

2007 Beef Improvement Federation 39th Annual Meeting

Coverage by Angus Productions Inc



www.bifconference.com

AB-EPD Table Released

News release provided by Roman L. Hruska U.S. Meat Animal Research Center

FORT COLLINS, COLO. (June 7, 2007) — The table of adjustment factors to be used to estimate across-breed expected progeny differences (AB-EPDs) for 16 breeds was presented June 7 at the Beef Improvement Federation (BIF) annual meeting in Fort Collins, Colo. (see Table 1).

Bulls of different breeds can be compared on the same EPD scale by adding the appropriate adjustment factor to the expected progeny differences (EPDs) produced in the most recent genetic evaluations for each of the 16 breeds.

As an example, suppose a Simmental bull has a weaning weight EPD of +25.0 lb. (which is slightly below the average of 32.9 lb. for Simmental cattle born in 2005) and a Gelbvieh bull has a weaning weight EPD of +45.0 lb. (which is slightly above the average of 41.0 lb. for Gelbvieh cattle born in 2005).

The across-breed adjustment factors for weaning weight (see Table 1) are 24.4 lb. for Simmental and 7.0 lb. for Gelbvieh. The AB-EPD is 25.0 lb. + 24.4 lb. = 49.4 lb. for the Simmental bull and 45.0 lb. + 7.0 lb. = 52.0 lb. for the Gelbvieh bull. The expected weaning weight difference when both are mated to cows of another breed (e.g., Angus) would be 49.4 lb. – 52.0 lb. = -2.6 lb., with the Simmental bull siring lighter calves on average.

The AB-EPDs are most useful to commercial producers purchasing bulls of more than one breed to use in crossbreeding programs. Uniformity from one generation to the next can be improved by

selecting bulls with similar AB-EPDs. Selection for uniformity is especially important in rotational crossbreeding systems for traits such as birth weight to manage calving difficulty and for traits related to cow size and milk production to effectively manage feed requirements in cow herds.

In terminal crossbreeding systems, AB-EPDs for growth traits can be used to identify bulls across breeds whose progeny should have the highest growth potential.

Birth weight AB-EPDs are useful for selecting bulls for use on first-calf heifers to decrease the likelihood of dystocia.

Most breed associations publish EPDs on an annual basis. These EPDs predict differences expected in performance of future progeny of two or more bulls within the same breed for birth weight, weaning

weight, yearling weight and maternal milking ability (as reflected in progeny weaning weights). Normally, the EPDs of bulls from different breeds cannot be compared because most breed associations compute their EPDs in separate analyses, and each breed has a different base point (where the average EPD = 0).

The across-breed adjustment factors allow producers to compare the EPDs for animals from different breeds for these traits; these factors reflect both the current breed difference (for animals born in 2005) and differences in the breed base point.

The adjustment factors in the table were updated using EPDs from the most recent national cattle evaluations conducted by each of the 16 breed associations.

The breed differences used to calculate the factors are based on comparisons of progeny of sires from each of these breeds at the Roman L. Hruska U.S. Meat Animal Research Center (USMARC) in Clay Center, Neb. These analyses were conducted by USMARC geneticists Larry Kuehn and Mark Thallman with the assistance of Dale Van Vleck and Larry Cundiff.

For more information about this project, contact Kuehn at 402-762-4352 or larry.kuehn@ars.usda.gov or Thallman at 402-762-4261 or mark.thallman@ars.usda.gov.



Look for the PowerPoint and audio file for this presentation in the newsroom. Two proceedings papers are available on the "Symposium Papers" page.

Table 1: Adjustment factors to add to EPDs of 16 different breeds to estimate across-breed EPDs

| Breed | Birth wt. | Weaning wt. | Yearling wt. | Maternal milk |
|-------------|-----------|-------------|--------------|---------------|
| Angus | 0.0 | 0.0 | 0.0 | 0.0 |
| Hereford | 2.7 | -3.1 | -12.7 | -15.7 |
| Red Angus | 2.5 | -4.7 | -0.7 | -5.1 |
| Shorthorn | 7.0 | 32.5 | 46.1 | 16.6 |
| South Devon | 5.8 | 23.1 | 41.7 | 8.0 |
| Braunvieh | 6.3 | 30.3 | 17.4 | 24.5 |
| Charolais | 9.6 | 40.9 | 48.7 | 3.5 |
| Gelbvieh | 4.4 | 7.0 | -21.2 | 6.2 |
| Limousin | 4.0 | -1.3 | -24.0 | -12.6 |
| Maine-Anjou | 7.1 | -2.9 | -31.9 | -6.2 |
| Salers | 4.2 | 30.7 | 43.5 | 12.8 |
| Simmental | 5.7 | 24.4 | 17.0 | 13.7 |
| Tarentaise | 3.0 | 31.9 | 18.3 | 20.0 |
| Beefmaster | 9.0 | 42.2 | 43.7 | -4.1 |
| Brahman | 12.1 | 38.5 | 2.6 | 26.7 |
| Brangus | 5.0 | 24.3 | 26.5 | -3.1 |

Editor's Note: This release is adapted from a news release distributed by the Roman L. Hruska U.S. Meat Animal Research Center in Clay Center, Neb. It is presented for redistribution. To request a copy of the original release, contact Mark Thallman at 402-762-4261 or mark.thallman@ars.usda.gov.



