

Carcass EPDs: Where Are We?

by Shauna Rose Hermel

During the Genetic Predictions Committee meeting at the 2006 Beef Improvement Federation (BIF) Annual Meeting and Research Symposium, Kansas State University's (K-State's) Dan Moser gave an overview of the current status of carcass expected progeny differences (EPDs) and the outlook for the future.

The good news, Moser said, is that carcass traits are among the most highly heritable traits available. So, when data is available, rapid progress can be made in changing the population.

The bad news, he countered, is that when carcass data is collected, the animal is deceased. Progeny testing to determine carcass merit is costly and time-consuming, and there's always the risk of losing the data due to lost identities.

As a result, very little actual carcass data is being submitted to breed associations, he continued, adding that vision-grading and a national animal identification system (NAIS) might encourage more data submission.

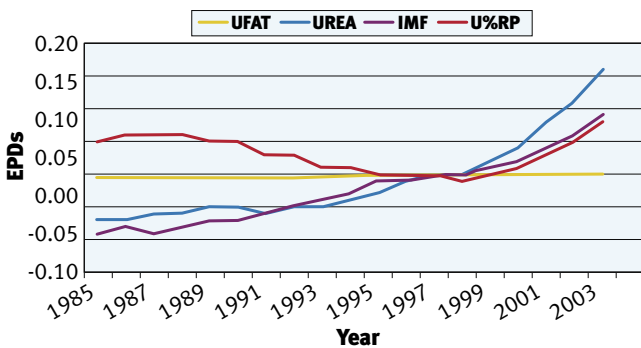
Ultrasound offers the opportunity to capture body composition data on

live animals, and yearling ultrasound measurements have fairly strong correlations to carcass traits, Moser shared.

Translating to EPDs

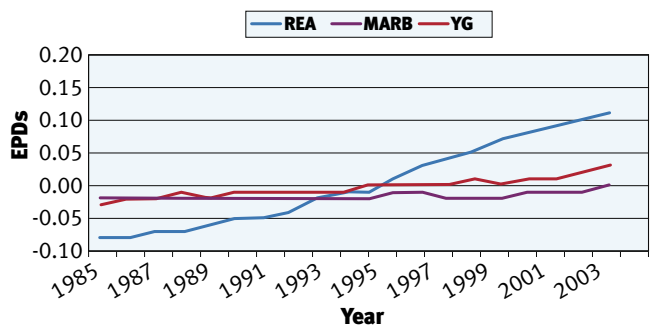
Breed associations currently vary in the information they use to calculate EPDs, Moser said. While collecting ultrasound data, the Brahman, Gelbvieh and Shorthorn associations base their carcass EPDs on actual carcass data only. The Canadian Angus, Senepol and many of the Australian breed registries have turned to

Fig. 1: Angus genetic trends for carcass traits



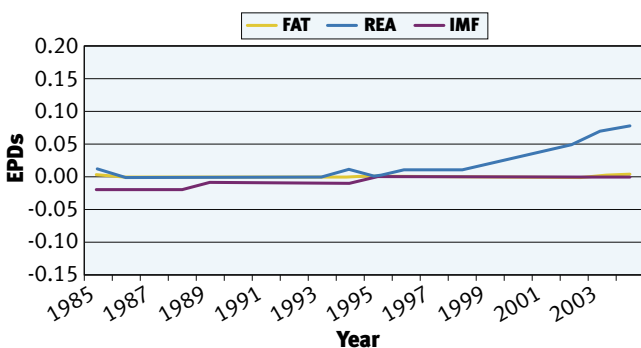
Source: Dan Moser, Kansas State University, PowerPoint® presentation at the Genetic Predictions Committee meeting at the 2006 BIF Annual Meeting and Research Symposium

Fig. 3: Limousin genetic trends for carcass traits



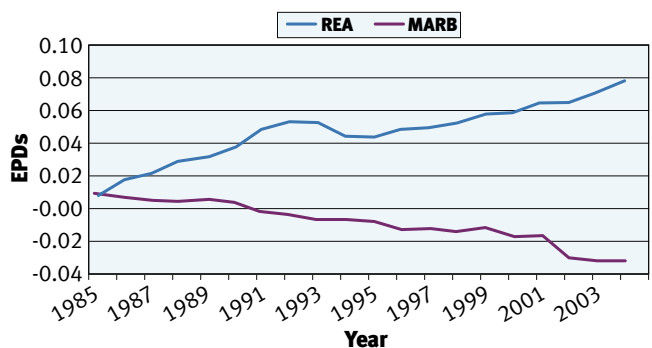
Source: Dan Moser, Kansas State University, PowerPoint® presentation at the Genetic Predictions Committee meeting at the 2006 BIF Annual Meeting and Research Symposium

Fig. 2: Hereford genetic trends for carcass traits



Source: Dan Moser, Kansas State University, PowerPoint® presentation at the Genetic Predictions Committee meeting at the 2006 BIF Annual Meeting and Research Symposium

Fig. 4: Gelbvieh genetic trends for carcass traits



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ultrasound measurements for calculating EPDs.

The American Angus Association reports both carcass and ultrasound EPDs separately.

Carcass and ultrasound measures can be jointly evaluated as correlated traits, like weaning and yearling weights, Moser said, and many associations are starting to use both types of data to establish one EPD, reported on either a carcass or an ultrasound basis.

Reporting on a carcass basis are the Braunvieh, Charolais, Chianina, Limousin, Maine-Anjou, Red Angus, Salers and Simmental breeds. Incorporating both types of data and reporting on an ultrasound basis are the Brangus and Hereford associations.

Retail product, tenderness

Many equations have been developed to predict a retail product percentage. The Canadian Angus, Chianina, Salers and Maine-Anjou associations report a percent retail product EPD. Limousin and Simmental have opted for a yield grade (YG) EPD, and the American Angus Association has developed a selection index for grid value, which includes a dollar value difference for yield grade.

Moser said three associations — Simmental, Hereford and Shorthorn — have published EPDs for tenderness based on Warner-Bratzler shear force (WBSF) testing. The American Simmental Association (ASA) has incorporated Calpain 316 genotypes into its tenderness EPDs.

Progress and the future

Progress is being made in carcass traits as can be seen in the genetic trends of the different associations. Most breeds have made progress in increasing ribeye size, Moser reports.

Only the Angus and Red Angus breeds are making much progress in marbling, Moser pointed out, noting the majority of the intramuscular fat scans collected are for Angus cattle.

As a closing thought, Moser posed the question, “Is there a need to standardize the collection of carcass and ultrasound data and the way they are reported as EPDs?” A committee was formed later in the week to address that issue.



Editor's note: To view the PowerPoint® presentation that accompanied this talk, visit the newsroom at www.bifconference.com.



►K-State's Dan Moser reviewed how the various breed associations collect and report carcass/ultrasound information and asked if standardization is needed.