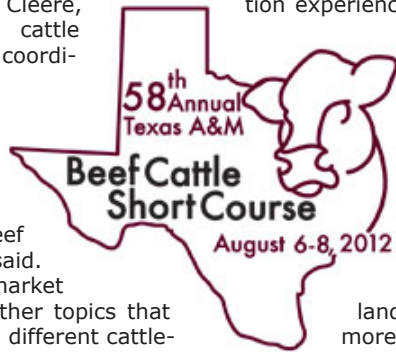
Participants can receive a Texas Department of Agriculture private pesticide applicator's license during the short course and can earn at least seven pesticide continuing education units if they are already licensed, Cleere added.

An industry trade show will be held during the event, featuring more than 110 agricultural businesses and service exhibits.

Registration is \$160 per person and includes educational materials, a copy of the 600-page Beef Cattle Short Course proceedings, trade show admittance, admission to the prime rib dinner, lunches, breakfasts and daily refreshments.

Registration information and a tentative schedule were mailed previous participants in May, but can also be found on the short course website at <http://beef.tamu.edu>.

Producers can register online at <http://beef.tamu.edu> or contact Cleere's office at 979-845-6931.



Beyond Basics workshop set for May 24-25

Experts to evaluate, improve company's HACCP plans

COLLEGE STATION – Companies interested in having their HACCP plans evaluated and improved by experts in the field should plan to attend a Beyond Basics workshop on May 24-25, 2012 on the campus of Texas A&M University in College Station.

The Texas A&M University Department of Animal Science is hosting the HACCP plan improvement workshop beginning at 8:30 a.m. at the Kleberg Animal and Food Sciences Center in Room 023. Those attending can expect to build confidence in their ability to support and defend their food safety programs.

The course will be taught by Dr. Jeff Savell, regents professor of meat science, and Dr. Kerri Harris, associate professor of meat science and HACCP coordinator.

"Do you have decision-making documentation for your HACCP plan? Can you justify and defend your CCPs or CLs? Do you have all of your scientific supporting documentation on file? Can you support the frequency of your monitoring and verification activities? Is the FSIS asking for information that you don't have? Are you ready for an FSIS review team visit? If you answered 'no' to any of these questions, then you need to attend this workshop and we'll help you find the answers," said Harris.

Participants are asked to bring their company's raw and/or cooked product HACCP plan(s) to the workshop for optimal hands-on interaction.

"This course allows us to focus on the establishment's actual food safety programs and to provide one-on-one interaction to ensure their programs are properly designed and comply with regulatory requirements," Harris added.

Cost to attend is \$500. Registration can be made online at https://secure.touchnet.com/C21490_ustores/web/product_detail.jsp?PRODUCTID=2892. For additional information, please contact Tiffany Mooney at 979-862-3643.

Congratulations

2012 CLASS OF 2012

Animal Science Graduates

The Department of Animal Science congratulates its May 2012 graduates! Earning a doctorate in physiology of reproduction were Kevin O. Curley, Jr. and Azure Faucette. Earning a master of agriculture in animal science were Kathryn Gehl and Kathryn Olson; earning a master of science in animal science were Haley Grimes and Carson Ulbrich; and earning a master of science in physiology of reproduction were Kelley Chiles, Ashley Navarrette, and Ligia Prezotto. 124 students received bachelor of science degrees in animal science. In addition, Elizabeth Peterson graduated with university honors, Michelle Bedenbaugh graduated as an university undergraduate research fellow, and Jessica Steger graduated as an undergraduate research scholar. We wish you all much success in your future careers and educational pursuits.

Genomics exhibit scheduled for Bush Library

COLLEGE STATION -- An exhibit called, "Genome: The secret of how life works" will be on display from Aug. 26, 2012 - July 5, 2013 at the George Bush Presidential Library and Museum. The exhibit will include highlights of genomics-related research conducted by Texas AgriLife Research, Texas A&M University and the Whole System Genomics Initiative. An estimated 100,000 people are expected to view the exhibit during this period, including thousands of K-12 students.



Poage speaks to department

COLLEGE STATION -- Roy Poage, a pioneer in the swine industry, presented a seminar to the Department of Animal Science on April 4 called, "The impact of the swine industry of the 1961 20-sow pure bred herd in Texas that became the nation's leading commercial breeding stock supplier with over 66,000 sows in 1990." Poage discussed

key events in the history of Lubbock Swine Breeders, Inc. which later became DeKalb Swine Breeders. This includes the development of a system for confinement and disease minimization and management, the exportation and importation of pigs to Asia and Europe, and the creation and refinement of a management system. Poage also addressed the graduate students and encouraged them to work in a field they enjoy and be passionate about your work. Traveling with Poage was his family, friends and former colleagues.



Rosenthal honored posthumously with award

COLLEGE STATION -- E.M. "Manny" Rosenthal has been honored posthumously with a Distinguished Texan in Agriculture Award from Texas A&M AgriLife.

The award was established in 1993 to recognize the efforts of individuals who have gained unique distinction for their outstanding leadership and achievements on behalf of the Texas agricultural industry, the state and beyond.

"Manny Rosenthal was a leader and visionary throughout his career in the meat industry," said Dr. Mark Hussey, vice chancellor and dean of agriculture and life sciences for the Texas A&M University System. "He also was an advocate for education, and his legacy continues proudly here at Texas A&M with our meat science center named in his honor."

Rosenthal, a 1942 Texas A&M graduate, was chairman emeritus of the board at Standard Meat Co. in Fort Worth. Many of the current business models in the meat industry can trace their history to the influence of Rosenthal's models developed throughout his career, according to nominees.

In 1987, he and his wife, Roz, donated the first endowed chair in the U.S. designed to support research and education in meat science, establishing the E.M. "Manny" Rosenthal Chair at Texas A&M in the Department of Animal Science.

"Manny's business principles were simple -- give the customer what they want and work tirelessly to be a great partner with them," said Dr. Jeff Savell, meat science professor in the department of animal science at Texas A&M and Rosenthal Chair.

ANSC faculty promoted, granted tenure

Several faculty in the Department of Animal Science will be promoted effective Sept. 1, 2012. From assistant professor to associate professor with tenure are Dr. Marcel Amstalden, Dr. Clay Cavinder, Dr. Josie Coverdale, Dr. Penny Riggs and Dr. Tryon Wickersham. Receiving tenure will be Dr. Kerri Harris, associate professor. Dr. Guoyao Wu will be promoted to university distinguished professor. Congratulations to them all for reaching these professional milestones.



College, department host area FFA contests

COLLEGE STATION -- The College of Agriculture and Life Sciences and the Department of Animal Science hosted the Area FFA Career Development Events on April 14, 2012 in College Station. More than 1,000 students participated in events organized by the department which included livestock evaluation, horse evaluation and meats evaluation and technology.

Department hosts state FFA meat contest



COLLEGE STATION -- The 2012 TAMU Meat Judging Team, the Department of Animal Science and the Rosenthal Meat Science and Technology Center hosted the State FFA Meat Judging Career Development Event on May 5 in College Station. The contest included 48 teams of 180 total students who qualified for the state contest by winning in the top placings at the area contests.



Hafla participates in Plains Nutrition Conf.

SAN ANTONIO -- Aimee Hafla, an animal science graduate student working under the direction of Dr. Gordon Carstens, participated in the graduate student poster competition at the Plains Nutrition Conference held in San Antonio. Her presentation was titled, "Impact on between-animal variation in performance, carcass-quality and feed efficiency on profitability on Angus-based composite steers." Hafla won fifth place with her poster and received a cash prize donated by the Dr. Kenneth and Caroline McDonald Eng Foundation.

SCHEDULE OF EVENTS

May 24-25 - Beyond Basics: HACCP Plan Improvement. Register online at https://secure.touchnet.com/C21490_ustores/web/product_detail.jsp?PRODUCTID=2892.

May 25-27 - Livestock Judging Camp - College Station. For more information, visit http://animalscience.tamu.edu/workshops/youth-workshops/livestock_judging_camp.htm.

May 27 - Texas A&M University Club Lamb Sale - Pearce Pavilion. Viewing begins at 10 a.m. with the sales starting at 1 p.m. For more information, contact Colt Sharpton at (979) 209-9714.

May 30-31 - Grass-fed Beef Conference - College Station. For more information, visit <http://animalscience.tamu.edu/images/pdf/beef/Grassfed-Conference-2012-Flyer.pdf>.

June 1 - ASGSA Crawfish Boil - Lake Bryan Pavilion - 5 p.m. Tickets are \$10 per adult and \$5 per children under 12 through May 31 and \$15 the day of the event. Contact Lauren Hulsman at lhulsman@tamu.edu or visit Kleberg room 422A.

June 5-7 - 3rd International Symposium on Beef Cattle Welfare - Saskatoon, Saskatchewan. For more information, go to www.beefwelfare2012.ca.

June 7 - ASGSA & Brazos Valley Bombers Picnic and Baseball Social - 6 p.m. Tickets cost \$15 and may be purchased by contacting Lauren Hulsman at lhulsman@tamu.edu or visit Kleberg room 422A.

June 27-29 - Aggie Horse Judging Camp - College Station. For more information, visit <http://animalscience.tamu.edu/workshops/youth-workshops/tamu-horse-judging-camp.htm>.

July 11-13 - Aggie Horse Judging Camp - College Station. For more information, visit <http://animalscience.tamu.edu/workshops/youth-workshops/tamu-horse-judging-camp.htm>.

July 20-22 - Aggieland Lamb Camp - College Station. For more information, visit <http://animalscience.tamu.edu/academics/sheep-goats/sheep-center/youth-camps/index.htm>.

July 27-29 - Aggieland Goat Camp - College Station. For more information, visit <http://animalscience.tamu.edu/academics/sheep-goats/sheep-center/youth-camps/index.htm>.

Aug. 3-5 - Saddle & Sirloin Club 2012 Steer, Heifer and Pig Futurity - Brazos County Expo Center. More details are available at <http://animalscience.tamu.edu/images/pdf/saddle-sirloin/S&S-Steer-Heifer-Futurity-2012.pdf>.

Aug. 3-5 - Livestock Judging Extravaganza - Brazos County Expo Center. More details to come.

Aug. 6-8 - Beef Cattle Short Course - College Station. For more information, visit <http://animalscience.tamu.edu/ansc/BCSC/index.html>.

Sept. 11-12 - Introductory HACCP. Register online at https://secure.touchnet.com/C21490_ustores/web/product_detail.jsp?PRODUCTID=2892.

Nov. 8-9 - Beyond Basics: HACCP Plan Improvement. Register online at https://secure.touchnet.com/C21490_ustores/web/product_detail.jsp?PRODUCTID=2892.

Dec. 4-5 - Introductory HACCP. Register online at https://secure.touchnet.com/C21490_ustores/web/product_detail.jsp?PRODUCTID=2892.

To submit an upcoming event to be listed in the *Animal Science Monthly*, please email cacoufal@tamu.edu.



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Feature Photo



Animal Science graduate student Jasmine Dillon performs "Stand Up for Agriculture" during a flash mob on the grounds of the Memorial Student Center at Texas A&M University on April 24. Dillon wrote the spoken word poem as her contribution to the Farmers Fight movement. A video of Dillon performing "Stand Up" can have grabbed the attention of more than 28,000 viewers on YouTube. To view the video, visit <http://www.youtube.com/watch?v=yFoGib8AfZo>.