

Animal Science Weekly

October 17, 2011



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4th Korea-U.S. International Joint Symposium will address cost-effectiveness of producing high-quality beef

COLLEGE STATION – The 4th Korea-U.S. International Joint Symposium scheduled Nov. 1-2 at Texas A&M University will help beef cattle producers learn more about producing high-quality beef and handling competition from the biofuels industry for corn and other grains, according to organizers.

“The global marketplace is facing an economic downturn, and beef cattle producers around the world are competing with biofuels for corn and other grains,” said Dr. Stephen Smith, Texas AgriLife Research meat scientist and professor in the Department of Animal Science. “In the face of this scenario, is the production of high-quality beef still cost-effective? What new strategies can we use to produce high-quality beef?”

The symposium will address these questions, Smith said, and will discuss the need for growth promotants and alternative feed-stuffs in the efficient beef production. Speakers from Korea, Japan, and Brazil, as well as experts from U.S. companies such as Merck Animal Health, Elanco Animal Health and JBS will share their most recent information.

“Recent decisions of large discount distributors to carry premium choice has created such a large demand for high-quality beef that there now is a shortage of product,” Smith said.

Smith said some of the main questions that will be addressed during the event include:

- What is the best way to produce beef for export to high-quality markets such as Korea and Japan?
- Can we increase efficiency of beef production with growth promotants without reducing carcass quality?
- Is there a place for byproducts such as distiller’s grains or palm oil in high-quality beef production?

Other topics will include growth-promoting feed additives and production of high-quality beef; and impact of by-products (distiller’s grains, cooking oils and glycerin) on carcass quality.

The following is a list of scheduled speakers:

From the U.S.

- Franke Rabe, JBS
- Dr. Bradley Johnson, Texas Tech University
- Dr. John Hutchinson, Merck Animal Health
- Dr. John Scanga, Elanco Animal Health
- Dr. Jim Drouillard, Kansas State University
- Dr. Antonio Calles, beef specialist
- Dr. Jim MacDonald, AgriLife Research, Amarillo

From Korea

- Dr. Won-Kyong Chung, National Institute of Animal Science
- Dr. Tae-Gyu Kim, Cargill Animal Nutrition, Korea
- Dr. Kyoung Hoon Kim, National Institute of Animal Science

From Japan

- Dr. Nobuhiro Kimura, Nippon Veterinary and Life Science University

From Brazil

- Dr. Pedro de Felicio, State University of Compinas

The symposium was developed through a mutual interest by the Department of Animal Science, AgriLife Research, and the National Institute of Animal Science of the Rural Development Administration, Republic of South Korea.

Registration is \$150 and more information can be found at <http://animalscience.tamu.edu/symposium>.



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Aggie freshman Emily Jack wins top honors in National Beef Ambassador Competition

WOOSTER, OHIO -- Emily Jack from Giddings, a freshman Animal Science major, won a seat on the 2012 National Beef Ambassador Team and also received a silver tray trophy.

Contestants from throughout the country vied for a place on the elite five-person 2012 National Beef Ambassador team at the annual competition, held Oct. 1 in Wooster, Ohio. The competition was funded in part by the Beef Checkoff Program. Contestants participating in the National Beef Ambassador Competition competed in a classroom type presentation, a consumer event scenario, a beef issues response paper and a media interview.

Emily will be joined on the 2012 National Beef Ambassador team with four other youth beef advocates including John Weber, Minnesota; Kim Rounds, California; Arika Snyder, Pennsylvania; and Rossie Blinson, North Carolina. The trained youth ambassadors will travel throughout the U.S. in 2012 educating consumers about the beef industry, food safety, nutrition and the Beef Checkoff Program.

The 29 contestants at this year's competition vied not only for a place on the select team of agriculture advocates, but also for \$5,000 in cash prizes and five educational scholarships totaling \$5,000 given by the American National Cattle Women Foundation, Inc. Additionally, one Beef Ambassador will be chosen for a prestigious USDA internship in Washington DC.

To qualify for the national contest, Emily Jack won the High Point Texas Beef Leader Contest during the state competition held in August 2011 at the Kleberg Center on the TAMU

campus. The state contest is hosted by the Texas Cattle Women and is funded by the Beef Checkoff, the Butler Foundation, Novartis Animal Health and Texas Cattle Women.

The Beef Checkoff Program was established as part of the 1985 Farm Bill. The checkoff assesses \$1 per head on the sale of live domestic and imported cattle, in addition to a comparable assessment on imported beef and beef products. States retain up to 50 cents on the dollar and forward the other 50 cents per head to the Cattlemen's Beef Promotion Board, which administers the national checkoff program, subject to USDA approval. The checkoff assessment became mandatory when the program was approved by 79 percent of the producers in a 1988 national referendum vote. Checkoff revenues may be used for promotion, education and research programs to improve the marketing climate for beef.

For more information visit the website <http://www.nationalbeefambassador.org>.



Horseman's Association visits Equifitness

COLLEGE STATION -- The Texas A&M Horseman's Association visited Equifitness, an equine conditioning and rehabilitation center specializing in aquatic therapy, located in Bryan.

Members had the unique opportunity to explore aquatic rehabilitation for horses, an uncommon aspect of the equine industry. Aquatic therapy allows both well and recovering horses alike to receive an excellent cardiovascular workout with minimal impact to joints and bones. The students also watched a demonstration of a horse work-out on an Aquatread, an underwater tread machine built specifically for horses.



"Horsemen's Association is grateful to Equifitness for the opportunity to tour the facility, as well as for the chance to expand our knowledge of the equine industry as the horsemen of tomorrow," said Jenni Marshall, director of communication for the student group.

Students interested in beef industry should plan to attend educational program Oct. 20

COLLEGE STATION -- Students interested in the beef industry are invited to attend a beef educational program called "Cattle Welfare: From Conception to Harvest" on Oct. 20, 2011 at Pearce Pavilion at 5:30 p.m.

Dr. Jason Cleere, Extension beef cattle specialist, said the program will benefit those students who plan to work in the beef industry after graduation as well as educate those who may not work in agricultural production.

"We want to provide students who will go to work in the beef industry with some Beef Quality Assurance information. This program will also emphasize animal welfare in beef cattle production and its impact on profitability and positive consumer perceptions of the beef industry," Cleere said.

A free meal will be served at 5:30 p.m. sponsored by Texas Beef Council. The program will begin at 5:50 p.m.

Students are asked to RSVP by Oct. 19 by calling 979-845-6931 or email extansc@ag.tamu.edu.

For additional information, go to <http://animalscience.tamu.edu/images/pdf/Beef-Student-Program-2011.pdf> to view the event flier.

AgriLife Research beef cattle studies focus on residual-feed intake, evaluate feed efficiency

by Blair Fannin
AgriLife Communications

COLLEGE STATION – Feed efficiency in beef cattle is getting a closer look by a Texas AgriLife Research scientist, who is evaluating both feedlot performance and feed intake to improve profitability and reduce the environmental impact of beef production systems.

Dr. Gordon Carstens, an AgriLife Research animal nutrition scientist and associate professor in the Department of Animal Science, along with other agency researchers, has been using GrowSafe technology to measure feed intake and feeding-behavior traits such as daily visits and time spent at the feed bunk.

The technology is part of ongoing research efforts in College Station and the McGregor AgriLife Research Center.

“Calculating residual-feed intake is an alternative method of assessing feed efficiency in beef cattle, which is based on the fact that considerable individual animal variation exists in feed intake above and below what is expected on the basis of an animal’s size and growth rate,” Carstens said.

For example, Carstens said to imagine two bulls that both weigh 900 pounds and gain four pounds per day during a performance test.

“For a given ration, we would expect that both bulls would eat say 26 pounds per day because their requirements for maintenance and growth should be similar,” he said. “In reality, one bull may have eaten 24 pounds and the other 28 pounds per day.”

Residual-feed intake is calculated as actual intake minus expected intake based on an animal’s body weight and growth rate, Carstens said.

“So the residual-feed intake would be minus and plus two pounds per day for the two bulls with the efficient bull being the one with a negative residual feed intake.”

Carstens and other scientists have found that residual feed intake is a “moderately heritable” trait that is genetically unrelated to growth traits. Thus, genetic selection for low residual-feed intake offers opportunities to select for improved feed efficiency without having to stock larger, mature cows, he said.

“With increased feed costs in recent years, there are a lot of folks in the industry interested in using this trait as part of a selection program to improve genetic merit for feed efficiency.”



(Left) Dr. Gordon Carstens, Texas AgriLife Research animal nutrition scientist, and Joel Walter, a graduate student in animal science, evaluate feed-intake data on a computer monitor. The data is captured by the automated feed monitoring system as part of a study to investigate feed efficiency in beef cattle near College Station. (Texas AgriLife Research photo by Blair Fannin)

In addition to measuring feeding intake, the GrowSafe system is able to monitor individual feeding patterns by using electronic radio frequency identification device ear tags. Sensors capture each animal’s trip to the feed bunk and the frequency and time of each bunk visit is recorded by the system’s computer software program.

This data is valuable in evaluating differences in feeding behavior patterns among efficient and inefficient cattle, Carstens said.

“We are interested in learning why some animals are efficient and others aren’t,” he said. “We are finding that cattle with low residual feed intake actually have lower energy requirements, come to the feed bunk less frequently, spend less time eating each day and tend to have higher digestibilities.”

The technology is robust, allowing for a feed truck to feed cattle in feed bunks each day, thus eliminating the time-consuming task of manual feeding and reducing the cost of collecting feed intake data for genetic evaluation purposes, Carstens said.

“Without a doubt, the recent increase in grain prices the past few years, and higher hay costs caused by the drought will create more demand for cattle with superior genetic merit for feed efficiency,” he said. “In the past, the beef industry has mainly focused on improving genetics of carcass and growth traits. Most recently, the focus has been on improved efficiency, and yes, the increased cost of feeds and drought has driven more interest in these areas.

“We can now start talking about how to improve efficiency so we can also reduce the environmental impact of beef cattle production systems. Cattle that are more efficient also produce less methane and less fecal output. Several countries are currently exploring the use of these technologies to improve feed efficiency in beef cattle as strategies to mitigate the carbon footprint of animal agriculture.”

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Straight from the

TAMU Saddle & Sirloin Club News

The Texas A&M Saddle & Sirloin Club held its annual Fall Barbecue on Oct. 4, 2011 at the Beef Center. Dr. John Siebert, professor of agricultural economics at Texas A&M University, was guest speaker. The 2011-2012 judging teams were introduced and S&S committees were announced. A silent auction was also held.

Ham Sale

Contact a S&S Club officer now to purchase a ham, bacon or marinated fajita meat. Please order by Nov. 14 to get your purchase in by Thanksgiving. Officers' contact information can be found at <http://saddleandsirloin.tamu.edu/node/6>.



Recent Publications

Carter, B. H., T. H. Friend, J. A. Sawyer, S. M. Garey, M. B. Alexander, M. J. Carter, and M. A. Tomaszewski. 2011. Effect of feed-bunk sprinklers on attendance at unshaded feed bunks in drylot dairies. *Professional Animal Scientist*. 27:127-132.

Erdington, T. S., B. H. Carter, R. L Farrow, A. Islas, G. R. Hagevoort, T. H. Friend, T. R. Callaway, R. C. Anderson and D. J. Nisbet. 2011. Influence of weaning on fecal shedding of pathogenic bacteria in dairy calves. *Foodborn Pathogens and Disease* 8:395-401. Doi: 10.1089/fpd.2010.0686.

Alexander, M. B., T. Friend and L. Haug. 2011. Obedience training effects on search dog performance. *Appl. Anim. Behav. Sci.* 132:152-159. Doi: 10.1016/j.applanim.2011.04.008.

Powell, L., K. L. Nicholson, D. Huerta-Montauti, R. K. Miller, and J. W. Savell. 2011. Constraints on establishing threshold levels for Warner-Bratzler shear-force values based on consumer sensory ratings for seven beef muscles. *Anim. Prod. Sci.* 51: 959-966.

Upcoming events ☆ Upcoming events ☆ Upcoming events

Saddle & Sirloin Children's Barnyard (Oct. 26-28, 2011 - Pearce Pavilion) - For more information, contact Katie Fritz at (830) 992-1364 or at <k2012fritz@neo.tamu.edu>.

College of Agriculture and Life Sciences Centennial Tailgate (Oct. 29, 2011 - Ag and Life Sciences Building Complex) - For more information, go to <http://ext.ag/tailgate-rsvp>.

4th annual Korea-United States International Joint Symposium (Nov. 1-2, 2011 - College Station) - For more information, visit <http://animalscience.tamu.edu/symposium/> or contact Dr. Stephen Smith at (979) 845-3939 or <sbsmith@tamu.edu>.

2011 Aggiefest Livestock Judging Contest (Nov. 5, 2011 - College Station) - For more information, contact Jake Franke at <jfranke@tamu.edu> or call (979) 845-6059.

2011 Aggiefest Horse Judging Workshop (Nov. 5, 2011 - College Station) - For more information, contact Teri Antilley at <tjantilley@ag.tamu.edu> or go to http://animalscience.tamu.edu/academics/equine/workshops/aggiefest_horsejudging.htm.

Howard Hesby Student Atrium Dedication Ceremony (Dec. 7, 2011 - Kleberg Center - 1:30 p.m.) - For more information, please call (979) 845-1541.

Department of Animal Science Seminar Series (Dec. 2, 2011 - Kleberg Faculty Lounge) - Dr. Barry Lambert, associate professor in the Department of Animal Science at Tarleton State University, will present "Southwest Regional Dairy Center Update." Lunch will be served at 11:45 a.m. with the program beginning at noon. Please contact Dr. Tryon Wickersham at <tryon@tamu.edu> with questions.

Equine Reproductive Management Short Course (Jan. 11-13, 2012 - College Station) - For more information, contact Dr. Martha Vogelsang or visit <http://animalscience.tamu.edu/academics/equine/workshops/equine-repro-short->



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Please forward additions to the mailing list and future requests and events to Courtney Coufal <cacoufal@tamu.edu>