MEAN EPDs REPORTED BY DIFFERENT BREEDS

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Expected progeny differences (EPDs) have been the primary tool for genetic improvement of beef cattle for over 40 years beginning with evaluations of growth traits. Since that time EPDs have been added for several other production traits such as calving ease, stayability, carcass merit and conformation. Most recently, several breed associations have derived economic indices from their EPDs to increase profit under different management and breeding systems.

It is useful for producers to compare the EPDs of potential breeding animals with their breed average. The current EPDs from the most recent genetic evaluations of 25 breeds are presented in this report. Mean EPDs for growth traits are shown in Table 1 (25 breeds), for other production traits in Table 2 (16 breeds), and for carcass and composition traits in Table 3 (20 breeds). Several breeds also have EPDs that are unique to their breed; these EPDs are presented in Table 4.

Average EPDs should only be used to determine the genetic merit of an animal relative to its breed average. To compare animals of different breeds, across breed adjustment factors should be added to animals' EPDs for their respective breeds (see Across-breed EPD Tables reported by Kuehn and Thallman in these proceedings).

This list is likely incomplete; evaluations for some breeds are not widely reported. If you see a breed missing and would like to report the average EPDs for that breed, please contact Larry (Larry.Kuehn@ars.usda.gov) or Mark (Mark.Thallman@ars.usda.gov).

Table 1. Birth year 2009 average EPDs from 2011 evaluations for growth traits

Breed	Birth Weight (lb)	Weaning Weight (lb)	Yearling Weight (lb)	Maternal Milk (lb)	Total Maternal (lb)
Angus	1.8	47	85	22	
Black Hereford	3.1	42	65.1	13.8	34.8
Hereford	3.6	44	73	17	39
Murray Grey	3.4	20	30	4	13
Red Angus	-0.1	32	60	17	33
Red Poll	1.7	14	23	6	
Shorthorn	2.4	15.0	24.4	2.2	9.7
South Devon	2.6	40.5	75.8	23	43.2
Beefmaster	0.3	8	13	2	
Braford	1.0	9	14	2	7
Brahman	1.7	14.7	23.5	6.3	
Brangus	0.7	23.0	41.7	10.8	22.3
Red Brangus	1.6	13.2	20.6	5.2	11.8
Santa Gertrudis	0.6	5.0	7.0	0.0	3.0
Senepol	1.0	11	16	5	10.4
Simbrah	2.3	28.4	46.3	2.8	17.1
Braunvieh	2.8	40.9	63.5	34.5	55.0
Charolais	0.6	24.2	42.6	6.8	18.9
Chianina	2.0	36.8	68.7	12.8	31.8
Gelbvieh	1.2	40.0	74.4	16.7	36.8
Limousin	1.5	45.4	83.0	20.9	
Maine-Anjou	1.7	39.4	78.1	19.6	
Salers	1.8	41.3	79.4	20.1	40.7
Simmental	0.7	30.8	56.3	3.4	18.8
Tarentaise	1.9	16	28.6	0.6	

Table 2. Birth year 2009 average EPDs from 2011 evaluations for other production traits

Breed	Calving Ease Direct (%)	Calving Ease Maternal (%)	Scrotal Circ (cm)	Docility Score	Mature Weight (lb)	Heifer Pregnancy (%)	Stayability (%)
Angus	5	8	0.45	10	37.5	8.0	
Hereford	0.4	0.9	0.7		85		
Murray Grey	-0.7	-0.3	0.10		46		
Red Angus	5	4				10	10
Shorthorn	-1.9	-1.8					
South Devon			0				
Beefmaster			0.2				
Brangus			0.65				
Simbrah	2.7	5.7					
Braunvieh	0.12	-0.81					
Charolais	2.8	3.7	0.61				
Gelbvieh	107	103	0.3				5.8
Limousin	8.4	4.7	0.4	18.5			
Salers	0.2	0.3	0.3	8			23.3
Simmental	7.5	10.3		9.6			18.0
Tarentaise	-1.2	0.6					

Table 3. Birth year 2009 average EPDs from 2011 evaluations for carcass and composition traits

Breed	Carcass Wt (lb)	Retail Product (%)	Yield Grade	Carcass			Rump fat (in)	WBSF (lb)
				Marbling Score	Ribeye Area (in^2)	Fat Thickness (in)		
Angus	22			0.43	0.32	0.009		
Hereford				0.04	0.25	0.001		
Murray Grey	26	0.3		0.0	0.08	0.00	0.00	
Red Angus	36		-0.003	0.07	0.07	0.00		
Shorthorn	3.9			-0.01	0.05	-0.012		
South Devon	24.7	0.8		0.3	0.21	0.01		
Beefmaster				0.00[a]	0.03[a]	0.01[a]	0.01[a]	
Braford	6			0.01	0.05	0.012		
Brahman	5.9	0.0		0.00	0.04	-0.002		-0.01
Brangus	14.8			0.01[b]	0.29[b]	-0.002[b]		
Santa Gertrudis	2			0.00	0.02	0.00		
Simbrah	-6.3		0.03	0.01	-0.14	0.006		-0.03
Braunvieh	31.6			0.41	0.73	-0.092		
Charolais	14.5			0.03	0.20	0.000		
Chianina	4.7	-0.14		0.25	0.03	0.02		
Gelbvieh	12.4[c]			-0.03[c]	0.13[c]			
Limousin	24.2		-0.05	-0.04	0.53			
Maine-Anjou	-0.3	0.28		0.22	0.16	0.00		
Salers	20.5	0.0		0.2	0.02	0.00		
Simmental	-2.9		-0.04	0.17	0.19	0.012		-0.31

[a]Derived using ultrasound measures and reported on an ultrasound scale (IMF% instead of marbling score)

[b]Reported on an ultrasound scale (IMF% instead of marbling score) but calculated using ultrasound and carcass data in a multi-trait model

[c]Adjusted to a fat-constant endpoint

Table 4. Birth year 2009 average EPDs from 2011 evaluations for other traits unique to individual breeds

	Residual Average Daily Gain (lb)	Mature Height (in)	Yearling Height (in)	Cow Energy Value ($)	Weaned Calf Value ($)	Feedlot Value ($)	Grid Value ($)	Beef Value ($)
Angus	0.12	0.4	0.35	-2.05	26.66	26.64	25.79	55.50

	Baldy Maternal Index ($)	Brahman Influence Index ($)	Certified Hereford Beef Index ($)	Calving Ease Index ($)
Hereford	17	15	20	15

	Mature Cow Maintenance (Mcal/mo)
Red Angus	4

	Feedlot Merit ($)	Carcass Value ($)	Gestation Length (d)	Days to Finish (d)
Gelbvieh	9.39	14.85	-1.0	2.3

	Mainstream Terminal Index ($)
Limousin	43.4

	All Purpose Index ($)	Terminal Index ($)
Simmental	105.4	61.7

	All Purpose Index ($)	Terminal Index ($)
Simbrah	64.3	50.4

	600-d wt (lb)	Gestational length (d)	Days to calving (d)
Murray Grey	45	-0.1	-0.6