

BEEFMASTER

GENOMIC BREEDING VALUE REPORT

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BEEFMASTER
CATTLE BREEDERS' SOCIETY OF SA
BEESTELERSGENOOTSAP VAN SA



EBVs, EBVi's and GEBVs

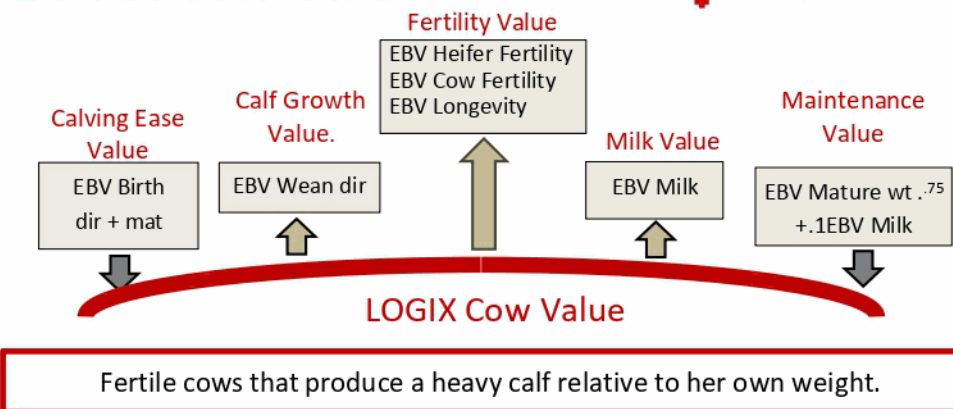
EBVi (Breeding Value Index): Genetic potential relative to the average (100) of the live (active) animals in the breed. Roughly 50% of the animals have values between 90 and 110. Values above 100, depending on the trait, tend to be in the more favourable direction.

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)

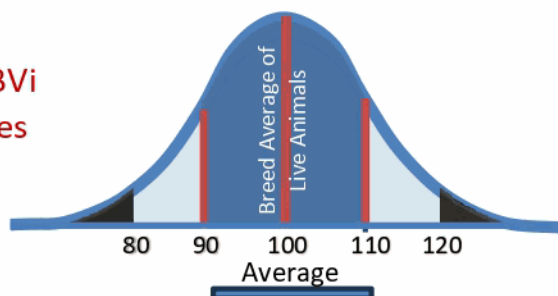
- WeanerCalf / Growth Value > 120
 - Cow Value and Fertility Value average to high
- Growers are usually heavier at birth (lower Calving Ease Value), and maturity (lower Maintenance Value).

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

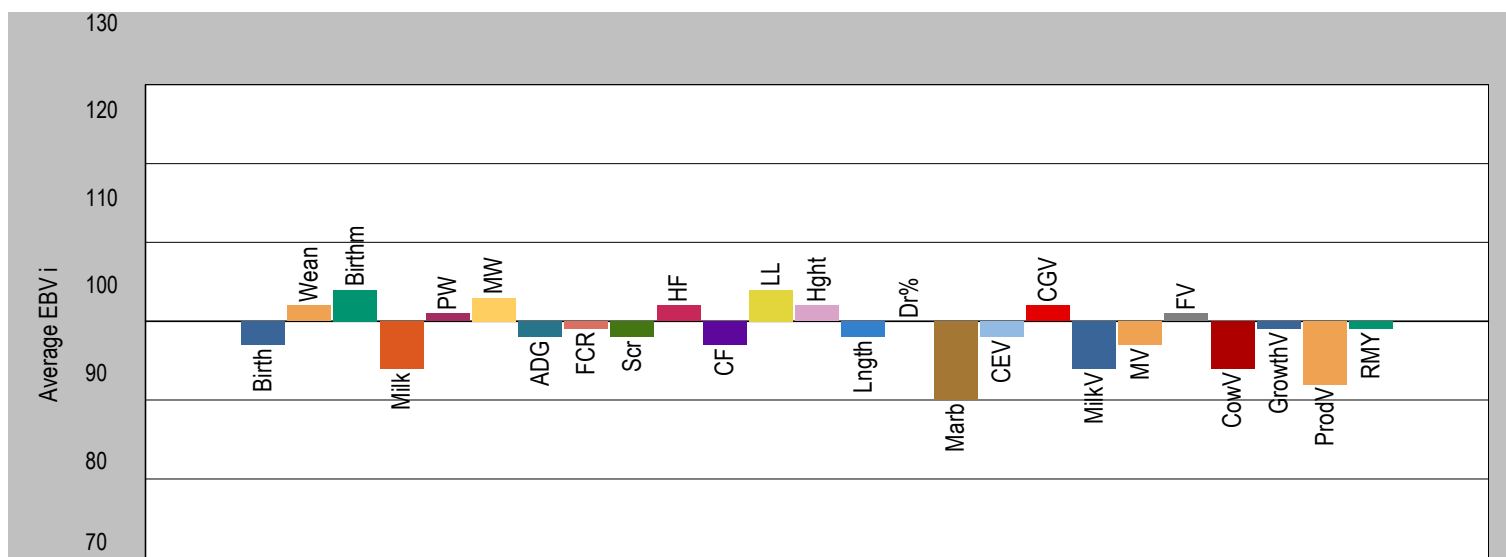
Larger groups result in more accurate and stable breeding values, as the mean and distribution of the group can be more accurately determined and are thus more representative. Groups should preferably have more than 5 animals. Weigh all the animals in the same group on the same day, as corrections for 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	RMY:	Carcass Value
	Ratio	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
Prewean Growth	Birth Weight	0.61	97	0.34
	Wean Weight	13.3	102	12.1
	Birth Mat.	-0.20	104	-0.05
	Milk (Wn.Mat.)	-3.0	94	-1.4
Postwean Growth	Postwean Wt	20.2	101	19.0
	Mature Weight	10	103	7
	ADG	66	98	72
	FCR	-38	99	-39
Fertility	Scrotal Circumf.	9.9	98	11.1
	Heifer Fertility	-8.8	102	-7.5
	Cow Fertility	-3.5	97	-4.1
	Longevity	17.2	104	14.8
Frame	Height	2	102	1
	Length	11	98	13
Carcass	EMA	0.93	101	0.85
	Fat	-0.11	96	0.11
	Marbling	-0.28	90	0.30

Selection Value	Ave. Herd
Calving Ease	98
Calf Growth	102
Milk	94
Maintenance	97
Fertility	101
Cow Value	94
Growth Value	99
Production Value	92
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

Bulls born in and earlier that are available for natural mating
130
120
110
100
90
80
70

Animals available for breeding

Total:	Cows born in and earlier
	130
	120
	110
	100
	90
	80
	70

Cow Herd

Total:

Sires of young animals

Sires (Natural mating and AI) of animals 3 years and younger
130
120
110
100
90
80
70

Results of previous selection decisions

Total:	Cows born in and earlier
	130
	120
	110
	100
	90
	80
	70

Cows older than 6 years

Total:

Selection possibilities

Bull calves

Bulls born in
130
120
110
100
90
80
70

Total:

Heifers born in
130
120
110
100
90
80
70

Heifer calves

Total:

Summary of Cow Herd

			Selection Values (SV)								Calf Weight		Dam		Growth & Efficiency				Fertility				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	100	99	99	100	99	99	99	99	99	100	100	100	99	99
2018	3	★★★★☆	100	101	103	99	102	101	105	106	104	101	88	103	103	103	98	100	103	106	102	99	93	93
2019	2	★★	97	100	93	91	94	70	103	70	102	100	86	93	101	109	109	114	98	94	92	102	125	104
2020	10	★★★☆☆	97	98	96	97	97	82	96	81	98	98	98	96	97	103	93	91	94	100	92	100	104	97
2021	7	★★★★	102	101	86	100	107	96	96	89	97	101	112	86	99	101	93	94	95	111	99	108	96	90
2022	3	★★★★☆	113	95	103	106	100	109	86	101	112	95	104	103	92	94	91	87	100	106	94	102	87	93
2023	3	★★★★☆	96	103	93	100	102	100	96	94	93	103	108	93	102	100	99	102	105	95	101	109	94	94
2024	3	★★★★☆	79	121	98	89	102	100	108	97	77	121	116	98	121	110	111	108	100	93	101	110	116	116
Cows in Herd Average:			98	103	96	97	101	94	99	91	98	103	102	96	102	103	99	99	99	101	97	104	102	98

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		Dir	Mat	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		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					
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	Calf Grwth	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.
				Value	Value																									
BA 120220		MAJ 080165	YP 060216	86	122	79	75	95	79	154	88	89	122	94	79	135	131	154	139	95	99	92	98	153	129	138	91	113	165	156
12 0220				97	97	95	93	92	87	90	88	1.24	25.0	0.20	-7.3	45.9	43	267	-81	8.3	-6.9	-2.5	13.7	32	41	4.55	-0.44	1.05	55	54 194
BOS 133084		WO 100126	BOS 044276	127	105	110	100	108	127	93	119	138	105	99	110	107	97	102	100	118	124	110	90	84	96	113	122	106	108	106
BOS133084				95	96	93	91	92	86	91	87	96	96	93	93	92	91	94	87	95	92	89	94	95	95	87	87	87	39	17 48
BOS 166143		BOS 133097	BOS 133100	95	100	91	98	105	93	95	88	95	100	137	91	97	101	100	107	111	104	103	106	87	89	96	102	96	81	66
BOS166143				95	95	93	91	92	85	92	86	96	95	92	93	93	91	92	90	93	92	90	93	93	92	91	91	90	10	18 22
BOS 188286		4248	BOS 133458	122	86	101	127	77	96	54	82	115	86	111	101	70	73	67	70	113	88	67	93	48	58	72	139	108	133	126
BOS188286				96	97	93	91	92	86	92	87	97	97	92	93	94	91	94	89	95	92	90	93	95	94	89	89	89	28	12 15
FA 140070		BOS 099237	BOS 088339	73	117	95	84	101	88	114	87	53	117	135	95	110	118	104	76	105	105	107	93	125	133	99	124	123	108	102
FA140070				95	96	92	90	89	85	90	86	96	96	92	92	90	90	93	84	95	90	86	92	95	95	84	84	84	43	26 67
FXF 110046		FXF 070291	FXF 010188	91	110	61	118	118	105	93	98	91	110	133	61	106	86	103	108	91	133	107	107	78	85	99	103	107	91	102
FXF110046				95	96	93	90	90	85	86	85	96	96	93	93	94	90	88	84	89	91	86	93	89	89	84	84	84	6	41 82
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	97	96	93	94	90	92	93	81	95	92	87	92	95	95	81	81	81	47	50 128
MB 170473		BOS 133084	BA 120240	108	128	93	93	102	119	111	116	153	128	93	93	130	105	123	117	105	116	94	98	116	127	135	127	129	114	107
MB 170473				92	95	82	67	68	75	52	70	95	95	82	82	42.1	13	155	-57	13.7	-19.8	-2.8	13.8	11	39	4.28	1.68	1.96	34	22 30
MB 190625		BOS 100432	HU 110312	73	123	92	82	97	88	112	87	70	123	102	92	121	120	114	104	117	85	96	111	102	115	108	139	110	30	25
MB 190625				92	92	90	87	89	83	88	84	93	92	90	90	90	87	90	85	91	89	87	90	92	91	86	86	86	5	7 7
MS 170084		VYF 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	93	93	88	88	90	85	89	87	91	86	82	88	91	91	89	87	87	20	14 21
OKT 160130		BOS 122346	OKT 080034	99	114	81	94	101	97	102	93	96	114	109	81	110	105	114	108	126	95	112	97	101	108	102	125	132	38	29
OKT 160130				86	86	80	65	63	70	38	64	88	86	79	80	78	65	62	9	69	68	45	77	70	67	17	16	15	5	16 31

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																												
RG 180131		BOS 144138 RG 070093	112	91	97	104	102	99			108	91	108	97	92	95	84	84	84	110	107	90	83	80	79	86	81	3	3
RG180131			66	68	58	32	42	50			-0.35	6.9	-0.36	-2.2	13.1	1	13	-22	2.0	-15.5	-5.5	8.6	-9	-6	-1.20	-0.71	-0.81		
											69	68	55	58	44	32	20	6	21	40	25	60	21	20	9	8	8	2	2
RLR 120090	 FFXF 060122  FFXF 080007		85	142	47	81	99	84	135	88	81	142	120	46	141	125	136	130	122	92	107	100	110	124	136	88	113	146	118
RLR 120090			96	97	94	91	92	86	91	87	1.93	36.6	-0.83	-16.5	50.9	35	201	-72	23.7	-0.8	-5.5	14.7	7	36	4.39	-0.60	1.05	146	118
											97	97	94	94	95	91	94	87	96	92	89	95	96	95	89	88	88	38	28 72
RLR 160064	 WO 130103  BOS 111198		70	146	49	76	99	78	136	83	53	146	143	49	148	132	134	111	102	78	94	124	110	136	125	147	153	119	113
RLR 160064			97	97	95	93	93	87	94	88	4.28	38.5	-1.77	-15.9	56.5	44	196	-52	12.5	9.6	-2.8	29.4	7	48	3.36	2.84	3.30	119	113
											97	97	95	95	96	93	95	92	96	93	92	95	96	96	94	94	94	31	27 40
RLR 190058	 RLR 160064  RLR 140006		70	133	90	88	91	92	111	91	64	133	143	90	130	112	113	102	81	71	93	113	128	128	108	107	122	44	41
RLR 190058			92	93	88	87	87	82	90	84	3.36	31.1	-1.77	-4.2	42.1	21	118	-42	0.3	15.4	-2.6	23.0	18	40	1.66	0.54	1.57	44	41
											93	93	89	88	90	87	91	87	93	87	86	89	93	92	89	88	88	13	1 1
RLR 200020	 BOS 133095  SP 170212		89	126	100	95	101	112	126	112	88	126	104	100	132	103	127	116	122	108	88	108	129	130	115	99	105	5	3
RLR 200020			87	88	85	84	84	78	84	79	1.32	27.0	-0.23	-1.5	44.1	11	170	-57	23.7	-13.5	-1.8	19.9	18	42	2.36	0.07	0.60		
											88	88	85	85	84	84	84	82	85	84	82	85	85	85	83	83	83		
VYF 120009		FXF 090275 FXF 060250	104	109	86	96	88	88	97	84	98	109	115	86	101	102	102	99	102	83	100	90	122	110	102	99	117	1	2
VYF120009			77	77	78	52	57	63	32	57	0.46	17.1	-0.63	-5.3	20.0	10	80	-38	12.3	5.5	-4.0	8.6	14	23	1.02	0.04	1.28		
											78	77	75	78	70	52	49	12	54	56	39	76	53	51	19	18	17	13	34

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	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																														
MEL 240003		RLR 190058	78	127	78	87	97	88	106	86	107	71	121	115	127	78	103	126	107	100	86	89	97	107	106	113	106	99	114	
96792007	6	RLR 180036	61	67	48	39	37	47	40	46	39	2.76	-0.90	24	28.0	-7.5	49	39.1	98	-39	3.3	1.4	-3.4	18.9	5	25	1.43	0.05	1.11	
MEL 240003												65	48	39	67	48	51	48	49	29	52	39	26	47	52	51	40	38	37	

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 180144 87395067 MB 180144		BOS 133084 HU 088023	129 70	92 74	104 74	117 70	98 55	115 63	89 38	108 58	86 22	126 -1.81 70	100 -0.06 70	85 -10 70	92 7.3 74	104 -0.4 74	99 40 73	95 14.9 58	93 46 61	87 -25 10	116 20.5 66	117 -20.9 63	94 -2.8 37	88 7.6 64	72 -15 67	77 -8 65	92 0.08 23	96 -0.15 20	87 -0.45 20
NGB 180027 90619081 1827			94 57	85 52	111 69	103 36	91 30	84 45				103 0.12 55	74 0.99 62	95 2 36	85 3.3 52	111 1.7 69	93 26 52	84 6.9 19	74 -21 14		76 -2.8 17	98 -5.9 34	86 -1.3 14	97 13.1 41	91 -4 18	80 -6 17			
RLR 180022 87568747 RLR 180022		RLR 120090 BVB 066009	76 74	127 74	93 75	76 64	118 56	105 63	120 40	104 58	120 30	82 1.87 75	89 0.38 71	128 39 64	127 27.6 74	93 -3.2 75	108 61 71	129 41.7 69	126 166 56	119 -60 20	116 20.2 60	104 -10.6 63	126 -9.3 42	111 21.4 64	116 10 61	121 34 60	124 3.25 31	86 -0.71 29	96 0.10 28
MB 190241 89468474 MB 190241		BA 120220 MB 140092	97 72	99 71	78 72	89 55	91 53	70 60	111 30	70 54	101 8	104 0.02 73	79 0.76 70	112 20 55	99 11.8 71	78 -7.7 72	75 -16 66	104 22.2 57	117 133 49	124 -65 9	90 5.1 52	95 -3.4 61	88 -1.6 38	98 13.5 61	120 13 52	100 14 51	100 0.89 8	82 -0.92 7	81 -0.77 7
NGB 190046 92782325 19 0046		VYF 120009	97 53	100 51	108 62	92 26	97 32		95 23		93 10	99 0.40 53	93 0.21 55	106 14 26	100 12.0 51	108 0.9 62	102 47 46	97 16.4 39	101 75 35	107 -46 6	106 14.6 41	93 -2.2 28	95 -3.1 20	105 17.9 48	129 18 42	107 20 40	98 0.61 10	77 -1.25 9	62 -1.84 9
MB 200255 90551508 MB 200255		LOU 155393 MB 170718	80 71	115 69	107 60	111 55	85 54	100 57	103 30	96 52	98 8	91 1.11 73	72 1.07 66	91 -3 55	115 20.9 69	107 0.5 60	126 103 61	111 27.8 51	100 72 54		98 9.9 57	108 -13.6 62	68 2.3 40	93 10.6 59	123 15 58	108 21 56	96 0.49 8	102 0.23 7	110 0.84 7
MB 200406 90706441 MB 200406		FA 140070 MB 140092	76 71	99 68	98 65	91 53	104 49	82 57	90 28	77 51	87 8	73 2.57 72	109 -0.41 66	108 16 53	99 11.5 68	98 -1.9 65	93 25 62	95 15.4 50	86 20 48	76 -13 5	94 7.7 51	109 -14.6 58	108 -5.7 32	94 11.0 58	106 5 51	102 15 50	81 -1.03 9	99 0.04 8	86 -0.50 8
MB 200741 91464719 MB 200741		HU 140054	109 62	94 59	81 51	108 34	85 31	79 44			81 8	112 -0.64 64	86 0.48 55	94 0 34	94 8.5 59	81 -6.8 51	78 -10 48	90 11.4 42	81 3 24		85 2.4 26	96 -4.3 30	92 -2.4 20	81 3.0 44	90 -5 26	86 0 25	76 -1.54 9	93 -0.32 8	94 -0.05 8
MEL 200014 92768886 20 0014			96 36	87 34	116 50							102 0.17 35	81 0.70 39		87 4.5 34	116 3.1 50		86 8.3 11					97 12.6 26						
MEL 200015 92768902 20 0015			115 27	82 25	107 38							113 -0.72 26	100 -0.06 29		82 1.5 25	107 0.5 38							93 10.7 26						
NGB 200004 92782341 20 0004		VYF 120009	105 53	97 52	108 63	90 26	101 32				94 10	104 0.02 53	102 -0.14 55	108 16 26	97 10.1 52	108 0.8 63	98 37 47	94 14.0 44	98 64 24	102 -41 6	102 12.1 27	93 -1.9 28	95 -3.1 20	113 22.8 49	121 14 26	105 18 26	97 0.59 10	77 -1.22 9	63 -1.80 9
NGB 200044 92782275 20 0044		OKT 160130	103 57	99 51	89 58	94 33	104 34		91 20		90 8	105 -0.08 57	93 0.22 58	104 12 33	99 11.4 51	89 -4.5 58	86 9 47	97 16.6 43	97 61 31	99 -38 5	108 15.8 34	101 -8.2 34	100 -4.0 21	110 21.0 48	103 3 35	96 9 34	92 0.03 9	89 -0.53 8	68 -1.53 8

Breeding Values and Accuracies: Cows

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

Inbreeding in red is high

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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																															
NGB 200059 90774068 NGB 200059		NGB 180027		92 58	97 54	102 49	92 42	86 31	79 43				92 1.02 60	103 -0.18 53	106 14 42	97 10.6 54	102 -0.7 49	95 30 48	94 14.6 23	86 23 7		88 4.5 9	91 -0.7 41	99 -3.9 15	80 2.2 37	103 3 9	94 8 8				
NGB 200103 94255064 20 0103		RLR 160064		72 55	116 55	61 60	90 35	103 34	72 44	102 34	70 42	100 42	70 2.85 55	140 -1.63 54	112 21 35	116 21.7 55	61 -12.4 60	79 -7 50	114 29.7 46	99 68 45	92 -30 21		89 5.0 46	96 -4.0 35	88 -1.7 21	123 29.0 47	98 0 47	100 13 46	96 0.42 43	98 0.02 41	75 -1.12 41
NGB 200105 94255189 20 0105		MS 170084		123 54	89 53	87 57	101 31	105 35		96 40		84 39	121 -1.44 54	96 0.11 52	98 5 31	89 5.7 53	87 -5.1 57	76 -14 47	91 11.8 43	95 53 40	85 -23 38		88 4.5 43	108 -13.7 39	89 -1.9 20	116 25.0 45	89 -5 44	87 1 43	105 1.36 40	69 -1.70 38	56 -2.21 38
MEL 210005 92584143 MEL 210005	1	BOS 166143 RLR 180022		88 68	116 68	93 61	85 44	115 49	104 54	109 38	101 51	106 34	83 1.76 70	120 -0.84 60	116 25 44	116 21.2 68	93 -3.3 61	102 47 58	115 30.5 62	115 126 46	115 -55 26		115 19.6 49	112 -16.6 59	118 -7.7 33	107 19.1 54	103 3 50	107 20 49	112 2.04 35	94 -0.22 32	97 0.13 31
NGB 210016 94255130 21 0016		VYF 120009		112 50	96 49	98 59	95 26	103 33		86 24		86 10	108 -0.35 50	107 -0.35 52	103 10 26	96 9.7 49	98 -2.0 59	91 21 45	93 13.3 40	89 31 35	92 -30 6		99 10.4 42	105 -11.2 34	97 -3.4 20	107 18.9 46	108 6 42	94 7 40	91 -0.06 10	77 -1.26 9	60 -1.98 9
NGB 210039 94255163 21 0039		FXF 110046		114 55	94 51	74 54	114 39	108 38	98 44			78 6	107 -0.28 55	114 -0.62 54	90 -4 39	94 8.5 51	74 -8.7 54	73 -21 48	92 12.7 45	86 20 32		86 3.0 36	122 -24.4 41	96 -3.2 24	106 18.3 49	85 -7 36	77 -8 35	84 -0.69 7	77 -1.22 6	53 -2.38 6	
NGB 210040 94255171 21 0040		RG 180131		119 48	85 40	101 45	99 16	106 27					115 -0.92 48	106 -0.31 47	99 6 16	85 3.6 40	101 -1.1 45	84 4 34	86 8.5 25	82 6 10		87 3.7 10	114 -18.8 29	100 -4.0 13	102 16.0 40	94 -2 10	82 -4 10				
NGB 210047 94255023 21 0047		FXF 110046		114 56	94 54	74 60	114 39	114 39	103 46			78 6	107 -0.27 56	115 -0.65 56	90 -5 39	94 8.6 54	74 -8.7 60	73 -21 51	92 12.9 46	85 18 32		85 2.8 36	126 -27.5 45	96 -3.3 24	114 23.4 49	85 -7 36	77 -9 35	84 -0.70 7	77 -1.23 6	53 -2.38 6	
NGB 210059 92523232 NGB 210059		OKT 160130 NGB 180027		95 65	101 63	101 60	101 43	99 42	97 51	87 20	90 45	91 8	97 0.59 67	94 0.18 59	97 4 43	101 12.6 63	101 -1.2 60	101 45 55	98 17.6 47	96 56 32	99 -38 5		102 12.5 35	102 -8.7 50	101 -4.2 27	98 13.4 49	98 0 36	96 9 35	88 -0.32 9	100 0.10 8	92 -0.16 8
NGB 210102 94255247 21 0102		RLR 160064		75 55	119 55	63 59	90 35	104 35	77 44	102 34	75 42	100 42	65 3.23 55	131 -1.26 54	112 21 35	119 23.0 55	63 -11.9 59	83 2 50	116 31.4 48	98 65 45	91 -29 21		89 4.7 46	95 -3.7 35	88 -1.7 21	125 30.1 48	97 0 47	99 13 46	95 0.39 43	98 0.01 41	75 -1.13 41
NGB 220013 95969184 22 013				104 27	87 25	107 38							107 -0.26 26	89 0.38 29		87 4.8 25	107 0.6 38		86 8.5 22						105 18.1 16						
NGB 220052 93792265 NGB 220052	1	MB 170473 MB 200421		136 65	107 67	101 54	99 46	107 45	127 52	101 31	121 48	107 12	135 -2.54 68	114 -0.61 53	98 5 46	107 16.4 67	101 -1.2 54	108 60 56	109 25.8 60	106 93 52	98 -37 8		97 9.3 54	112 -17.1 52	101 -4.3 31	104 17.6 52	98 0 54	107 20 54	111 1.93 13	118 1.18 12	112 1.00 11

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	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																													
NGB 220053 93792273 NGB 220053	1	BOS 188286 MB 200406	98 65	91 67	101 51	113 40	92 44	91 50	71 31	81 46	80 12	94 0.82 68	110 -0.46 54	89 -5 40	91 7.0 67	101 -1.2 51	94 27 53	81 4.3 5.8	75 -18 49	72 -9 11	102 12.4 52	99 -6.8 49	87 -1.4 32	97 12.9 51	76 -13 52	79 -7 51	75 -1.59 12	119 1.21 11	96 0.09 10
LDW 230003 95625711 LDW 230003	2	BOS 166143 HS 180159	102 64	101 57	81 50	109 41	101 43	94 47	94 37	89 45	88 36	95 0.73 67	119 -0.81 52	93 -1 41	101 12.6 57	81 -6.8 50	86 9 49	98 17.8 52	99 69 44	97 -35 27	108 15.9 47	94 -2.9 48	102 -4.6 30	105 18.0 51	92 -3 48	89 3 46	84 -0.68 37	96 -0.12 35	97 0.13 34
LDW 230014 96543558 LDW 230014	3	BOS 166143 HS 210011	96 62	105 65	99 51	103 42	103 41	105 49	98 38	99 47	94 37	92 0.98 65	112 -0.54 50	96 2 42	105 15.2 65	99 -1.6 51	106 55 53	106 23.9 54	102 81 44	99 -38 29	103 12.7 47	95 -3.9 45	108 -5.7 29	104 17.6 49	87 -6 48	96 10 47	99 0.77 38	91 -0.41 36	96 0.08 35
NGB 230010 97228829 23 010		MB 190625	90 42	103 42	99 36	88 28	102 31		96 24		94 15	92 0.97 44	94 0.17 37	111 20 28	103 13.8 42	99 -1.8 36	96 32 35	102 20.7 36	97 60 38	96 -35 7	103 13.0 41	96 -4.1 33	92 -2.4 25	117 25.1 36	103 3 41	98 12 40	94 0.28 16	96 -0.12 14	57 -2.17 14
MEL 240014 97601819 MEL 240014		RLR 200020 MEL 200014	83 52	109 55	111 40	97 25	96 26	99 37	101 23	95 34	100 24	86 1.54 56	96 0.08 37	100 7 25	109 17.5 55	111 1.6 40	117 82 40	112 28.3 30	104 88 26	104 -44 18	106 14.3 28	100 -7.2 25	89 -1.9 17	104 17.5 36	115 10 28	109 22 28	95 0.40 24	86 -0.68 23	78 -0.92 22
MEL 240016 97663496 MEL 240016	4	RLR 190058 MEL 210005	76 61	124 64	90 46	87 34	104 35	96 45	110 40	94 44	111 38	76 2.30 65	133 -1.36 46	113 22 34	124 26.0 64	90 -4.2 46	109 64 48	122 36.1 48	113 119 47	108 -48 29	97 9.6 50	91 -0.5 38	106 -5.2 23	112 22.2 44	115 10 51	117 29 50	110 1.80 40	101 0.15 37	110 0.84 37
MEL 240017 97623649 MEL 240017	1	RLR 190058 RLR 180022	79 63	129 67	94 51	84 42	105 38	104 49	113 40	102 47	114 38	69 2.88 67	120 -0.86 50	117 27 42	129 29.1 67	94 -3.2 51	116 79 53	129 41.7 50	116 129 50	107 -47 27	96 8.6 53	88 1.6 40	109 -5.8 27	114 23.2 47	118 12 53	121 33 52	113 2.12 39	96 -0.13 37	108 0.75 36

Selection List on Cow Value

Bulls 2 years and older

ID Name Sorted on ID			Sire ID	Dam ID	% Inbreeding	Horned / Polled	Myostatin				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	MEL 240003	MEL 240003	RLR 190058	RLR 180036	5.6						7861	12767	7848	8739	9737	8847	10640	8646	



Selection List on Cow Value

Cows 2 years and older

ID		Name	Sire ID	Dam ID	% Inbreeding	Horned / Polled	Myostatin				Calving Ease Value	Calf Growth Value	Milk Value	Maint. Value	Fertility Value	Cow Value	Growth Value	Prod Value	
Sorted on ID							nt821	Q204X	F94L	Genomic tested	Acc	Acc	Acc	Acc	Acc	Acc	Acc	Acc	Acc
											★★★★★								
1	NGB 220052	NGB 220052	MB 170473	MB 200421	0.9						13665	10767	10154	9946	10745	12752	10131	12148	
											★★★★★								
1	MB 180144	MB 180144	BOS 133084	HU 088023	0.2						12970	9274	10474	11770	9855	11563	8938	10858	
											★★★★☆								
1	LDW 230014	LDW 230014	BOS 166143	HS 210011	3.2						9662	10565	9951	10342	10341	10549	9838	9947	
2	MB 200255	MB 200255	LOU 155393	MB 170718	0.1						8071	11569	10760	11155	8554	10057	10330	9652	
3	MEL 210005	MEL 210005	BOS 166143	RLR 180022	0.9						8868	11668	9361	8544	11549	10454	10938	10151	
4	MEL 240017	MEL 240017	RLR 190058	RLR 180022	0.8						7963	12967	9451	8442	10538	10449	11340	10247	
5	NGB 210047	21 0047	FXF 110046		0.0						11456	9454	7460	11439	11439	10346			
6	RLR 180022	RLR 180022	RLR 120090	BVB 066009	0.0						7674	12774	9375	7664	11856	10563	12040	10458	
											★★★★								
1	LDW 230003	LDW 230003	BOS 166143	HS 180159	1.9						10264	10157	8150	10941	10143	9447	9437	8945	
2	MEL 240014	MEL 240014	RLR 200020	MEL 200014	0.0						8352	10955	11140	9725	9626	9937	10123	9534	
3	MEL 240016	MEL 240016	RLR 190058	MEL 210005	4.4						7661	12464	9046	8734	10435	9645	11040	9444	
4	NGB 210039	21 0039	FXF 110046		0.0						11455	9451	7454	11439	10838	9844			
5	NGB 210059	NGB 210059	OKT 160130	NGB 180027	0.0						9565	10163	10160	10143	9942	9751	8720	9045	
6	NGB 220053	NGB 220053	BOS 188286	MB 200406	1.4						9865	9167	10151	11340	9244	9150	7131	8146	
											★★★★☆								
1	MB 200406	MB 200406	FA 140070	MB 140092	0.0						7671	9968	9865	9153	10449	8257	9028	7751	
2	NGB 180027	1827			0.0						9457	8552	11169	10336	9130	8445			
											★★★								
1	MB 190241	MB 190241	BA 120220	MB 140092	0.0						9772	9971	7872	8955	9153	7060	11130	7054	

Selection List on Cow Value

Cows 2 years and older

ID Name Sorted on ID		Sire ID	Dam ID	% Inbreeding	Horned / Polled	Myostatin				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	
						nt821	Q204X	F94L	Genomic tested									
										★★★								
2	MB 200741	MB 200741	HU 140054	0.0						109 62	94 59	81 51	108 34	85 31	79 44			
3	NGB 200059	NGB 200059	NGB 180027	0.0						92 58	97 54	102 49	92 42	86 31	79 43			
4	NGB 200103	20 0103	RLR 160064	0.0						72 55	116 55	61 60	90 35	103 34	72 44	102 34	70 42	
5	NGB 210102	21 0102	RLR 160064	0.0						75 55	119 55	63 59	90 35	104 35	77 44	102 34	75 42	

	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.

