

DRAKENSBERGER

GENOMIC BREEDING VALUE REPORT

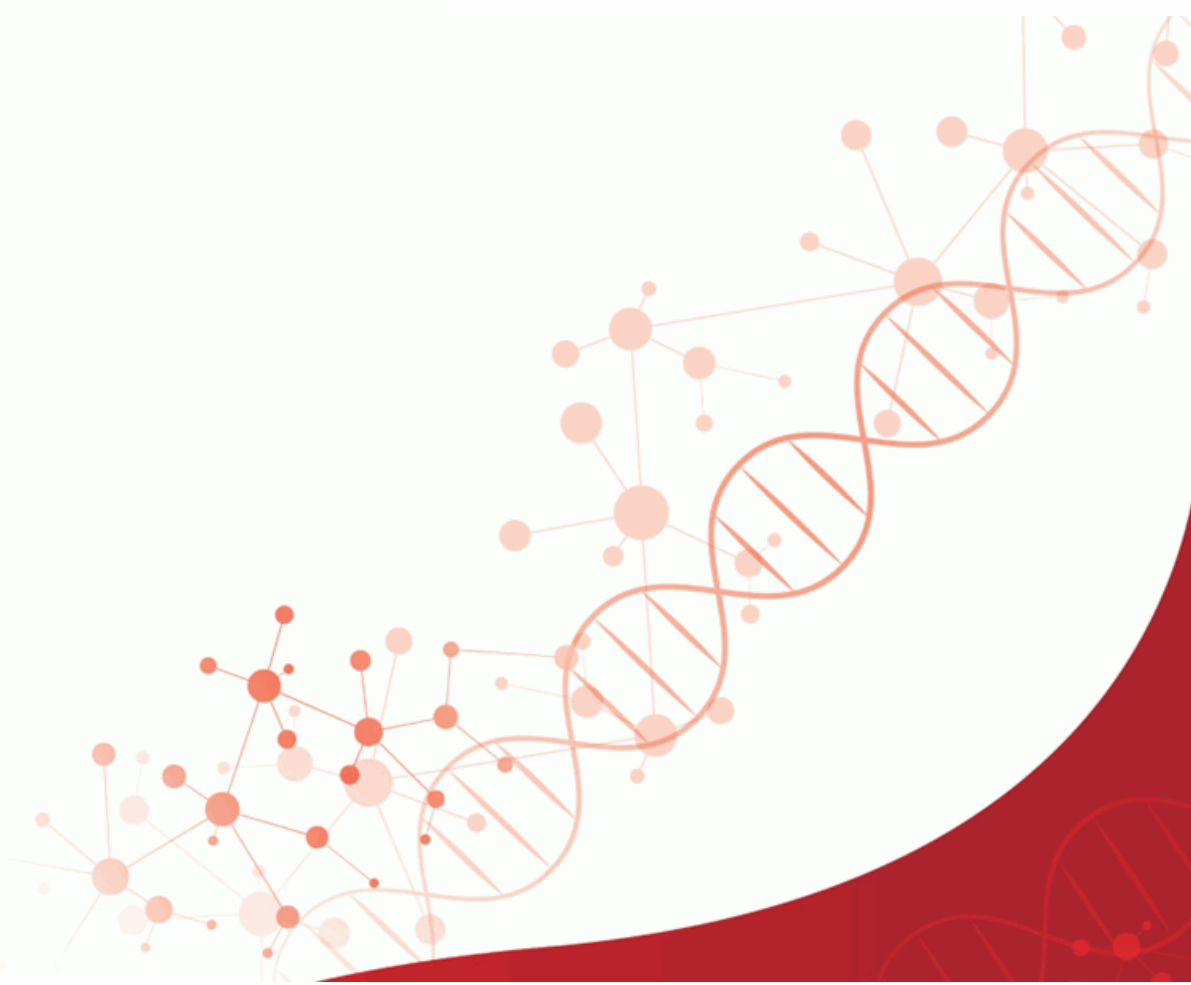
September 2026



DRAKENKRAAL

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EBVs, EBVi's and GEBVs

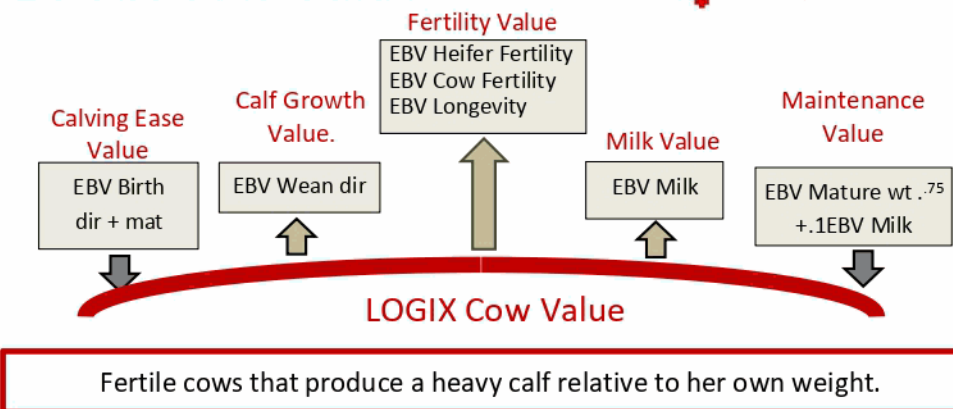
EBVi (Breeding Value Index): Genetic potential relative to the average (100) of the live (active) animals in the breed. Roughly 50% of the animals have values between 90 and 110. Values above 100, depending on the trait, tend to be in the more favourable direction.

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)

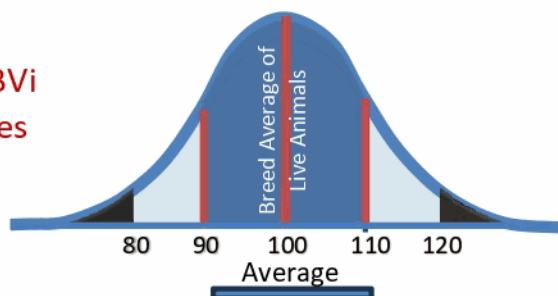
- WeanerCalf / Growth Value > 120
 - Cow Value and Fertility Value average to high
- Growers are usually heavier at birth (lower Calving Ease Value), and maturity (lower Maintenance Value).

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

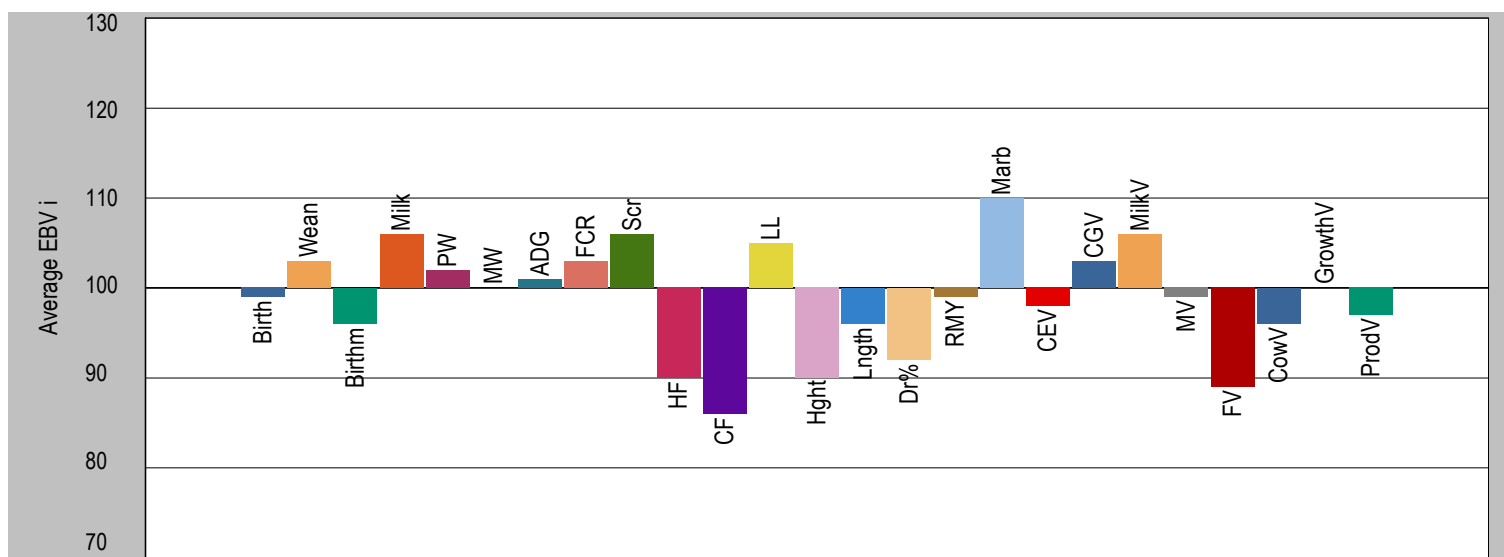
Larger groups result in more accurate and stable breeding values, as the mean and distribution of the group can be more accurately determined and are thus more representative. Groups should preferably have more than 5 animals. Weigh all the animals in the same group on the same day, as corrections for 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	Dr%:	Dressing%
FCR:	Feed Conversion Ratio	RMY:	Red Meat Yield
		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	0.16	99	0.10
	Wean Weight	11.9	103	10.5
	Birth Mat.	0.37	96	0.17
	Milk (Wn.Mat.)	5.2	106	3.3
Postwean Growth	Postwean Wt	21.5	102	19.8
	Mature Weight	11	100	11
	ADG	73	101	71
	FCR	-55	103	-50
Fertility	Scrotal Circumf.	14.6	106	11.3
	Heifer Fertility	5.5	90	-2.3
	Cow Fertility	1.4	86	-1.7
	Longevity	27.3	105	24.7
Frame	Height	-8	90	-1
	Length	8	96	12
Carcass	EMA	-0.36	92	0.48
	Fat	0.00	102	-0.20
	Marbling	0.73	110	0.16

Selection Value	Ave. Herd
Calving Ease	98
Calf Growth	103
Milk	106
Maintenance	99
Fertility	89
Cow Value	96
Growth Value	100
Production Value	97
Carcass Value	99

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

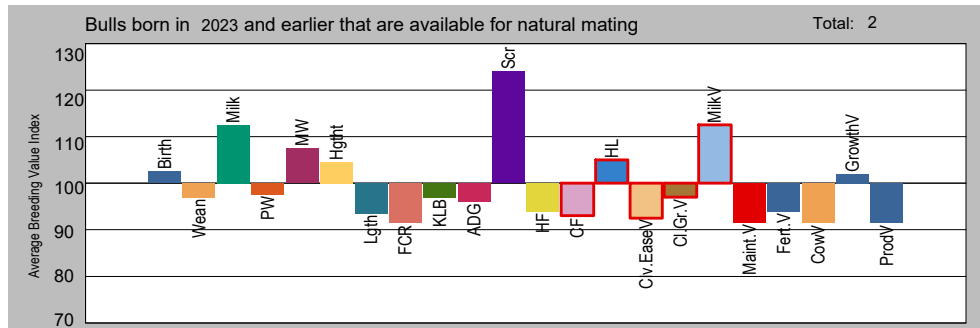
What does a sub-selection value above breed average (100) mean?:

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

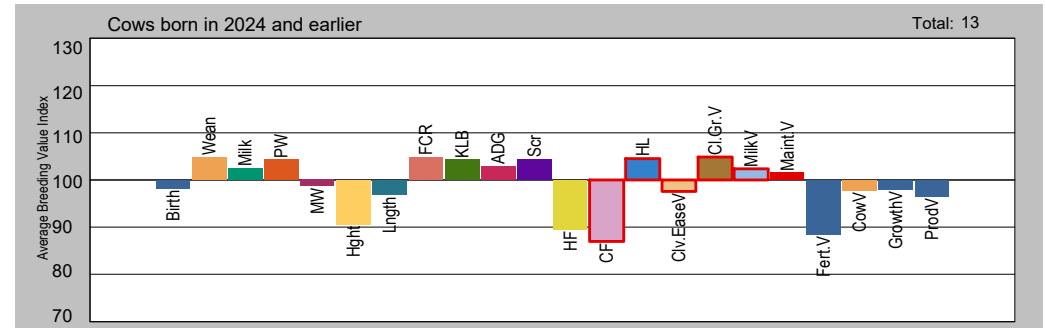
Genetic Windows

Animals available for breeding

Bulls on the farm

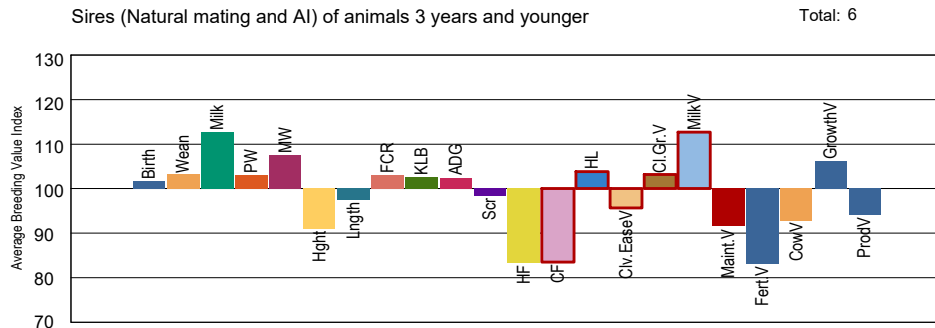


Cow Herd

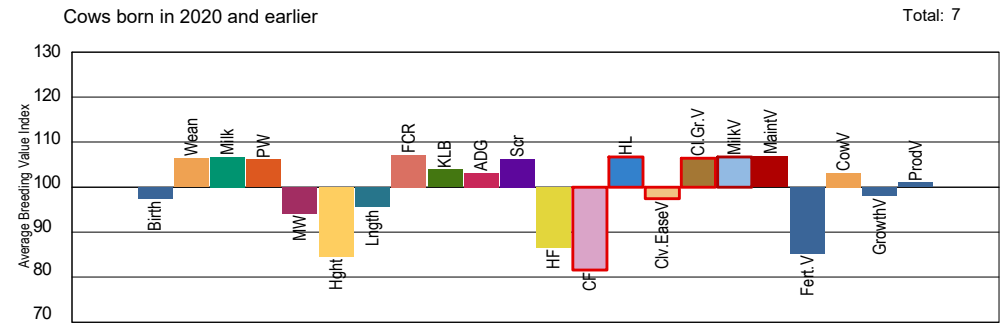


Results of previous selection decisions

Sires of young animals

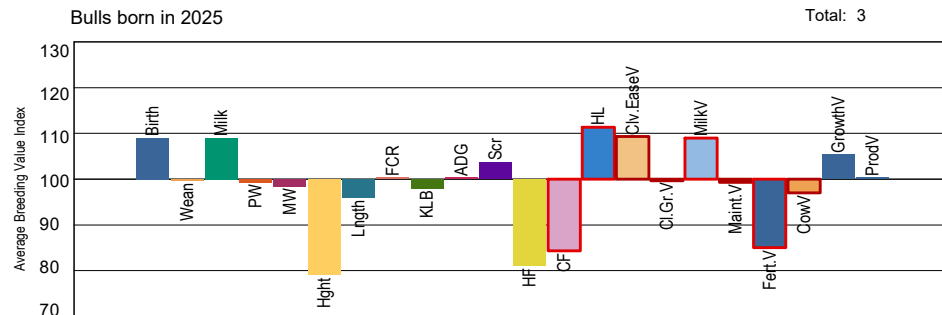


Cows older than 6 years

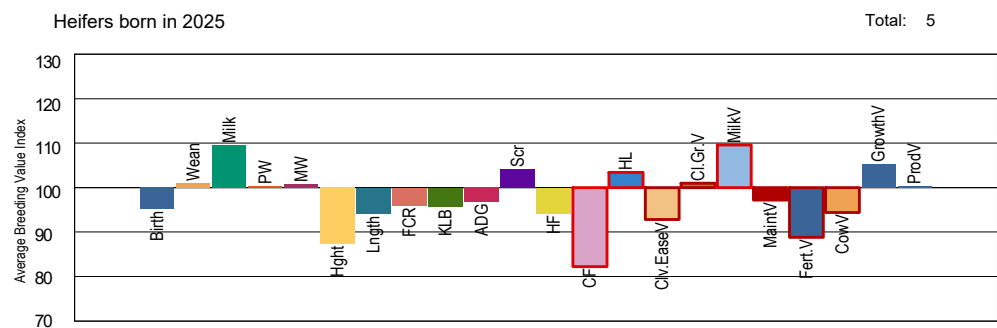


Selection possibilities

Bull calves



Heifer calves

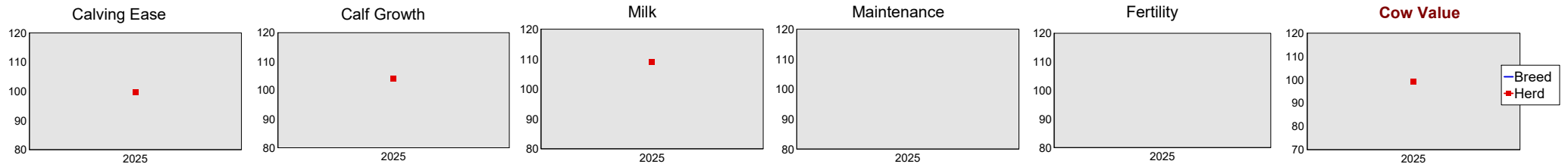


Summary of Cow Herd

			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	100	100	101	101	101	99	100	100	100	100	100	100	99	99	100	100	99	100	100	100	100	99
2014	1	★★★★	106	91	110	123	80	97	76	91	101	91	108	110	91	80	92	95	102	81	70	115	71	82	
2015	1	★★★★★	104	94	120	129	81	110	91	105	109	94	90	120	96	72	94	97	101	85	71	112	69	82	
2016	1	★★★★	100	117	86	106	71	94	112	97	97	117	104	86	112	94	108	106	97	66	82	101	97	107	
2017	1	★★★★	92	98	109	120	73	95	85	91	90	98	103	109	95	82	97	101	97	71	84	98	71	88	
2018	2	★★★★★	95	116	108	99	88	110	108	109	95	116	99	108	117	99	109	107	117	92	78	109	86	103	
2019	1	★★★★☆	90	113	106	73	116	106	106	105	95	113	90	106	116	133	113	115	113	119	108	104	112	105	
2022	2	★★★★☆	85	103	100	97	90	88	98	88	90	103	90	100	103	102	100	99	106	90	92	103	96	104	
2023	1	★★★★☆	92	108	109	95	92	101	104	101	96	108	91	109	109	103	112	114	108	88	100	102	108	108	
2024	3	★★★★	108	101	92	94	94	91	96	90	107	101	103	92	99	106	101	105	98	97	92	102	96	92	
2025	5	★★★★	93	101	110	97	89	94	105	100	95	101	94	110	100	101	97	96	104	94	82	103	87	94	
Cows in Herd Average:			97	104	105	103	87	99	98	98	98	104	97	105	104	97	102	104	104	88	86	105	89	97	

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.



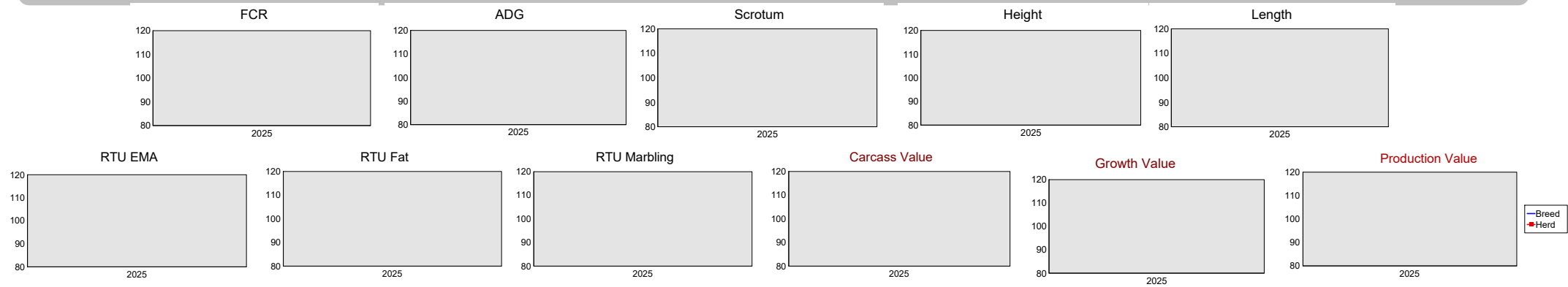
Herd

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance						Fertility						Cow Value			
	Birth Weight		Dir	Mat	Calv. Ease	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Milk	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	Number	EBV			Number	EBV
2025	10	-0.01	0.33	100	7	12.6	104	7	6.30	109													99			

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.)		Milk	Postwean Weight		Mature Weight		Maintenance	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	
2016	3646	0.21	0.12	100	2841	9.8	99	2841	1.58	95	2243	18.0	536	11	101	786	-0.9	490	-1.6	4039	18.4	96	92	
2017	3747	0.22	0.09	100	2879	10.7	100	2879	1.88	96	2328	19.3	551	12	101	731	-1.1	516	-2.1	4171	18.7	98	94	
2018	4020	0.24	0.13	99	3347	10.5	100	3347	1.94	96	2574	19.5	538	13	100	750	0.0	524	-2.2	4320	18.8	97	93	
2019	3716	0.16	0.11	100	3312	9.8	99	3312	2.49	98	2449	19.4	499	12	101	743	-3.0	485	-2.0	4312	19.0	101	95	
2020	4077	0.11	0.10	101	3575	9.9	99	3575	2.62	98	2781	19.0	510	10	101	772	-2.6	446	-2.4	4146	19.5	101	96	
2021	4035	0.14	0.09	100	3588	9.8	99	3588	2.80	98	2633	18.8	482	11	100	679	-2.1	369	-2.3	3913	19.6	101	96	
2022	4015	0.16	0.10	100	3442	10.3	100	3442	3.11	99	2315	21.0	400	13	99	558	-1.5	29	-3.3	1635	19.2	102	98	
2023	4207	-0.03	0.10	102	3319	9.9	99	3319	3.19	100	2252	20.6	53	10	99	201	-1.3					100	98	
2024	3580	-0.07	0.13	102	3060	10.0	99	3060	3.46	100	2232	20.1			99	7	-1.8					93	99	
2025	3286	-0.02	0.14	101	2447	9.5	98	2447	3.55	101	207	13.3			104								99	
2026	694	-0.11	0.07	103	19	14.0	107	19	2.57	98													95	

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			
2025																									

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	81	-67	110	594	85	103	560	13.2	104	551	1	103	551	15	103	384	0.51	100	-0.04	102	-0.02	97	101	100	95
2018	115	-66	109	553	97	107	507	13.3	104	469	4	107	469	18	107	290	1.00	105	-0.27	99	0.17	100	103	103	96
2019	104	-60	106	545	99	107	532	13.2	103	341	2	103	341	17	105	311	1.58	111	0.19	105	0.15	100	108	103	99
2020	116	-59	105	714	89	104	687	13.6	104	504	1	102	505	15	103	438	0.97	105	0.09	104	0.11	99	106	101	97
2021	108	-72	113	739	81	102	742	12.6	102	648	2	104	648	16	104	345	1.05	106	-0.39	98	0.03	98	106	100	96
2022	74	-78	117	651	92	105	630	13.5	104	401	1	102	401	15	103	280	1.07	106	0.32	106	0.37	104	109	102	99
2023	94	-69	111	663	98	107	657	14.4	106	617	4	107	617	20	108	350	1.16	107	0.19	105	0.24	101	108	104	100
2024	82	-74	114	449	104	108	639	12.4	102	400	2	104	400	18	106	316	1.46	109	0.01	103	0.19	101	110	107	104
2025	1	-23	85	2	14	86	5	12.8	103	5	-1	99	5	7	94	1	1.84	113	-4.77	44	0.11	99	89	94	90
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.
BF 180222		PU 110302		88	118	102	78	98	101	130	106	89	118	97	102	121	125	136	127	114	75	110	124	105	135	119	109	112	152	146
18 0222		BF 130038		93	97	62	35	65	66	56	64	1.26	20.2	0.30	4.0	36.4	36	213	-96	18.8	16.5	-3.8	36.8	3	46	2.47	0.51	0.87	18	1
BH 120222		M 090044		126	107	95	88	107	109	115	109	115	107	121	95	108	113	122	119	124	113	97	104	111	110	97	123	120	49	48
KENNEDY II		BH 030003		92	94	88	76	70	77	50	72	-1.39	14.1	-0.81	1.5	26.4	24	156	-82	24.4	-12.2	-1.0	26.5	7	22	0.18	1.67	1.31	4	18
BH 160021		BH 110117		79	97	93	94	77	66	89	68	92	97	75	93	97	106	88	84	127	80	85	93	80	93	100	58	114	199	134
CHRIS		BH 130324		96	98	93	91	93	86	93	87	0.94	9.0	1.35	1.0	17.1	17	23	-21	25.9	12.9	1.7	20.9	-14	6	0.48	-3.64	0.98	34	8
BH 180072		BH 150111		97	106	87	84	78	75	93	76	109	106	78	87	101	119	95	105	77	88	83	85	104	91	83	109	98	15	13
KUDU II		BH 090101		88	89	82	79	82	76	82	77	-0.82	13.8	1.17	-1.1	20.3	29	53	-58	-0.8	6.7	2.0	16.9	2	3	-1.29	0.56	0.04	3	1
BH 190063		BH 160078		87	86	142	104	88	99	91	96	103	86	57	142	88	91	91	95	96	94	82	103	97	83	74	80	69	56	52
POTYSTER		BH 150037		94	96	90	88	90	83	90	84	-0.22	2.9	2.15	17.5	10.3	3	35	-41	9.0	2.4	2.2	26.1	-3	-4	-2.25	-1.81	-1.65	18	2
BJ 180004		LL 130053		94	98	115	94	89	92	103	93	96	98	95	115	102	103	112	109	89	80	102	102	108	109	104	112	103	84	71
RUDI		BJ 150051		94	96	88	86	88	82	88	83	0.53	9.4	0.42	8.3	21.1	14	119	-65	5.6	12.7	-2.0	25.9	5	21	0.92	0.79	0.33	13	3
BJ 180024		LL 130053		93	112	109	85	106	108	106	107	109	112	63	109	111	116	104	94	145	102	108	105	110	111	106	97	99	103	100
LEWIES		BJ 150049		94	97	89	84	88	82	87	83	-0.81	16.9	1.88	6.2	28.2	27	87	-38	35.7	-3.9	-3.3	27.4	6	22	1.08	-0.46	0.13	50	15
BO 110218		BO 060042		106	117	103	98	101	120	134	123	105	117	101	103	123	100	124	112	97	87	112	111	126	125	118	86	45	78	67
BO11EMB05120218		EMB 050120		95	96	93	72	82	80	64	77	-0.38	19.7	0.13	4.3	37.7	11	166	-71	9.6	7.7	-4.3	30.3	16	36	2.38	-1.35	-3.07	13	31
BZ 220005		BZ 180006		92	108	112	80	82	90	121	95	95	108	92	112	106	122	108	97	111	83	81	105	90	105	92	136	111	37	24
KAPTEIN		P 140051		91	92	85	82	84	79	84	80	0.57	15.0	0.53	7.5	24.4	32	102	-44	17.4	10.6	2.5	27.4	-8	17	-0.40	2.75	0.80		
CL 110023		FD 070065		103	86	107	135	63	86	75	82	111	86	85	107	85	66	91	96	110	79	48	100	61	79	79	81	100	93	79
SALAM		CL 080048		94	96	89	68	78	78	76	78	-1.05	3.1	0.86	5.8	8.1	-21	34	-43	16.5	13.4	9.7	24.5	-27	-8	-1.75	-1.77	0.17	8	18
CL 130034		CL 090054		92	93	107	133	37	74	98	76	83	93	115	107	90	68	101	110	92	46	52	80	70	87	68	114	139	137	124
ROBBIE		CL 080032		94	97	89	52	80	76	80	77	1.88	7.0	-0.51	5.6	11.9	-20	76	-68	7.0	39.1	8.9	14.7	-20	-1	-2.83	0.94	2.47	18	20

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.	
CL 140016 CL 090054 CL 110019 CHARL				96	123	83	105	111	119	113	118	92	123	106	83	119	95	110	114	109	115	101	107	101	114	94	124	151	56	39	
				91	93	86	48	74	72	64	70	0.95	22.4	-0.12	-2.5	35.1	6	109	-74	16.3	-13.6	-1.9	28.4	0	26	-0.11	1.79	3.14	8	15	54
CL 150015 CL 110023 CL 120009 KOELA				96	100	104	115	83	97	84	93	97	100	97	104	95	87	90	95	107	95	62	111	68	81	75	93	103	18	17	
				84	88	79	40	67	66	74	68	0.38	10.4	0.32	4.6	16.0	-1	30	-42	14.9	1.9	6.6	30.3	-22	-6	-2.12	-0.75	0.36	4	8	21
CL 200067 CL 160024 CL 130016 KONING				116	117	100	89	87	108	125	111	117	117	99	100	116	111	108	102	109	77	91	114	83	110	106	97	100	78	75	
				95	97	92	90	91	85	92	86	-1.60	19.4	0.22	3.4	32.2	22	102	-54	15.9	15.0	0.3	31.7	-12	22	1.09	-0.48	0.17	11		
CL 210096 BF 150065 CL 130013 DANA 4				88	104	120	98	74	93	104	94	90	104	93	120	105	99	101	110	108	78	62	114	64	87	82	128	151	21	18	
				90	91	85	82	84	79	84	80	1.08	12.7	0.48	10.0	23.5	10	76	-68	15.5	14.5	6.6	31.6	-25	0	-1.40	2.10	3.14			

Growth Tests

Animal			Cow Value	Weight		Frame				Growth				Carcass			
Test Code	Sex	Test no		Wean dir	End- weight	Length	Height	Length/ Height	Scrotum	Intake	ADG	FCR	Growth Value	EMA	Fat	Marbling	Carcass Value
202201 D11 M			0682584DRB														
BOTH A		BJ 210080 92857085	BJ 180024 BJ 180093	86	105	103	102	112	85	85	102	86	118	98	89	104	101
				75	87	86	14	7	1.11	0.57	80	-26	82	0.23	-1.09	0.37	77

Breeding Values and Accuracies: Bulls

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	ID Number	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
BJ 210080 92857085 LEWIES	5	 BJ 180024  BJ 180093		79 85	105 87	98 82	82 80	102 81	86 75	118 82	90 76	101 77	87 1.42 88	83 0.97 81	120 31 80	105 13.2 87	98 2.6 82	95 51 83	106 24.3 84	102 80 84	86 -26 77	140 32.9 86	100 -2.2 80	104 -2.5 77	103 26.1 82	112 7 78	102 14 78	98 0.23 77	89 -1.09 77	104 0.37 77
TD 230037 95061735 TD2337 - 4P	5	 BH 190063  TD 200006		106 83	89 84	127 81	101 79	86 80	97 74	86 80	93 75	83 81	118 -1.77 84	77 1.23 81	95 6 79	89 4.5 84	127 12.6 81	116 106 81	89 11.5 82	90 31 82	97 -45 78	108 15.7 82	88 6.6 80	82 2.3 78	107 28.0 81	97 -3 82	85 -2 82	80 -1.66 81	90 -0.99 81	83 -0.86 81
DK 250003 99564064 DK250003	10	BZ 220005 CL 170011		92 65	101 73	112 50	96 24	81 37	90 47	103 34	91 44	105 40	92 0.88 75	99 0.24 48	102 13 24	101 10.9 73	112 7.2 50	109 89 49	98 18.4 45	103 82 41	103 -54 23	105 13.8 46	78 14.5 37	82 2.4 22	109 29.4 44	81 -13 46	97 9 45	86 -0.94 42	122 1.63 39	121 1.37 38
DK 250005 99564080 DK250005	5	CL 200067 CL 160016		120 67	97 74	109 55	100 22	90 40	101 49	105 36	101 46	104 43	121 -2.06 76	98 0.29 53	97 8 22	97 8.9 74	109 6.3 55	105 79 50	99 19.0 54	98 65 45	97 -44 24	100 11.1 48	85 9.2 40	91 0.3 25	110 29.8 46	79 -15 49	95 8 48	94 -0.10 45	98 -0.38 41	85 -0.72 42
DK 250006 99564098 DK250006	11	CL 200067 CL 140027		116 68	101 74	106 57	102 34	84 43	100 52	101 40	99 50	105 50	114 -1.35 76	103 0.05 54	96 7 34	101 11.0 74	106 5.3 57	107 83 55	101 20.7 56	100 71 50	101 -52 27	106 14.3 54	80 13.3 40	80 2.6 29	115 32.1 48	77 -16 55	96 8 53	96 0.08 51	101 -0.11 48	105 0.45 47

Breeding Values and Accuracies: Cows

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	CL	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																														
CL 140027 80113186 DANSIE 1A2	16 5	CL 110023 CL 090069		106 91	91 91	110 92	123 85	80 85	97 81	76 84	91 82	87 84	101 0.01 91	108 -0.21 90	80 8 85	91 5.6 91	110 6.8 92	108 86 89	91 12.6 88	92 39 85	100 -50 83	102 12.6 86	81 12.5 85	70 4.8 83	115 32.5 87	71 -20 86	82 -5 86	86 -1.02 85	105 0.25 84	109 0.71 84
CL 150030 82155409 DANSIE 1A3	16 5	CL 110023 CL 090069		104 84	94 84	120 86	129 50	81 61	110 67	91 52	105 64	92 54	109 -0.87 85	90 0.62 81	72 -16 50	94 7.2 84	120 10.0 86	125 129 73	96 16.7 74	94 49 57	96 -42 42	101 12.1 61	85 9.5 67	71 4.6 47	112 30.5 68	69 -21 62	82 -5 60	86 -0.98 56	101 -0.15 53	103 0.33 52
CL 160013 83966309 OUNOOI 3 B 1	4	BO 110218 CL 130038		100 79	117 80	86 82	106 46	71 58	94 63	112 45	97 59	108 52	97 0.40 81	104 -0.02 75	94 5 46	117 19.7 80	86 -1.4 82	104 76 69	112 29.4 70	108 102 56	107 -62 30	97 9.5 60	66 23.9 65	82 2.2 44	101 25.2 65	97 -2 61	107 19 60	104 0.88 54	95 -0.60 51	97 -0.02 50
CL 170011 85791424 SANTIE 2C1	13 5	CL 130034 CL 130087		92 80	98 81	109 82	120 39	73 56	95 62	85 48	91 59	91 48	90 1.11 83	103 0.05 76	82 -6 39	98 9.6 81	109 6.4 82	113 99 67	95 16.1 69	97 59 51	109 -64 42	97 9.9 54	71 19.6 64	84 1.9 40	98 23.7 66	71 -20 54	88 0 53	81 -1.52 50	108 0.50 47	130 1.93 48
CL 180010 87500161 MAGGIE 4 C 1	10 5	CL 140016 CL 150039		96 79	118 79	103 78	99 34	109 55	122 60	109 44	119 57	110 51	96 0.55 82	100 0.16 74	99 10 34	118 19.8 79	103 4.3 78	118 111 64	121 36.4 68	109 105 29	112 -70 29	112 17.5 60	108 -8.7 61	105 -2.9 39	106 27.9 61	94 -5 61	108 20 59	96 0.04 53	120 1.46 49	129 1.85 48
CL 180029 87410791 DANSIE 4A	13 5	CL 150015 CL 130013		94 77	114 77	113 74	98 35	67 54	98 58	107 50	99 56	109 53	94 0.69 81	98 0.28 71	99 11 35	114 18.0 77	113 7.7 74	123 126 62	112 29.1 68	109 105 55	112 -70 41	122 23.2 60	76 16.0 61	51 9.1 38	111 30.0 58	78 -15 61	97 9 59	96 0.06 55	109 0.57 51	131 1.95 51
TD 190905 89195804 TD905-3P	1	BH 120222 TD 150518		90 76	113 76	106 72	73 53	116 48	106 60	106 31	105 54	105 36	95 0.58 79	90 0.63 70	133 43 53	113 17.3 76	106 5.2 72	103 73 67	116 32.2 66	113 121 44	114 -74 15	113 18.5 48	119 -17.1 58	108 -3.3 29	104 26.8 59	112 8 49	105 17 47	95 -0.02 37	100 -0.16 34	102 0.26 33
BF 220138 94117942 22 0138		BF 180222 BF 090277		87 68	114 68	100 52	93 17	95 35	101 45	114 28	103 42	116 39	88 1.34 74	96 0.34 57	106 17 17	114 17.8 68	100 3.4 52	109 88 46	116 32.2 53	117 139 42	112 -71 11	106 14.5 44	88 7.1 36	101 -1.8 15	108 28.8 45	102 1 45	117 28 44	110 1.49 40	103 0.09 38	112 0.87 37
BF 220240 94394764 22 0240		BH 160021 BF 130366		82 61	92 66	100 46	100 29	85 38	75 45	81 32	73 42	85 44	91 1.04 70	83 0.97 47	97 9 29	92 6.2 66	100 3.4 46	93 47 47	89 11.4 53	83 5 44	77 -10 17	105 14.2 46	92 3.9 36	83 1.9 21	97 22.9 48	89 -8 47	91 4 46	96 0.10 45	70 -2.69 44	100 0.14 43
TD 230031 95989364 TD2331 4W	2	BJ 180004 TD 180826		92 64	108 68	109 48	95 32	92 39	101 47	104 30	101 44	107 28	96 0.54 74	91 0.58 47	103 14 32	108 14.5 68	109 6.5 48	113 99 49	109 27.2 52	112 119 46	110 -68 12	108 15.5 49	88 6.9 39	100 -1.7 21	102 25.5 48	108 5 47	108 19 46	102 0.72 29	109 0.52 26	100 0.17 25
TD 240003 96458955 TD2403-4X	4	BH 180072 TD 200024		108 63	102 56	91 46	90 33	82 36	83 43	95 30	83 40	91 40	106 -0.47 73	103 0.02 46	111 22 33	102 11.8 56	91 0.4 46	90 39 45	100 19.5 45	99 66 42	105 -58 15	104 13.7 46	84 9.5 36	86 1.3 20	98 23.5 42	93 -5 47	86 -1 46	82 -1.37 42	104 0.11 38	103 0.33 37
TD 240004 96458963 TD2404-3Z	1	BH 180072 TD 180804		109 63	105 57	85 48	87 34	96 37	88 44	96 30	88 41	94 38	110 -0.93 73	99 0.24 47	115 26 34	105 12.9 57	85 -1.6 48	85 27 46	101 20.5 46	101 76 43	107 -62 13	98 10.2 48	103 -4.6 36	87 1.3 21	102 25.7 43	97 -2 49	93 5 47	85 -1.07 40	108 0.43 37	113 0.92 36

Breeding Values and Accuracies: Cows

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																													
TD 240006 96458989 TD2406-4Z	5	BJ 180004 TD 210023	108 63	97 69	99 48	106 30	104 38	102 47	98 28	100 43	96 27	104 -0.28 73	107 -0.14 45	92 4 30	97 8.7 69	99 2.9 48	98 59 49	97 17.2 53	103 81 45	101 -52 9	92 7.2 48	103 -4.6 39	103 -2.4 21	105 27.0 46	97 -3 46	96 9 45	92 -0.34 28	101 -0.12 26	106 0.50 25
DK 250001 99564049 DK250001		BF 220240	93 31	86 33	104 23	105 14	83 19	77 22			82 22	99 0.21 35	89 0.70 23	93 4 14	86 3.3 33	104 4.6 23	93 46 23	84 6.8 26	81 -4 22	74 -4 9	94 8.3 23	98 -0.9 18	83 2.1 11	84 16.5 24	94 -5 23	90 3 23	94 -0.12 22	75 -2.22 22	92 -0.30 22
DK 250007 99564106 DK250007	11	BZ 220005 CL 150030	91 66	105 73	115 52	100 29	83 39	99 49	106 35	99 46	105 42	94 0.66 76	93 0.49 50	97 8 29	105 13.1 73	115 8.4 52	118 113 51	104 22.7 46	101 75 43	96 -43 23	106 14.8 48	83 10.4 38	76 3.5 26	111 30.0 45	79 -14 49	93 6 47	89 -0.68 44	118 1.30 41	107 0.56 40
DK 250008 99564114 DK250008	15	CL 210096 CL 180010	96 65	115 72	110 51	96 28	93 40	112 48	109 34	111 45	113 40	99 0.17 75	93 0.51 49	102 13 28	115 18.5 72	110 6.7 51	121 118 50	117 33.0 46	108 101 42	113 -72 20	112 17.8 47	91 4.4 41	85 1.6 26	114 31.6 44	82 -13 48	101 13 46	91 -0.42 42	124 1.81 39	151 3.14 38
DK 250010 99564130 DK250010	18	CL 210096 CL 160052	89 66	101 72	113 53	96 28	83 41	91 49	101 36	91 46	99 43	86 1.56 75	104 0.01 50	102 13 28	101 11.1 72	113 7.7 53	111 93 51	100 20.2 46	98 62 45	104 -57 23	111 17.3 50	87 7.7 40	72 4.4 27	112 30.5 46	77 -16 51	90 3 49	81 -1.54 45	112 0.83 41	151 3.14 40
DK 250011 99564148 DK250011		TD 190905	95 57	98 38	106 36	89 27	102 25	93 33			92 18	98 0.26 69	93 0.50 36	110 21 27	98 9.4 38	106 5.4 36	99 62 34	97 17.9 33	96 54 22	93 -38 7	98 10.4 24	112 -11.3 29	95 -0.5 15	96 22.9 32	105 3 24	97 9 24	94 -0.18 18	91 -0.95 17	93 -0.23 17

Selection List on Cow Value

Bulls 2 years and older

ID Sorted on ID		Name	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	TD 230037	TD2337 - 4P	BH 190063	TD 200006	4.8	HH	0	0	0		10683	8984	12781	10179	8680	9774	8680	9375	
1	BJ 210080	LEWIES	BJ 180024	BJ 180093	4.8	HH	0	0	0		7985	10587	9882	8280	10281	8675	11882	9076	

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								
										★★★★★															
1	CL 180010	MAGGIE 4 C 1	CL 140016	CL 150039	10.2					96	79	118	79	103	78	99	34	109	55	122	60	109	44	119	57
										★★★★★☆☆															
1	CL 150030	DANSIE 1A3	CL 110023	CL 090069	16.3					104	84	94	84	120	86	129	50	81	61	110	67	91	52	105	64
										★★★★★															
1	BF 220138	22 0138	BF 180222	BF 090277	0.0					87	68	114	68	100	52	93	17	95	35	101	45	114	28	103	42
2	TD 190905	TD905-3P	BH 120222	TD 150518	0.8					90	76	113	76	106	72	73	53	116	48	106	60	106	31	105	54
3	TD 230031	TD2331 4W	BJ 180004	TD 180826	1.8					92	64	108	68	109	48	95	32	92	39	101	47	104	30	101	44
4	TD 240006	TD2406-4Z	BJ 180004	TD 210023	5.0					108	63	97	69	99	48	106	30	104	38	102	47	98	28	100	43
										★★★★☆☆															
1	CL 140027	DANSIE 1A2	CL 110023	CL 090069	16.3	HH	0	0	0	106	91	91	91	110	92	123	85	80	85	97	81	76	84	91	82
2	CL 160013	OUNOOI 3 B 1	BO 110218	CL 130038	3.7					100	79	117	80	86	82	106	46	71	58	94	63	112	45	97	59
3	CL 170011	SANTIE 2C1	CL 130034	CL 130087	13.0					92	80	98	81	109	82	120	39	73	56	95	62	85	48	91	59
4	CL 180029	DANSIE 4A	CL 150015	CL 130013	13.4					94	77	114	77	113	74	98	35	67	54	98	58	107	50	99	56
										★★★															
1	TD 240003	TD2403-4X	BH 180072	TD 200024	3.9					108	63	102	56	91	46	90	33	82	36	83	43	95	30	83	40
2	TD 240004	TD2404-3Z	BH 180072	TD 180804	0.9					109	63	105	57	85	48	87	34	96	37	88	44	96	30	88	41
										★★★☆☆															
1	BF 220240	22 0240	BH 160021	BF 130366	0.0					82	61	92	66	100	46	100	29	85	38	75	45	81	32	73	42

Selection List on Cow Value

Bull Calves younger than 2 years

ID Sorted on ID		Name	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	DK	250005	DK250005	CL 200067	CL 160016	5.4					12067	9774	10955	10022	9040	10149	10536	10146	
2	DK	250006	DK250006	CL 200067	CL 140027	11.3					11668	10174	10657	10234	8443	10052	10140	9950	
											★★★★☆								
1	DK	250003	DK250003	BZ 220005	CL 170011	9.6					9265	10173	11250	9624	8137	9047	10334	9144	

Selection List on Cow Value

Heifers younger than 2 years

ID Sorted on ID		Name	Sire ID	Dam ID	% Inbreeding	Horned / Polled	Myostatin			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	DK	250008	DK250008	CL 210096	CL 180010	15.3					9665	11572	11051	9628	9340	11248	10934	11145	
											★★★★☆								
1	DK	250007	DK250007	BZ 220005	CL 150030	10.7					9166	10573	11552	10029	8339	9949	10635	9946	
2	DK	250010	DK250010	CL 210096	CL 160052	17.8					8966	10172	11353	9628	8341	9149	10136	9146	
3	DK	250011	DK250011		TD 190905	0.0					9557	9838	10636	8927	10225	9333			
											★★★☆☆								
1	DK	250001	DK250001		BF 220240	0.0					9331	8633	10423	10514	8319	7722			

	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 18mnth 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.

