

SUSSEX

BREEDING VALUE REPORT

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The brand you need

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.

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



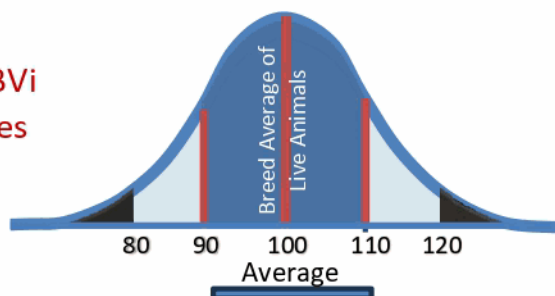
Select for more meat on the carcass as measured from end weight in Phase C and D Growth Tests and RTU scanning.

LOGIX Production Value

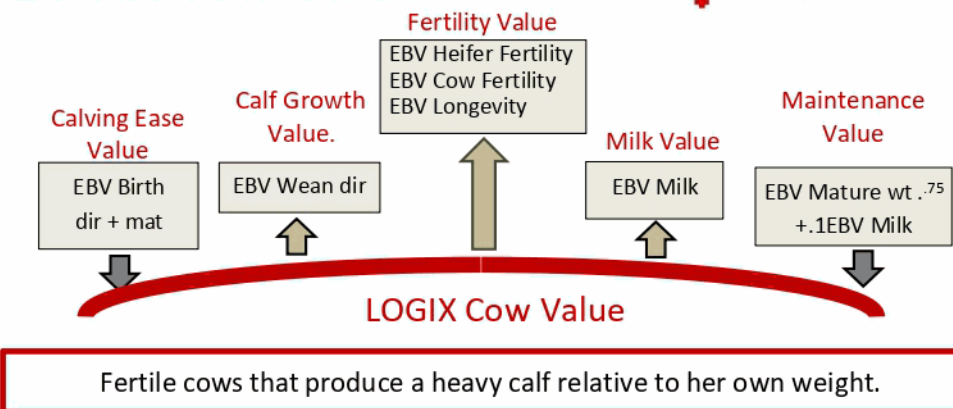


80% LOGIX Cow Value +
20% LOGIX Growth Value

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

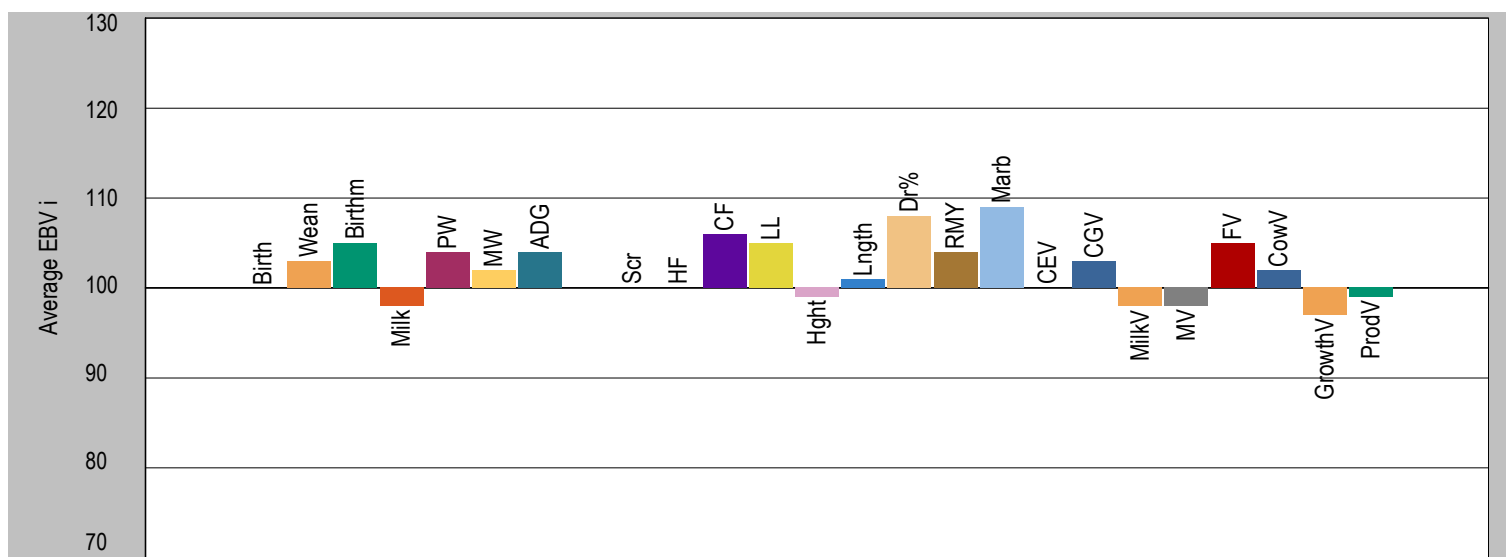
Larger groups result in more accurate and stable breeding values, as the mean and distribution of the group can be more accurately determined and are thus more representative. Groups should preferably have more than 5 animals. Weigh all the animals in the same group on the same day, as corrections for 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	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
Prewrite Growth	Birth Weight	1.12	100	1.09
	Wean Weight	17.0	103	15.4
	Birth Mat.	0.24	105	0.44
	Milk (Wn.Mat.)	5.6	98	6.2
Postwean Growth	Postwean Wt	33.1	104	29.9
	Mature Weight	28	102	26
	ADG	133	104	113
	FCR			-90
Fertility	Scrotal Circumf.	13.4	100	13.7
	Heifer Fertility	-1.3	100	-1.5
	Cow Fertility	-7.3	106	-5.8
	Longevity	28.4	105	24.9
Frame	Height	18	99	19
	Length	33	101	32
Carcass	Dressing%	0.13	108	-0.05
	RedMeatYield	1.6	104	0.4
	Marbling	0.11	109	-0.65

Selection Value	Ave. Herd
Calving Ease	100
Calf Growth	103
Milk	98
Maintenance	98
Fertility	105
Cow Value	102
Growth Value	97
Production Value	99

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

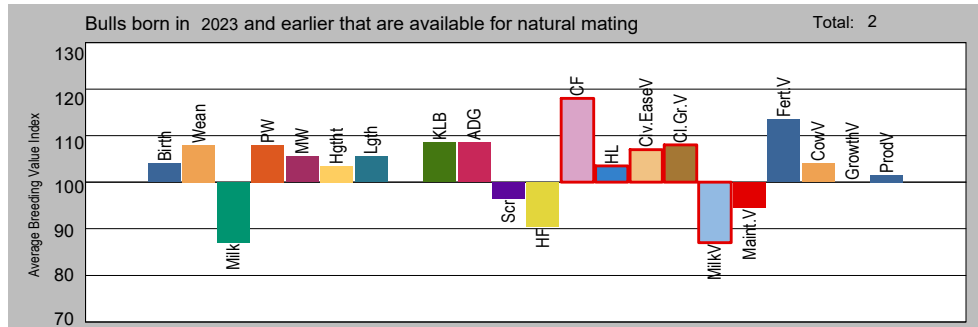
What does a sub-selection value above breed average (100) mean?:

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

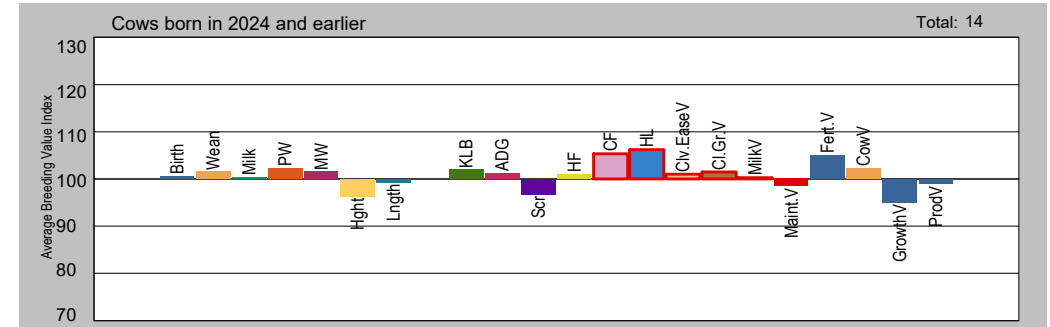
Genetic Windows

Animals available for breeding

Bulls on the farm

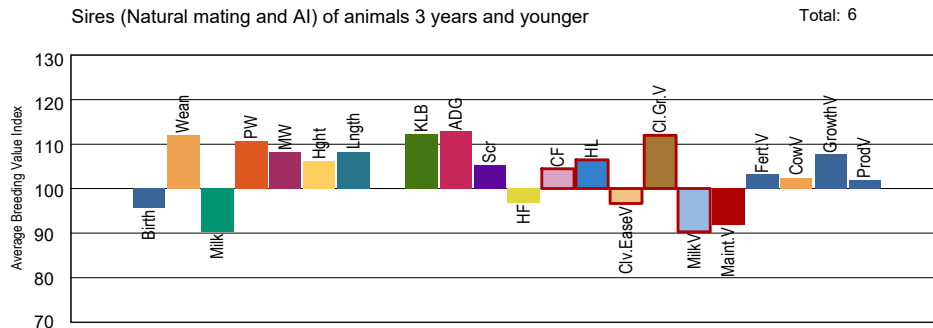


Cow Herd

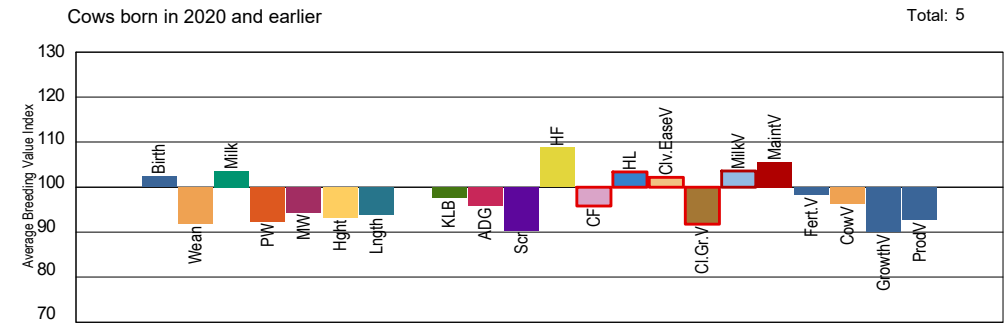


Results of previous selection decisions

Sires of young animals

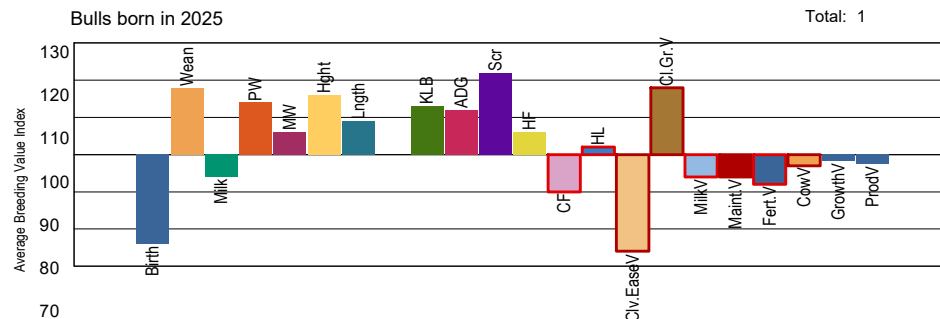


Cows older than 6 years

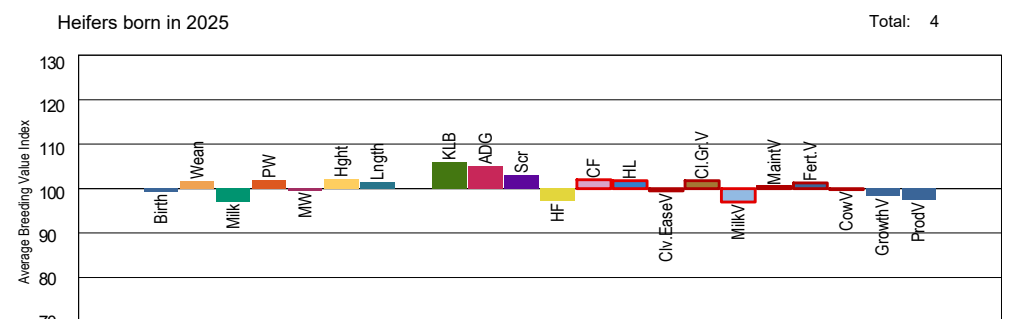


Selection possibilities

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	100	100	100	100	99	99	99	100	100	100
2015	2	★★★★☆	106	92	110	108	112	106	92	101	106	92	96	110	94	92	98	99	90	117	109	108	95	97
2016	1	★★★★☆	96	92	117	98	103	101	83	95	99	92	80	117	94	102	89	90	95	117	99	95	90	93
2017	1	★★★★	97	94	103	95	98	92	92	90	97	94	100	103	93	105	98	100	100	121	91	105	97	94
2020	1	★★	107	90	78	119	66	77	92	78	105	90	116	78	87	81	97	101	77	72	72	102	90	89
2023	4	★★★★☆	103	105	98	95	117	107	98	103	102	105	108	98	106	105	103	104	98	98	119	107	93	99
2024	5	★★★★☆	99	108	99	94	103	105	98	102	98	108	104	99	109	106	105	105	102	95	104	109	102	105
2025	4	★★★★☆	100	102	97	101	101	100	98	98	99	102	103	97	102	100	105	106	103	97	102	102	102	102
2026	2	★★★★★	105	107	96	96	109	110	113	110	103	107	112	96	108	104	110	111	104	101	109	107	100	103
Cows in Herd Average:			102	99	100	101	101	100	96	97	101	99	102	100	99	99	101	102	96	102	101	104	96	98

Genetic Trends for On-Farm Traits

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

Herd

Birth Year	Calving Ease				Calf Growth			Milk		Maintenance						Fertility						Cow Value
	Birth Weight		Dir EBV	Calv. Ease	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	Milk	Number	EBV	Number		EBV	Number	EBV	Number	EBV	Number		

Breed

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance					Fertility								Cow Value
	Birth Weight		Mat EBV	Calv. Ease	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Postwean Weight		Mature Weight		Maintenance	Heifer Fert.		Cow Fert.		Longevity		Ferti- lity			
	Number	Dir EBV			Number	EBV		Number	EBV	Number	EBV	Number	EBV		Number	EBV	Number	EBV	Number	EBV		Number	EBV	
2016	1955	1.03	0.37	101	1392	13.8	97	1392	4.56	95	1016	27.2	155	24	103	490	1.9	379	-4.2	1999	17.9	92	92	
2017	2176	1.04	0.42	101	1503	13.7	97	1503	4.83	95	1143	26.9	231	21	105	589	1.5	426	-4.4	2201	18.1	94	93	
2018	2151	1.03	0.34	101	1437	14.3	98	1437	4.35	94	1018	28.3	233	23	103	512	-0.1	390	-5.4	2143	17.4	97	93	
2019	2032	1.08	0.35	100	1356	14.5	98	1356	5.11	96	967	28.6	173	26	101	519	0.5	353	-5.2	2109	18.7	96	95	
2020	2209	1.13	0.42	100	1596	14.7	99	1596	5.13	96	1107	28.3	226	27	101	587	-0.5	403	-5.6	2251	18.7	98	95	
2021	2344	1.00	0.39	101	1733	15.1	99	1733	5.53	98	1384	29.5	220	25	101	696	-0.1	414	-5.4	2145	19.1	98	98	
2022	2141	1.10	0.38	100	1549	15.6	100	1549	5.68	98	1124	30.7	148	25	99	479	1.6	92	-5.9	898	19.9	98	98	
2023	2136	1.05	0.46	100	1634	15.5	100	1634	6.11	100	1211	29.9	17	26	100	237	0.4	3	-6.6			97	99	
2024	2177	1.09	0.46	100	1492	16.2	102	1491	6.17	100	992	31.7			99	22	-3.8					95	101	
2025	2001	0.91	0.46	102	1255	14.9	99	1255	5.87	99	218	32.9			100								99	99
2026	686	0.88	0.57	102	27	18.8	107	27	8.86	108													112	

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	4	-123	113	264	120	101	263	11.8	96	264	18	98	264	30	98	51	-0.06	102	1.13	107	-0.29	104	102	96	91
2018	3	-124	113	218	128	103	218	14.1	101	218	19	100	218	33	101	39	0.53	107	1.02	106	-0.27	104	107	98	92
2019	10	-124	113	147	137	104	147	13.5	100	147	20	102	147	35	102	28	0.60	108	1.85	113	-0.09	106	111	99	93
2020	7	-123	113	182	123	102	182	14.3	101	182	18	99	182	32	100	49	-0.11	102	0.85	105	-0.45	102	100	98	93
2021	3	-120	112	253	127	102	253	14.2	101	253	20	101	253	36	103	27	0.70	108	0.45	101	-0.28	104	111	99	96
2022				221	146	106	221	13.9	100	221	22	104	221	38	105	48	0.94	111	1.23	108	0.05	108	109	103	98
2023				241	133	104	241	13.2	99	241	19	100	241	34	102	94	-0.31	100	0.07	98	-0.43	103	99	100	95
2024				154	148	106	166	13.8	100	132	20	102	132	37	104								103	98	
2025																									
2026																									

Sires

Bull			Selection Values							Calf		Dam		Growth				Fertility				Frame		Carcass			Measured Progeny			
ID	Index	Sire 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.	
	EBV Acc																			Fertility										
Name	Dam ID																													
CN 120034	CN 090016 CN 060023		100	104	90	101	110	100	99	98	98	104	119	90	101	99	108		119	87	115	94	103	110	114	109	104	78	65	
VANGUARD 12034			95	94	88	45	68	74	43	68	1.32	17.6	-0.36	3.1	30.8	25	153		22.9	8.8	-9.4	20.9	21	45	1.39	1.37	-0.31	16	20 77	
JRE 120058	JRE 070087 JRE 060030		106	96	115	99	119	112	83	104	106	96	96	115	100	101	93		101	138	110	108	86	96	107	111	124	50	42	
GOLIATH 11TH			91	88	83	56	61	71	38	64	0.57	13.4	0.60	11.0	29.6	27	77		14.3	-32.3	-8.2	30.6	9	27	0.55	1.70	1.42		14 52	
JRE 180078	JRE 130173 JRE 130188		86	122	94	78	125	111	118	111	85	122	117	94	116	122	114		89	129	119	102	89	114	115	113	133	107	87	
COLOSSAL 37TH			92	92	70	40	50	63	43	59	2.43	26.6	-0.27	4.4	43.7	48	190		8.3	-25.3	-10.3	26.2	11	49	1.41	1.94	2.24	34	11 11	
JRE 210064	JRE 190066 JRE 170093		70	129	91	92	87	104	119	106	73	129	92	91	126	108	126		145	91	88	98	135	124	129	130	100	37	9	
GRANITE 2ND			86	76	47	26	28	44	36	42	3.54	29.8	0.80	3.6	52.5	34	252		35.5	6.0	-3.0	23.5	45	62	3.15	3.97	-0.66	1		
JRE 210093	JRE 190069 JRE 150075		103	114	95	97	83	107	110	106	102	114	110	95	115	103	116		103	81	87	120	128	122	110	130	92	30	23	
DUKE			83	81	49	26	28	46	33	43	0.93	22.2	0.00	4.6	43.0	29	200		15.0	13.8	-2.6	38.8	40	60	0.90	3.95	-1.33			
JRE 220060	JRE 190038 JRE 160021		116	96	89	97	92	94	107	95	114	96	112	89	97	103	113		117	93	93	112	100	94	96	134	86			
FIELD MARSHAL 4TH			73	72	51	25	30	44	34	42	-0.12	13.7	-0.07	2.8	27.2	29	181		22.0	3.9	-4.2	33.5	19	25	-0.85	4.43	-1.90			
JS 160002	CN 120034 TL 070001		113	101	84	93	121	99	95	97	109	101	125	84	101	107	103		91	88	127	103	88	95	109	109	107	125	92	
TREVOR			94	89	76	40	58	66	34	60	0.28	16.2	-0.63	1.4	31.2	33	129		9.2	8.5	-12.2	26.8	10	25	0.70	1.40	-0.09	9	13 20	
JS 170002	JS 120031 TL 060181		94	97	68	110	83	73	87	73	93	97	117	68	92	90	93		79	82	87	89	92	88	91	102	104	5	2	
JS 170002			75	65	61	31	41	49	20	43	1.75	14.1	-0.27	-3.7	23.1	16	78		3.5	12.9	-2.6	16.9	13	17	-1.40	0.55	-0.29		2 3	
JS 230026	JS 160002 JS 150039		92	110	89	94	111	100	97	97	91	110	113	89	109	106	105		87	99	113	104	97	101	109	124	116			
JS 230026			75	72	54	26	38	48	32	45	1.90	20.5	-0.10	2.9	37.2	32	140		7.4	-0.4	-8.8	27.8	17	33	0.72	3.29	0.77			
TZ 140017	GA 090097 TZ 050092		91	91	104	102	87	87	90	85	92	91	94	104	91	98	99	103		106	115	82	100	102	91	95	102	104	81	58
DIAMOND 55STE			93	91	80	35	58	66	51	63	1.78	11.2	0.69	7.4	21.8	23	108	-98		16.7	-13.6	-1.4	24.9	21	21	-0.97	0.51	-0.34	17	22 34

Breeding Values and Accuracies: Bulls

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

Inbreeding in red is high Value <80 Value >120 Breeding values with an accuracy < 5% are not printed

Animal			Selection Values									Birth		Wean				Growth			Fertility				Frame		Carcass					
Index EBV Acc	% Inbreeding	Sire ID Dam ID	Calv. Ease V	Calf Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Carcass Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	FCR	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	EMA	Fat	Marbling			
JS 160002 84401496 TREVOR	1	CN 120034 TL 070001	113 94	101 89	84 76	93 40	121 58	99 66	95 34	97 60	102 32	109 0.28 95	125 -0.63 80	107 33 40	101 16.2 89	84 1.4 76	87 45 68	101 31.2 75	103 129 62					91 9.2 68	88 8.5 69	127 -12.2 46	103 26.8 74	88 10 66	95 25 64	109 0.70 34	109 1.40 29	107 -0.09 28
JS 230015 95694881 JS 230015	2	JS 160002 JS 170025	101 74	115 71	90 54	96 27	106 37	109 47	105 32	106 44	113 46	99 1.18 76	115 -0.21 56	104 30 27	115 22.9 71	90 3.1 54	102 80 51	115 42.7 56	114 186 55					102 14.4 64	93 4.6 45	109 -7.9 29	104 27.8 49	119 33 65	116 53 62	129 3.15 49	118 2.49 43	104 -0.28 42
JS 250003 99963456 JS 250003	2	JRE 210064 CN 170028	74 70	118 54	94 44	94 19	92 24	97 35	105 23	97 33	110 10	76 3.25 72	96 0.61 44	106 32 19	118 24.2 54	94 4.4 44	107 90 39	114 41.9 41	112 179 40					122 24.5 46	106 -6.2 30	90 -3.3 18	102 26.0 37	116 31 46	109 43 44	112 1.09 13	114 2.05 8	103 -0.42 7

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																													
JS 150039 82328691 JS 150039	5	JRE 120058 JRE 120114	92 84	105 79	102 77	104 32	100 48	103 58	93 28	99 52	101 40	93 1.76 84	98 0.51 80	96 22 32	105 17.8 79	102 7.0 77	107 92 63	105 34.4 66	101 118 49	85 6.5 56	112 -11.3 58	97 -5.0 37	106 28.9 62	92 13 56	97 28 54	109 0.75 42	114 1.97 37	116 0.77 36	
JS 150061 82527342 JS 150061	5	JRE 120058 JRE 070033	119 83	78 79	118 80	112 43	124 48	108 61	90 25	102 54	93 31	118 -0.53 83	93 0.74 80	88 13 43	78 4.7 79	118 12.0 80	103 81 67	83 15.0 58	94 81 45	95 11.2 50	122 -19.5 59	120 -10.5 37	109 30.9 62	97 17 51	96 27 49	98 -0.55 33	107 1.10 29	114 0.56 28	
JS 160009 84401397 JS 160009	1	JRE 120058 JS 130036	96 82	92 73	117 67	98 29	103 44	101 53	83 21	95 47	90 27	99 1.22 82	80 1.27 77	102 28 29	92 11.3 73	117 11.7 67	106 89 56	94 24.5 56	89 58 38	95 11.1 42	117 -15.3 55	99 -5.5 34	95 21.1 58	90 11 43	93 24 41	98 -0.61 29	104 0.75 25	115 0.64 25	
CN 170028 85529196 GERTI 1728	3	TZ 140017 CN 090069	97 82	94 78	103 76	95 30	98 44	92 56	92 29	90 51	95 6	97 1.37 82	100 0.45 76	105 31 30	94 12.5 78	103 7.3 76	96 67 61	93 24.0 63	98 105 53	100 13.5 58	121 -18.4 48	91 -3.7 39	105 28.6 58	97 17 59	94 25 57	95 -0.96 10			
JS 200014 91236612 JS 200014	5	JS 170002 JS 140013	107 70	90 54	78 57	119 20	66 28	77 38	92 20	78 34	97 18	105 0.68 71	116 -0.23 61	81 7 20	90 10.5 54	78 -0.5 57	82 34 44	87 18.7 42	97 97 34	77 2.5 41	72 21.3 36	72 1.0 19	102 26.4 47	90 11 42	89 18 40	92 -1.31 22	113 1.85 15	107 -0.03 13	
JRE 230061 96571781 COLOSSAL'S ZENA 2ND	5	JRE 180078 JRE 180030	97 74	122 72	104 51	96 24	126 31	127 44	118 24	124 40	117 36	96 1.46 76	110 0.00 51	104 30 24	122 26.3 72	104 7.4 51	118 116 49	124 50.2 58	118 210 45	113 19.8 49	111 -10.7 43	125 -11.7 19	104 27.4 47	104 22 49	115 51 48	111 0.96 37	106 1.03 34	115 0.68 33	
JS 230020 95694931 VIGOREX VERITY 7TH	1	JS 160002 JS 150005	116 75	93 71	102 55	95 30	111 38	102 48	87 21	97 43	95 18	114 -0.13 76	108 0.08 57	105 31 30	93 11.8 71	102 6.8 55	94 61 52	95 25.5 53	96 93 37	91 9.3 41	91 5.6 46	115 -9.3 30	108 30.4 51	83 6 40	90 20 39	103 0.04 20	103 0.63 17	109 0.17 16	
JS 230021 95694949 JS 230021	1	JS 160002 JS 150061	113 74	99 71	101 55	97 29	124 37	109 48	97 21	105 43	103 20	111 0.12 76	111 -0.04 56	103 29 29	99 14.8 71	101 6.4 55	99 72 52	101 30.9 52	103 130 38	99 13.3 42	102 -3.0 45	126 -11.9 29	108 30.8 50	98 18 41	101 34 40	108 0.63 22	109 1.37 18	111 0.32 17	
JS 230025 95694980 JS 230025	1	JS 160002 JS 140053	84 75	107 72	86 55	92 25	105 36	88 47	90 20	86 42	96 8	85 2.47 76	103 0.33 57	108 34 25	107 18.9 72	86 1.8 55	92 56 51	103 32.7 55	95 87 36	88 7.9 40	89 7.5 44	109 -7.9 28	106 29.1 50	86 8 37	91 21 35	100 -0.35 11	104 0.76 5		
JRE 240027 98231624 DUKE'S VERITY	4	JRE 210093 JRE 170054	94 72	120 70	112 46	93 24	86 24	119 40	109 21	116 36	120 22	95 1.56 74	97 0.55 44	107 33 24	120 25.3 70	112 10.1 46	122 124 47	123 49.5 53	117 203 36	115 21.2 42	83 12.7 33	89 -3.2 15	117 36.7 40	129 41 43	126 65 41	110 0.87 24	120 2.81 20	95 -1.12 19	
JRE 240030 98233901 DUKES ACTRESS 2ND	2	JRE 210093 JRE 170118	93 72	121 70	98 46	94 22	93 26	113 41	108 21	111 37	117 23	94 1.67 74	99 0.46 45	106 32 22	121 25.9 70	98 5.7 46	112 103 46	124 50.6 53	114 187 36	107 17.2 42	95 2.7 35	93 -4.2 17	122 40.5 40	113 29 43	115 51 41	112 1.14 25	131 4.13 21	107 -0.08 21	
JS 240022 97628085 JS 240022	2	JS 160002 CN 170028	96 74	105 70	91 53	92 25	110 34	96 45	95 22	94 40	101 10	94 1.60 76	113 -0.12 55	108 34 25	105 17.8 70	91 3.3 53	94 61 49	103 32.1 49	103 128 39	98 12.8 43	103 -4.2 41	110 -8.1 28	103 27.2 48	95 15 43	97 28 41	104 0.10 12	104 0.82 7	106 -0.10 6	

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																													
JS 240032 97629844 JS 240032	1	JS 160002 JS 160009	105 74	96 58	101 51	95 25	112 36	100 43	89 20	96 38	96 18	104 0.69 76	103 0.32 56	105 31 25	96 13.5 58	101 6.6 51	96 67 45	97 27.6 46	96 93 36		93 10.2 40	102 -3.4 44	113 -8.8 28	102 26.1 48	89 11 39	94 24 38	103 0.05 20	106 1.08 16	111 0.28 15
JS 240051 97751044 JS 240051	1	JS 160002 JS 140040	105 75	99 60	91 55	97 27	113 38	97 45	87 23	93 41	95 24	104 0.76 76	109 0.07 57	103 28 27	99 14.9 60	91 3.5 55	92 56 47	100 29.9 49	96 90 41		98 12.8 46	94 3.1 47	116 -9.6 30	100 25.1 49	85 8 45	93 23 44	100 -0.37 25	102 0.49 22	109 0.14 22
JS 250004 99959025 JS 250004	1	JS 160002 JS 160009	99 73	100 58	99 51	95 25	112 36	100 43	89 20	96 38	96 18	99 1.20 74	103 0.31 56	105 31 25	100 15.4 58	99 5.9 51	98 70 45	100 29.9 46	96 93 36		93 10.2 40	102 -3.4 44	113 -8.8 28	99 23.9 47	89 11 39	94 24 38	103 0.05 20	106 1.08 16	111 0.28 15
JS 250005 99959033 JS 250005	1	JS 160002 JS 150061	116 73	89 59	102 55	103 29	123 37	104 45	92 21	99 40	98 20	114 -0.19 74	109 0.06 56	97 23 29	89 10.2 59	102 6.8 55	94 62 48	92 22.8 48	98 105 38		93 10.2 42	105 -5.5 45	123 -11.3 29	106 28.8 48	93 13 41	95 26 40	103 0.07 22	108 1.25 18	110 0.24 17
JS 250006 99978736 JS 250006	3	JRE 210064 JS 200014	91 68	108 46	86 37	106 15	77 17	91 28	106 20	92 26	111 12	91 1.87 71	104 0.29 38	94 20 15	108 19.3 46	86 1.8 37	97 69 33	105 34.6 34	112 175 35		111 19.0 41	81 13.7 25	80 -1.0 9	100 24.9 32	113 28 41	106 40 39	110 0.92 15	121 2.91 9	104 -0.34 7
JS 250007 99959041 JS 250007	2	JRE 210064 JS 150039	92 71	110 55	101 45	98 19	93 26	104 36	106 22	103 33	113 21	93 1.71 73	94 0.68 46	102 28 19	110 20.3 55	101 6.5 45	108 92 40	111 39.1 42	114 185 39		115 21.0 45	101 -2.6 34	92 -4.0 17	102 26.2 38	114 29 45	111 45 42	119 1.95 23	122 2.97 19	108 0.06 18
JS 260001 6020739444 JS 260001	17	JS 230026 JS 230021	103 51	105 47	95 30	96 5						101 1.01 52	112 -0.07 33	104 30 5	105 17.7 47	95 4.7 30	98 71 27	105 34.1 30	104 135 15		93 10.4 27	100 -1.7 16		106 29.3 21	98 17 27	101 33 23			
JS 260002 6020482284 JS 260002	2	JRE 220060 JRE 230061	106 51	109 49	96 35	96 14	109 18	110 28	113 20	110 26	114 26	105 0.67 52	111 -0.03 34	104 30 14	109 20.0 49	96 5.1 35	103 82 33	110 38.7 38	116 196 34		115 20.9 40	102 -3.4 26	109 -7.9 9	108 30.4 31	102 20 40	104 38 38	103 0.06 29	120 2.73 24	101 -0.61 23

Selection List on Cow Value

Bulls 2 years and older

ID Sorted on ID		Name	Sire ID	Dam ID	% Inbreeding	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	JS 230015	JS 230015	JS 160002	JS 170025	1.7	10174	11571	9054	9627	10637	10947	10532	10644	
						★★★★☆								
1	JS 160002	TREVOR	CN 120034	TL 070001	1.0	11394	10189	8476	9340	12158	9966	9534	9760	

Selection List on Cow Value

Cows 2 years and older

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	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	JRE 230061 COLOSSAL'S ZENA 2ND	JRE 180078	JRE 180030	4.6	97 74	122 72	104 51	96 24	126 31	127 44	118 24	124 40	
					★★★★★								
1	JRE 240027 DUKE'S VERITY	JRE 210093	JRE 170054	3.7	94 72	120 70	112 46	93 24	86 24	119 40	109 21	116 36	
2	JRE 240030 DUKES ACTRESS 2ND	JRE 210093	JRE 170118	2.4	93 72	121 70	98 46	94 22	93 26	113 41	108 21	111 37	
					★★★★								
1	JS 150039 JS 150039	JRE 120058	JRE 120114	4.9	92 84	105 79	102 77	104 32	100 48	103 58	93 28	99 52	
2	JS 150061 JS 150061	JRE 120058	JRE 070033	4.8	119 83	78 79	118 80	112 43	124 48	108 61	90 25	102 54	
3	JS 160009 JS 160009	JRE 120058	JS 130036	1.4	96 82	92 73	117 67	98 29	103 44	101 53	83 21	95 47	
4	JS 230020 VIGOREX VERITY 7TH	JS 160002	JS 150005	1.0	116 75	93 71	102 55	95 30	111 38	102 48	87 21	97 43	
5	JS 230021 JS 230021	JS 160002	JS 150061	0.9	113 74	99 71	101 55	97 29	124 37	109 48	97 21	105 43	
6	JS 240032 JS 240032	JS 160002	JS 160009	1.1	105 74	96 58	101 51	95 25	112 36	100 43	89 20	96 38	
					★★★★								
1	CN 170028 GERTI 1728	TZ 140017	CN 090069	2.8	97 82	94 78	103 76	95 30	98 44	92 56	92 29	90 51	
2	JS 240022 JS 240022	JS 160002	CN 170028	1.7	96 74	105 70	91 53	92 25	110 34	96 45	95 22	94 40	
3	JS 240051 JS 240051	JS 160002	JS 140040	1.0	105 75	99 60	91 55	97 27	113 38	97 45	87 23	93 41	
					★★★								
1	JS 230025 JS 230025	JS 160002	JS 140053	1.4	84 75	107 72	86 55	92 25	105 36	88 47	90 20	86 42	
					★★★								
1	JS 200014 JS 200014	JS 170002	JS 140013	5.4	107 70	90 54	78 57	119 20	66 28	77 38	92 20	78 34	

Selection List on Cow Value

Bull Calves younger than 2 years

ID Name Sorted on ID		Sire ID	Dam ID	% Inbreeding	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	JS 250003 JS 250003	JRE 210064	CN 170028	2.0	7470	11854	9444	9419	9224	9735	10523	9733	

Selection List on Cow Value
Heifers younger than 2 years

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	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	JS 260002	JS 260002	JRE 220060	JRE 230061	2.0	106 51	109 49	96 35	96 14	109 18	110 28	113 20	110 26
					★★★★								
1	JS 250004	JS 250004	JS 160002	JS 160009	1.1	99 73	100 58	99 51	95 25	112 36	100 43	89 20	96 38
2	JS 250005	JS 250005	JS 160002	JS 150061	0.9	116 73	89 59	102 55	103 29	123 37	104 45	92 21	99 40
3	JS 250007	JS 250007	JRE 210064	JS 150039	1.9	92 71	110 55	101 45	98 19	93 26	104 36	106 22	103 33
					★★★★☆								
1	JS 250006	JS 250006	JRE 210064	JS 200014	2.6	91 68	108 46	86 37	106 15	77 17	91 28	106 20	92 26

	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.

