

BEEFMASTER

GENOMIC BREEDING VALUE REPORT

September 2026



GOGONTLE FARMING

Herd Number: 700800

E-mail: moabi.mahape@vodadealers.co.za



BEEFMASTER
CATTLE BREEDERS' SOCIETY OF SA
BEESTELERSGENOOTSAP VAN SA



EBVs, EBVi's and GEBVs

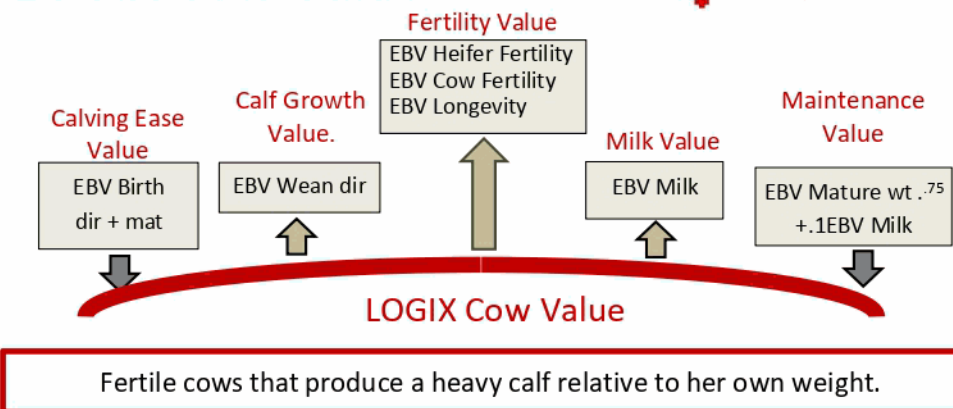
EBVi (Breeding Value Index): Genetic potential relative to the average (100) of the live (active) animals in the breed. Roughly 50% of the animals have values between 90 and 110. Values above 100, depending on the trait, tend to be in the more favourable direction.

EBV (Breeding Value): Genetic potential relative to the average of the animals born in the base year (1990), expressed in the unit of measurement.

GEBV (Genomic Breeding Value) Interpreted like the EBVi. (GEBV = EBV + Genomic information)

LOGIX Selection values combine different breeding values in a logical way. For example, Heifer Fertility (how early a heifer starts calving), Cow Fertility (how regular she calves) and Longevity (retention within the family) are combined to form the Fertility Value.

LOGIX Cow Value



Selection Values

LOGIX Cow Value



Selecting for:

- fertile,
- low maintenance,
- easy calving cows
- with heavy weaners

LOGIX Growth Value



Select for efficient growers on veld and in feedlot, as measured in Phase C and D Growth Tests.

LOGIX Production Value



80% LOGIX Cow Value +
20% LOGIX Growth Value

LOGIX Carcass Value



Select for more meat on the carcass as measured from end weight in Phase C and D Growth Tests and RTU scanning.

How to use the Cow Value

Selection values should be compatible with your selection goal.

AVERAGE ANIMALS

(NO GROWTH EXTREMES)

- Selection Values 90 to 110
 - Cow Value and Fertility Value average to high
- A safe choice, as animals are profitable in most environments.

GROWERS

(GOOD ENVIRONMENT)

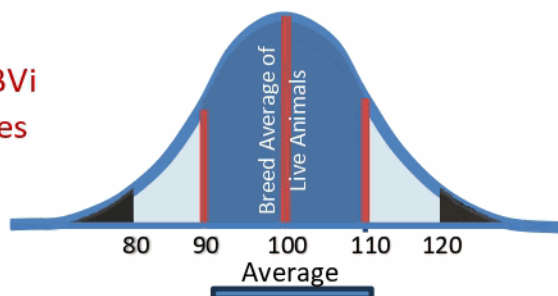
- WeanerCalf / Growth Value > 120
 - Cow Value and Fertility Value average to high
- Growers are usually heavier at birth (lower Calving Ease Value), and maturity (lower Maintenance Value).

LOW- MAINTENANCE ANIMALS

(HARSH ENVIRONMENT)

- Maintenance Value >110
 - Cow Value and Fertility Value average to high
- Lighter cows have a lower maintenance.

Interpretation of EBVi and Selection Values



Examples

Type of Animal	Cow Value	Calving Ease V	Weaner Calf V	Milk Value	Maint. Value	Fertility Value
Average	Med-High	Avg	Avg	Avg	Avg	Med-High
Grower	Med-High		High			Med-High
Low Maintenance	Med-High				High	Med-High

Contemporary Groups

The correct composition of contemporary groups is one of the cornerstones of BLUP breeding value estimation. Breeding values are estimated from the differences between animals exposed to the same environment, ***as these differences are caused by genetics***. The following aspects are important:

1. Animals at the same time, place and treatment

A contemporary group is a comparable group of animals measured at the same time in the same environment. It is therefore a comparable group of animals that were together on the same farm or camp in the same year and season. If there are animals in the group that were treated differently, they should be given a separate treatment code because their performance is influenced by other environmental influences than the rest of the group. Examples of possible different treatments are when some animals received supplements or creep feed, sale or show animals, embryo donors, sick or foster calves or even purchased cows and calves. If bull and heifer calves or older cows and young heifers were in the same camp, they should be placed in the same group – corrections for sex, age and first calving of cows are automatically made during breeding value estimation.

2. Progeny of at least two sires, of which one is a link sire

The progeny of different sires needs to be compared in the same group in order to determine the sires' genetic merit relative to each other. At least one sire should be a link sire with progeny in other herds. Genetic links between herds are used to determine the position of sires in the breed. All sires are good link sires. Smaller herds could artificially inseminate some cows or allow some cows to be covered by another herd's bull.

3. Larger groups stabilise Breeding Values

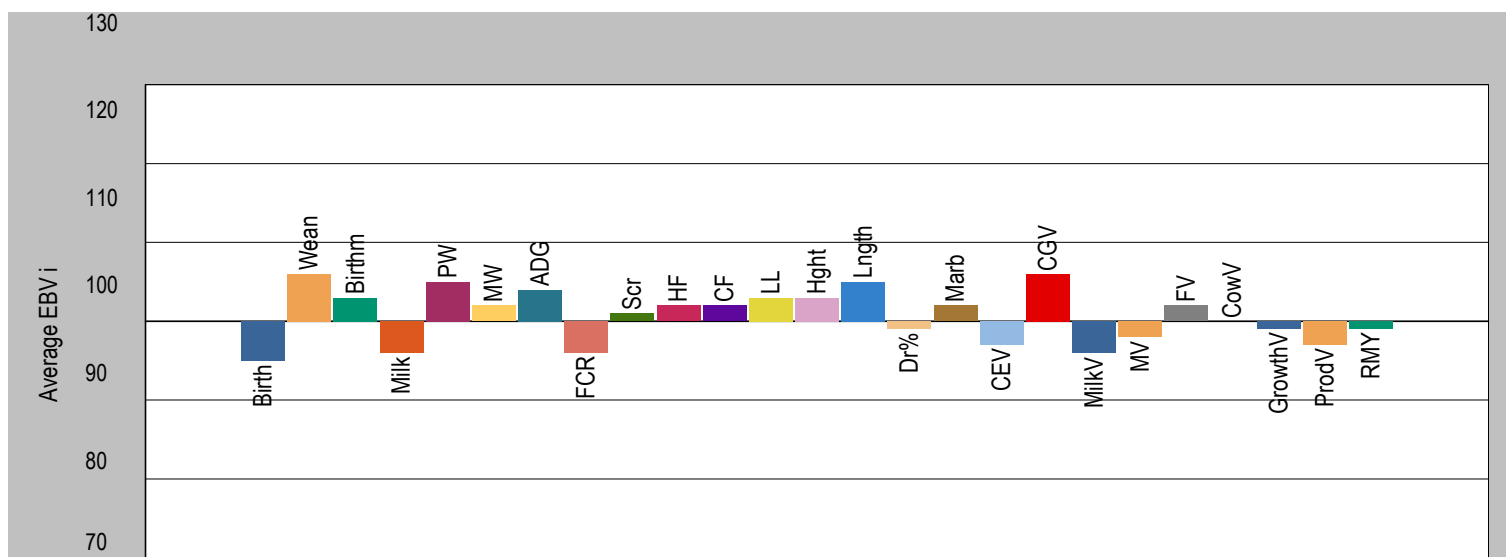
Larger groups result in more accurate and stable breeding values, as the mean and distribution of the group can be more accurately determined and are thus more representative. Groups should preferably have more than 5 animals. Weigh all the animals in the same group on the same day, as corrections for age differences are made during genetic evaluation. The use of breeding seasons rather than through the year calving will also increase contemporary group size. Groups with less than 3 animals are not included in breeding value estimation. An accidental mistake in a small group affects the animal itself, its family, all the other animals in the group and their families. The effect could be much less in large groups.

4. Measure all animals in the contemporary group

Weigh ALL the animals in the contemporary group, the good as well as the poor performers. Weigh animals before they are culled, so their parents can be penalized for their poor breeding.



Herd and Breed Averages



Breeding Values:

Birth:	Birth weight	Scr:	Scrotal circumf.
Wean:	Weaning weight	HF:	Heifer Fertility
Birthm:	Birth maternal	CF:	Cow Fertility
Milk:	Milk	LL:	Longevity
PW:	Post-wean weight	Hght:	Height
MW:	Mature weight	Lngth:	Length
ADG:	Average Daily Gain	EMA:	Eye Muscle Area
FCR:	Feed Conversion Ratio	RMY:	Carcass Value
		Marb:	Marbling

Selection Values:

CEV:	Calving Ease Value
CGV:	Calf Growth Value
MilkV:	Milk Value
MV:	Maintenance Value
FV:	Fertility Value
CowV:	Cow Value (CV)
GrowthV:	Growth Value (GV)
ProdV:	Production Value (PV)

	Trait	EBV Herd	EBV Index	EBV Breed
Prewrite Growth	Birth Weight	0.72	95	0.34
	Wean Weight	15.7	106	12.1
	Birth Mat.	-0.19	103	-0.05
	Milk (Wn.Mat.)	-2.5	96	-1.4
Postwean Growth	Postwean Wt	23.2	105	19.0
	Mature Weight	10	102	7
	ADG	86	104	72
	FCR	-35	96	-39
Fertility	Scrotal Circumf.	11.4	101	11.1
	Heifer Fertility	-9.2	102	-7.5
	Cow Fertility	-4.5	102	-4.1
	Longevity	16.7	103	14.8
Frame	Height	3	103	1
	Length	18	105	13
Carcass	EMA	0.88	100	0.85
	Fat	0.39	105	0.11
	Marbling	0.41	102	0.30

Selection Value	Ave. Herd
Calving Ease	97
Calf Growth	106
Milk	96
Maintenance	98
Fertility	102
Cow Value	100
Growth Value	99
Production Value	97
Carcass Value	99

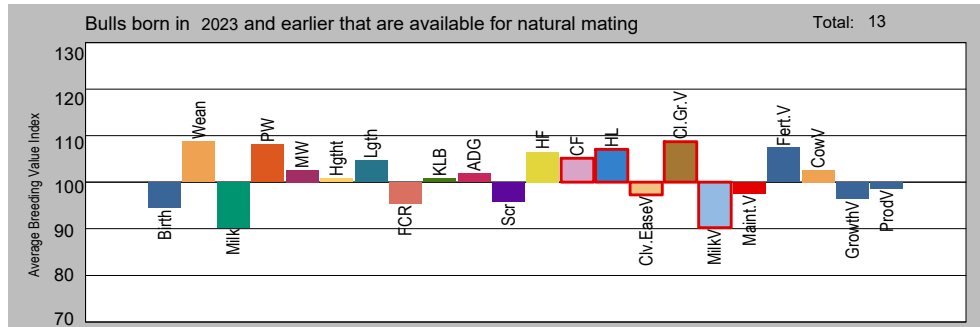
- Average of live animals in the breed: 100
- Above 100: **more favourable**,
- Below 100: **less favourable**

What does a sub-selection value above breed average (100) mean?:

Calving ease:	Smaller calf at birth - easier calving
Calf growth:	Heavier calves at wean due to growth potential of the calf
Milk:	Cows with more milk and better mothering ability
Maintenance:	Animals with low maintenance requirements (lower mature weight).
Fertility:	Cows/daughters that calve

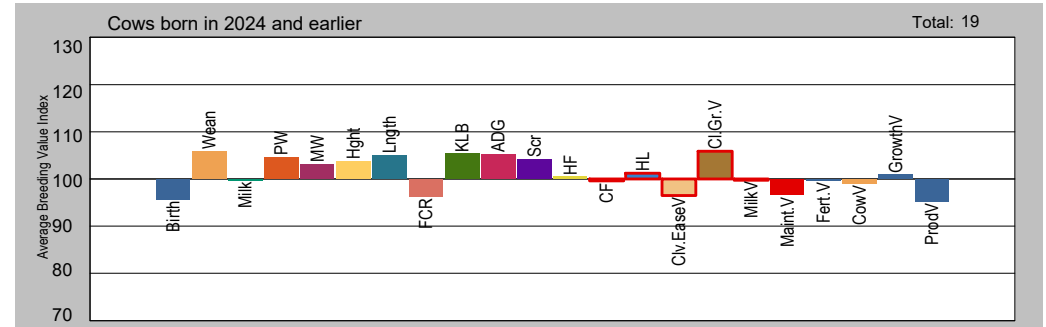
Genetic Windows

Bulls on the farm



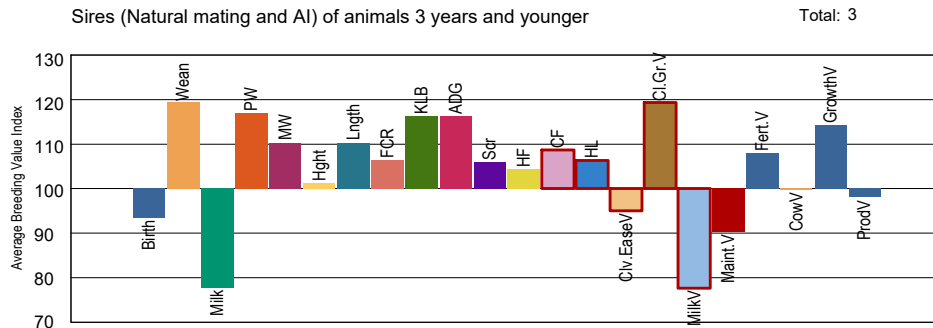
Animals available for breeding

Cow Herd

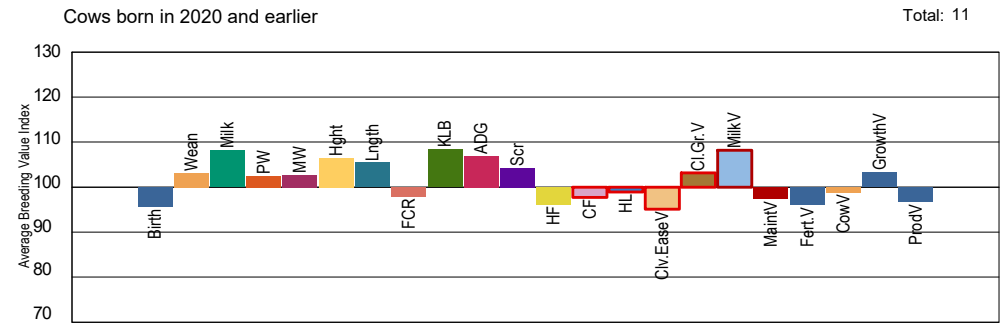


Results of previous selection decisions

Sires of young animals



Cows older than 6 years



Selection possibilities

Bull calves



Heifer calves



Summary of Cow Herd

			Selection Values (SV)								Calf Weight		Dam		Growth & Efficiency				Fertiity				Frame		
Birth Year	No. Cows	Average Cow Value	Calving Ease	Calf Grwth	Milk	Maint.	Fertility	Cow Value	Growth Value	Prod Value	Birth Weight	Wean Weight	Birth Mat.	Milk (Wn.Mat)	Postwn Weight	Mature Weight	ADG	Kleiber	Scrotal Circumf.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	
			Cows in Breed Average:								100	99	100	101	100	100	99	100	99	99	99	99	99	100	100
2018	3	★★★★	95	95	109	102	89	91	103	91	97	95	96	109	94	97	104	106	112	89	97	98	115	102	
2019	8	★★★★☆	96	104	109	98	97	101	102	100	96	104	99	109	103	103	106	107	100	98	100	97	106	107	
2020	1	★★★☆☆	95	99	107	98	89	89	111	88	97	99	94	107	101	99	118	126	116	89	79	107	96	103	
2021	4	★★★★☆	110	105	85	102	101	100	101	96	106	105	107	85	105	98	102	101	106	102	102	100	97	100	
2022	1	★★★☆☆	76	106	110	91	92	86	79	79	78	106	100	110	102	106	88	82	91	107	81	98	103	105	
2023	3	★★★★☆	91	117	85	89	114	103			88	117	111	85	113	111	110	109	106	112	110	112	105	111	
Cows in Herd Average:			94	104	101	97	97	95	99	91	94	104	101	101	103	102	105	105	105	100	95	102	104	105	

Genetic Trends for On-Farm Traits

The graphs show the genetic gain of the herd relative to the breed. Only data of animals with measurements are included.

Herd

Birth Year	Calving Ease			Calf Growth			Milk			Maintenance				Fertility				Cow Value		
	Birth Weight		Calv. Ease	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Postwean Weight	Mature Weight		Maintenance	Heifer Fert.		Cow Fert.		Longevity		Fertility	
	Number	EBV		Number	EBV		Number	EBV		Number	EBV		Number	EBV	Number	EBV	Number			EBV

Breed

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance					Fertility								Cow Value
	Birth Weight		Mat EBV	Calv. Ease	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Postwean Weight		Mature Weight		Maintenance	Heifer Fert.		Cow Fert.		Longevity		Fertility			
	Number	Dir EBV			Number	EBV		Number	EBV	Milk	Number	EBV	Number		EBV	Number	EBV	Number	EBV	Number		EBV	Number	
2016	13219	0.14	0.07	102	12679	9.1	95	12679	-1.48	100	8440	15.3	1794	3	102	3547	-3.4	2382	-3.3	17317	7.0	92	91	
2017	13995	0.13	0.10	101	13543	9.5	95	13543	-1.37	100	9155	16.1	1876	5	102	3705	-3.9	2610	-3.3	17744	7.7	93	92	
2018	14638	0.19	0.05	101	14085	10.0	96	14085	-1.34	100	9471	16.9	2043	6	101	3752	-4.9	2671	-3.5	18478	8.4	96	93	
2019	14156	0.27	0.02	100	13892	10.8	98	13892	-1.52	100	9219	18.0	2528	6	101	4491	-5.8	3152	-3.8	18218	9.0	97	94	
2020	15148	0.25	0.00	101	15376	10.8	98	15376	-1.55	99	10390	17.9	2588	6	100	4524	-5.8	3018	-3.8	19306	9.7	97	94	
2021	16009	0.27	0.04	100	16004	10.8	98	16004	-1.35	100	10852	18.0	2635	6	100	4750	-5.2	2794	-3.8	18490	8.9	97	95	
2022	17601	0.32	-0.01	100	16942	11.8	99	16942	-1.58	99	11576	19.5	2295	8	100	4355	-6.7	1065	-4.2	8636	9.8	100	97	
2023	18573	0.32	-0.02	100	18307	11.8	99	18307	-1.53	100	11750	19.7	741	11	99	2183	-7.2	100	-4.8			102	98	
2024	18117	0.35	-0.05	100	16963	12.1	100	16963	-1.48	100	9904	20.0	3	6	99	166	-7.7					105	99	
2025	17947	0.27	-0.03	101	15468	12.0	100	15468	-1.38	100	2468	22.0			98								99	
2026	5644	0.19	0.00	102	192	13.1	102	192	-1.95	98													100	

Genetic Trends for Growth Test Traits

Herd

Birth Year	Growth									Frame						Carcass						Selection Values			
	FCR			ADG			Scrotum			Height			Length			EMA			Fat		Marbling		Carcass Value	Growth Value	Prod Value
	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	RTU Number	EBV	EBVi	EBV	EBVi	EBV	EBVi			

Breed

Birth Year	Growth									Frame						Carcass						Selection Values			
	FCR			ADG			Scrotum			Height			Length			RTU Number	EMA		Fat		Marbling		Cracss Value	Growth Value	Prod Value
	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi		EBV	EBVi	EBV	EBVi	EBV	EBVi			
2017	62	-38	100	1015	76	101	979	12.8	103	953	4	105	953	15	102	101	0.00	91	0.00	98	0.00	95	93	97	91
2018	16	-50	110	835	94	106	830	14.6	106	830	6	107	830	18	105	33	1.18	103	0.28	103	0.55	104	108	102	93
2019	13	-43	103	772	95	106	773	14.5	106	767	6	108	766	19	106	32	0.58	97	-0.14	96	0.44	102	100	101	94
2020	15	-50	110	1035	102	108	1026	15.8	108	960	6	108	960	21	108	60	1.56	107	-0.22	94	0.67	107	109	104	96
2021	20	-40	101	1162	102	108	1151	15.5	108	1048	5	107	1048	21	108	148	1.41	106	-0.20	95	0.46	103	106	104	97
2022	20	-45	106	1222	104	109	1266	14.4	106	1115	5	106	1115	21	108	147	1.11	103	-0.08	97	0.28	100	103	104	99
2023	10	-52	112	1270	110	110	1263	15.5	108	1127	5	107	1127	22	109	250	1.52	107	0.14	101	0.58	105	109	106	101
2024	11	-49	109	918	108	110	945	16.3	109	790	5	106	790	22	109	127	1.57	107	0.12	100	0.66	106	108	105	101
2025				54	90	105	58	13.0	103	58	0	98	58	14	100	25	1.70	109	-0.30	93	0.47	103	108	100	106
2026																									

Sires

Bull			Selection Values							Calf		Dam		Growth				Fertility				Frame		Carcass			Measured Progeny		
ID	Index EBV Acc	Sire ID Dam ID	Calv. Ease Value	Calf Grwth Value	Milk Value	Maint. Value	Fertility Value	Cow Value	Growth Value	Prod Value	Birth Dir	Wean Dir	Birth Mat.	Wean Mat.	Post wn wt	Mature weight	ADG	FCR	Scrotal	Heifer Fertility	Cow Fertility	Long-evi ty	Height	Length	EMA	Fat	Marbling	Birth Grwth Test	Wean Dgt/Calvs.
BA 130407 BA 100203 BA 100206 BA13-0407			87	105	106	72	108	89	103	86	93	105	85	106	106	134	110	110	69	134	98	92	80	91	106	105	116	34	29
			90	91	87	84	84	80	82	80	0.91	15.0	0.54	0.2	23.4	46	109	-50	-6.7	-34.3	-3.6	9.9	-10	5	1.45	0.37	1.19	8	9
BOS 100432 WO 030081 BOS 033340 BOS100432			78	111	105	78	99	86	113	85	84	111	86	105	112	125	117	122	134	98	91	110	111	101	107	161	97	616	659
			99	99	99	98	97	90	97	91	1.63	18.2	0.52	0.1	28.3	36	133	-63	30.3	-5.6	-2.4	20.8	8	14	1.58	3.67	0.13	227	217
BOS 111348 BOS 066337 BOS 055263 BOS111348			99	97	123	114	92	111	110	108	104	97	85	123	95	87	108	87	111	110	95	81	109	115	97	129	126	100	69
			94	93	90	65	77	78	34	69	0.03	10.1	0.53	5.2	15.4	-8	101	-25	17.4	-15.0	-3.1	3.3	7	27	0.54	1.81	1.78		34
BOS 122237 WO 060052 BOS 044149 BOS122237			76	103	132	109	86	103	120	102	89	103	69	132	107	91	116	102	124	75	87	103	120	111	84	130	111	152	148
			96	97	95	93	92	87	90	88	1.27	14.1	1.18	7.7	24.4	-3	130	-41	24.7	11.8	-1.5	16.5	13	24	-0.69	1.84	0.95	30	42
BOS 133097 WO 980062 BOS 033011 BOS133097			101	114	87	95	123	117	107	113	99	114	132	87	112	104	117	125	97	115	127	112	83	103	115	105	94	5	184
			88	97	95	72	90	82	60	78	0.43	20.3	-1.32	-5.0	28.2	11	132	-66	9.2	-19.2	-9.4	21.9	-9	17	2.34	0.40	-0.05	5	73
BOS 133238 BOS 099241 BOS 088083 BOS133238			76	95	95	115	94	83	60	72	75	95	129	95	88	87	70	55	89	100	93	95	87	92	86	108	98	185	187
			97	98	95	93	93	87	92	88	2.40	9.2	-1.21	-2.8	9.4	-8	-37	9	4.8	-7.6	-2.6	11.4	-6	6	-0.50	0.56	0.19	52	36
BOS 144170 BOS 100048 BOS 100106 BOS144170			77	113	102	100	88	91	99	87	72	113	112	102	115	98	104	92	101	93	86	97	113	122	105	83	92	6	122
			79	95	85	58	76	73	42	67	2.63	19.7	-0.55	-0.8	30.4	5	85	-30	11.7	-1.6	-1.2	12.8	9	34	1.30	-0.87	-0.14	3	21
BOS 144246 BOS 099122 BOS 100363 BOS144246			94	108	101	134	102	123	99	117	91	108	127	101	101	63	102	98	117	107	96	103	84	96	104	97	106	106	113
			95	96	93	90	89	85	88	86	1.09	16.8	-1.14	-1.2	19.5	-35	81	-37	21.0	-13.1	-3.3	16.6	-8	9	1.27	-0.09	0.66	47	38
BOS 144259 WO 100126 BOS 088022 BOS144259			82	129	92	83	107	105	105	102	81	129	108	92	132	118	110	96	103	128	86	107	104	125	128	118	115	106	84
			95	95	91	77	73	80	49	74	1.92	29.2	-0.37	-3.6	43.9	28	110	-35	12.7	-29.5	-1.3	19.0	4	37	3.57	1.16	1.14		40
BOS 144263 WO 100126 BOS 077214 BOS144263			121	123	82	104	123	136	111	132	117	123	132	82	131	96	125	123	104	116	141	98	128	122	134	103	108	107	104
			95	96	93	91	91	85	89	86	-1.04	25.2	-1.30	-6.6	43.2	2	161	-64	13.5	-20.2	-12.2	13.9	17	34	4.23	0.29	0.74	35	35
BOS 144750 BOS 111176 BOS 122555 BOS144750			99	110	97	91	120	114	99	109	103	110	90	97	109	107	105	87	98	120	129	101	82	118	106	101	114	107	108
			95	96	94	91	90	85	90	86	0.13	17.9	0.36	-2.4	26.3	15	90	-24	9.7	-22.9	-9.9	15.3	-9	30	1.46	0.16	1.08	32	32

Sires

Bull			Selection Values							Calf		Dam		Growth				Fertility				Frame		Carcass			Measured Progeny		
ID	Index EBV Acc	Sire ID Dam ID	Calv. Ease Value	Calf Grwth Value	Milk Value	Maint. Value	Fertility Value	Cow Value	Growth Value	Prod Value	Birth Dir	Wean Dir	Birth Mat.	Wean Mat.	Post wn wt	Mature weight	ADG	FCR	Scrotal	Heifer Fertility	Cow Fertility	Long-evi ty	Height	Length	EMA	Fat	Marbling	Birth Grwth Test	Wean Dgt/Calvs.
	Name																												
BOS 155297		BOS 111100 BOS 122480	99	110	59	105	93	80	104	78	95	110	112	59	103	96	105	97	86	93	83	108	99	106	101	108	108	28	23
BOS155297			84	85	72	41	62	64	30	57	0.74	17.8	-0.54	-12.9	21.3	3	91	-36	2.9	-1.7	-0.7	19.9	1	19	0.97	0.59	0.75	7	11
BOS 155661		BOS 100441 BOS 100246	121	119	47	87	105	90	122	91	114	119	121	46	119	116	120	112	92	108	97	109	102	109	121	74	95	192	155
BOS155661			98	98	96	95	95	88	94	89	-0.80	22.9	-0.90	-16.5	33.8	25	145	-52	6.4	-13.4	-3.4	20.1	3	22	2.95	-1.40	-0.01	55	81
BOS 177146		BOS 144451 BOS 144160	103	120	78	81	142	127	96	120	97	120	123	78	121	123	105	102	102	119	149	134	89	114	122	130	103	16	371
BOS177146			98	99	98	96	97	89	96	90	0.56	23.5	-0.97	-7.6	35.6	33	89	-41	12.2	-22.1	-13.9	35.8	-5	26	3.06	1.87	0.46	5	61
LOU 155393		BOS 066191 LOU 099026	130	112	77	124	98	122	95	115	129	112	91	77	109	78	99	94	102	110	78	110	137	112	100	110	113	128	120
LOU			96	96	94	92	90	86	88	86	-2.09	19.3	0.31	-7.7	25.7	-18	70	-32	12.3	-15.4	0.3	20.8	23	25	0.89	0.71	1.03	47	50
MS 170084		YVF 150036 MS 130032	110	105	99	92	96	99	124	100	112	105	90	99	107	106	128	102	102	94	93	105	93	111	146	89	115	55	47
MS170084			92	93	88	85	85	81	89	83	-0.67	14.8	0.36	-1.7	24.7	14	173	-41	12.4	-2.6	-2.6	17.9	-2	24	5.42	-0.56	1.17	20	14
OKT 130009		BOS 077229 OKT 080036	85	113	112	81	97	95	103	92	82	113	113	112	112	120	100	65	97	81	113	96	110	131	109	95	104	119	91
OKT 130009			95	95	91	75	75	80	41	72	1.81	19.6	-0.55	1.9	28.3	30	71	-1	9.2	7.1	-6.8	12.4	7	43	1.72	-0.17	0.54	40	107
OKT 170177		OKT 130021 OKT 110020	90	105	90	98	104	94	103	90	92	105	98	90	114	100	100	82	99	103	95	113	94	103	102	75	105	86	63
DOUBLE CAB OKT 17 0177			95	94	91	87	88	84	84	84	1.03	15.0	0.03	-4.3	30.0	7	71	-19	10.3	-10.2	-3.0	22.7	-2	16	1.01	-1.36	0.59	19	29
OKT 180004		OKT 140008	91	103	96	104	80	82			92	103	100	96	106	95	91	91	92	84	103	71	99	96	84	92	100	10	4
OKT 180004			67	62	42	35	36	45			1.02	14.0	-0.04	-2.7	23.5	1	39	-29	6.6	5.3	-4.6	-3.4	1	10	-0.71	-0.34	0.27	1	1
OKT 190178		BOS 155661 OKT 100051	110	114	82	97	109	110	112	107	108	114	102	82	113	101	115	108	106	113	109	102	101	106	111	91	103	41	31
OKT 190178			84	85	64	47	49	62	20	54	-0.33	20.0	-0.12	-6.4	29.0	9	127	-48	14.8	-17.6	-5.9	16.0	2	19	1.94	-0.44	0.44	1	1
OKT 200111		BOS 155661 OKT 140038	75	130	78	89	99	92	115	91	75	130	108	78	124	112	118	109	106	86	103	107	97	113	115	104	107	38	36
OKT 200111			92	92	87	85	86	81	84	82	2.45	29.7	-0.38	-7.6	37.4	20	137	-49	14.3	3.6	-4.7	19.4	0	26	2.35	0.36	0.69		
V8 160067		BOS 122346 BOS 077132	70	135	75	76	103	87	110	86	71	135	93	75	126	130	120	119	137	105	78	125	121	121	116	123	123	198	183
V8160067			97	98	95	94	93	87	90	88	2.70	32.3	0.23	-8.3	39.4	41	144	-59	32.3	-11.6	0.4	30.2	13	33	2.47	1.46	1.59	43	80

Sires

Bull			Selection Values								Calf		Dam		Growth				Fertility				Frame		Carcass			Measured Progeny	
ID	Index EBV Acc	Sire ID Dam ID	Calv. Ease Value	Calf Grwth Value	Milk Value	Maint. Value	Fertility Value	Cow Value	Growth Value	Prod Value	Birth Dir	Wean Dir	Birth Mat.	Wean Mat.	Post wn wt	Mature weight	ADG	FCR	Scrotal	Heifer Fertility	Cow Fertility	Long-evi ty	Height Length	EMA	Fat	Marbling	Birth Grwth Test	Wean Dgt/Calvs.	
	Name																												
V8 170160		BOS 144134 OKT 150163	110	109	49	101	103	83	98	80	103	109	121	49	104	100	97	83	121	93	111	103	100	102	93	90	105	191	160
V8170160			97	97	93	92	92	86	92	87	0.10	17.3	-0.88	-15.8	21.9	7	60	-21	23.2	-2.2	-6.3	16.6	1	15	0.12	-0.45	0.59	30	26 32
V8 180172		OKT 130021 OKT 12005A	87	107	97	91	93	86	105	83	93	107	83	97	113	108	104	95	119	95	92	99	86	90	98	96	114	56	37
V8180172			90	88	80	64	59	71	31	63	0.90	16.4	0.62	-2.3	29.4	17	85	-34	21.7	-3.2	-2.4	14.3	-7	3	0.65	-0.11	1.12		20 36
V8 190352		BOS 155661 OKT 150128	100	114	73	85	116	97	116	96	97	114	131	73	114	118	116	102	106	114	114	110	106	112	113	78	96	1	1
V8190352			86	86	84	82	82	77	80	78	0.57	20.3	-1.29	-9.0	29.6	27	129	-41	14.6	-18.7	-6.8	21.2	5	25	2.13	-1.15	0.07		
VPK 160038		VPK 090118 VPK 080180	93	94	124	100	99	103			94	94	97	124	91	97				105	91	103						17	10
VPK160038			72	71	47	20	39	47			0.81	8.7	0.07	5.2	12.3	3				-11.7	-2.3	16.4						1 1	
WO 150906		WO 110200 WO 100573	79	142	125	61	132	139	150	142	53	142	120	125	148	150	154	141	121	121	146	108	156	145	138	124	113	16	16
WO150906			88	89	87	85	84	79	82	80	4.28	36.3	-0.85	5.8	56.5	64	267	-84	23.2	-24.1	-13.4	20.1	34	56	4.56	1.50	1.01	1	8 26

Breeding Values and Accuracies: Bulls

Green: >120 High
White: 80-120 Average
Orange: <80 Low

Inbreeding in red is high

Value <80 Value >120

Breeding values with an accuracy < 5% are not printed

Animal			Selection Values								Birth		Wean				Growth			Fertility				Frame		Carcass			
Index EBV Acc	% Inbreeding	Sire ID Dam ID	Calv. Ease V	Calv Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Carcass Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	FCR	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	EMA	Fat	Marbling
ID Number Name			Calv. Ease V	Calv Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Carcass Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	FCR	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	EMA	Fat	Marbling
OKT 170171 86124195 OKT 170171	3	OKT 130009 BOS 100240	98 67	103 69	91 62	93 46	100 48	91 54	93 26	86 48	92 16	94 0.84	113 -0.56	106 14	103 14.0	91 -3.8	92 23	100 19.4	89 32	64 0	87 3.5	92 -0.8	111 -6.4	98 13.6	93 -3	103 16	94 0.24	98 -0.03	104 0.53
BOS 188625 87826202 BRAVEHEART BOS 18 8625		BOS 144170 BOS 155732	85 87	99 85	111 72	113 52	96 55	101 65	88 23	94 57	89 26	84 1.68	108 -0.37	89 -6	99 11.6	111 1.7	113 72	103 21.2	92 43	85 -22	91 5.7	102 -8.7	94 -3.0	98 13.3	97 0	98 11	90 -0.15	91 -0.41	93 -0.09
MB 180572 87873527 MB 180572		BOS 144263 MB 130260	114 59	101 62	89 52	109 42	106 41	110 48	101 40	105 46	96 14	111 -0.55	106 -0.29	92 -1	101 12.6	89 -4.5	93 26	105 22.8	103 83	106 -45	92 6.3	108 -13.3	112 -6.6	97 13.0	110 7	98 11	101 0.99	85 -0.76	80 -0.86
V8 180233 88875711 V8180233	6	BOS 144259 BOS 099243	82 69	119 71	89 63	89 47	107 50	98 56	102 32	94 51	110 18	80 2.03	113 -0.58	111 20	119 23.1	89 -4.5	104 52	121 35.3	108 102	103 -42	96 9.0	113 -17.6	100 -4.0	107 18.9	98 0	107 20	113 2.13	110 0.71	110 0.89
MB 190622 90407172 MB 190622		LOU 155393 MB 140136	110 63	103 53	90 56	119 44	96 44	108 48	86 38	100 46	95 6	112 -0.63	90 0.32	84 -12	103 14.0	90 -4.3	101 44	101 20.0	97 61		88 4.3	104 -11.0	85 -1.0	104 17.0	116 11	101 14	95 0.40	93 -0.29	85 -0.58
V8 190364 89723803 V8190364	1	BOS 155297 OKT 160158	102 64	112 66	71 54	104 31	100 42	95 48	100 20	91 42	102 16	98 0.50	110 -0.46	96 2	112 19.3	71 -9.6	89 16	107 24.6	101 76	95 -34	87 3.4	95 -3.3	98 -3.7	108 19.7	101 2	103 16	98 0.65	117 1.12	113 1.03
BOS 200155 94715760 BOS200155	4	BOS 177146 BOS 166124	93 53	114 61	93 60	87 38	135 52	120 49	96 30	114 45	107 28	93 0.94	101 -0.11	113 22	114 20.1	93 -3.4	101 45	113 29.2	103 82	102 -41	101 11.7	116 -20.0	136 -11.3	127 31.7	95 -2	106 19	110 1.84	117 1.12	99 0.25
OKT 200117 90563503 OKT 200117	1	BOS 111348 OKT 160014	98 65	101 57	110 53	104 39	98 45	104 48			101 16	100 0.32	93 0.23	95 1	101 12.9	110 1.4	111 68	101 19.9	105 91	94 -33	105 14.2	101 -8.4	105 -5.1	90 8.7	110 7	111 24	97 0.52	109 0.63	111 0.95
V8 200417 90566779 V8200417	1	BOS 155661 DID 140004	112 66	107 66	72 58	93 41	98 44	89 51	111 20	87 45	104 12	106 -0.14	116 -0.68	107 15	107 16.1	72 -9.2	80 -4	107 24.5	110 107	100 -39	94 7.6	109 -14.4	90 -2.0	101 15.1	103 3	109 22	107 1.57	84 -0.82	96 0.07
BOS 211047 91950337 BOS211047	4	BOS 133097 BOS 122140	102 51	112 68	96 62	89 41	119 54	114 51	99 34	109 48	105 31	97 0.55	113 -0.58	110 19	112 18.8	96 -2.7	102 48	110 27.0	108 102	109 -49	98 9.8	111 -15.7	122 -8.5	112 22.5	91 -4	105 18	112 2.04	100 0.09	97 0.12
BOS 211226 92551795 BOS211226	2	BOS 177146 BOS 166285	100 55	112 60	85 60	92 35	126 50	114 48	88 31	107 45	102 27	94 0.84	119 -0.80	107 15	112 18.8	85 -5.7	95 31	110 26.8	99 69	99 -38	93 7.0	117 -20.7	120 -8.1	124 29.7	92 -3	104 17	106 1.44	121 1.35	106 0.63
KKB 220542 93025856 KKB 220542	1	V8 160067 OKT 160128	74 67	124 69	87 59	82 51	109 47	94 54			109 12	65 3.24	103 -0.18	120 30	124 26.0	87 -5.2	104 51	117 32.5	109 106	106 -45	115 19.9	109 -14.4	97 -3.4	117 25.5	106 5	110 22	109 1.78	105 0.42	113 1.06

Breeding Values and Accuracies: Bulls

Green: >120 High
White: 80-120 Average
Orange: <80 Low

Inbreeding in red is high

Value <80 Value >120

Breeding values with an accuracy < 5% are not printed

Animal			Selection Values									Birth		Wean				Growth			Fertility				Frame		Carcass					
Index EBV Acc	ID Number Name	% Inbreeding	Sire ID Dam ID	Calv. Ease	Calv Growth	Milk	Maint.	Fertility	Cow Value	Growth Value	Prod. Value	Carcass Value	Birth wt	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	FCR	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	EMA	Fat	Marbling		
				V	V	V	V							dir	mat																	
OKT 220356			OKT 170177	95	106	89	95	106	96			99	95	99	104	106	89	94	111	101	83	98	108	97	109	99	106	105	90	104		
93525533	1		OKT 180193	65	58	53	41	39	47			10	0.71	-0.02	12	15.6	-4.4	28	27.2	75	-21	9.7	-13.8	-3.5	20.5	1	19	1.33	-0.50	0.53		
OKT 220356													68	55	41	58	53	51	48	28	7	30	46	23	49	30	29	11	10	10		

Breeding Values and Accuracies: Cows

Green: >120 High
White: 80-120 Average
Orange: <80 Low

Inbreeding in red is high				Value <80				Value >120				Breeding values with an accuracy < 5% are not printed																			
Animal				Selection Values								Birth		Wean				Growth			Fertility				Frame		Carcass				
Index EBV Acc	% Inbreeding	Sire ID	Dam ID	Calv. Ease V	Calf Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Carcass Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	FCR	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	EMA	Fat	Marbling	
ID Number Name																															
MB 180351		BOS 100432		95	108	76	90	105	87	95	82	94	94	103	110	108	76	84		102	97	94	118	106	104	103	107	91	90	131	92
87873261		BEST130082		68	70	64	51	56	57	35	53	25	0.85	-0.18	19	17.0	-8.1	4		20.8	61	-33	21.5	-12.4	-4.9	16.5	6	5	-0.09	1.90	-0.15
MB 180351													70	61	51	70	64	62		58	55	14	56	57	50	60	56	55	26	24	24
MB 180397		BOS 122237		88	97	138	99	87	102	111	100	102	95	82	97	97	138	128		99	111	106	106	79	90	102	123	113	89	101	86
87873428		MB 110051		65	67	62	47	46	53	33	49	22	0.72	0.68	4	10.6	9.2	109		18.2	113	-46	14.7	8.9	-2.0	15.8	15	26	-0.22	0.19	-0.51
MB 180397													67	58	47	67	62	59		54	52	11	55	48	35	55	56	55	23	22	22
MB 180510				103	81	113	118	76	83				102	102	83	81	113	96		80			81		88						
87873329		MB 110093		49	54	37	16	12	32				0.18	-0.14	-12	1.1	2.1	32		3.6			7.1		7.4						
MB 180510													54	33	16	54	37	36		25			16		17						
MB 190157		BOS 122237		94	91	118	111	82	91	92	86	85	99	88	90	91	118	108		92	92	89	97	80	86	93	98	90	73	106	92
89468912		MB 150374		63	65	56	49	47	52	30	48	22	0.46	0.42	-5	6.7	3.6	62		13.0	44	-27	9.4	7.8	-1.3	10.5	0	4	-1.82	0.48	-0.14
MB 190157													66	54	49	65	56	57		54	46	11	48	50	36	54	48	48	23	22	22
MB 190267		BOS 144750		89	108	118	81	104	103	90	96	103	95	86	119	108	118	112		107	101	99	104	100	113	98	108	119	101	92	87
89467260		MB 110065		62	64	57	43	42	50	27	45	6	0.76	0.50	29	16.8	3.6	71		24.7	75	-38	13.3	-7.7	-6.7	13.4	6	32	0.91	-0.36	-0.44
MB 190267													64	54	43	64	57	55		48	46	6	48	44	29	52	48	48	7	6	6
MB 190288		BA 130407		100	109	97	85	100	95	102	91	97	101	97	116	109	97	98		109	106	105	88	118	95	92	83	87	102	105	116
89468383		RLR 130094		64	67	55	44	44	51	32	47	20	0.24	0.07	25	17.1	-2.3	37		26.3	95	-44	4.3	-21.9	-3.0	9.9	-8	1	1.04	0.42	1.20
MB 190288													67	53	44	67	55	55		55	45	14	50	44	33	54	50	49	21	19	19
MB 190400		WO 150906		76	133	129	67	107	117	134	119	141	66	111	140	133	129	134		138	146	147	127	95	120	101	156	146	130	103	93
89468326		MB 120200		58	60	51	34	33	44	20	39	8	3.19	-0.47	53	31.0	6.8	122		48.2	239	-91	26.7	-3.8	-8.0	15.5	34	57	3.82	0.31	-0.13
MB 190400													61	47	34	60	51	48		40	28	6	42	33	21	44	34	32	8	7	7
OKT 190149		BOS 111348		104	95	112	121	99	114	97	108	92	102	106	79	95	112	113		94	100	86	102	110	100	91	95	99	88	112	113
89779318		OKT 100014		68	69	62	46	48	54	22	48	17	0.19	-0.29	-16	9.1	1.9	73		14.7	72	-24	12.4	-15.2	-4.1	9.2	-2	13	-0.28	0.79	1.03
OKT 190149													70	62	46	69	62	59		56	35	7	38	51	36	58	38	37	18	16	16
OKT 190186		BOS 155297		105	103	69	105	91	81			96	101	110	96	103	69	77		99	100	87	85	82	98	100	96	101	98	99	105
89865661		OKT 100060		64	65	55	35	42	49			14	0.26	-0.43	2	13.8	-10.0	-11		18.2	73	-25	2.3	6.8	-3.6	14.7	-1	14	0.69	0.07	0.60
OKT 190186													67	54	35	65	55	52		51	27	8	29	46	27	52	29	28	14	13	13
OKT 190205		BOS 111348		100	98	110	116	91	105	98	100	95	101	95	85	98	110	112		94	98	68	100	97	97	89	103	105	92	103	108
89866859		OKT 060021		68	67	62	45	49	54	24	48	16	0.25	0.13	-9	10.9	1.3	69		14.2	63	-4	10.9	-5.2	-3.4	7.9	3	19	0.07	0.31	0.73
OKT 190205													70	62	45	67	62	58		52	33	14	36	53	34	59	36	35	16	15	14
VPK 190180		VPK 160038		100	94	116	98	102	103				101	98	99	94	116	106		92				102	93	112					
90242462		VPK 110376		54	57	38	10	24	35				0.26	0.04	6	8.7	3.1	56		13.2				-9.0	-2.6	21.9					
VPK190180													59	38	10	57	38	35		33				22	9	40					
RLR 200055		MS 170084		95	99	107	98	89	89	111	88	101	97	94	99	99	107	103		101	118	97	116	89	79	107	96	103	117	81	99
91192542	1	VYF 150194		65	68	56	46	42	52	48	51	44	0.58	0.18	6	11.5	0.4	49		19.4	137	-35	20.4	1.3	0.1	18.9	-1	16	2.51	-1.02	0.23
RLR 200055													68	54	46	68	56	57		64	50	42	55	46	28	53	55	54	46	42	42

Breeding Values and Accuracies: Cows

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Animal				Selection Values								Birth		Wean				Growth			Fertility				Frame		Carcass			
Index EBV Acc	% Inbreeding	Sire ID Dam ID	ID Number Name	Calv. Ease V	Calf Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Carcass Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	FCR	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	EMA	Fat	Marbling
V8 210549	13	V8 170160		109	108	58	109	99	90	101	87	95	105	110	94	108	58	74	105	99	88	107	96	103	100	95	99	94	93	106
91764977		V8 180196		65	60	53	42	42	49	30	45	8	-0.05	-0.46	0	16.8	-13.2	-19	22.9	68	-26	15.3	-4.6	-4.7	14.9	-1	12	0.22	-0.32	0.65
V8210549														68	56	42	60	53	52	51	48	8	51	49	25	51	51	50	9	8
V8 210577		BOS 144246		123	99	103	104	101	113	101	108	107	118	108	94	99	103	102	97	107	107	122	101	98	104	100	103	105	115	105
92358399		MB 180201		67	59	56	51	49	52	34	48	22	-1.14	-0.37	1	11.5	-0.6	47	16.7	99	-47	23.7	-8.0	-3.8	17.1	1	16	1.34	1.01	0.56
V8210577													69	58	51	59	56	55	48	53	14	55	54	39	55	55	54	23	21	21
V8 210649	1	OKT 180004		101	108	90	97	100	98			98	97	110	101	108	90	98	109	101		93	104	107	92	105	103	96	94	100
92950856		V8 190327		59	48	41	29	32	39			8	0.56	-0.46	9	16.9	-4.3	37	26.1	75		7.0	-10.3	-5.5	10.0	4	16	0.49	-0.25	0.30
V8210649														63	44	29	48	41	39	36	20		21	35	17	43	21	21	8	7
V8 210656		V8 180172		105	104	89	97	104	98	100	94	96	105	98	102	104	89	93	108	100	91	101	108	99	104	86	94	97	92	106
92899640		BOS 166562		65	58	56	37	42	48	20	42	10	-0.06	0.01	9	14.4	-4.6	25	25.0	71	-30	11.5	-13.6	-3.9	17.0	-7	8	0.58	-0.36	0.63
V8210656													68	56	37	58	56	50	46	32	6	35	46	27	52	35	34	11	10	9
MB 220818		BOS 133238		76	106	110	91	92	86	79	79	92	78	100	106	106	110	110	102	88	79	91	107	81	98	103	105	98	110	102
94545373		SPB 140072		68	70	61	54	51	56	34	52	22	2.17	-0.05	14	15.5	1.4	65	20.9	30	-16	5.7	-12.6	-0.3	13.4	3	18	0.62	0.71	0.42
MB 220818													70	60	54	70	61	62	56	54	12	56	55	40	58	56	56	23	21	20
OKT 230458	1	OKT 190178		95	107	95	93	111	103			102	96	97	105	107	95	99	103	104	88	108	106	107	113	102	105	101	100	104
95382198		OKT 160146		65	65	52	38	39	48			10	0.63	0.06	13	16.1	-3.0	39	21.6	86	-26	15.6	-12.3	-5.6	22.7	3	18	0.99	0.10	0.54
OKT 230458														68	53	38	65	52	52	53	26	9	28	42	25	49	28	27	10	9
OKT 230478		OKT 200111		90	128	70	87	112	100			114	85	115	115	128	70	97	120	115	108	107	106	112	110	106	112	113	106	111
95445383		OKT 200181		61	64	47	37	33	45			8	1.54	-0.67	25	28.2	-9.9	34	34.8	128	-47	15.0	-12.0	-6.5	20.8	5	25	2.17	0.45	0.94
OKT 230478													65	48	37	64	47	49	48	20	5	21	38	18	43	21	21	8	7	7
OKT 230479	2	V8 190352		88	116	90	87	119	107			110	83	121	113	116	90	101	116	112	99	103	123	110	114	106	115	114	92	102
95451209		OKT 200160		59	61	47	36	35	45			10	1.72	-0.89	22	21.5	-4.3	45	31.7	117	-38	12.7	-25.6	-6.0	23.2	5	27	2.22	-0.38	0.40
OKT 230479														62	47	36	61	47	48	46	27	7	28	40	22	44	28	28	11	10

Selection List on Cow Value

Bulls 2 years and older

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	Myostatin Horned / Polled nt821 Q204X F94L Genomic tested	Calving Ease Value Acc	Calf Growth Value Acc	Milk Value Acc	Maint. Value Acc	Fertility Value Acc	Cow Value Acc	Growth Value Acc	Prod Value Acc	
1	BOS 200155	BOS200155	BOS 177146	BOS 166124	4.4									
1	BOS 211047	BOS211047	BOS 133097	BOS 122140	3.6									
2	BOS 211226	BOS211226	BOS 177146	BOS 166285	2.2									
3	MB 180572	MB 180572	BOS 144263	MB 130260	0.0									
1	BOS 188625	BRAVEHEART BOS 18 8625	BOS 144170	BOS 155732	0.4									
2	MB 190622	MB 190622	LOU 155393	MB 140136	0.0									
3	OKT 200117	OKT 200117	BOS 111348	OKT 160014	1.5									
1	KKB 220542	KKB 220542	V8 160067	OKT 160128	1.4									
2	OKT 170171	OKT 170171	OKT 130009	BOS 100240	3.1									
3	OKT 220356	OKT 220356	OKT 170177	OKT 180193	1.4									
4	V8 180233	V8180233	BOS 144259	BOS 099243	6.5									
5	V8 190364	V8190364	BOS 155297	OKT 160158	1.1									
1	V8 200417	V8200417	BOS 155661	DID 140004	1.2									

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Selection List on Cow Value

Cows 2 years and older

ID	Name	Sire ID	Dam ID	% Inbreeding	Myostatin Horned / Polled nt821 Q204X F94L Genomic tested	Calving Ease Value Acc	Calf Growth Value Acc	Milk Value Acc	Maint. Value Acc	Fertility Value Acc	Cow Value Acc	Growth Value Acc	Prod Value Acc	
Sorted on ID														
										★★★★				
1	MB 190400	MB 190400	WO 150906	MB 120200	0.0	76 58	133 60	129 51	67 34	107 33	117 44	134 20	119 39	
2	OKT 190149	OKT 190149	BOS 111348	OKT 100014	0.0	104 68	95 69	112 62	121 46	99 48	114 54	97 22	108 48	
3	V8 210577	V8210577	BOS 144246	MB 180201	0.3	123 67	99 59	103 56	104 51	101 49	113 52	101 34	108 48	
											★★★★☆			
1	MB 180397	MB 180397	BOS 122237	MB 110051	0.0	88 65	97 67	138 62	99 47	87 46	102 53	111 33	100 49	
2	MB 190267	MB 190267	BOS 144750	MB 110065	0.0	89 62	108 64	118 57	81 43	104 42	103 50	90 27	96 45	
3	OKT 190205	OKT 190205	BOS 111348	OKT 060021	0.1	100 68	98 67	110 62	116 45	91 49	105 54	98 24	100 48	
4	OKT 230458	OKT 230458	OKT 190178	OKT 160146	1.0	95 65	107 65	95 52	93 38	111 39	103 48			
5	OKT 230478	OKT 230478	OKT 200111	OKT 200181	0.1	90 61	128 64	70 47	87 37	112 33	100 45			
6	OKT 230479	OKT 230479	V8 190352	OKT 200160	1.5	88 59	116 61	90 47	87 36	119 35	107 45			
7	VPK 190180	VPK190180	VPK 160038	VPK 110376	0.0	100 54	94 57	116 38	98 10	102 24	103 35			
											★★★★			
1	MB 190157	MB 190157	BOS 122237	MB 150374	0.0	94 63	91 65	118 56	111 49	82 47	91 52	92 30	86 48	
2	MB 190288	MB 190288	BA 130407	RLR 130094	0.1	100 64	109 67	97 55	85 44	100 44	95 51	102 32	91 47	
3	V8 210549	V8210549	V8 170160	V8 180196	13.1	109 65	108 60	58 53	109 42	99 42	90 49	101 30	87 45	
4	V8 210649	V8210649	OKT 180004	V8 190327	0.8	101 59	108 48	90 41	97 29	100 32	98 39			
5	V8 210656	V8210656	V8 180172	BOS 166562	0.2	105 65	104 58	89 56	97 37	104 42	98 48	100 20	94 42	
											★★★★☆			
1	MB 180351	MB 180351	BOS 100432	BEST130082	0.0	95 68	108 70	76 64	90 51	105 56	87 57	95 35	82 53	
2	MB 180510	MB 180510		MB 110093	0.0	103 49	81 54	113 37	118 16	76 12	83 32			
3	MB 220818	MB 220818	BOS 133238	SPB 140072	0.0	76 68	106 70	110 61	91 54	92 51	86 56	79 34	79 52	
4	OKT 190186	OKT 190186	BOS 155297	OKT 100060	0.2	105 64	103 65	69 55	105 35	91 42	81 49			
5	RLR 200055	RLR 200055	MS 170084	VYF 150194	0.6	95 65	99 68	107 56	98 46	89 42	89 52	111 48	88 51	

	EBVi	Description / Measurement	Goal	Low Value	High Value
Selection Values	Calving Ease Value	Difficult calving due to high birth weight	Average birth weight	High	Low
	Calf Growth Value	Calf's genetic ability for prewean growth	Heavy weaner	Light	Heavy
	Milk Value	Cow's genetic mothering and milking ability	Enough milk for calf	Less	More
	Maintenance Value	Maintenance requirement of cow (weight and milk)	Low cow maintenance	High	Low
	Fertility Value	Fertility and retention of cows and heifers	Fertile cows	Low	High
	Cow Value	Combination of calving ease, calf growth, milk, maintenance and fertility values (Rand-value per Ha)	Profitable cows	Loss	Profit
	Weaner Calf Value	Heavier weaners and more milk, with lower birth and cow weights	Heavy weaner	Light	Heavy
	Growth Value	Efficient growth on veld and in feedlot (Rand-value per animal)	Profitable growth	Loss	Profit
	Production Value	Combination of Cow- and Growth Values (Rand-value)	Profitable animals	Loss	Profit
	Carcass Value	Meat on carcass (Weight and RTU EBVs)	Meat on carcass	Less	More
Birth	Cow weight - birth	Cow weight at birth of calves	Mature cow weight	Light	Heavy
	Birth weight direct	Birth weight (Calf's genetic ability)	Average birth weight	Heavy	Light
	Cow-Calf birth	EBV Birth dir / EBV Mature cow weight	Average	Low	High
Wean	Cow Weight wean	Cow weight at weaning of calves	Mature cow weight	Light	Heavy
	Weaning weight direct	Weaning weight (Calf's genetic ability)	Heavy weaners	Light	Heavy
	Weaning weight mat	Weaning weight (Dam's genetic ability)	Good mothers	Poor	Good
	Cow-Calf Wean	EBV Wean dir / EBV Mature cow weight	High cow-calf ratio	Low	High
Growth & Adaptation	Post-Wean weight	12- and 18mth weights	Post-wean growth	Low	High
	Ave. Daily Gain	Average daily gain in growth test (Phase C and D)	Good growth	Poor	Good
	Veld Growth	ADG on veld (Phase B)	Good adaptation	Poor	Good
	Feed Conversion Ratio	100g feed intake /g weight gain	Feed Efficiency	Poor	Good
	Final Test Weight	Final weight in growth test (Phase C and D)	Heavy Carcasses	Light	Heavy
	Skin Thickness	Measured in growth tests	Thicker skin	Thin	Thick
Fertility	Scrotal Circumference	Scrotal circumference in growth test	Fertile bulls	Less	More
	Heifer Fertility	Age at first calving	Fertile heifers	Less	More
	Cow Fertility	First 3 inter-calving periods (ICPs)	Fertile cows	Less	More
	Longevity	Retention of progeny	Acceptable progeny	Poor	Good
Frame	Height	Shoulder / Hip height in growth test	Average height	Short	Tall
	Length	Length in growth test	Longer (more meat)	Short	Long
	Length:Height	EBV Length / EBV Height	Longer, not higher	Less desirable	More desirable
Carcass	Eye Muscle Area	RTU Eye muscle area	Muscle in carcass	Small	Big
	Fat	RTU P8 Backfat Thickness	Carcass quality & adaptability	Thin	Thick
	Marbling	RTU % Marbling	Juicy meat	Low	High
	Dressing%	Carcass weight / Live weight	High dressing %	Low	High

Notes on the interpretation of EBVs, EBVi's, sub-values and selection values

EBVi (EBVindex) is the breeding value index and is easier to interpret than the breeding value, especially for commercial farmers buying from stud farmers. The base of a breeding value index is 100, which is the average of all the live animals in the breed, and all values are expressed relative to this value. Values above 100 are always in a more desirable direction: an index of 105 for AFC indicates a genetic potential to calve earlier. Note that a very high index is not always desirable. For certain traits, such as birth weight, average values can be better.

EBV: (Estimated Breeding Value) indicates the genetic potential of the animal for a specific trait. It is presented in the unit of measurement and relative to the average of animals born in the base year (1990 for most breeds and traits). Higher values for certain traits are better while lower values for other traits are better, for example, an EBV of -2 for AFC (age at first calving) indicates that the animal has the genetic potential to calve 2 days earlier than the average heifer in 1990 (the base year). Earlier calving is better and therefore low breeding values (high breeding value indices) are better. For weaning weight, higher values are better.

Sub-values combine similar breeding values in a scientific manner to simplify the selection of animals. For example, AFC (age at first calving) and ICP (inter-calving period) are combined to form the sub-value Fertility by taking the heritability and economic importance in consideration. The sub-value is expressed in an index format, thus an animal with a sub-value of 110 for Fertility will genetically be above average compared to the live animals in the breed.

Selection Values (Cow Value and Growth Value) combine the sub-values into a single value. This gives a quick and easy indication of the combined genetic value of an animal compared to the breed. It is advised to still look at the sub-values to see where the strengths and weaknesses lie.

How to use breeding values to select animals

Selecting animals on breeding values is easy if you know how. There is a common saying that “good nutrition can mask poor breeding”. This is very true. If an animal that is genetically inferior is fed well, it can appear as a great animal. This great performance will not be passed over to future generations. An animal that is genetically superior can appear to be inferior if its environment did not allow it to reach its true potential. It is best to select animals that are most adapted to the environment and can reach their full potential. To continuously adapt the environment to the animal can be expensive.

The reason why the use of breeding values is such a valuable tool is because it “removes” the environmental effect that contributes to the performance.

Scientific methods are used to determine how much of the performance is due to genetics and to identify genetically superior animals. This involves the measurement of animals under controlled environments, complete record keeping and pedigree information. *If performance recording and pedigree information are not done correctly, breeding values of these animals will not be useful.* Keep in mind that breeding is a long-term option: the effect of a bull selected/bought today will only show much later. If it is a good decision, his daughters will become part of the breeding herd and contribute to overall profitability in future.

Even if a bull is not perfect in all aspects, knowing the shortcomings will allow strategic selection with suitable cows. Traits are genetically correlated, meaning that a change in one trait can lead to a change in another. This change can be favourable or unfavourable. An increase in weaning weight can lead to an increase in birth weight, which can lead to calving difficulty. It is therefore advisable to not only select on a single trait. Take other traits in consideration to avoid negative effects.

How to improve the herd genetically

The first and most important aspect is to know what type of animal will improve the herd genetically. This can be determined through the following factors:

What happens to the calves? For example: used as replacement heifers, sold as stud animals or sold to commercial breeders who sell weaner calves.

How much feed is available? The availability of feed (or the hardness of the environment) determines the optimal frame size. If feed is abundant and the environment is less harsh, larger animals would be ideal. If not, medium framed animals would be ideal.

What is the genetics of the cow herd? Are they the wrong frame type, grow too slowly, do not have enough milk, etc.? Always aim to breed a calf that is superior to its dam.

Conclusion

Different types of bulls are suitable for different types of cows, environments and breeding objectives. Inbreeding should be avoided or limited as much as possible. Mating programs are available to aid in the pairing of bulls and cows.

The data used for this evaluation is pedigree information and performance data found on LOGIX as provided by breeders. All attempts are made to present accurate information. SA Stud Book takes no responsibility for the use and interpretation of information presented in this report.

