

CHAROLAIS

GENOMIC BREEDING VALUE REPORT

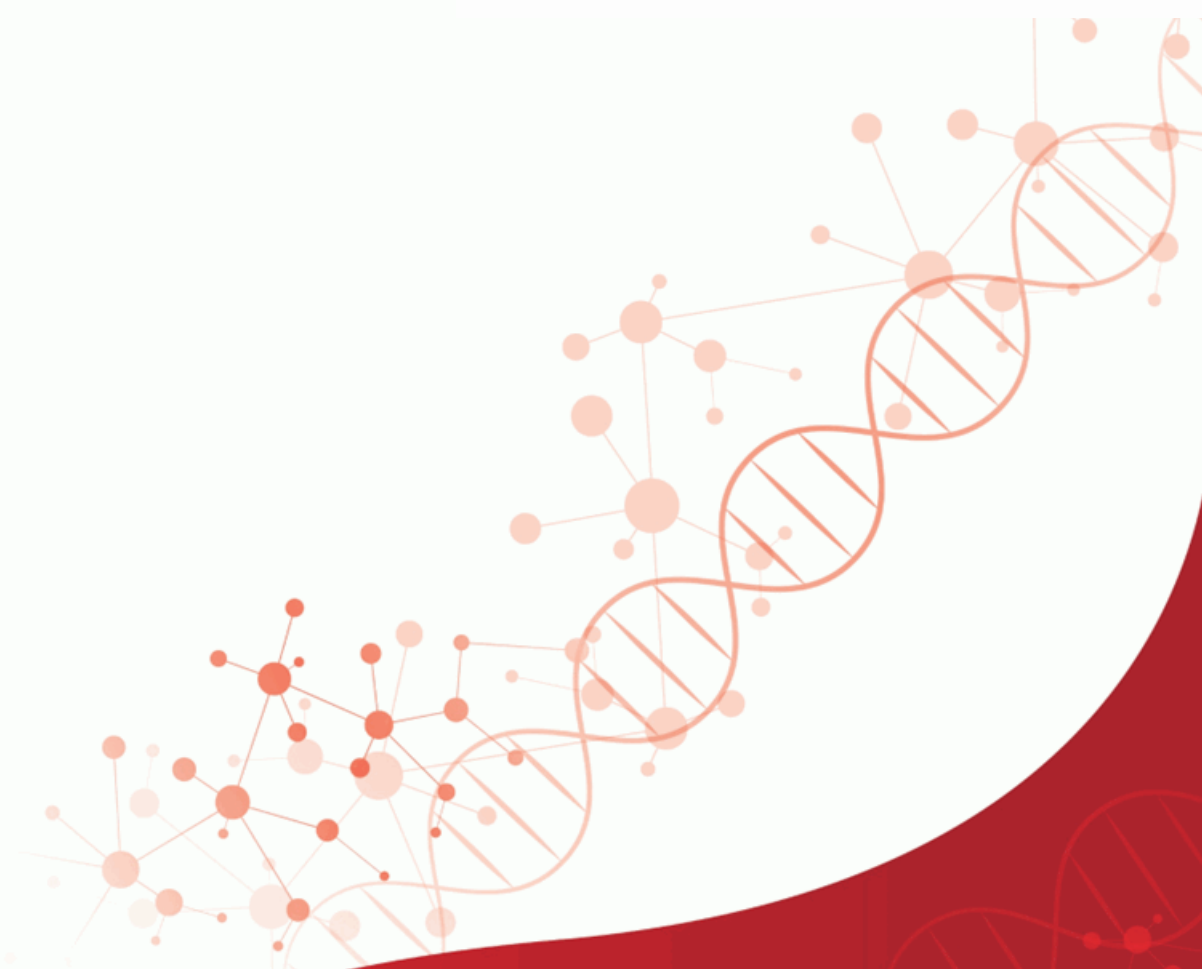
September 2026



LK BEEF RANCHERS

Herd Number: 729820

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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.

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



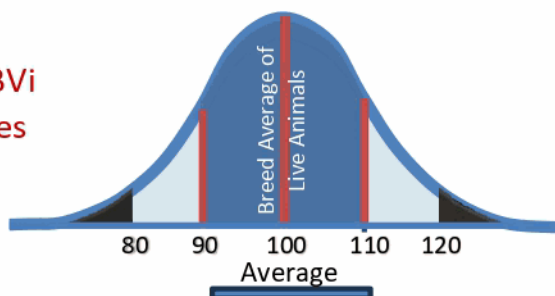
80% LOGIX Cow Value +
20% LOGIX Growth Value

LOGIX Carcass Value

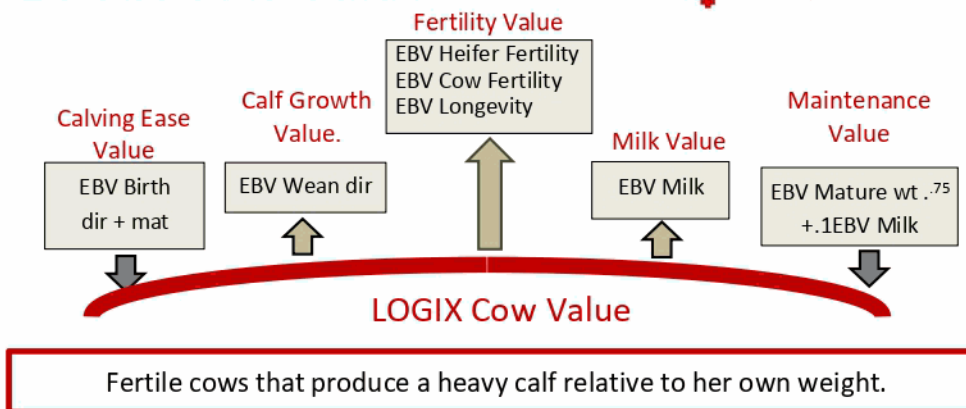


Select for more meat on the carcass as measured from end weight in Phase C and D Growth Tests and RTU scanning.

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

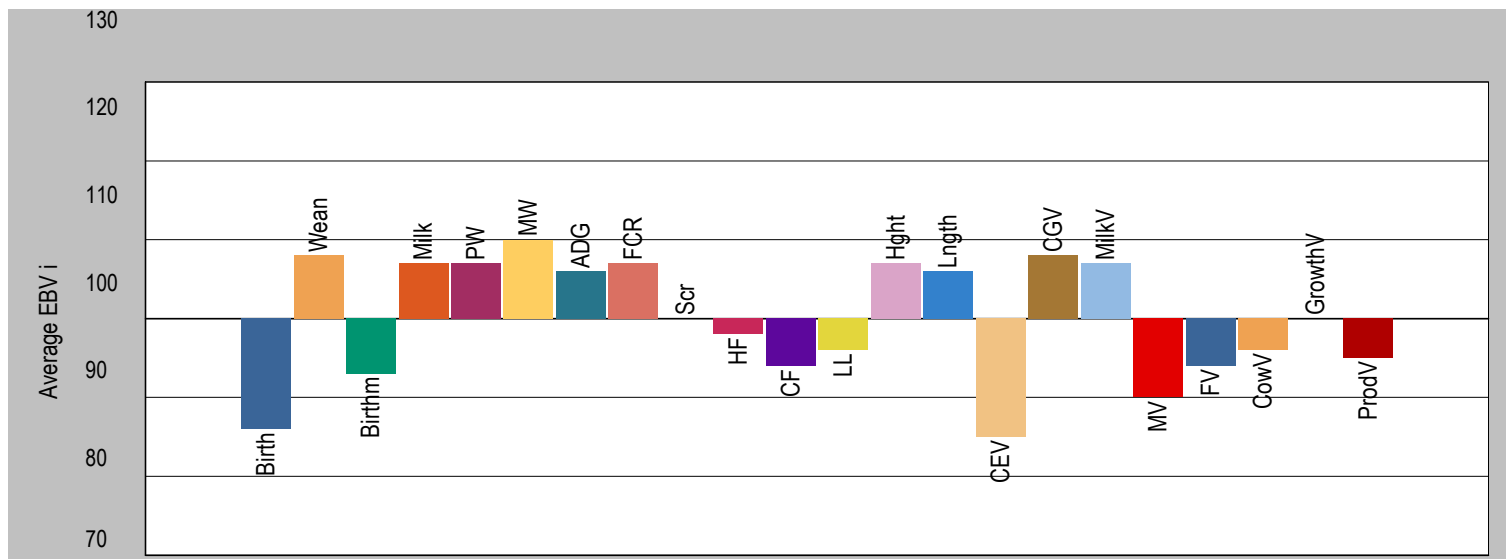
(HARSH ENVIRONMENT)

- 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

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	Lngh:	Length
ADG:	Average Daily Gain		
FCR:	Feed Conversion Ratio		

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	86	0.55
	Wean Weight	14.7	108	10.9
	Birth Mat.	0.15	93	-0.18
	Milk (Wn.Mat.)	3.2	107	0.9
Postwean Growth	Postwean Wt	23.2	107	18.2
	Mature Weight	23	110	13
	ADG	60	106	35
	FCR	-25	107	-19
Fertility	Scrotal Circumf.	6.1	100	6.1
	Heifer Fertility	3.1	98	1.7
	Cow Fertility	-1.0	94	-2.1
	Longevity	12.4	96	14.4
Frame	Height	8	107	3
	Length	16	106	9

Selection Value	Ave. Herd
Calving Ease	85
Calf Growth	108
Milk	107
Maintenance	90
Fertility	94
Cow Value	96
Growth Value	100
Production Value	95

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

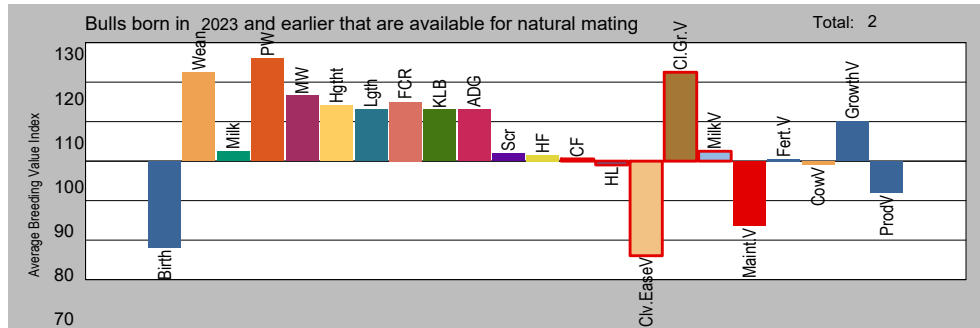
What does a sub-selection value above breed average (100) mean?:

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

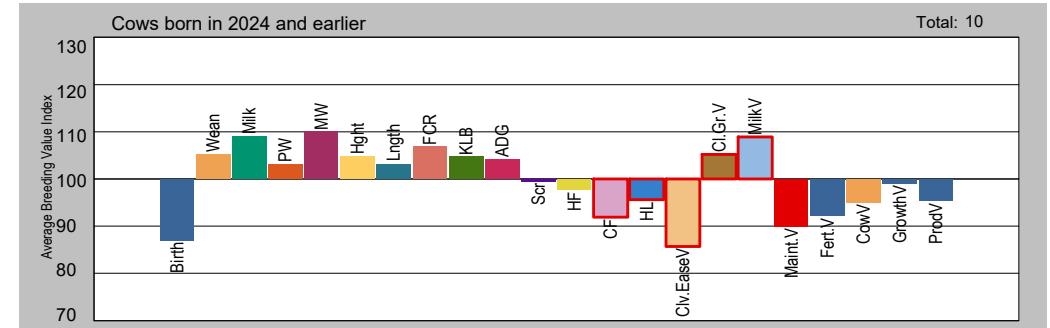
Genetic Windows

Animals available for breeding

Bulls on the farm

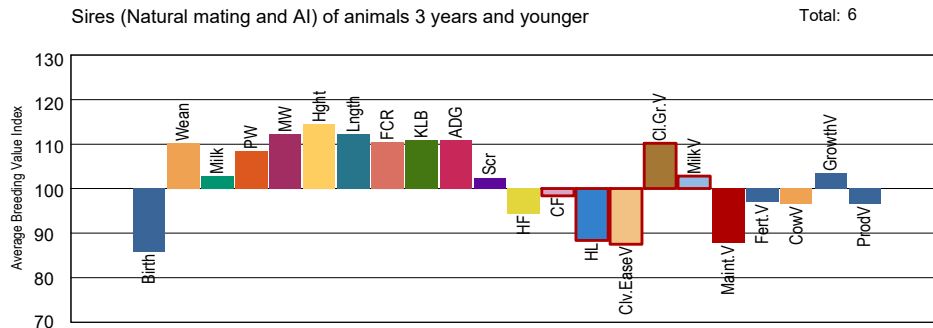


Cow Herd

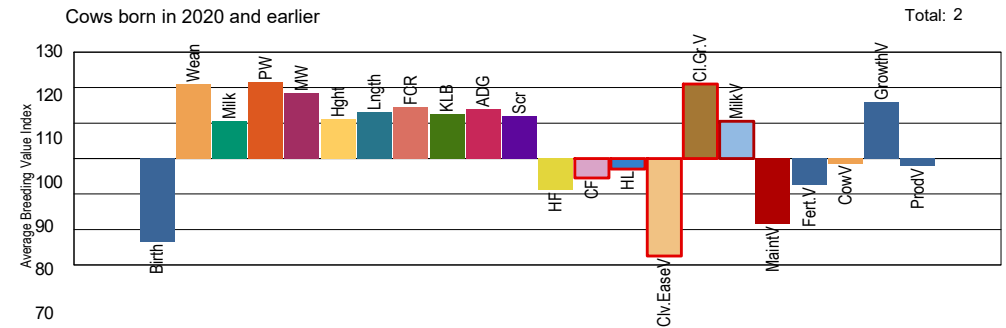


Results of previous selection decisions

Sires of young animals



Cows older than 6 years

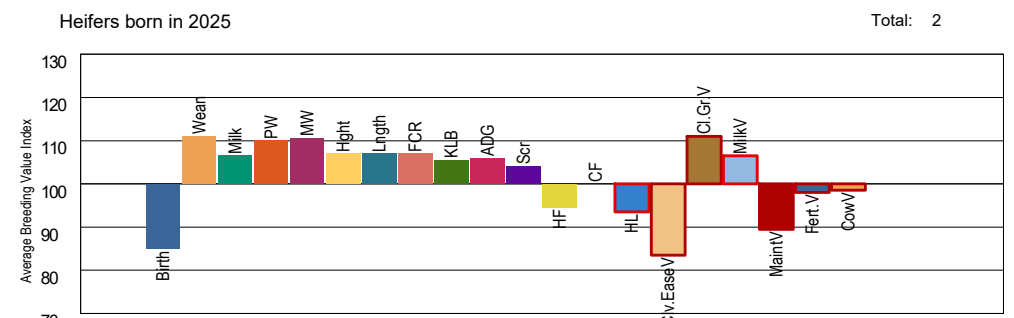


Selection possibilities

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	99	100	101	100	100	99	99	99	100	100	100	99
2020	2	★★★★	73	121	111	82	93	99	116	98	77	121	83	111	122	119	114	113	112	91	95	97	111	113
2021	3	★★★★	87	111	106	86	91	99	104	99	89	111	92	106	110	114	109	109	107	94	91	100	105	108
2022	2	★★★★	90	99	112	96	96	96	95	93	91	99	96	112	92	105	99	101	90	106	93	98	103	98
2023	2	★★★★	97	89	109	102	91	91	76	88	96	89	99	109	85	99	96	98	87	105	88	89	101	94
2024	1	★★★★☆	77	103	108	86	93	84			78	103	96	108	103	114	98	98	98	93	94	91	101	98
2025	2	★★★★	84	111	107	90	98	99			85	111	93	107	110	111	106	106	104	95	100	94	107	107
2026	1	★★★★☆	94	104	105	98	96	101	94	98	94	104	98	105	108	102	97	98	90	101	95	97	103	99
Cows in Herd Average:			86	105	108	91	94	96	97	95	87	105	94	108	104	109	103	103	98	98	94	95	104	102

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	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

Breed

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance					Fertility						Cow Value	
	Birth Weight		Calv. Ease	Weaning Weight	Calf Growth	Milk (Wn.Mat.)		Postwean Weight	Mature Weight	Maintenance	Heifer Fert.		Cow Fert.		Longevity		Fertility						
	Number	Dir EBV				Mat EBV	Number				EBV	Number	EBV	Number	EBV	Number		EBV	Number	EBV	Number		EBV
2016	1099	0.56	-0.08	100	863	7.7	93	863	0.18	98	663	13.6	137	5	104	240	1.0	197	-2.1	1108	9.4	99	93
2017	1299	0.62	-0.11	99	1029	8.2	94	1029	0.34	98	796	13.9	155	8	103	257	1.9	224	-1.7	1213	9.5	98	93
2018	1392	0.55	-0.12	100	1050	9.0	96	1050	-0.70	95	857	15.6	182	10	102	287	2.1	251	-1.4	1378	10.2	96	93
2019	1431	0.42	-0.16	101	1078	8.9	96	1078	0.16	98	821	15.3	174	9	103	276	1.5	227	-2.1	1375	10.9	99	96
2020	1636	0.46	-0.16	101	1150	8.9	96	1150	0.10	97	894	15.0	189	8	103	260	1.7	225	-2.3	1544	10.3	99	95
2021	1590	0.35	-0.15	102	1209	9.2	96	1209	0.56	99	928	17.0	162	10	101	216	1.7	164	-2.3	1390	10.0	99	98
2022	1585	0.53	-0.24	100	1189	10.1	98	1189	0.80	100	898	18.0	147	11	100	236	2.4	80	-2.8	497	7.7	100	99
2023	1641	0.37	-0.24	102	1310	9.7	97	1310	0.50	99	969	17.0	36	6	101	152	1.8					101	99
2024	1541	0.33	-0.17	102	1239	9.9	98	1239	0.50	99	896	18.5			100	1	1.0					104	99
2025	1470	0.57	-0.18	100	971	11.5	101	971	0.87	100	141	17.5			101								101
2026	517	0.43	-0.13	101	25	10.3	99	25	1.46	102													103

Genetic Trends for Growth Test Traits

Herd

Birth Year	Growth									Frame						Selection Values	
	FCR			ADG			Scrotal Circumf.			Height			Length			Growth Value	Prod Value
	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi		

Breed

Birth Year	Growth									Frame						Selection Values	
	FCR			ADG			Scrotal Circumf.			Height			Length			Growth Value	Prod Value
	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi		
2016				21	-26	84	21	-3.0	82	21	-9	85	21	-12	80	82	79
2017							3	-3.8	81								
2018				60	26	97	58	5.0	98	58	3	100	58	6	97	97	93
2019	15	-26	108	40	29	98	40	5.7	99	40	4	102	40	7	97	95	92
2020	15	-20	101	79	19	96	83	4.4	97	83	0	96	83	3	94	94	92
2021				52	84	113	52	10.2	108	52	9	108	52	21	111	111	107
2022				64	57	106	70	8.3	104	70	8	107	70	16	106	106	103
2023				85	45	103	88	9.3	106	88	4	102	88	13	103	102	100
2024				78	64	107	77	10.8	109	78	7	106	78	17	107	105	104
2025				21	111	120	21	20.0	127	21	17	120	21	41	129	121	125

Percentile Table for Bulls (based on live animals)

%	Calf weight			Growth & efficiency				Fertility				Frame	
	Birth weight	Weaning weight	Milk (WW.Mat.)	Post wean	Mature weight	ADG	Kleiber	Scrotal circum.	Heifer Fertility	Cow Fertility	Longevity	Height	Length
Mean	0.54	11.4	0.9	18.9	15	43	34	7.2	2.3	-2.1	14.1	4	12
Top	-5.29	30.5	14.2	48.9	57	212	116	28.5	-28.1	-9.7	33.0	36	56
1	-3.36	27.5	10.7	43.3	45	187	94	28.5	-16.3	-7.2	30.1	27	51
2	-2.72	25.8	9.4	39.7	41	158	82	24.7	-14.2	-6.5	27.8	24	44
3	-2.37	24.1	8.3	37.2	39	146	78	22.7	-13.4	-6.0	26.1	23	42
4	-2.10	23.0	7.4	35.9	37	137	75	21.2	-12.0	-5.8	24.7	21	40
5	-1.94	22.3	6.9	34.7	36	132	71	19.5	-10.9	-5.5	23.8	20	38
6	-1.78	21.6	6.5	33.6	35	127	69	18.6	-10.1	-5.4	23.3	19	36
7	-1.66	21.0	6.1	32.7	33	120	67	17.8	-9.5	-5.2	22.8	19	35
8	-1.55	20.5	5.9	32.1	32	116	65	16.7	-8.7	-5.1	22.4	18	34
9	-1.45	20.1	5.7	31.4	31	113	63	16.4	-8.0	-5.0	21.7	17	32
10	-1.29	19.8	5.4	30.7	30	110	62	15.9	-7.4	-4.9	21.4	16	31
20	-0.67	16.6	3.5	26.4	25	84	51	12.0	-3.8	-3.8	18.7	12	23
30	-0.22	14.6	2.5	22.9	20	67	44	9.8	-1.5	-3.2	16.8	9	19
40	0.14	12.6	1.6	20.3	17	53	39	8.1	0.4	-2.6	15.3	6	15
50	0.45	10.9	0.8	18.2	14	39	33	6.5	2.4	-2.0	13.9	3	11
60	0.79	9.4	0.0	16.3	11	28	27	5.0	4.2	-1.5	12.6	1	7
70	1.21	7.9	-0.9	14.2	8	15	23	3.5	6.2	-1.0	10.9	-2	4
80	1.72	6.2	-1.9	11.6	4	3	17	1.9	8.5	-0.3	9.0	-4	0
90	2.60	3.8	-3.3	8.0	-1	-15	7	-0.3	12.2	0.6	6.6	-8	-5
91	2.74	3.5	-3.5	7.5	-1	-18	6	-0.5	12.5	0.7	6.3	-9	-6
92	2.90	3.2	-3.7	6.8	-2	-21	4	-0.7	13.1	0.8	6.1	-9	-7
93	3.01	2.9	-4.1	6.3	-3	-23	3	-1.3	13.8	1.0	5.8	-10	-8
94	3.18	2.4	-4.4	5.6	-4	-26	1	-1.8	14.5	1.1	5.6	-10	-8
95	3.44	1.7	-4.8	5.1	-6	-32	-1	-2.2	15.2	1.3	5.3	-11	-9
96	3.63	0.8	-5.1	4.1	-7	-36	-5	-2.8	16.2	1.5	4.8	-12	-10
97	3.92	0.3	-5.6	3.3	-8	-43	-9	-3.4	17.6	1.8	4.2	-13	-12
98	4.18	-0.9	-6.1	2.0	-10	-54	-13	-4.6	18.5	2.2	3.4	-14	-14
99	4.76	-2.1	-6.9	-0.7	-14	-69	-20	-6.5	20.0	2.7	1.8	-18	-18
Bottom	5.79	-12.6	-9.3	-10.1	-26	-226	-102	-15.8	26.0	5.6	-3.7	-35	-48

Percentile Table for Cows (based on live animals)

%	Calf weight			Growth & efficiency				Fertility				Frame	
	Birth weight	Weaning weight	Milk (WW.Mat.)	Post wean	Mature weight	ADG	Kleiber	Scrotal circum.	Heifer Fertility	Cow Fertility	Longevity	Height	Length
Mean	0.56	10.7	0.9	17.9	12	31	30	5.5	1.4	-2.1	14.5	2	8
Top	-4.87	30.5	17.0	48.7	58	212	108	28.5	-38.3	-11.5	33.0	36	56
1	-3.07	25.4	12.0	39.0	45	152	83	24.8	-23.1	-8.4	30.7	23	43
2	-2.54	23.3	10.4	36.3	41	141	77	21.7	-19.2	-7.6	28.6	21	39
3	-2.18	22.3	9.4	34.4	38	133	73	19.8	-17.6	-7.1	27.0	20	35
4	-1.95	21.5	8.6	32.9	36	124	70	18.3	-16.2	-6.7	26.0	18	34
5	-1.78	20.7	7.9	32.1	34	115	66	17.1	-14.8	-6.5	25.3	18	32
6	-1.64	20.0	7.4	31.3	32	109	64	16.3	-13.8	-6.1	24.5	17	30
7	-1.53	19.5	7.0	30.7	31	104	62	15.6	-12.9	-6.0	23.9	16	29
8	-1.38	18.9	6.6	30.0	30	101	61	15.0	-12.2	-5.7	23.5	15	28
9	-1.27	18.6	6.3	29.5	29	98	59	14.4	-11.5	-5.5	22.9	15	27
10	-1.19	18.2	6.0	29.0	28	95	58	13.9	-10.8	-5.3	22.5	14	27
20	-0.49	15.8	4.0	25.1	22	73	48	10.4	-6.1	-4.1	19.6	10	20
30	-0.10	13.8	2.7	22.2	18	55	41	8.2	-3.1	-3.3	17.6	7	15
40	0.24	12.1	1.7	19.8	15	42	35	6.6	-0.7	-2.7	15.8	4	11
50	0.54	10.4	0.8	17.5	12	29	29	5.2	1.5	-2.1	14.3	2	8
60	0.86	9.0	-0.1	15.6	9	18	24	3.6	3.9	-1.5	12.9	0	4
70	1.21	7.4	-1.2	13.2	6	5	18	2.1	6.1	-0.8	11.4	-3	1
80	1.64	5.7	-2.4	10.8	2	-8	12	0.3	9.0	0.0	9.5	-6	-3
90	2.32	3.4	-4.2	7.5	-5	-29	2	-2.2	13.4	1.1	6.8	-10	-9
91	2.42	3.2	-4.4	6.9	-6	-31	1	-2.5	14.0	1.3	6.5	-10	-10
92	2.53	2.7	-4.7	6.3	-7	-34	0	-3.0	14.7	1.4	6.2	-11	-10
93	2.67	2.3	-5.0	5.9	-8	-38	-2	-3.4	15.6	1.6	5.8	-12	-11
94	2.82	1.8	-5.4	5.2	-9	-42	-4	-3.9	16.2	1.8	5.4	-13	-12
95	2.96	1.3	-5.8	4.3	-11	-47	-6	-4.4	17.3	2.1	5.0	-13	-14
96	3.12	0.8	-6.2	3.3	-13	-53	-9	-5.0	18.4	2.4	4.3	-14	-15
97	3.37	-0.2	-6.8	2.2	-16	-60	-12	-5.8	19.7	2.7	3.6	-16	-17
98	3.60	-1.2	-7.6	0.9	-19	-69	-17	-6.6	21.8	3.3	2.4	-18	-19
99	4.22	-2.6	-9.2	-1.4	-22	-82	-28	-8.5	24.5	4.3	0.1	-21	-23
Bottom	5.79	-11.0	-16.4	-13.2	-41	-137	-69	-18.3	33.3	9.8	-24.3	-32	-36

Sires

Bull			Selection Values								Calf		Dam		Growth				Fertility				Frame		Measured Progeny				
ID	Index EBV Acc	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	Birth	Wean	Dgt/Calvs.		Grwth Test
																											G _T	Dam ID	
5232801219		GS538973 5294075519	94	119	104	75	101	110	116	109	93	119	107	104	141	125	115	122	113	94	103	85	112	115	65	63	12	38	2
SNOOPY			95	94	84	38	58	68	51	65	1.37	19.6	-0.47	2.0	45.4	38	94	-37	12.6	6.0	-2.7	7.5	11	26					
											96	94	83	84	87	38	51	46	57	74	43	89	58	56					
8552394134		D1893102983 8596100049	101	98	109	99	97	104	97	101	98	98	124	109	96	101	103	100	97	96	98	82	113	106	159	116	20	71	10
PINAY			97	96	89	67	64	77	70	76	0.76	10.1	-1.26	3.7	15.9	13	49	-19	4.4	4.3	-1.7	6.1	12	16					
											98	96	88	89	90	67	69	63	75	79	50	94	76	74					
8894104162		7187110011 4580102372	80	111	124	90	94	105	105	103	78	111	118	124	103	110	111	132	86	106	91	83	122	106	105	64	13	38	15
JUMPER			96	94	84	54	60	72	56	69	3.03	16.1	-0.98	8.2	20.2	23	77	-45	-1.0	-2.2	-0.4	6.1	18	16					
											97	94	84	84	86	54	78	30	84	76	44	92	85	83					
98CHL		RVSCHL RR4 SCHL	96	88	103	90	90	84			95	88	106	103	75	110				89	92	82			9	4	2	8	
GIONO			71	56	49	32	22	38			1.10	5.3	-0.42	1.8	1.7	23				9.1	-0.5	5.9							
											74	56	44	49	43	32				26	18	40							
FR2101109 480		0395121015 2195101267	85	105	127	92	83	104			90	105	67	127	106	108	106	107	102	85	85	89	108	106	60	51	15	60	
SISTERON			94	93	85	42	59	69			1.65	13.3	1.31	9.0	22.0	21	57	-25	7.3	12.1	0.8	9.3	8	16					
											95	93	85	85	84	42	13	8	14	77	41	85	14	13					
FR7932491 006		RVS17 FR793249068 4	110	99	100						109	99	99	100	97							84			29	5			
			80	56	20						-0.48	10.5	-0.15	0.8	16.5							6.9							
											88	56	5	20	9							36							
MCS 170007		MCS 090064 MCS 120069	73	121	105	83	104	97	116	99	76	121	87	105	111	117	116	120	105	101	105	88	109	113	33	23	2	5	
JAMES BOND			93	91	83	77	78	82	76	81	3.29	20.5	0.39	2.5	25.7	30	98	-35	8.6	0.9	-3.0	8.8	9	24					
											94	91	83	83	72	77	77	76	77	80	77	87	77	77					
MCS 170134		MCS 120010 MCS 080080	61	129	116	76	91	99	114	100	65	129	63	116	146	124	117	116	117	91	92	74	118	118	47	34	4	7	
MCS 170134			92	91	70	24	44	57	22	50	4.54	24.5	1.47	5.8	48.7	37	103	-32	15.0	8.0	-0.7	2.0	16	29					
											94	91	69	70	72	24	28	16	29	55	34	75	29	29					
MCS 180030		MCS 120006 MCS 120043	89	118	110	81	89	109			94	118	63	110	104	119	114	114	108	101	87	92	118	118	6	2	1	2	
MCS 180030			81	76	62	15	35	47			1.24	19.5	1.46	4.0	21.1	32	89	-30	10.0	1.2	0.3	10.5	16	29					
											83	76	59	62	57	15	14	12	15	44	26	62	15	15					
MCS 200032		MCS 170007 MCS 110048	74	113	106	85	95	90	110	92	78	113	76	106	111	115	111	113	100	108	92	89	110	108	5	1			
MCS 200032			88	85	80	76	76	79	76	78	3.06	16.8	0.89	2.7	25.4	28	79	-29	6.3	-4.1	-0.6	9.0	10	18					
											89	85	80	80	61	76	76	76	76	77	76	81	76	76					
MCS 230031		RJC16 MCS 100096	78	132	99	82	106	108			78	132	104	99	141	118	115	117	104	95	109	109	118	118					
MCA RIVALDO 23-031			63	60	48	16	30	39			3.02	25.8	-0.36	0.5	45.7	31	95	-33	8.3	5.3	-3.7	18.5	15	29					
											64	60	50	48	52	16	19	15	21	40	20	49	21	20					

Sires

Bull				Selection Values						Calf		Dam		Growth				Fertility				Frame		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	Birth	Wean	Dgt/Calvs.	Grwth	
				Ease	Grwth	Value	Value	Value	Value	Value	Value	Dir	Dir	Mat.	Mat.	wt	weight					Fertility	Fertility	ty						
Name				Value	Value				Value	Value	Value																			Test
RJC16		RJC		66	131	100	83	97	97			57	131	97	100	131	117	115	112	109	84	101	84	117	117	53	37	2	2	
		RR4S3										5.40	25.5	-0.04	0.8	39.0	30	95	-29	10.5	13.1	-2.3	7.0	15	28					
MYLOVE				90	88	63	17	30	49			94	88	57	63	54	17	17	16	19	46	13	60	19	19					

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		
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	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
ID Number Name																									
MCS 200032 2  MCS 170007 90594094 MCS 110048 MCS 200032			74 88	113 85	106 80	85 76	95 76	90 79	110 76	92 78	78 3.06	76 0.89	115 28	113 16.8	106 2.7	109 48	111 25.4	111 79	113 -29	100 6.3	108 -4.1	92 -0.6	89 9.0	110 10	108 18
MCS 230031 RJC16 95832598 MCS 100096 MCA RIVALDO 23-031			78 63	132 60	99 48	82 16	106 30	108 39			78 3.02	104 -0.36	118 31	132 25.8	99 0.5	118 67	141 45.7	115 95	117 -33	104 8.3	95 5.3	109 -3.7	109 18.5	118 15	118 29
											89 76	80 80	76 85	80 80			61 76	76 76		76 77	76 76	81 81	76 76	76 76	
											64 50	50	16 16	60 60	48 48	41 41	52 52	19 19	15 15	21 21	40 40	20 20	49 49	21 21	20 20

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	
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	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	
ID Number Name																										
MCS 200053 91182022 MCS 200053	1	MCS 170134 MCS 120069	66 76	125 74	108 56	80 22	89 34	95 46	116 24	98 42	71 3.86 78	79 0.74 54	120 33 22	125 22.6 74	108 3.4 56	118 66 51	124 34.5 58	119 109 28	118 -33 20	116 14.5 29	85 12.3 43	93 -0.7 26	94 11.6 53	109 9 29	116 27 29	
MCS 200056 91182055 MCS 200056	4	MCS 170134 MCS 160053	79 77	117 72	113 60	83 16	96 38	102 47			82 2.65 79	86 0.46 63	117 30 16	117 18.9 72	113 5.0 60	117 65 49	119 31.2 56	109 71 19	111 -28 10	108 10.4 20	97 4.1 52	96 -1.3 25	100 14.6 54	113 12 20	110 21 20	
MCS 210003 91377754 MCS 210003	1	MCS 170134 MCS 170040	90 73	112 70	107 53	87 21	87 34	103 45	110 24	103 41	92 1.50 76	88 0.34 50	113 26 21	112 16.6 70	107 3.0 53	110 51 48	117 29.4 54	112 83 27	110 -28 19	112 12.2 28	90 9.0 42	88 0.2 26	92 10.4 51	103 5 28	109 19 28	
MCS 210016 91933473 MCS 210016	4	MCS 180030 MCS 170097	65 72	126 68	113 50	78 12	100 28	99 40			70 3.92 74	73 1.04 49	122 35 12	126 22.9 68	113 5.0 50	121 74 43	115 28.0 48	118 106 12	118 -34 9	114 13.2 13	98 3.1 37	100 -2.2 19	108 18.0 46	118 16 13	120 31 13	
MCS 210037 92641471 MCS 210037		5232801219 MCS 180051	107 75	94 71	99 55	92 21	85 42	96 48	98 28	95 44	104 0.07 77	115 -0.84 60	108 20 21	94 8.1 71	99 0.6 55	93 14 49	98 16.8 58	97 24 29	102 -21 25	94 3.1 32	93 6.7 58	86 0.6 26	99 14.0 56	95 -1 32	96 5 31	
MCS 220046 94150372 22 046	2	8894104162 MCS 180031	89 73	100 59	110 51	97 28	91 36	95 44	95 29	93 41	89 1.85 75	104 -0.33 53	103 16 28	100 10.9 59	110 4.0 51	107 44 46	91 11.9 51	98 28 39	111 -28 16	84 -2.3 43	111 -5.9 47	86 0.6 26	89 9.1 55	109 9 43	97 6 42	
MCS 220063 94784022 22 063	1	FR210110948 MCS 130046	91 75	97 73	113 61	94 25	100 38	96 49			92 1.43 77	88 0.35 59	106 19 25	97 9.6 73	113 4.7 61	106 42 53	93 13.6 60	100 37 17	105 -23 11	96 4.1 18	100 1.8 48	100 -2.1 27	106 17.4 55	97 1 18	99 8 17	
MCS 230050 96155676 23 050		8552394134 MCS 180033	111 74	74 71	111 57	115 35	85 40	92 51	76 35	88 48	111 -0.69 76	91 0.23 57	85 -2 35	74 -1.0 71	111 4.2 57	94 17 54	75 1.8 58	79 -47 35	81 -4 32	75 -6.6 38	107 -3.4 48	81 1.5 32	85 7.1 58	88 -6 39	79 -13 37	
MCS 230053 96215348 MCS 230053	8	MCS 200032 MCS 110069	82 73	104 52	107 49	88 16	96 27	89 36			81 2.67 76	107 -0.50 48	112 25 16	104 12.7 52	107 3.0 49	104 39 39	95 15.1 42	112 82 19	112 -28 14	98 5.2 20	103 -0.4 34	95 -1.1 20	92 10.6 45	114 13 20	108 18 20	
MCS 240034 97927842 GIONO		98CHL MCS 200056	77 69	103 46	108 39	86 15	93 22	84 31			78 3.02 72	96 -0.01 38	114 27 15	103 12.1 46	108 3.4 39	107 44 33	103 20.0 35	98 28 10	100 -19 5	98 5.2 10	93 6.6 29	94 -0.9 15	91 10.2 33	101 3 10	98 8 10	
LKB 250001 99314445 FIRSTY		FR793249100 MCS 220063	100 56	98 46	106 31	96 12	100 19	102 28			101 0.47 59	94 0.10 30	104 16 12	98 10.1 46	106 2.8 31	100 29 30	95 15.0 30	100 37 8	102 -21 6	99 5.4 9	99 2.5 24	101 -2.2 14	95 12.2 33	99 2 9	100 9 9	
LKB 250004 99890386 LKB 250004		RJC16 MCS 200056	67 59	124 57	107 38	83 12	96 24	95 33			69 4.02 61	91 0.21 42	117 30 12	124 22.2 57	107 2.9 38	117 66 36	125 35.1 40	112 83 13	112 -28 9	109 10.5 14	90 8.6 34	99 -1.8 14	92 10.8 40	115 14 14	114 24 14	

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	
Index EBV Acc	ID	Sire ID Dam ID	Calv. Ease V	Calv Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. 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
	LKB 260003	MCS 230031	94	104	105	98	96	101	94	98	94	98	102	104	105	106	108	97	100	90	101	95	97	103	99
	6020431992	MCS 230050	49	47	38	19	24	32	20	30	1.23	-0.06	15	12.9	2.4	43	23.8	24	-19	0.8	0.9	-1.1	12.8	5	8
	LKB26003										50	38	19	47	38	35	40	20	18	22	31	18	38	22	21

Selection List on Cow Value
Bulls 2 years and older

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	Horned / Polled	Myostatin				Genomic tested	Calving Ease Value		Calf Growth Value	Milk Value	Maint. Value	Fertility Value	Cow Value	Growth Value	Prod Value							
						Q204X	nt821	F94L	Acc		Acc	Acc	Acc	Acc	Acc	Acc										
											★★★★★															
1	MCS 230031	MCA RIVALDO 23-031	RJC16	MCS 100096	0.0						78	63	132	60	99	48	82	16	106	30	108	39				
											★★★★☆															
1	MCS 200032	MCS 200032	MCS 170007	MCS 110048	2.0	HH	1	0	0		74	88	113	85	106	80	85	76	95	76	90	79	110	76	92	78

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	MCS 200056	MCS 200056	MCS 170134	MCS 160053	3.5		79 77	117 72	113 60	83 16	96 38	102 47			
2	MCS 210003	MCS 210003	MCS 170134	MCS 170040	1.1		90 73	112 70	107 53	87 21	87 34	103 45	110 24	103 41	
1	MCS 200053	MCS 200053	MCS 170134	MCS 120069	0.5		66 76	125 74	108 56	80 22	89 34	95 46	116 24	98 42	
2	MCS 210016	MCS 210016	MCS 180030	MCS 170097	4.0		65 72	126 68	113 50	78 12	100 28	99 40			
3	MCS 210037	MCS 210037	5232801219	MCS 180051	0.0		107 75	94 71	99 55	92 21	85 42	96 48	98 28	95 44	
4	MCS 220046	22 046	8894104162	MCS 180031	1.6		89 73	100 59	110 51	97 28	91 36	95 44	95 29	93 41	
5	MCS 220063	22 063	FR2101109480	MCS 130046	0.8		91 75	97 73	113 61	94 25	100 38	96 49			
6	MCS 230050	23 050	8552394134	MCS 180033	0.0		111 74	74 71	111 57	115 35	85 40	92 51	76 35	88 48	
1	MCS 230053	MCS 230053	MCS 200032	MCS 110069	7.8		82 73	104 52	107 49	88 16	96 27	89 36			
2	MCS 240034	GIONO	98CHL	MCS 200056	0.0		77 69	103 46	108 39	86 15	93 22	84 31			

Selection List on Cow Value
Heifers younger than 2 years

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								
Sorted on ID							Q204X	nt821	F94L																	
											★★★★															
1	LKB 250001	FIRSTY	FR7932491006	MCS 220063	0.0						100	56	98	46	106	31	96	12	100	19	102	28				
2	LKB 260003	LKB26003	MCS 230031	MCS 230050	3.5						94	49	104	47	105	38	98	19	96	24	101	32	94	20	98	30
											★★★★☆															
1	LKB 250004	LKB 250004	RJC16	MCS 200056	0.0						67	59	124	57	107	38	83	12	96	24	95	33				

	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.

