

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 24 breeds are presented in this report. Mean EPDs for growth traits are shown in Table 1 (24 breeds), for other production traits in Table 2 (18 breeds), and for carcass and composition traits in Table 3 (20 breeds). Several breeds also have EPDs and indices 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 2012 average EPDs from 2014 evaluations for growth traits

Breed	Birth Weight (lb)	Weaning Weight (lb)	Yearling Weight (lb)	Maternal Milk (lb)	Total Maternal (lb)
Angus	1.8	48	86	24	
Hereford	3.5	46.5	75.5	18.8	42.1
Murray Grey	3.8	22	35	4	15
Red Angus	-1.2	54	83	18	45
Red Poll	1.6	15	23	7	
Shorthorn	2.2	15.2	24.9	2.2	9.8
South Devon	2.6	43	80	24	45
Beefmaster	0.3	10	14	2	
Braford	1.1	1.2	17	3	9
Brahman	1.7	16	25	6	
Brangus	0.8	24.3	43.5	11.1	23.2
Red Brangus	1.5	12.7	20.0	5.3	11.7
Santa Gertrudis	0.2	3.5	6.2	0.2	
Senepol	0.8	8.3	9.0	4.0	4.0
Simbrah	3.9	62.5	84.4	22.5	53.7
Braunvieh	2.8	39.3	61.9	33.0	52.7
Charolais	0.5	25.6	45.7	7.7	20.5
Chianina	3.7	38.4	70.7	10.2	29.3
Gelbvieh	0.8	64.5	93.2	27.9	60.2
Limousin	1.7	45.9	83.3	22.6	
Maine-Anjou	1.7	38.8	77.8	20.2	39.5
Salers	1.6	41	80	19	
Simmental	2.2	64.2	93.2	23.7	55.8
Tarentaise	1.9	16	28.6	0.6	

Table 2. Birth year 2012 average EPDs from 2014 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	0.77	12	35	9.2	
Hereford	0.8	1.1	0.8		85		
Murray Grey	-0.6	-0.2	0.2		52		
Red Angus	4	5				10	11
Shorthorn	-1.3	-1.4					
South Devon			0.1				
Beefmaster			0.2				
Brangus	5.1	7.1	0.55				
Simbrah	2.7	6.7		7.9			
Braunvieh	-0.2	-0.6					
Charolais	3.0	3.7	0.66				
Chianina	5.5	-2.2					
Gelbvieh	9.7	6.8					5.2
Limousin	9.0	4.5	0.46	20.7			20.0
Maine Anjou	9.2	3.5					
Salers	0.3	0.4	0.3	9			23
Simmental	9.3	10.6		10.3			19.6
Tarentaise	-1.2	0.6					

Table 3. Birth year 2012 average EPDs from 2014 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	28			0.50	0.48	0.01		
Hereford				0.05	0.28	0.002		
Murray Grey	30	0.4		0.0 ^a	0.10 ^a	0.00 ^a	0.00 ^a	
Red Angus	18		-0.02	0.41	0.14	-0.003		
Shorthorn	1.1			-0.03	-0.02	-0.009		
South Devon	27	0.8		0.4	0.23	0.01		
Beefmaster				0.00 ^a	0.04 ^a	0.00 ^a	0.01 ^a	
Braford	6			0.01	0.06	0.011		
Brahman	12	-0.01		0.00	0.08	0.01		0.04
Brangus	12.9			0.02 ^a	0.31 ^a	0.000 ^a	-0.008 ^a	
Santa Gertrudis	5.1			-0.01	0.05	0.002		
Simbrah	25.3		-0.22	-0.09	0.43	-0.060		-0.02
Braunvieh	18.2			-0.24 ^a	0.58 ^a	-0.43 ^a	-0.057 ^a	
Charolais	15.1			0.02	0.21	0.001		
Chianina	8.3	-0.08		0.22	0.08	0.011		
Gelbvieh	25.9		-0.18	0.01	0.42	-0.05		
Limousin	25.1		-0.07	-0.01	0.55			
Maine-Anjou	-0.5	0.33		0.20	0.17	-0.003		
Salers	22	0.0		0.2	0.03	0.00		
Simmental	28.4		-0.31	0.13	0.76	-0.06		-0.31

^aDerived using ultrasound measures and reported on an ultrasound scale (IMF% instead of marbling score)

Table 4. Birth year 2012 average EPDs from 2014 evaluations for other traits unique to individual breeds

Angus	Residual Average Daily Gain (lb)	Mature Height (in)	Yearling Height (in)	Cow Energy Value (\$)	Weaned Calf Value (\$)	Feedlot Value (\$)	Grid Value (\$)	Beef Value (\$)
	0.16	0.4	0.5	-3.78	29.89	27.89	30.29	69.76
Hereford	Baldy Maternal Index (\$)	Brahman Influence Index (\$)	Certified Hereford Beef Index (\$)	Calving Ease Index (\$)				
	16.98	15.19	21.42	14.99				
Red Angus	Mature Cow Maintenance (Mcal/mo)							
	0							
Gelbvieh	Feedlot Merit (\$)	Carcass Value (\$)						
	31.61	17.24						
Limousin	Mainstream Terminal Index (\$)							
	44.5							
Simmental	All Purpose Index (\$)	Terminal Index (\$)	Simbrah	All Purpose Index (\$)	Terminal Index (\$)			
	119.5	68.3		69.10	51.60			
Shorthorn	\$ Calving Ease	\$ Feedlot	\$ British Maternal Index					
	18.20	16.12	20.06					
Murray Grey	600-d wt (lb)	Gestational length (d)	Days to calving (d)					
	51	-0.2	-0.8					