eBEEF newsletter No. 4: February 2017 View this email in your browser

What's happening with eBEEF?

Since the last newsletter posted June 2016 the eBEEF team has been developing and posting additional factsheets and developing additional FAQ videos that will be uploaded soon. Traffic to the site has continued to increase and we are getting the occasional online question. These inquiries are greatly welcomed and often result in a factsheet or developing a FAQ. As a reminder, all of the information on the website is meant for the public and we encourage its duplication and usage. We are continually trying to expand our library of videos that deal with frequently asked questions (FAQs), conference videos and tools; your ideas and suggestions are certainly welcome!

In this newsletter you will find:

- Factsheet update
- FAQ update
- Video update
- Upcoming conferences of interest

Here is a list, and a short description, of the factsheets that have been developed since the last newsletter:

Parentage Testing

Parentage testing can be a valuable tool for both seedstock breeders and commercial producers. This fact sheet covers how parentage testing works and tips for using parentage testing successfully. Parentage testing is often thought of as a tool that is only applicable to seedstock producers, but in fact, there are benefits to commercial producers as well. Parentage testing not only ensures correct pedigree, but can provide information to make important management decisions for commercial producers. Knowing some of the basics of parentage testing and how it

works can help a producer understand the benefits of testing.

Simple Inheritance in Beef Cattle

Managing traits controlled by simple inheritance has economic importance to many beef operations. Understanding simple inheritance can assist producers in breeding cattle that are the phenotype desired, such as polled, or avoid undesirable traits, such as lethal defects. This information sheet explains how simple inheritance works and how it can be managed.

Hair Shedding Scores: A Tool to Select Heat Tolerant Cattle

Responsible beef breeding requires matching cattle genetics to production environment. This is necessary for at least three reasons: Profitability, animal well-being and improved environmental impact. Hair shedding scores are an easy and effective way to measure cattle's ability to cope with heat stress. In this fact sheet, learn the how, when, and why of hair shedding scores.

Go to the FAQ section to find answers to some common beef genetics questions. You have the option to click and read the text or watch a video with the answers. No new FAQs have been added since the last newsletter, but several are in the final editing stage. Go to: http://www.ebeef.org/faqs.html.

Thirty videos associated with FAQs have been developed and 37 videos from various conferences are included in the library. These videos can be found at: https://www.youtube.com/channel/UCw8zZL_EaBRC6Pa-4V0OYrA/videos

Feature Article

(This article can be reproduced for other publications.)

Can I Compare EPDs Across Breeds?

Matt Spangler
Associate Professor and Beef Genetics Extension Specialist
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Larry Kuehn
Research Geneticist

Expected Progeny Differences published by one breed are inherently not comparable to those published by another breed. This is due to several factors including differences in arbitrary base adjustments used by each breed, the lack of data from comparisons among animals of different breeds, and differences in selection emphasis for a specific trait in one breed compared to another. Consequently, producers who wish to compare bulls of different breeds must utilize across-breed adjustment factors. Currently the US Meat Animal Research Center (USMARC) calculates across breed adjustment factors for 18 breeds for growth and carcass traits including: birth weight, weaning weight, yearling weight, maternal milk, marbling score, ribeye area, and fat thickness. Producers can use these additive adjustment factors to adjust EPD to a common Angus base. Across-breed adjustments are updated annually to capture differences in base changes, genetic trends, and the addition of more data generated in the Germplasm Evaluation Project at USMARC. Each year new across-breed adjustment factors are released at the Beef Improvement Federation meeting. Current across-breed adjustment factors can be found at www.beefimprovement.org.

As an example, to compare a Limousin or bull's EPDs directly to an Angus bull's EPDs bull buyers need to use the following adjustment factors to add to the Limousin bull's EPDs: 2.3 (birth weight), -18.2 (weaning weight), -41.3 (yearling weight), -13.7 (milk). If a Limousin bull has a Milk EPD of 26, his Milk EPD on an Angus base would be 12.3 (26 – 13.7). For bull buyers wishing to directly compare bulls of different breeds this exercise is critical. To make this exercise easier, online across-breed EPD calculators are available at www.eBEEF.org.

Do Across-Breed EPD adjusted factors tell us about breed differences? No. Do not confuse the EPD adjust factors with breed differences. The annual report from USMARC also presents breed of sire means for growth and carcass traits. Differences in these breed of sire means are half of the differences between breeds. It is critical not to confuse the two. The breed differences can be used to determine how breeds rank relative to a particular trait and inform which breeds best fit given production scenarios. The Across-Breed EPD factors should only be used to compare EPDs of animals across breeds.

Breed association collaborations are underway that represent the opportunity to directly compare bulls of different breeds directly in the future. International Genetic Solutions (IGS) represents a partnership between 12 beef breed associations. Consequently, each participating breed association benefits from data contributed by partner breed associations enabling even more accurate EPDs when pedigree ties exist between breeds. These pedigree ties are evident when one thinks of SimAngus, LimFlex, Balancer, and Red Angus, as examples. However, to directly compare breeds in this multi-breed genetic evaluation breed differences and estimates of heterosis are needed to adjust the phenotypic data. In the future, these values from USMARC will be critical in allowing for direct comparison of breeds who decide to take part in such collaborations. For the spring 2017 bull buying season, the Across-Breed EPD adjustment factors are still required when comparing bulls of different breeds even within the IGS system.

Upcoming Conferences of Interest

University of Georgia to host BIF annual meeting and research symposium
Registration will soon be available for the 2017 Beef Improvement Federation Annual Meeting and Research Symposium. This year's event will be May 31 – June 3 in Athens, Georgia. Additional information will be available on the BIF website soon (http://beefimprovement.org/library/registration-info).

Each year the BIF symposium draws a large group of leading seedstock and commercial beef producers, academics and allied industry partners. The attendance list is a "who's who" of the beef value chain and offers great networking opportunities and conversations about the issues of the day. Program topics focus on how the beef industry can enhance value through genetic improvement across a range of attributes that affect the value chain.

King Ranch Institute for Ranch Management Lectureship
Application of Advanced Genetic Technology in Beef Cattle will be held in Bozeman, Montana on May 8-9 and Rapid City, South Dakota May 11-12. This lectureship will feature two eBEEF.org team members, Dr. Matt Spangler and Dr. Bob Weaber.

In recent decades, genetic technology has evolved at a rapid pace. Keeping up with the genetic selection and evaluation innovations, and understanding which advancements are practical for your operation can be daunting. This lectureship will not only strengthen the foundational understanding of genetic principles among attendees, but it will also build upon them to enable attendees to apply advanced genetic technologies in the real world of seedstock and commercial cattle production.

For more information, please visit the following website:
http://krirm.tamuk.edu/lectureships/genetictechnology/

Applied Reproductive Strategies in Beef Cattle (ARSBC) Symposium
Event to be held in Manhattan, KS on August 29-30, 2017 at the Hilton Garden. More details available soon at: http://beefrepro.unl.edu/

MU Extension ReproGene
Taking the next step in beef cattle reproduction and genetics
University of Missouri livestock specialists will host a series of meetings to occur this March. The meeting at each location will focus on incorporating best practices and new technologies to improve reproduction and genetics.

Topics will include:

- Overview of Synchronization Protocols for Heifers and Cows
- Evaluation of Synchronization Protocols for Two-Year-Old Cows

- How to use Genomic Predictions for Increased Profitability
- Producer Testimonials and Q&A

The meeting will include a meal and handouts with relevant information.

Town, location, date, time, location and contact for the meetings:

Maryville, MO: March 7, 5:30-9:00pm
Northwest Technical School (tentative location)
Amie Schleicher (schleichera@missouri.edu)

Kingsville, MO: March 9, 5:00-8:30pm
Kingsville Livestock Auction
David Hoffman (HoffmanD@missouri.edu)

Macon, MO: March 11, 11:00am-3:00pm
Crossroads Church
Anita Snell (snella@missouri.edu) and Daniel Mallory (MalloryD@missouri.edu)

Springfield, MO: March 16, 4:00-8:30pm
Springfield Livestock Marketing Center
Eldon Cole (ColeE@missouri.edu) and Andy McCorkill (mccorkilla@missouri.edu)

Cape Girardeau, MO: March 28, 5:30 to 9:00pm
University of Missouri Extension Center
Erin Larimore (LarimoreE@missouri.edu)

Additional information continues to be added to the website so please come back often and see what is new!

Yours sincerely,
The eBEEF team

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