

Multi-Breed NCE FAQ

by Greg Comstock and Larry Keenan

For many months, RAAA and its members have been discussing Genetic Performance Solutions or the "Joint Venture" as many of you have known it. The centerpiece of the Joint Venture was the construction of a data-warehouse that would both store data from participating breed associations, and allow for the calculation of multi-breed EPDs and delivery of decision support aids.

Initially, the impetus for the Joint Venture came from the Summer, 2004 meeting of the National Beef Cattle Evaluation Consortium (NBCEC), which consists of the land grant universities involved in producing National Cattle Evaluations (NCE). At this meeting, the NBCEC indicated that the technology to produce true Multi-Breed EPDs was at hand. They also indicated that land grant universities would be exiting the "number crunching" phase of EPD calculation to concentrate on research of new selection tools, and refinement of existing EPD models. Breed Associations were given a potential "5-year window" to internalize, privatize or establish some new plan for servicing their NCE needs.

The Joint Venture sought to accomplish this task, although participating breed associations struggled with its organizational, political, and funding structure. Responding to the heightened interest from breed associations, the NBCEC moved forward, and announced on March 30, 2006 that a production run of its multi-breed EPD model for growth traits would be available for participating breeds. Growth traits are scheduled to be published in August, 2006 through the NBCEC member, University of Georgia (UGA), with carcass traits being added in 2007 and threshold traits in 2008.

The following questions have been asked by several members and customers relative to Red Angus' participation in a Multi-Breed NCE. Hopefully, the answers to these FAQs will foster your own questions and/or comments which you are invited to

submit via the "Submit Questions/Comments" link on the Multi-Breed NCE page on the RAAA website: www.redangus.org

1. Q. What is a Multi-Breed NCE and why would RAAA want to be part of it?

A. A multi-breed NCE (National Cattle Evaluation) would offer a superior service to commercial bull buyers by calculating a single suite of genetic predictions (EPDs) among all participating breeds; these EPDs would be represented in a common base and scale. This benefits bull buyers by allowing them to compare all breeds for the same traits on the same scale. A multi-breed NCE would benefit Red Angus breeders by presenting competitive breeds' bulls on an equal playing field, i.e., breeds with larger average birth weights than Red Angus, will no longer be able to simply "re-base" their breed average BW EPD to zero to make birth weights look more moderate.

2. Q. What does base and scale mean, and what do you mean by "a common suite of EPDs"?

A. "Base" refers to where breeds set the zero EPD value for a specified trait. Currently, different breeds use different methods for determining base. Some use the average EPDs of foundation animals. Others use breed average EPDs for a selected year, but breeds using this method don't necessarily use the same year. By adjusting its base up or down, a breed can make the EPDs of the majority of its cattle look more attractive to potential buyers. However, changing the base does not change the animals' true genetic merit,

nor does it change how animals rank within their respective breeds.

B. "Scale" is typically different from one breed to the next and relates to the genetic variation (as expressed in EPDs) within a breed for a given trait. An example of differing "Scales" would be two breeds that both have an average YW EPD of 50 lbs. However, to rank in the top 10 percent of Breed A, an animal has to have an 80 YW EPD, where in breed B, an animal would have to have only a 70 YW EPD.

C. The "Common Suite of EPDs" refers to all breeds evaluating the same traits, through utilization of the same models. For example: currently the model for Red Angus Calving Ease Direct (CED) EPD accounts for variation in both birthweights and calving ease scores, some other breeds' Calving Ease EPDs only utilize calving ease scores. Thus, even though both EPDs say Calving Ease they actually are two different measurements.

3. Q. Why would I care about Multi-Breed EPDs if I am not crossbreeding, and only propagating 1A Red Angus?

A. Several other breeds are using a significant number of Red Angus sires in their hybrid programs. We would gain genetic information, and possibly prove sires quicker, by having that data included with our NCE.

B. Several Red Angus breeders are using Black Angus sires as a source of "outcross" genetics in their breeding programs. RAAA stands to gain significant Black Reference sire information due to the extensive use of high accuracy Black Angus sires in other breeds' hybrid programs.

C. Most importantly, with 15 breeds participating in the NBCEC prototype, it enhances Red Angus' competitive position to be "the Angus" written in the common genetic language (base, scale, EPD suite) of the beef industry.

4. Q. What does NBCEC stand for, and what does it do?

A. NBCEC stands for National Beef Cattle Evaluation Consortium, which is the operating name for the cooperative efforts between three land grant universities: University of Georgia (UGA), Cornell University, and Colorado State University (CSU). Currently, each of these institutions is involved in calculating EPDs for various breed associations. Red Angus EPDs are calculated at CSU.

B. A primary objective of the NBCEC is to combine the best science at each of these universities and avoid duplicity in research. This should speed the rate of delivery of next generation genetic selection tools and improvements to existing EPD models.

5. Q. Will RAAA/Red Angus switch to a multi-breed EPD model?

A. Yes, on March 30, 2006 the NBCEC announced that it is prepared to move forward with a large number of breeds participating in a Multi-Breed Analysis which would include Red Angus.

6. Q. What is the time table for delivery of the Multi-Breed EPDs?

A. NBCEC has suggested that they would have the multi-breed EPDs for growth traits available by August, 2006. With carcass traits following in 2007 and threshold traits (calving ease, heifer pregnancy, stayability, etc) released in 2008.

7. Q. If NBCEC is only providing growth traits in 2006, how will RAAA members get their EPDs for carcass, maintenance and threshold traits?

A. CSU will continue to produce Red Angus EPDs to complete the traits not produced by the consortium. RAAA may elect to publish both CSU and

NBCEC growth EPDs in 2006 during this transition.

8. Q. If a multi-breed NCE requires a change in Red Angus' current base and scale how will that affect Red Angus EPDs?

A. Many false assumptions relative to changing RAAA's EPD base abound. The EPDs may look different if a base change occurs, but rank correlation will be unchanged. Remember, only adding data can change where one bull ranks vs. another. If the base is reset, the numeric value of the EPD may change, but the relative rank of animals within the breed will remain unchanged. Also, Meat Animal Research Center (MARC) data suggests that Red Angus will fare well when compared to other breeds. MARC's Cycle 7 report showed that Angus cattle (Red and Black) have really closed the gap with Continental breeds in growth traits (finished weight/post-weaning gain) while excelling in calving ease, and marbling. Additionally, we expect Red Angus to excel in low maintenance costs, heifer pregnancy and Stayability after several years of selection for these ERTs.

9. Q. Will "pooling" data with other breeds to produce a Multi-Breed EPD affect Red Angus breed purity?

A. Not at all. Red Angus breeders will continue to produce 1A, 1B or Category III (Red Angus influenced) seedstock - just as they are doing now. Any "non-Red Angus" parentage, including other breeds, Black Angus, multiple sire groups, and non-registered cattle will continue to be documented in RAAA pedigrees so that breeders may represent the cattle as exactly what they are.

10. Q. If the multi-breed model accounts for heterosis, doesn't that mean that my Red Angus will be compared (ratioed) vs. my neighbors' Limousin or other breeds?

A. Multi-Breed EPDs will allow for two things: first, it allows for genetic pre-

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dictions to be compared across breeds. Second, it allows animals of different breed makeup to be compared within a contemporary group, as the multi-breed model accounts for heterosis. Therefore, the only way performance data from your Red Angus would be compared against Limousin data would be if you also owned the Limousin and managed them with your Red Angus. Remember, all comparisons are within contemporary groups. Contemporary groups are sorted by ownership, feed codes, etc. Thus, if you produce only 1A cattle, your animals are only going to be ratioed against other 1A cattle that you manage in the same contemporary group. Just like in the current Red Angus EPD calculations, Red Angus from other herds are put into different contemporary groups with ratios only comparing animals within a contemporary group.

11. Q. Will a Multi-breed pooled data run affect Red Angus breed identity?

A. There will be no loss of breed identity. RAAA's national advertising budget will still actively promote the benefits of Red Angus cattle. Red Angus will maintain commercial marketing programs like FCCP and ProCow. RAAA members will continue to deal with the Registration staff they know, and Red Angus pedigrees will still be printed on a Red Angus registration certificate. RAAA will continue to publish ARA Magazine, sponsor the National Red Angus Show, and support the Junior Red Angus Association.

12. Q. Will a Multi-breed pooled data run change RAAA's present category system? Will this allow 1B cattle to achieve 1A status?

A. Absolutely not. The Red Angus category system will remain unchanged. Red Angus cattle will continue to be described as they currently are.

Red Angus Category System:

- * 1A = 100% Red Angus, no disqualifying characteristics
- * 1B = 87 through 99% Red Angus, no disqualifying characteristics
- * II = 87 up to 100% Red Angus, having one or more disqualifying characteristics
- * III = 0 through 86% Red Angus

13. Q. Doesn't participation in a multi-breed NCE require RAAA to give up our intellectual property?

A. We will not be giving up any intellectual property. Our EPD models including such industry leading EPDs as Heifer Pregnancy (HPG) and Mature Cow Maintenance Energy Requirements (ME) are in the public domain at the same land grant universities which comprise the NBCEC. These and other ERTs are part of the decision support technology that NBCEC will provide to participating breeds.

14. Q. Will RAAA continue to do a joint run with Canadian Angus Association (CAA)?

A. Yes, CAA will be included in the NBCEC's Multi-Breed evaluation.

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15. Q. Red Angus are more popular now than ever. So, "if it's not broke why fix it?"

A. Maybe we are popular now because we weren't afraid to evolve. After all, RAAA was the first breed association to require mandatory total herd reporting. Red Angus was the first breed to use genotype to certify their bull customer's feeder cattle allowing eligibility into branded product lines making breed claims. The examples of Red Angus' departure from beef "Purebred" norms date back to RAAA's founding.

While we should be proud of our breed's commercial acceptance and continued innovation, we should not become complacent. There is so much more room for growth. To put this in perspective, American Angus grew last year by nearly as much as our entire 1A registry. Yes, RAAA is growing, but there's still room for additional growth.

16. Q. Speaking of American Angus, I heard their board voted to form a company to publish multi-breed EPDs?

A. That is true, according to what American Angus has published. Imagine two Angus Associations, RAAA and AAA; however, AAA is the one whose EPDs are the same as the rest of the beef industry - same base and scale, same traits evaluated. Then, which 'Angus' will enjoy the competitive advantage among commercial producers seeking to use 'Angus' genetics in their planned crossbreeding programs?

17. Q. Why don't we have \$value indexes like a few other breeds?

A. \$ value indexes assume that all producers have similar production environments, base cow herd genetics, performance levels and marketing strategies. It is doubtful that this is true of even one Red Angus breeder's bull customers - let alone producers spread from the Everglades in Florida to high desert in eastern Oregon. The Multi-breed NCE will provide a next generation solution to indexes, and that is decision support software. Decision support is currently in its finishing phase of programming by Colorado State University and allows producers to custom build their own "index". This will assist them in their sire selection process by allowing each producer to input their specific environmental, marketing, performance and genetic constraints to rank bulls by their effects on profitability in that producer's unique production system.

18. Q. Is RAAA's participation in the Multi-breed EPD expected to raise members' THR fees?

A. There are no plans to increase THR because of our participation in a Multi-breed NCE. One must understand that THR fees are not fixed from here to eternity. The current fee was set by the RAAA board to stand for five years, and we are in the third year of that plan, so it will be a couple of more years before the board reviews THR fees again. ■