

BEEFMASTER

GENOMIC BREEDING VALUE REPORT

September 2026



MAKEKE BEEFMASTER

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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.

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 Carcass Value



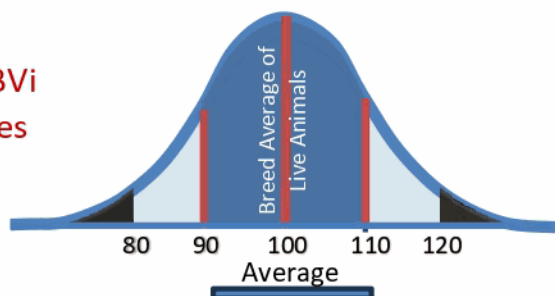
Select for more meat on the carcass as measured from end weight in Phase C and D Growth Tests and RTU scanning.

LOGIX Production Value

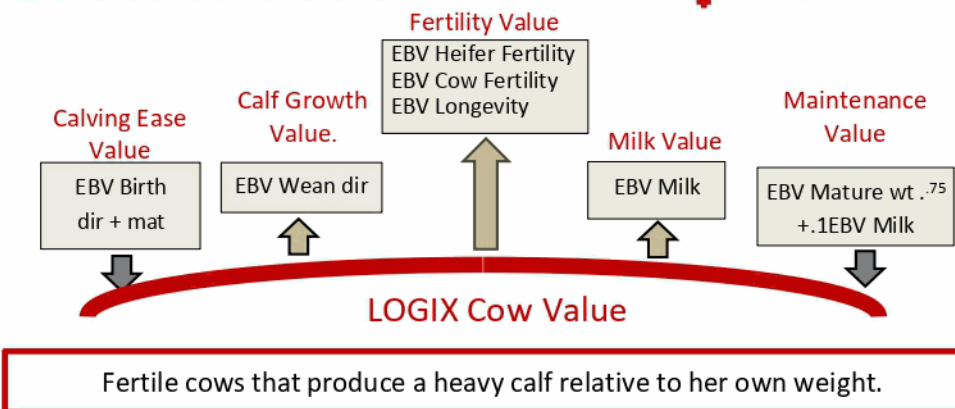


80% LOGIX Cow Value +
20% LOGIX Growth Value

Interpretation of EBVi and Selection Values



LOGIX Cow Value



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.

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

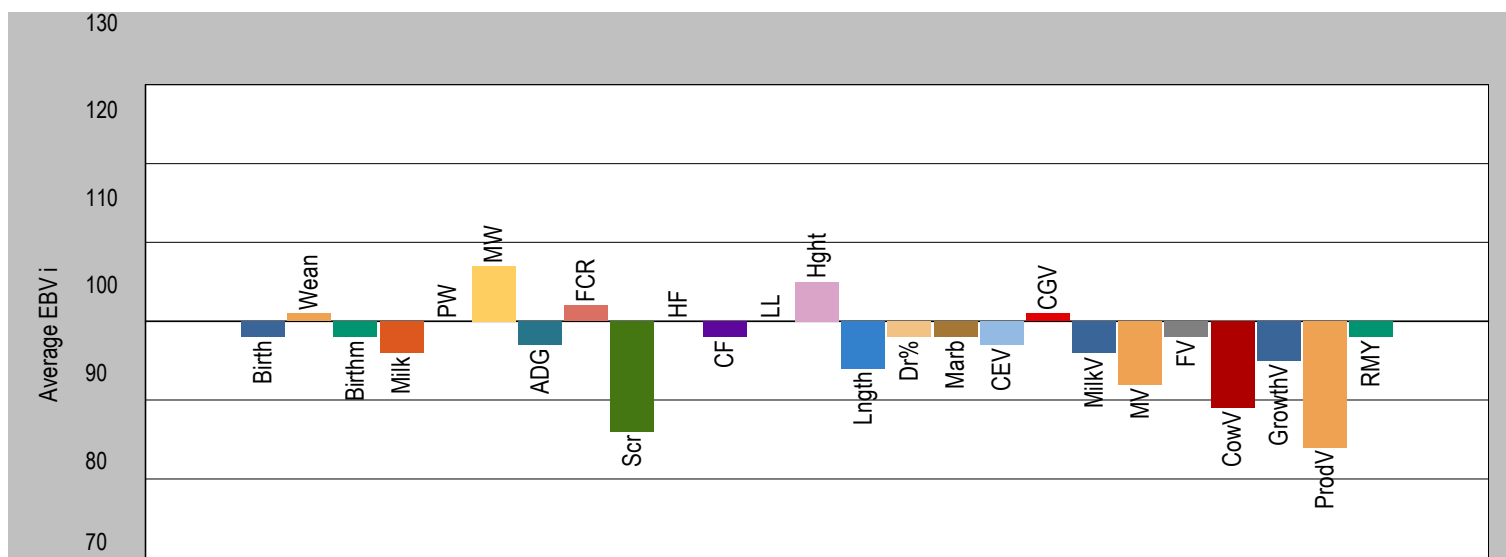
Larger groups result in more accurate and stable breeding values, as the mean and distribution of the group can be more accurately determined and are thus more representative. Groups should preferably have more than 5 animals. Weigh all the animals in the same group on the same day, as corrections for 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	Lnght:	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
Prewean Growth	Birth Weight	0.54	98	0.34
	Wean Weight	12.4	101	12.1
	Birth Mat.	0.01	98	-0.05
	Milk (Wn.Mat.)	-2.6	96	-1.4
Postwean Growth	Postwean Wt	18.8	100	19.0
	Mature Weight	15	107	7
	ADG	61	97	72
	FCR	-41	102	-39
Fertility	Scrotal Circumf.	3.3	86	11.1
	Heifer Fertility	-7.8	100	-7.5
	Cow Fertility	-3.6	98	-4.1
	Longevity	14.7	100	14.8
Frame	Height	4	105	1
	Length	8	94	13
Carcass	EMA	0.80	100	0.85
	Fat	-0.51	90	0.11
	Marbling	0.19	98	0.30

Selection Value	Ave. Herd
Calving Ease	97
Calf Growth	101
Milk	96
Maintenance	92
Fertility	98
Cow Value	89
Growth Value	95
Production Value	84
Carcass Value	98

- 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

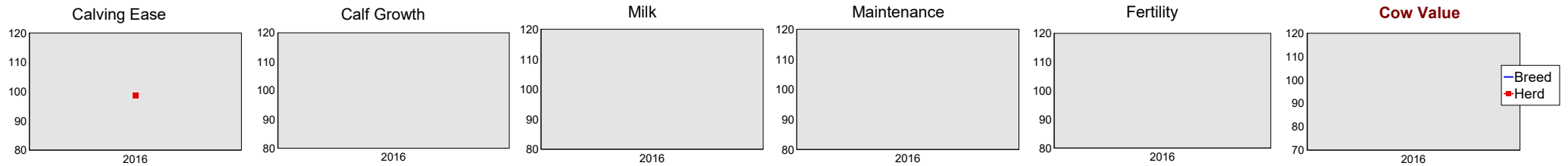
Total:

Summary of Cow Herd

			Selection Values (SV)								Calf Weight		Dam		Growth & Efficiency				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	100	99	99	100	99	99	99	99	99	100	100	100	99	99
2020	2	★★★☆☆	94	119	68	92	99	86	114	86	92	119	108	68	119	110	114	118	117	96	98	104	96	103
2022	5	★★★★	105	101	82	104	105	97	92	91	102	101	106	82	101	97	95	98	95	107	100	106	86	89
Cows in Herd Average:			100	110	75	98	102	92	103	89	97	110	107	75	110	104	105	108	106	102	99	105	91	96

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.



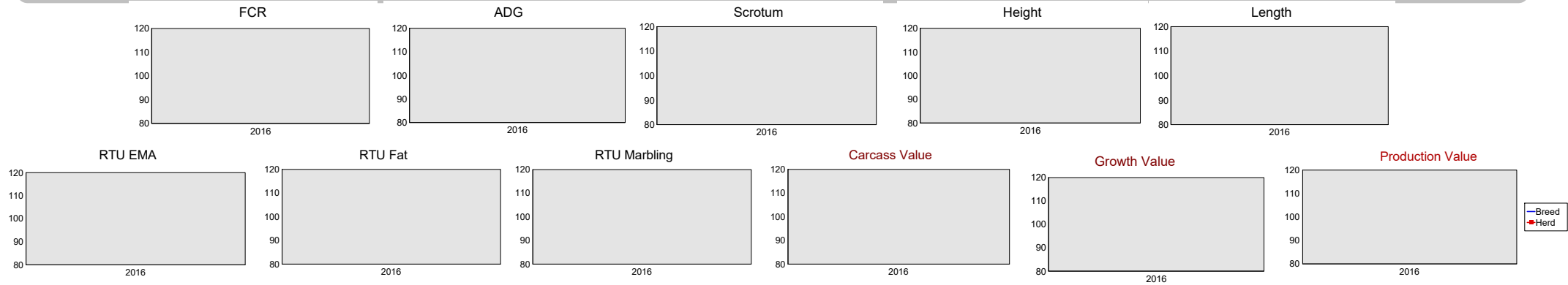
Herd

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		Ferti- lity	
	Number	EBV				Number	EBV		Number	EBV		Number	EBV		Number	EBV	Number		EBV	Number		EBV
2016	9	0.36	0.07	99																3	13.8	

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		Mainte-nance	Heifer Fert.		Cow Fert.		Longevity		Ferti-lity			
	Number	Dir EBV			Number	EBV		Number	EBV	Number	EBV	Number	EBV		Number	EBV	Number	EBV	Number	EBV		Number		EBV
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.
	Name																												
BOS 166103		BOS 066337 BOS 088340	74	124	89	83	106	93	117	93	79	124	93	89	126	119	125	114	112	119	100	99	86	114	124	156	131	107	81
			96	96	93	91	92	86	92	87	96	96	94	93	94	91	93	90	94	92	91	94	94	94	91	91	91	15	10 12
BOS 177663		BOS 100441 BOS 100738	86	122	91	85	85	84	114	84	83	122	112	91	123	116	120	114	102	72	89	103	71	103	145	37	68	134	118
			96	97	93	92	92	86	92	87	97	97	93	93	94	92	94	90	95	93	90	94	95	95	92	91	91	28	16 22
JT 110943		HC 070784 JT 080665	86	111	104	78	108	96	109	94	88	111	98	104	110	125	110	108	68	109	107	104	127	106	103	106	110	30	3
			89	86	84	82	82	78	82	79	90	86	84	84	84	82	84	78	86	82	79	85	87	86	78	78	78	1	1 5
PSB 110126		BOS 033362 PSB 050090	113	86	122	91	96	97			118	86	79	122	86	106	98	94	96	77	101	110	107	101	91	82	78	5	
			65	63	56	34	46	49			-1.16	4.0	0.76	4.8	8.6	14	63	-33	8.9	10.4	-4.3	21.2	5	14	0.01	-0.96	-0.98		
RLR 120090		FXF 060122 FXF 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
			96	97	94	91	92	86	91	87	97	97	94	94	50.9	35	201	-72	23.7	-0.8	-5.5	14.7	7	36	4.39	-0.60	1.05	38	28 72
RLR 160025		RLR 111153 RLR 140012	75	118	114	71	107	98	120	98	60	118	107	114	128	135	128	128	142	105	94	118	134	106	108	68	98	111	98
			96	96	94	93	92	86	92	87	97	96	94	94	40.8	47	175	-69	35.3	-11.1	-2.9	26.2	21	19	1.63	-1.73	0.16	30	32 52
RLR 160061		RLR 130053 FXF 070136	103	89	69	132	122	108	85	100	101	89	131	69	82	68	83	76	61	116	130	106	54	66	71	158	124	43	38
			92	92	89	87	86	82	86	83	93	92	89	89	5.2	-29	10	-13	-10.9	-20.1	-10.1	18.5	-25	-19	-1.99	3.50	1.67	5	10 18
RLR 170061		RLR 120090 BOS 066401	93	122	65	84	99	83	118	83	89	122	114	65	121	119	120	118	115	98	98	104	93	103	112	90	113		
			67	70	61	50	50	55	47	53	69	70	60	61	35.4	29	145	-58	19.7	-5.6	-3.6	17.3	-2	16	2.04	-0.45	1.03		
WO 140549		WO 100160 WO 090160	117	102	81	102	118	111	96	105	113	102	108	81	104	97	100	101	105	124	127	94	123	98	93	62	61	180	170
			96	97	93	91	91	86	89	87	97	97	93	93	22.5	4	74	-41	13.8	-26.5	-9.4	10.8	15	11	0.14	-2.08	-1.90	9	29 62
ZCW 190250		WO 120122 ZCW 120107	112	100	101	111	98	110	105	105	114	100	89	101	97	91	107	99	119	106	80	111	104	103	100	111	94	3	3
			68	71	58	36	46	52	24	46	71	71	57	58	46	36	33	13	37	46	32	60	38	36	20	19	18		

Growth Tests

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

Animal				Weight		Frame				Growth				Carcass			
Test Code	Sex	Test no	Sire ID	Cow	Wean	Length	Height	Length/	Scrotum	Intake	ADG	FCR	Growth	EMA	Fat	Marbling	Carcass
Test station		ID	Dam ID	Value	dir			Height					Value				Value
201801 D11 M			0588010BMA														
MEYER		RLR 170061	RLR 120090	83	122	103	93	114	115	89	120	118	118	112	90	113	113
				55	70	16	-2	1.17	19.7	0.34	145	-58	47	2.04	-0.45	1.03	30
		86053501	BOS 066401		74	73	76	74	75	20	68	20		32	29	29	
202201 D11 M			0636977BMA														
GANTOUW FARMING (PTY) LTD		ZCW 210155	RLR 160025	88	109	96	109	81	110	95	108	101	103	83	68	84	97
				53	68	10	7	1.08	16.9	0.21	101	-40	48	-0.86	-1.77	-0.64	64
		92687664	RLR 140003		73	73	76	74	74	23	66	23		66	61	59	

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																													
MKK 140020 81115404 MKK 140020		PSB 110126 MKK 110001	117 50	82 31	112 28	97 17	92 24	90 28				120 -1.33 54	85 0.52 34	100 7 17	82 1.6 31	112 1.9 28	89 15 25	82 5.0 30	88 28 12		91 6.1 13	86 3.7 22	94 -2.9 14	101 15.6 37	102 2 13	92 6 12			
MKK 150001 82022633 MKK15001		JT 110943 MKK 110006	92 51	99 36	106 31	89 28	98 27	89 32	92 20	84 30		95 0.77 55	94 0.18 36	109 18 28	99 11.3 36	106 0.4 31	98 37 32	97 17.1 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	98 13.3 39	112 8 38	95 8 37			
MKK 150002 82022641 MKK15002		JT 110943 CMO 110106	81 52	103 44	103 36	92 28	93 30	83 35	89 20	78 32		86 1.50 56	91 0.29 38	107 15 28	103 13.9 44	103 -0.4 36	102 46 36	102 20.4 35	92 44 33		75 -2.9 37	95 -3.7 34	97 -3.5 15	92 10.0 41	109 6 38	93 7 37			
MKK 150006 82527516 006		JT 110943 MKK 120189	103 53	95 36	103 31	89 28	98 27	89 32	92 20	84 30		104 -0.02 58	95 0.14 37	109 18 28	95 8.9 36	103 -0.6 31	91 21 32	94 14.2 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	98 13.5 40	112 8 38	95 8 37			
MKK 150008 82527433 008		JT 110943 CMO 110083	95 56	94 44	108 35	94 28	98 31	90 36	87 20	84 33		99 0.44 60	90 0.35 40	103 11 28	94 8.8 44	108 0.8 35	97 35 36	93 14.0 35	89 31 33		73 -4.3 37	104 -10.5 35	99 -3.9 17	94 10.9 41	105 4 38	89 3 37			
MKK 150010 82527458 010		JT 110943 MKK 110019	99 53	96 36	104 31	89 28	98 27	89 32	92 20	84 30		101 0.26 58	95 0.15 37	109 18 28	96 9.8 36	104 -0.3 31	94 27 32	95 15.2 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	98 13.6 40	112 8 38	95 8 37			
MKK 150011 82527466 011		JT 110943 MKK 110002	99 55	97 36	104 31	89 28	98 27	89 33	92 20	84 30		99 0.41 59	98 0.03 41	109 18 28	97 10.1 36	104 -0.4 31	94 28 32	96 15.6 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	98 13.7 40	112 8 38	95 8 37			
MKK 150013 82527995 013		JT 110943 CMO 110080	99 56	97 44	103 36	90 28	92 31	85 36	91 20	80 33		101 0.25 60	93 0.21 40	108 16 28	97 10.5 44	103 -0.6 36	94 29 36	95 15.3 35	95 53 33		77 -1.8 37	100 -7.2 34	93 -2.7 17	91 9.2 42	111 8 38	96 9 37			
MKK 150015 82527490 015		JT 110943 MKK 110039	93 55	98 36	106 31	89 28	98 28	89 33	92 20	84 30		96 0.67 59	93 0.22 39	109 18 28	98 11.0 36	106 0.3 31	97 36 32	97 16.8 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	99 14.0 41	112 8 38	95 8 37			
MKK 150016 82527441 016		JT 110943 MKK 110091	93 55	99 36	106 31	89 28	98 28	89 33	92 20	84 30		95 0.78 59	95 0.13 39	109 18 28	99 11.3 36	106 0.3 31	98 37 32	97 17.1 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	99 14.0 41	112 8 38	95 8 37			
MKK 150017 82527425 017		JT 110943 MKK 120041	101 55	96 36	103 31	89 28	98 28	89 33	92 20	84 30		101 0.23 59	98 0.01 39	109 18 28	96 9.6 36	103 -0.6 31	92 24 32	95 15.0 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	98 13.5 41	112 8 38	95 8 37			
MKK 150018 82993320 15MKK018		JT 110943 MKK 110061	84 53	101 36	109 31	89 28	98 28	89 32	92 20	84 30		88 1.30 57	92 0.26 39	109 18 28	101 12.9 36	109 1.1 31	103 49 32	100 19.1 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	99 14.0 41	112 8 38	95 8 37			

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																															
MKK 150020 82993346 15MKK020		JT 110943 CMO 110108		101 59	100 49	92 42	93 33	89 36		82 41	92 24	77 38	89 6	100 0.35 63	102 -0.14 45	106 14 33	100 12.3 49	92 -3.8 42	89 17 41	97 16.4 41	97 62 36	88 -26 7	79 -0.8 41	85 4.4 39	96 -3.2 22	94 11.2 47	107 5 41	93 6 40	93 0.15 7	93 -0.30 5	102 0.41 5
MKK 160002 83104745 16MKK002		JT 110943 MKK 110020		104 52	94 36	102 31	89 28	98 28		89 32	92 20	84 30		104 -0.03 56	97 0.05 38	109 18 28	94 8.9 36	102 -0.8 31	90 19 32	94 14.1 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	99 14.0 41	112 8 38	95 8 37			
MKK 160003 84459734 MKK 160003		JT 110943 MKK 110001		98 52	97 36	104 31	89 28	98 27		89 32	92 20	84 30		99 0.43 56	97 0.06 38	109 18 28	97 10.2 36	104 -0.3 31	94 29 32	96 15.7 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	98 13.7 39	112 8 38	95 8 37			
MKK 160004 84459742 MKK 160004		JT 110943 MKK 110107		93 52	98 36	106 31	89 28	98 28		89 32	92 20	84 30		96 0.69 56	94 0.18 38	109 18 28	98 11.0 36	106 0.3 31	97 36 32	97 16.8 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	99 14.0 41	112 8 38	95 8 37			
MKK 160006 84457662 MKK 160006		JT 110943 MKK 110050		117 54	89 36	98 31	90 28	98 28		89 33	92 20	84 30		116 -1.01 58	97 0.06 39	109 18 28	89 6.0 36	98 -1.9 31	82 0 32	89 10.5 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	99 14.0 41	112 8 38	95 8 37			
MKK 160007 84457670 MKK 160007		JT 110943 MKK 116501		85 54	101 36	108 31	89 28	98 28		89 33	92 20	84 30		88 1.33 58	96 0.11 39	109 18 28	101 12.9 36	108 0.9 31	102 47 32	100 19.1 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	99 14.0 41	112 8 38	95 8 37			
MKK 160008 84457688 MKK 160008		JT 110943 CMO 110078		94 58	96 44	104 36	95 28	98 31		90 37	86 20	83 34		92 0.98 62	107 -0.32 42	103 10 28	96 9.7 44	104 -0.2 36	96 33 36	94 14.4 35	88 30 33		72 -4.8 37	104 -10.6 35	101 -4.3 17	93 10.4 42	104 4 38	89 2 37			
MKK 160011 84457712 MKK 160011		JT 110943 CMO 110106		89 43	100 44	102 36	92 28	93 30		84 34	89 20	78 31		94 0.84 45	88 0.41 36	107 15 28	100 12.1 44	102 -0.9 36	97 35 36	99 18.2 35	92 44 33		75 -2.9 37	95 -3.7 34	97 -3.5 15	92 10.0 41	109 6 38	93 7 37			
MKK 160022 82993361 15MKK022		JT 110943 MKK 110507		98 42	97 36	104 31	89 28	98 28		89 30	92 20	84 28		99 0.38 44	96 0.11 35	109 18 28	97 10.1 36	104 -0.2 31	94 28 32	96 15.6 32	94 50 33		77 -1.8 37	101 -8.6 27	98 -3.6 15	99 14.0 41	112 8 38	95 8 37			
RLR 170061 86053501 RLR 170061		RLR 120090 BOS 066401		93 67	122 70	65 61	84 50	99 50		83 55	118 47	83 53	113 30	89 1.27 69	114 -0.61 60	119 29 50	122 24.6 70	65 -11.3 61	85 7 60	121 35.4 60	120 145 68	118 -58 20	115 19.7 75	98 -5.6 52	98 -3.6 38	104 17.3 60	93 -2 76	103 16 73	112 2.04 32	90 -0.45 29	113 1.03 29
MKK 200001 91386326 MKK20001		RLR 170061 BOG 180005		96 47	114 46	75 42	86 35	97 35		83 38	116 30	83 36	109 26	97 0.62 48	98 0.01 42	116 25 35	114 20.1 46	75 -8.4 42	86 10 41	115 30.6 42	119 141 42	116 -57 14	119 21.7 46	98 -5.6 35	92 -2.5 26	104 17.2 43	100 2 47	100 14 45	108 1.63 26	87 -0.66 25	111 0.90 24
ZCW 210155 92687664 21-0155	7	RLR 160025 RLR 140003		72 66	109 68	100 56	87 49	105 44		88 53	103 48	85 52	97 64	70 2.82 69	99 -0.01 57	113 22 49	109 17.2 68	100 -1.3 56	102 47 58	112 28.6 56	108 101 66	101 -40 23	110 16.9 74	105 -11.3 46	95 -3.2 32	112 22.5 54	109 7 76	96 10 73	83 -0.86 66	68 -1.77 61	84 -0.64 59

Breeding Values and Accuracies: Cows

Green: >120 High
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Value <80 Value >120

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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																													
MKK 200002 91384156 MKK20002	1	RLR 170061 RLR 180012	99 47	115 49	70 43	94 35	99 35	88 39	110 28	87 37	105 22	98 0.52 48	103 -0.19 42	106 14 35	115 20.5 49	70 -9.9 43	86 10 42	115 30.6 44	110 109 42	103 -42 12	117 20.6 46	97 -5.0 36	96 -3.3 26	105 18.2 43	94 -2 46	99 13 45	105 1.34 22	98 0.01 21	111 0.93 20
MKK 200003 91384149 MKK20003	13	RLR 170061 RLR 180004	88 47	123 46	65 42	89 35	98 35	84 38	117 30	85 36	112 22	85 1.56 49	112 -0.54 42	113 22 35	123 25.7 46	65 -11.3 42	89 17 41	122 36.2 42	118 139 43	113 -53 14	116 20.5 46	94 -2.9 36	100 -4.0 27	103 16.9 43	98 0 47	106 19 46	112 2.07 22	89 -0.56 21	112 1.00 20
ZCW 220310 93976918 22-0310	2	WO 140549 ZCW 150116	113 66	95 68	83 59	100 45	121 45	106 53	86 28	98 48	83 28	111 -0.56 68	103 -0.17 59	99 6 45	95 9.4 68	83 -6.2 59	79 -7 57	95 15.4 54	89 33 42	88 -26 10	96 8.6 46	126 -27.5 49	122 -8.5 30	104 17.1 56	103 3 47	88 2 46	83 -0.79 30	86 -0.73 27	72 -1.28 26
ZCW 220336 93976397 22-0336	2	ZCW 190250 WO 180330	125 60	92 63	86 49	119 38	99 36	105 46	88 24	98 42	86 18	121 -1.39 64	103 -0.17 47	84 -11 38	92 7.6 63	86 -5.4 49	84 4 50	92 12.5 43	91 38 26	83 -21 19	97 9.5 30	106 -11.8 38	88 -1.7 26	106 18.6 45	91 -4 29	90 4 28	92 0.07 19	91 -0.43 17	95 0.01 16
ZCW 220402 94077260 22-0402	1	RLR 160061 ZCW 161054	107 64	94 65	82 54	112 40	105 39	97 49	86 28	90 45	81 30	101 0.28 67	116 -0.70 54	91 -3 40	94 8.9 65	82 -6.5 54	80 -4 53	91 11.9 46	83 11 42	77 -15 12	80 -0.4 45	107 -12.7 39	106 -5.2 26	101 15.3 52	74 -13 46	77 -8 45	77 -1.44 32	129 1.80 29	98 0.20 29
ZCW 220409 94105780 22-0409	5	BOS 166103 ZCW 150502	92 64	108 67	81 56	98 34	112 42	98 49	94 28	92 45	94 32	92 0.99 67	101 -0.10 53	100 8 34	108 16.6 67	81 -6.8 56	91 20 52	107 24.7 54	100 71 44	93 -31 9	97 9.5 48	118 -21.4 45	104 -4.9 31	109 20.1 51	73 -14 48	89 3 47	104 1.24 34	114 0.94 30	112 0.95 30
ZCW 220498 94478187 22-0498		BOS 177663 ZCW 160227	87 63	116 66	80 54	90 35	86 41	78 48	105 26	76 44	102 32	87 1.43 66	105 -0.24 53	110 18 35	116 21.6 66	80 -7.2 54	95 30 52	118 32.8 49	111 111 45		104 13.4 48	79 8.8 48	78 0.3 25	110 21.2 51	91 -4 48	102 15 48	119 2.67 33	43 -3.22 30	74 -1.19 29

Selection List on Cow Value

Bulls 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									
										★★★★																
1	MKK 140020	MKK 140020	PSB 110126	MKK 110001	0.0						117	50	82	31	112	28	97	17	92	24	90	28				
2	MKK 150008	008	JT 110943	CMO 110083	0.0						95	56	94	44	108	35	94	28	98	31	90	36	87	20	84	33
3	MKK 160008	MKK 160008	JT 110943	CMO 110078	0.0						94	58	96	44	104	36	95	28	98	31	90	37	86	20	83	34
										★★★★☆																
1	MKK 150001	MKK15001	JT 110943	MKK 110006	0.0						92	51	99	36	106	31	89	28	98	27	89	32	92	20	84	30
2	MKK 150002	MKK15002	JT 110943	CMO 110106	0.0						81	52	103	44	103	36	92	28	93	30	83	35	89	20	78	32
3	MKK 150006	006	JT 110943	MKK 120189	0.0						103	53	95	36	103	31	89	28	98	27	89	32	92	20	84	30
4	MKK 150010	010	JT 110943	MKK 110019	0.0						99	53	96	36	104	31	89	28	98	27	89	32	92	20	84	30
5	MKK 150011	011	JT 110943	MKK 110002	0.0						99	55	97	36	104	31	89	28	98	27	89	33	92	20	84	30
6	MKK 150013	013	JT 110943	CMO 110080	0.0						99	56	97	44	103	36	90	28	92	31	85	36	91	20	80	33
7	MKK 150015	015	JT 110943	MKK 110039	0.0						93	55	98	36	106	31	89	28	98	28	89	33	92	20	84	30
8	MKK 150016	016	JT 110943	MKK 110091	0.0						93	55	99	36	106	31	89	28	98	28	89	33	92	20	84	30
9	MKK 150017	017	JT 110943	MKK 120041	0.0						101	55	96	36	103	31	89	28	98	28	89	33	92	20	84	30
10	MKK 150018	15MKK018	JT 110943	MKK 110061	0.0						84	53	101	36	109	31	89	28	98	28	89	32	92	20	84	30
11	MKK 150020	15MKK020	JT 110943	CMO 110108	0.1						101	59	100	49	92	42	93	33	89	36	82	41	92	24	77	38
12	MKK 160002	16MKK002	JT 110943	MKK 110020	0.0						104	52	94	36	102	31	89	28	98	28	89	32	92	20	84	30
13	MKK 160003	MKK 160003	JT 110943	MKK 110001	0.0						98	52	97	36	104	31	89	28	98	27	89	32	92	20	84	30
14	MKK 160004	MKK 160004	JT 110943	MKK 110107	0.0						93	52	98	36	106	31	89	28	98	28	89	32	92	20	84	30
15	MKK 160006	MKK 160006	JT 110943	MKK 110050	0.0						117	54	89	36	98	31	90	28	98	28	89	33	92	20	84	30
16	MKK 160007	MKK 160007	JT 110943	MKK 116501	0.0						85	54	101	36	108	31	89	28	98	28	89	33	92	20	84	30
17	MKK 160011	MKK 160011	JT 110943	CMO 110106	0.0						89	43	100	44	102	36	92	28	93	30	84	34	89	20	78	31
18	MKK 160022	15MKK022	JT 110943	MKK 110507	0.0						98	42	97	36	104	31	89	28	98	28	89	30	92	20	84	28
19	MKK 200001	MKK20001	RLR 170061	BOG 180005	0.3						96	47	114	46	75	42	86	35	97	35	83	38	116	30	83	36
20	RLR 170061	RLR 170061	RLR 120090	BOS 066401	0.0						93	67	122	70	65	61	84	50	99	50	83	55	118	47	83	53
21	ZCW 210155	21-0155	RLR 160025	RLR 140003	6.8						72	66	109	68	100	56	87	49	105	44	88	53	103	48	85	52

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									
										★★★★★								
1	ZCW 220310 22-0310	WO 140549	ZCW 150116	1.5						113 66	95 68	83 59	100 45	121 45	106 53	86 28	98 48	
2	ZCW 220336 22-0336	ZCW 190250	WO 180330	2.1						125 60	92 63	86 49	119 38	99 36	105 46	88 24	98 42	
										★★★★								
1	ZCW 220402 22-0402	RLR 160061	ZCW 161054	1.5						107 64	94 65	82 54	112 40	105 39	97 49	86 28	90 45	
2	ZCW 220409 22-0409	BOS 166103	ZCW 150502	4.8						92 64	108 67	81 56	98 34	112 42	98 49	94 28	92 45	
										★★★★								
1	MKK 200002 MKK20002	RLR 170061	RLR 180012	0.5						99 47	115 49	70 43	94 35	99 35	88 39	110 28	87 37	
2	MKK 200003 MKK20003	RLR 170061	RLR 180004	12.7						88 47	123 46	65 42	89 35	98 35	84 38	117 30	85 36	
										★★★								
1	ZCW 220498 22-0498	BOS 177663	ZCW 160227	0.0						87 63	116 66	80 54	90 35	86 41	78 48	105 26	76 44	

	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.

