

SANTA GERTRUDIS

GENOMIC BREEDING VALUE REPORT

September 2026



PINNACLE STUDS PTY LTD

Herd Number: 8536518

E-mail: pinnacle.santas@gmail.com



LOGIX



EBVs, EBVi's and GEBVs

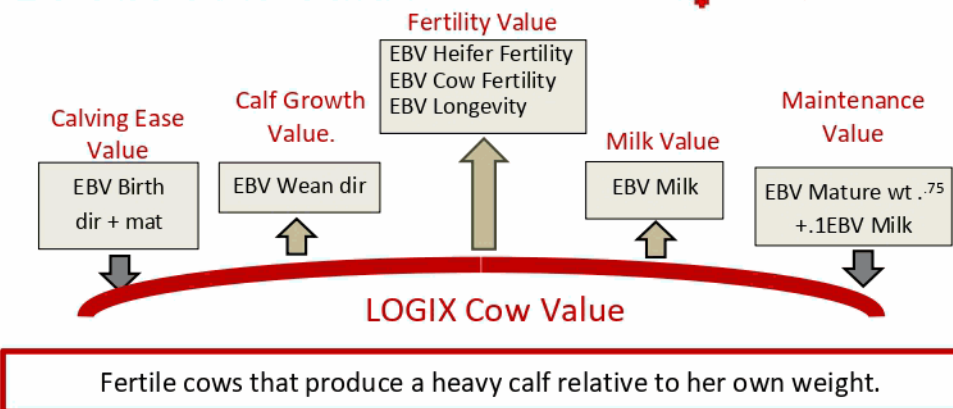
EBVi (Breeding Value Index): Genetic potential relative to the average (100) of the live (active) animals in the breed. Roughly 50% of the animals have values between 90 and 110. Values above 100, depending on the trait, tend to be in the more favourable direction.

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)

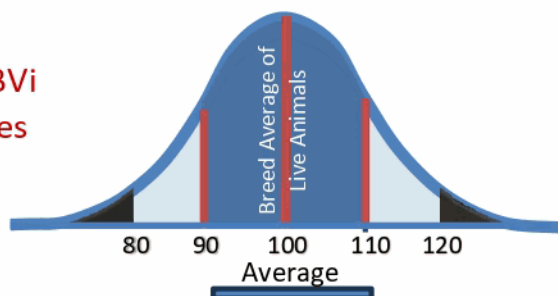
- WeanerCalf / Growth Value > 120
 - Cow Value and Fertility Value average to high
- Growers are usually heavier at birth (lower Calving Ease Value), and maturity (lower Maintenance Value).

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

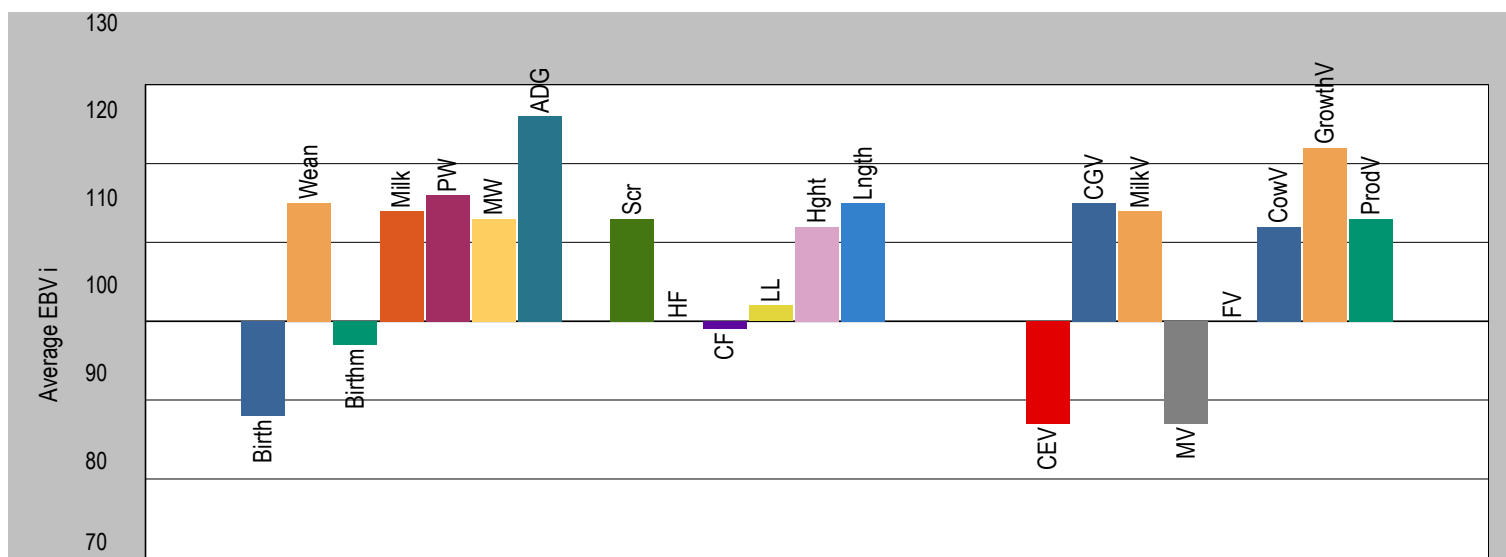
Larger groups result in more accurate and stable breeding values, as the mean and distribution of the group can be more accurately determined and are thus more representative. Groups should preferably have more than 5 animals. Weigh all the animals in the same group on the same day, as corrections for 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	RMV:	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	2.14	88	1.11
	Wean Weight	22.6	115	14.7
	Birth Mat.	0.05	97	-0.07
	Milk (Wn.Mat.)	5.0	114	0.7
Postwean Growth	Postwean Wt	35.7	116	23.1
	Mature Weight	31	113	19
	ADG	205	126	95
	FCR			
Fertility	Scrotal Circumf.	17.3	113	10.4
	Heifer Fertility	-3.6	100	-3.8
	Cow Fertility	-5.7	99	-5.8
	Longevity	34.5	102	33.0
Frame	Height	19	112	12
	Length	41	115	24
Carcass	Dressing%			
	RedMeatYield			
	Marbling			

Selection Value	Ave. Herd
Calving Ease	87
Calf Growth	115
Milk	114
Maintenance	87
Fertility	100
Cow Value	112
Growth Value	122
Production Value	113

- 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

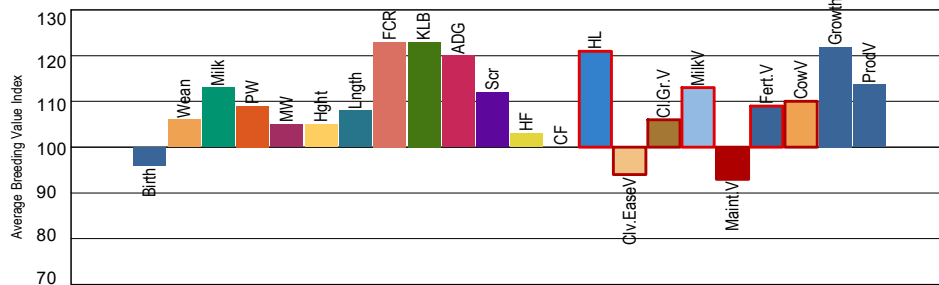
Total:

Selection possibilities

Bull calves

Bulls born in 2025

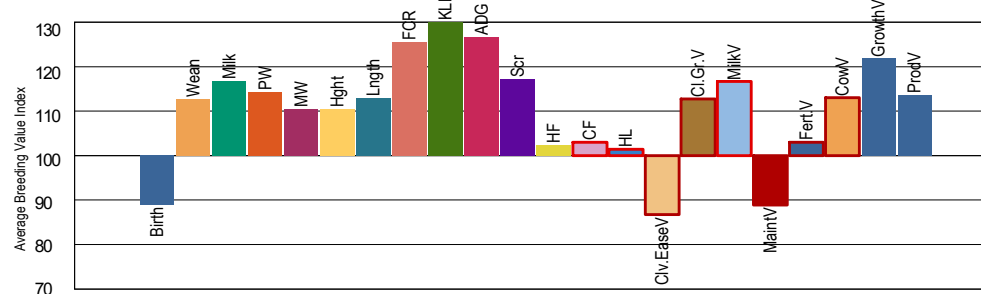
Total: 1



Heifer calves

Heifers born in 2025

Total: 7

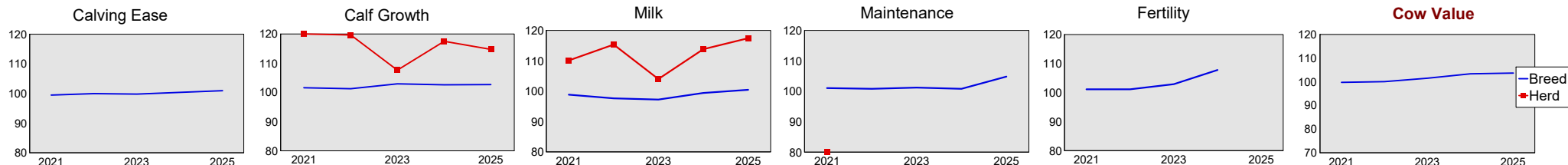


Summary of Cow Herd

			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	100	100	100	100	99	99	99	100	100	100
2018	2	★★★★☆	93	109	116	88	80	100	113	100	95	109	100	116	110	112	116	118	109	86	77	97	103	110
2020	2	★★★★☆	82	113	106	92	97	103	126	106	84	113	90	106	119	109	127	133	104	97	93	107	109	114
2021	2	★★★★★	90	128	122	77	107	131	132	132	82	128	105	122	124	127	133	130	128	103	111	100	126	126
2022	1	★★★★★	79	113	121	97	102	113	124	114	86	113	86	121	117	100	132	137	105	103	103	98	111	116
2024	3	★★★★☆	88	109	121	88	97	108	118	109	91	109	92	121	113	110	124	129	107	101	97	96	106	109
2025	7	★★★★★	87	113	117	89	103	113	122	114	89	113	96	117	114	110	127	130	117	102	103	101	110	113
Cows in Herd Average:			87	114	117	89	98	111	123	113	88	114	95	117	116	111	127	130	112	99	97	100	111	115

Genetic Trends for On-Farm Traits

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



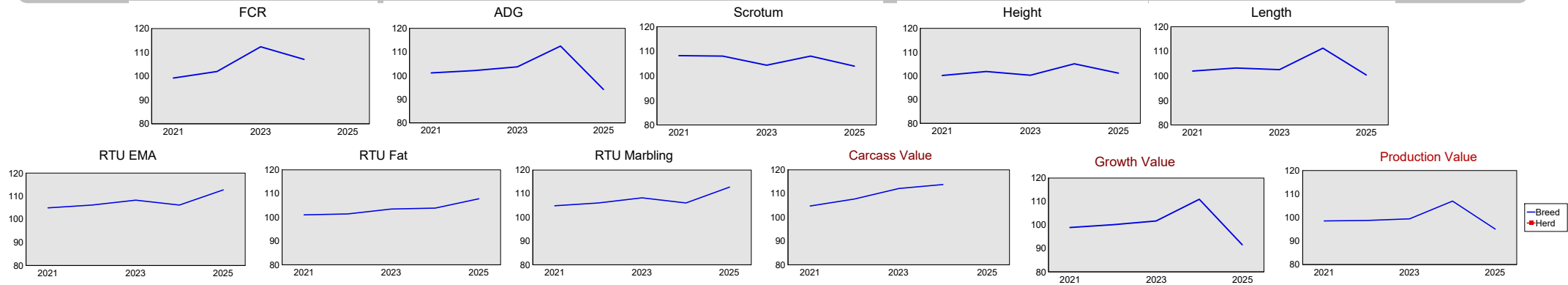
Herd

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance					Fertility						Cow Value	
	Birth Weight		Calv. Ease	Dir EBV	Mat EBV	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Postwean Weight		Mature Weight		Mainte- nance	Heifer Fert.		Cow Fert.		Longevity			Ferti- lity
	Number	EBV				Number	EBV		Number	EBV	Number	EBV	Number	EBV		Number	EBV	Number	EBV	Number	EBV		
2021						8	25.9	120	8	3.81	110		1	54	68				5	36.5			
2022						3	25.2	120	3	5.44	115												
2023						3	19.0	108	3	1.90	104												
2024						4	24.2	118	4	4.86	114												
2025						5	22.8	115	5	6.02	117												

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		Maine- 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
2016	2689	1.09	-0.07	100	1903	13.7	98	1903	-0.18	97	513	20.0	171	13	105	1226	-3.3	906	-4.7	5869	24.3	94	93
2017	2776	1.13	-0.09	100	2154	14.4	99	2154	-0.17	97	642	20.4	214	14	106	1179	-4.1	871	-4.8	5765	25.8	96	93
2018	2956	1.05	-0.07	101	2127	15.3	101	2127	-0.52	96	545	22.6	259	13	105	1243	-3.8	835	-5.5	6004	26.3	97	98
2019	3205	1.15	-0.07	100	2831	14.6	100	2831	-0.05	97	800	23.6	299	15	102	1189	-3.7	844	-5.7	5985	27.5	98	97
2020	3447	1.14	-0.10	100	3076	14.9	100	3076	0.03	98	695	23.9	286	17	102	1192	-3.4	704	-5.7	6060	28.1	99	97
2021	3337	1.21	-0.16	99	3401	15.6	102	3401	0.37	99	732	22.7	273	17	101	1071	-4.0	641	-6.0	5554	29.9	101	100
2022	3474	1.17	-0.14	100	3746	15.4	101	3746	0.01	98	748	23.3	226	18	101	854	-3.8	274	-6.5	2809	29.7	101	100
2023	3301	1.22	-0.18	100	3337	16.3	103	3337	-0.10	97	702	24.6	48	23	101	435	-2.9	15	-7.5			103	102
2024	3311	1.17	-0.16	100	3379	16.1	103	3379	0.56	99	667	25.1			101	21	-6.0					108	103
2025	3015	1.12	-0.13	101	1920	16.2	103	1920	0.86	100	441	17.5			105								104
2026	1509	1.01	-0.07	102	57	13.1	97	57	1.96	104													98

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			
2021																									
2022																									
2023																									
2024																									
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	EBV	EBVi			
2017	73	-23	102	285	93	100	299	9.4	98	288	11	99	285	24	100	202	0.47	96	-0.03	98	0.58	102	99	97	94
2018	47	-23	102	220	86	98	275	9.2	98	248	11	98	220	22	98	123	0.85	101	0.10	99	0.72	104	103	95	101
2019	55	-26	105	256	102	102	338	10.3	100	253	13	101	183	27	103	206	1.00	103	-0.39	95	0.48	101	102	99	96
2020	30	-25	104	229	95	100	292	10.6	100	170	14	103	138	32	107	206	0.67	99	0.29	101	0.82	105	103	98	100
2021	35	-19	99	271	100	101	299	14.8	108	278	12	100	271	27	102	196	1.02	103	0.33	101	0.82	105	105	99	99
2022	22	-22	102	198	104	102	198	14.7	108	198	13	102	198	28	103	83	1.38	107	0.38	101	0.92	106	108	100	99
2023	28	-34	112	154	111	104	154	12.8	104	154	12	100	154	27	103	99	1.43	108	0.64	103	1.10	108	112	102	99
2024	28	-28	107	96	148	112	95	14.8	108	135	15	105	135	37	111	104	1.50	109	0.70	104	0.92	106	114	111	107
2025				94	70	94	94	12.6	104	136	13	101	136	25	100	32	1.90	114	1.19	108	1.46	113		92	95
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.
FR 150090		SP 110076 FR 100039	75	105	121	97	104	103	126	105	84	105	75	121	114	100	136	138	100	105	105	97	103	109	126	56	87	127	133
GAFFEL			95	97	90	79	87	86	88	86	2.50	17.3	0.90	7.0	34.0	20	249	-64	10.2	-8.1	-6.8	31.2	14	34	2.89	-5.43	-0.65	7	28 53
FR 150093		SP 110076 FR 060197	85	113	114	87	76	99	125	102	93	113	79	114	126	113	133	116	103	80	78	94	112	124	149	44	86	93	85
GEVAARLIK			94	95	90	79	88	86	86	86	1.71	22.0	0.73	5.1	43.1	31	236	-39	11.8	12.1	-1.3	28.9	20	51	4.78	-6.96	-0.73	4	22 44
FR 200084		SP 160036 FR 110024	92	107	111	96	97	105	116	105	97	107	87	111	111	103	122	122	93	100	100	92	112	109	100	114	106		4
OSBORN			39	74	58	27	48	53	32	49	1.37	18.6	0.44	4.1	31.8	22	190	-46	6.6	-4.2	-5.8	27.3	19	34	0.77	2.01	0.88		
HH 170045		LL 120206 HH 130031	88	118	85	75	85	95	108	95	84	118	112	85	111	132	108	100	107	80	104	85	113	119	107	96	102	11	150
OUTPOST			93	97	93	91	92	88	90	88	2.53	24.3	-0.55	-3.8	32.0	50	129	-20	14.2	12.2	-6.7	23.0	20	45	1.37	-0.36	0.61		17 22
HH 210001		HH 170028 HH 170046	102	113	116	86	109	122	115	120	99	113	112	116	112	114	118	124	133	100	106	118	114	112	111	92	122		14
GUNNER			81	88	81	77	80	78	78	78	1.22	21.9	-0.54	5.5	32.3	33	170	-48	28.3	-3.8	-7.0	45.2	20	37	1.69	-0.84	2.21		
JH 140070		KVS 080229 JH 100097	103	107	149	75	66	108	97	104	98	107	121	149	105	126	102	94	90	80	58	95	106	117	132	89	103		18
1470			69	85	74	38	59	67	70	68	1.26	18.3	-0.87	15.7	26.9	44	104	-13	5.1	12.0	2.9	29.7	15	43	3.43	-1.15	0.63		7 21
JH 190022		SS 130048 JH 130085	87	112	100	84	127	114	125	116	86	112	107	100	110	118	127	127	131	120	133	99	113	119	135	94	76	7	85
1922			89	96	87	84	86	85	84	85	2.28	21.1	-0.33	0.7	30.7	36	211	-51	27.4	-19.7	-12.5	32.1	20	45	3.62	-0.54	-1.51		1 1
LL 150091		292796 LL 100255	89	113	101	91	95	105	133	109	81	113	119	101	111	109	128	115	123	87	112	92	119	110	96	82	103	1	39
LL150091			54	90	77	34	63	67	40	62	2.77	22.0	-0.81	1.0	31.5	28	213	-38	22.9	6.5	-8.1	27.3	24	36	0.43	-2.14	0.68		13 22
SP 090102		SP 060039 SP 070085	79	121	104	79	83	103	137	108	77	121	89	104	131	124	133	123	111	83	90	93	137	128	95	125	100	20	14
AVIATOR			80	84	70	39	64	69	61	67	3.06	26.4	0.37	2.1	47.3	42	237	-47	16.3	10.0	-3.7	28.1	35	55	0.36	3.40	0.41		3 5
SP 180045		20143156 SP 110048	87	136	134	69	138	148	133	147	90	136	95	134	134	135	138	139	149	141	129	103	121	129	116	148	137	81	75
JINERO			94	95	88	85	87	86	87	86	1.97	34.3	0.13	10.9	49.7	53	256	-65	37.2	-36.3	-11.7	35.0	25	56	2.09	6.31	3.46		10 14
SP 210076		JH 170074 HH 150041	84	129	113	77	121	133	137	135	80	129	103	113	135	126	140	129	120	115	116	113	136	131	107	128	112	44	33
SP210076			91	92	85	82	84	83	82	83	2.82	30.3	-0.18	4.7	50.5	44	264	-54	21.0	-16.0	-9.0	41.6	34	58	1.37	3.83	1.39		

Sires

Bull				Selection Values								Calf		Dam		Growth				Fertility				Frame		Carcass			Measured Progeny				
ID	Index EBV Acc	Sire ID	Dam ID	Calv.	Calf	Milk	Maint.	Fertility	Cow	Growth	Prod	Birth	Wean	Birth	Wean	Post wn	Mature	ADG	FCR	Scrotal	Heifer	Cow	Long-evi	Height	Length	EMA	Fat	Marbling	Birth	Wean			
				Ease	Grwth	Value	Value	Value	Value	Value	Value	Value	Dir	Dir	Mat.	Mat.	wt	weight					Fertility	Fertility	ty							Grwth	Dgt/Calvs.
				Value	Value																											Test	
VV 080131		JR 060013	VV 060097	87	116	87	105	86	100	93	96	83	116	111	87	110	94	99	88	69	79	98	97	97	113	110	89	87	106	87			
08 131				96	97	94	89	92	89	90	89	97	97	94	94	30.8	14	92	-6	-6.3	13.0	-5.5	31.0	10	38	1.59	-1.21	-0.65	6	19	70		

Breeding Values and Accuracies: Bulls

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

Inbreeding in red is high

Value <80 Value >120

Breeding values with an accuracy < 5% are not printed

Animal				Selection Values										Birth		Wean				Growth			Fertility				Frame		Carcass		
Index EBV Acc	ID Number Name	% Inbreeding	Sire ID Dam ID	Calv. Ease 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	
	HH 240004	1	HH 170045	88	134	92	70	110	126	122	125	128	85	114	139	134	92	110	127	125	116	124	105	113	103	129	131	117	106	110	
	97379614		SS 180185	82	86	83	80	81	78	79	78	79	2.42	-0.63	56	33.3	-1.8	78	44.1	200	-39	23.3	-7.7	-8.4	35.3	29	58	2.14	0.93	1.23	
	HH 240004												83	80	80	86	83	83	80	79	79	79	82	79	82	80	80	79	79	79	
	HH 240008		SP 210076	82	122	112	83	115	123	139	126	135	84	96	119	122	112	122	127	141	130	112	107	107	120	125	128	132	98	106	
	97960728		OLG 200008	82	85	81	79	79	77	78	77	79	2.46	0.10	37	26.8	4.3	107	44.3	268	-55	17.0	-9.7	-7.3	46.4	27	54	3.43	-0.01	0.94	
	JEFF												83	79	79	85	81	82	78	79	78	79	79	78	81	79	79	79	79	78	
1	HH 250005	1	HH 210001	94	106	113	93	109	110	117	110	115	96	97	105	106	113	113	109	120	123	112	103	100	121	105	108	117	86	108	
	6020186075		OLG 200008	44	68	46	30	32	47	30	44	27	1.47	0.07	24	17.9	4.6	87	30.0	183	-47	16.8	-6.1	-5.8	47.3	15	34	2.15	-1.65	1.11	
	KOLE												46	34	30	68	46	48	28	27	29	31	32	20	43	31	30	28	26	25	
1	HH 260002	1	VV 080131	85	118	95	94	88	102	111	102	112	82	105	106	118	95	109	118	114	105	92	85	94	97	108	116	111	99	94	
	6020186117		HH 200051	53	58	53	39	44	49	42	48	40	2.68	-0.25	25	24.4	-0.8	77	37.2	156	-26	6.1	8.1	-4.6	31.2	17	42	1.68	0.04	-0.06	
	LEADER												54	47	39	58	53	50	43	43	38	47	45	33	54	47	46	41	39	38	

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				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
HH 180028 291175875 DAKOTA	1	JH 140070 RS 140025		104 81	107 86	130 87	81 78	79 80	107 78	108 80	106 78	110 79	100 1.14 81	113 -0.56 79	119 37 78	107 18.4 86	130 9.8 87	122 108 84	102 24.8 79	109 133 79	104 -25 79	115 18.5 80	86 7.4 79	77 -1.2 78	95 29.8 82	103 14 80	108 33 80	117 2.18 79	80 -2.36 79	99 0.33 79
SP 180029 291156164 JINGO		FR 150093 SP 100100		82 51	110 72	101 69	95 18	80 47	92 55	117 44	94 53	109 36	89 2.10 54	87 0.44 41	104 23 18	110 20.0 72	101 0.9 69	107 72 53	117 36.0 36	123 195 42	112 -34 41	103 12.2 47	86 7.4 48	76 -1.0 31	99 32.5 63	103 14 48	111 36 46	119 2.30 37	66 -4.17 34	90 -0.35 33
HH 200051 291311033 FAWN	4	SP 090102 HH 150016		83 45	119 66	103 58	84 35	89 40	105 50	129 40	108 48	122 28	80 2.81 48	98 -0.01 35	118 37 35	119 25.1 66	103 1.6 58	112 84 53	127 43.6 32	129 221 41	120 -44 34	115 18.6 46	91 3.2 38	90 -3.8 26	98 31.5 57	120 24 47	120 46 45	112 1.77 29	108 1.28 27	101 0.54 26
OLG 200008 291279917 RAGEL	1	FR 150090 SS 150142		80 70	106 75	108 75	99 50	105 46	101 63	122 46	103 60	113 44	88 2.17 74	82 0.61 54	99 18 50	106 17.8 75	108 3.1 75	112 83 67	111 31.9 38	125 202 43	123 -47 45	92 6.2 48	103 -6.6 46	96 -5.0 31	115 43.3 60	98 11 49	107 32 47	125 2.80 45	79 -2.44 42	95 0.05 41
DT 210364 291350254 ANIKA		LL 150091 DT 170210		86 31	133 70	107 61	85 36	105 44	130 50	141 23	133 45	134 30	70 3.68 33	107 -0.34 25	117 35 36	133 32.7 70	107 2.9 61	129 124 56	129 45.7 36	139 260 35	125 -49 7	121 21.7 49	93 1.6 47	117 -9.3 27	100 33.0 58	137 34 40	131 58 38	120 2.43 32	97 -0.21 28	111 1.30 27
HH 210006 291363711 GRACE		SP 180045 HH 180028		93 50	122 73	137 66	68 52	108 38	132 56	123 40	131 53	131 35	93 1.70 54	103 -0.19 36	137 54 52	122 26.8 73	137 11.8 66	133 135 64	119 38.1 32	126 204 36	123 -47 40	134 29.1 42	112 -13.1 43	104 -6.7 22	99 32.1 49	115 21 43	121 47 41	119 2.36 37	114 2.01 33	119 1.95 32
OLG 220013 95455531 DONPEDRO	4	FR 150090 DJW 170005		79 69	113 70	121 58	97 24	102 44	113 56	124 44	114 54	119 42	86 2.35 73	86 0.46 53	100 19 24	113 22.0 70	121 7.2 58	130 126 51	117 35.9 39	132 231 43	131 -57 42	105 13.2 47	103 -5.9 45	103 -6.4 29	98 31.8 57	111 19 48	116 42 46	118 2.25 44	88 -1.34 41	98 0.23 40
HH 240006 97483150 JASMINE	1	FR 200084 HH 210006		97 31	108 65	126 45	86 30	103 32	116 43	113 26	114 40	115 22	100 1.12 33	94 0.18 24	113 32 30	108 19.2 65	126 8.5 45	123 109 47	110 31.1 23	118 170 24	119 -42 24	107 14.4 28	108 -10.2 34	101 -5.9 20	95 29.6 41	106 16 28	107 32 27	103 0.98 24	114 1.93 21	110 1.27 21
HH 240007 97960710 JENNY	1	FR 150090 HH 180028		88 53	106 71	125 58	89 26	92 42	104 53	115 46	105 52	109 42	92 1.80 55	94 0.17 44	109 28 26	106 17.7 71	125 8.4 58	122 107 52	108 29.3 39	121 185 43	121 -44 45	106 13.6 47	96 -0.3 45	91 -4.0 28	96 30.6 54	101 13 48	107 32 46	120 2.43 44	68 -3.91 41	93 -0.18 40
HH 240009 97960736 JANE	1	FR 150090 HH 200051		79 52	112 58	112 52	90 27	97 42	104 47	127 44	107 46	117 40	82 2.66 54	87 0.45 43	109 28 27	112 21.2 58	112 4.3 52	116 94 46	120 38.8 38	133 235 42	129 -54 43	107 14.4 47	98 -2.4 44	98 -5.3 28	98 31.4 54	111 19 48	114 40 46	119 2.33 41	82 -2.07 39	94 -0.05 38
HH 250001 98385552 KIARA	8	FR 150090 SP 180029		78 53	107 60	111 55	96 21	92 43	97 49	121 46	99 48	110 42	86 2.30 55	81 0.67 45	102 21 21	107 18.6 60	111 4.0 55	114 88 45	115 35.0 38	130 222 43	125 -50 44	101 11.2 47	96 -0.3 47	91 -3.9 29	98 31.8 54	103 14 48	110 35 46	122 2.59 43	61 -4.80 40	89 -0.50 39
HH 250002 99299448 KIM	1	JH 190022 OLG 220013		83 51	112 59	111 43	90 25	114 35	114 45	125 30	115 42	119 30	86 2.32 54	97 0.06 38	109 28 25	112 21.5 59	111 3.9 43	116 94 42	113 33.3 39	130 221 30	129 -54 28	118 20.3 44	111 -12.8 38	118 -9.4 21	98 31.9 46	112 19 34	117 43 32	126 2.93 31	91 -0.94 29	87 -0.64 28

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																													
HH 250003 99299455 KENDRA	1	FR 150090 RS 140025	90 58	102 62	121 58	96 26	95 44	102 51	121 48	104 50	110 44	95 1.55 60	89 0.34 48	102 21 26	102 15.8 62	121 7.0 58	118 98 49	104 26.2 40	126 205 45	128 -53 48	122 22.2 50	99 -3.4 46	94 -4.5 31	96 30.4 55	100 12 51	102 27 49	112 1.77 46	65 -4.31 43	87 -0.60 42
HH 250004 99299463 KRISTY	2	HH 210001 HH 210006	89 37	129 66	123 43	70 30	108 29	133 44	128 28	133 41	136 24	88 2.17 39	110 -0.45 28	134 52 30	129 30.4 66	123 7.7 43	130 126 46	124 41.9 26	131 227 24	129 -54 27	143 33.7 28	102 -5.5 31	108 -7.5 16	108 38.2 40	126 28 29	128 55 28	126 2.90 25	104 0.69 22	123 2.30 22
HH 250006 6020186083 KINSLEY	1	FR 150090 HH 180028	89 53	105 71	126 58	89 26	92 42	104 53	116 46	105 52	109 42	92 1.77 55	94 0.18 44	109 28 26	105 17.4 71	126 8.5 58	121 106 52	108 28.9 39	121 186 43	121 -44 45	106 13.8 47	96 -0.5 45	91 -3.9 28	97 31.1 54	102 13 48	107 32 46	120 2.45 44	68 -3.90 41	93 -0.18 40
HH 250007 6020186091 KAMILA		FR 150090 DT 210364	80 49	113 70	115 53	94 28	105 43	112 52	128 42	114 50	117 40	81 2.74 51	90 0.33 42	104 23 28	113 22.0 70	115 5.4 53	123 110 50	117 36.6 38	132 233 41	128 -53 40	105 13.3 48	101 -4.5 46	110 -7.8 28	100 32.8 54	114 20 46	114 39 45	118 2.23 42	76 -2.88 39	97 0.22 38
HH 250008 6020573744 KELLY	1	HH 210001 SS 180185	98 43	121 68	110 46	87 21	115 30	129 46	114 23	126 41	118 24	94 1.59 46	112 -0.55 33	113 32 21	121 26.2 68	110 3.8 46	122 107 45	119 37.7 26	117 169 21	119 -42 22	125 24.0 25	112 -13.5 31	109 -7.6 16	113 41.5 42	116 22 29	113 39 28	111 1.69 25	101 0.38 23	116 1.75 22

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	HH 240004 HH 240004	HH 170045	SS 180185	1.1	HH	0	0	0		8882	13486	9283	7080	11081	12678	12279	12578	
2	HH 240008 JEFF	SP 210076	OLG 200008	0.3	HH	0	0	0		8282	12285	11281	8379	11579	12377	13978	12677	

Selection List on Cow Value

Cows 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	DT 210364 ANIKA	LL 150091	DT 170210	0.3						86	31	133	70	107	61	85	36	105	44	130	50	141	23	133	45
2	HH 210006 GRACE	SP 180045	HH 180028	0.4						93	50	122	73	137	66	68	52	108	38	132	56	123	40	131	53
1	HH 240006 JASMINE	FR 200084	HH 210006	0.6						97	31	108	65	126	45	86	30	103	32	116	43	113	26	114	40
2	OLG 220013 DONPEDRO	FR 150090	DJW 170005	3.6						79	69	113	70	121	58	97	24	102	44	113	56	124	44	114	54
1	HH 180028 DAKOTA	JH 140070	RS 140025	1.3	HH	1	0	0		104	81	107	86	130	87	81	78	79	80	107	78	108	80	106	78
2	HH 200051 FAWN	SP 090102	HH 150016	3.5						83	45	119	66	103	58	84	35	89	40	105	50	129	40	108	48
3	HH 240007 JENNY	FR 150090	HH 180028	1.0						88	53	106	71	125	58	89	26	92	42	104	53	115	46	105	52
4	HH 240009 JANE	FR 150090	HH 200051	1.3						79	52	112	58	112	52	90	27	97	42	104	47	127	44	107	46
5	OLG 200008 RAGEL	FR 150090	SS 150142	0.7						80	70	106	75	108	75	99	50	105	46	101	63	122	46	103	60
1	SP 180029 JINGO	FR 150093	SP 100100	0.3						82	51	110	72	101	69	95	18	80	47	92	55	117	44	94	53

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	HH	250005	KOLE		HH 210001	OLG 200008	0.7						9444	10668	11346	9330	10932	11047	11730	11044	
													★★★★☆								
1	HH	260002	LEADER		VV 080131	HH 200051	0.4						8553	11858	9553	9439	8844	10249	11142	10248	

Selection List on Cow Value

Heifers 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	
									★★★★★										
1	HH 250004	KRISTY	HH 210001	HH 210006	2.1						8937	12966	12343	7030	10829	13344	12828	13341	
									★★★★★☆										
1	HH 250008	KELLY	HH 210001	SS 180185	1.1						9843	12168	11046	8721	11530	12946	11423	12641	
									★★★★★										
1	HH 250002	KIM	JH 190022	OLG 220013	0.7						8351	11259	11143	9025	11435	11445	12530	11542	
2	HH 250007	KAMILA	FR 150090	DT 210364	0.4						8049	11370	11553	9428	10543	11252	12842	11450	
									★★★★☆										
1	HH 250003	KENDRA	FR 150090	RS 140025	1.5						9058	10262	12158	9626	9544	10251	12148	10450	
2	HH 250006	KINSLEY	FR 150090	HH 180028	1.0						8953	10571	12658	8926	9242	10453	11646	10552	
									★★★★										
1	HH 250001	KIARA	FR 150090	SP 180029	7.7						7853	10760	11155	9621	9243	9749	12146	9948	

	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.

