

Implications of multi-breed evaluation and across-breed EPDs for commercial cattlemen

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Outline

- Discussion of current state of the ABEPD system and possible changes
- Update on current sampling and progress in the USMARC Germplasm Evaluation Program (GPE)

TABLE 1: ADJUSTMENT FACTORS TO ADD TO EPDs OF EIGHTEEN DIFFERENT BREEDS TO ESTIMATE ACROSS BREED EPDs

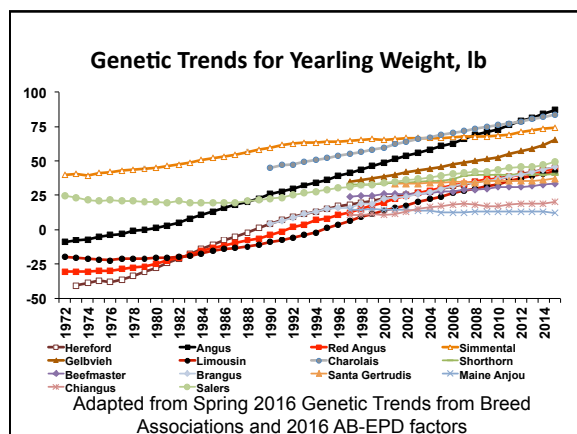
Breed	Birth Wt. (lb)	Weaning Wt. (lb)	Yearling Wt. (lb)	Maternal Milk (lb)	Marbling Score ^a	Ribeye Area (in ²)	Fat Thickness (in)	Carcass Wt. (lb)
Angus	0.0	0.0	0.0	0.0	0.00	0.00	0.000	0.0
Hereford	2.3	-7.8	-28.6	-17.3	-0.31	-0.07	-0.056	-59.0
Red Angus	2.5	-31.4	-34.6	3.3	-0.27	0.01	-0.016	-9.0
Shorthorn	4.7	-36.6	-17.3	4.1	-0.14	0.37	-0.105	-7.1
South Devon	3.3	-11.4	-27.1	3.9	-0.08	0.29	-0.133	-24.8
Beefmaster	4.7	17.9	0.5	5.9				
Brahman	10.3	45.1	6.6	23.8	-0.78	-0.05	-0.145	-27.8
Brangus	3.3	12.0	4.0	6.3				
Santa Gertrudis	5.7	36.3	43.0	17.0	-0.54	-0.09	-0.080	2.2
Braunvieh	1.9	-25.5	-50.0	-0.8	-0.70	0.78	-0.092	
Charolais	8.0	34.6	40.4	8.2	-0.33	1.01	-0.208	13.0
Chiangus	3.2	-27.0	-40.5	-1.7	-0.34	0.34	-0.093	-18.1
Gelbvieh	2.8	-22.6	-29.3	2.3	-0.27	0.75		-15.0
Limousin	2.3	-18.2	-41.3	-13.7	-0.43	1.01	-0.132	-12.0
Maine-Anjou	4.2	-30.5	-38.7	-6.2	-0.57	0.97	-0.187	-15.9
Salers	1.8	-7.3	-25.7	5.9	-0.09	0.94	-0.196	-23.5
Simmental	3.2	-9.4	-12.1	4.4	-0.34	0.49	-0.129	4.4
Tarentaise	3.4	25.1	5.6	24.2				

^aMarbling score units: 4.00 = S¹⁰⁰; 5.00 = S⁹⁰

TABLE 2: BREED OF SIRE MEANS FOR 2014 BORN ANIMALS UNDER CONDITIONS SIMILAR TO USMARC

Breed	Birth Wt. (lb)	Weaning Wt. (lb)	Yearling Wt. (lb)	Maternal Milk (lb)	Marbling Score ^a	Ribeye Area (in ²)	Fat Thickness (in)	Carcass Wt. (lb)
Angus	86.3	570.7	1057.4	555.7	5.88	13.57	0.677	913.7
Hereford	90.6	560.1	1016.1	535.7	5.07	13.28	0.607	882.7
Red Angus	86.2	545.4	1019.8	555.9	5.47	13.19	0.637	891.7
Shorthorn	92.1	538.1	1015.1	554.8	5.20	13.35	0.522	885.2
South Devon	90.6	552.0	1021.0	561.7	5.61	13.56	0.537	884.2
Beefmaster	90.3	560.6	1011.9	547.6				
Brahman	97.1	580.8	988.6	562.1	4.51	13.01	0.515	854.4
Brangus	89.6	556.1	1016.7	548.5				
Santa Gertrudis	90.9	559.8	1014.6	550.2	4.73	13.00	0.582	886.2
Braunvieh	89.7	538.6	984.4	566.5	5.14	14.17	0.478	
Charolais	93.5	581.0	1055.5	549.6	5.00	14.38	0.457	910.5
Chiangus	90.5	536.0	989.0	546.3	5.05	13.70	0.507	873.5
Gelbvieh	88.3	562.8	1033.9	561.8	5.10	14.24		893.4
Limousin	88.6	564.2	1017.4	545.7	4.85	14.54	0.488	895.1
Maine-Anjou	90.9	536.5	990.3	545.5	4.77	14.22	0.433	873.8
Salers	88.6	553.4	1019.0	557.6	5.40	14.00	0.464	877.8
Simmental	90.1	573.7	1046.8	558.7	5.09	14.33	0.475	912.8
Tarentaise	89.7	562.4	1002.8	557.6				

^aMarbling score units: 4.00 = S¹⁰⁰; 5.00 = S⁹⁰



Goal – multibreed

- Use breed differences from GPE to help parameterize International Genetic Solutions multibreed model
- We want to get to a point where the adjustment factor is the same (to Angus) for breeds in the IGS multibreed model
- Currently in prototype stage

Goal – multibreed

- Even after breed differences incorporated into IGS multibreed, not all breeds are active participants
 - Still a need for ABEPD or a similar system to adjust EPDs to a comparable scale
 - Many trait complexes do not fit a simple additive EPD adjustment
 - Need to continue to think about ways to deliver information in a timely manner if not in real time

BIF Working Group

- Committee was formed at midyear BIF board meeting to discuss multibreed evaluation and the ABEPD system and ways to facilitate multiple release dates of the factors (January 2017)

Darrh Bullock	Matt Spangler
Larry Kuehn	Mark Thallman
Wade Shafer	Lauren Hyde
Joe Epperly	Larry Keenan
Bob Weaber	

BIF Working Group

- Main conclusions
 - ABEPD adjustment factors still necessary for comparison of bulls across breed even for breeds involved in IGS multibreed
 - Write-up in eBeef.org February 2017 newsletter
 - Expedited release of factors prior to high-volume spring bulls buying season would be desirable
 - Particularly important when breeds change their base

Goals

- Short term
 - Starting this year, we will begin to target release of ABEPD factors early in the calendar year
 - USMARC will derive differences in late fall after weaning weights for spring calves have been recorded
 - We will need a feel for when breed associations can provide updates on GPE bulls and breed average EPDs from their NCE

Questions

