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Contact: Ashley Patterson, ashley.charanza@tamuk.edu

Genetic Technology Lectureship Offered at KRIRM

KINGSVILLE, TEXAS (Jan. 11, 2016)—A new lectureship will be offered by the King Ranch® Institute for Ranch Management (KRIRM) Feb. 26-27, 2016, in Kingsville, Texas. The lectureship on the Application of Advanced Genetic Technology in Beef Cattle will be led by Matt Spangler, Ph.D. and Bob Weaber, Ph.D., two nationally-recognized beef cattle experts.

Clay Mathis, Ph.D., director of KRIRM, explained keeping up with genetic selection and evaluation innovations and understanding which advancements are practical for a specific operation can be daunting. The course is designed to strengthen the foundational understanding of genetic principles among participants.

“Technology in ranching is evolving fast, and there is no better example of this than genetic technology,” said Mathis. “We believe that it is important for KRIRM graduate students and stakeholders in our industry to truly understand the new technologies that have been developed to aid in the genetic advancement of beef cattle.”

Spangler, associate professor and beef genetics extension specialist at University of Nebraska-Lincoln, noted that participants of this lectureship will learn the importance of how and when to use genetic improvement tools that exist in the beef industry. One such topic that he believes is important is multiple trait selection. The lectureship will help participants understand selection accuracy, confidence intervals, and strategies for multiple trait selection.

“There is more than one trait that impacts the profitability of cow-calf enterprises,” said Spangler. “Thus, producers need to select for improvement in multiple traits simultaneously. We will discuss and illustrate ways to do this and also ways not to do this.”

During the two-day course, other learning objectives include developing breeding objectives by identifying environmental constraints, marketing alternatives, and the economic relevancy of traits; and deciphering performance measures, adjusted data, ratios, and Expected Progeny Difference (EPDs).

“It is important to understand where and how these technologies are appropriate and practical,” explained Mathis. “This lectureship will provide that knowledge to attendees and should simplify some of the management decisions regarding genetic selection.”

Weaber, associate professor and cow/calf extension specialist with Kansas State University, noted how genomic technologies are growing in their ability to describe genetic variation in economically important traits. Examples of this will be discussed while studying the application of genomically-enhanced EPDs (GE-EPD) and marker-assisted management in genetic advancement.

“These GE-EPDs have increased accuracy values compared to EPDs based solely on pedigree and performance data,” said Weaber. “Increased accuracy translates to decreased selection risk.”

He further explained that the gains in accuracy are even more valuable for traits that would not be observed until later in life (i.e., longevity), or are very expensive to measure, such as feed intake or carcass merit traits. Participants in this lectureship will learn about the practical use of GE-EPDs and complete hands-on exercises to make selection decisions for a variety of scenarios using GE-EPDs.



Like the other lectureships offered by KRIRM, the most valuable component are the real-world scenarios examined that participants could potentially face on their own operations. An interactive sire selection exercise will be included, which will provide the tools necessary for participants to return to their ranch and apply what was learned.

“We will work through scenarios and collectively decide what breed(s) should be included in the breeding program, which traits are economically relevant, and go through the process of sire selection given ranch goals and environmental constraints,” explained Spangler.

For a rancher interested in learning how to leverage the new and advanced genetic tools in the industry, this lectureship will provide that and more.

Weaber believes the topics discussed will be beneficial to participants because the appropriate use of breeding system design and selection strategies allow cattle producers to take advantage of the value of heterosis on production efficiency. With a greater knowledge of breeding and selection strategies, Weaber explained that participants will also be able to select cattle within a breed for economically relevant traits to increase profitability, sustainability, and efficiency.

“Use of genetic selection tools allows producers to make informed decisions about the genetic merit individual animals may bring to the breeding program,” he said.

With the addition of this lectureship to the 2016 schedule of events, the content of lectureships offered by KRIRM has broadened to better serve the ranching industry. The registration fee is \$300; additional information about this lectureship can be found at krirm.tamuk.edu/lectureships/geneticotechnology. The agenda, registration form, and a campus map are available for download. Online registration is also available, or call 361-593-5406 to register. This lectureship counts toward the Texas Farm Credit Certificate in Advanced Ranch Management. A full list of the 2016 lectureships and more about the certificate program can be found at krirm.tamuk.edu/lectureships.

About KRIRM

Formed in 2003, KRIRM is a ranch management master’s program at Texas A&M University-Kingsville created in honor of the 150th Anniversary of the legendary King Ranch. As the only ranch management master’s program in the world, KRIRM teaches graduate students using a multi-disciplinary, systems approach to ranch management, and provides the highest quality lectureships and symposia to stakeholders in the ranching industry. The programs serve the ranching industry by empowering graduate students and outreach attendees with skills that will enable them to strategically manage complex ranching operations and successfully lead the industry. Graduates of KRIRM manage livestock and wildlife on more than 4 million acres of ranchland. For more information about KRIRM, and the master’s and certificate programs, visit krirm.tamuk.edu.

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