

SANTA GERTRUDIS

GENOMIC BREEDING VALUE REPORT

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LOGIX



EBVs, EBVi's and GEBVs

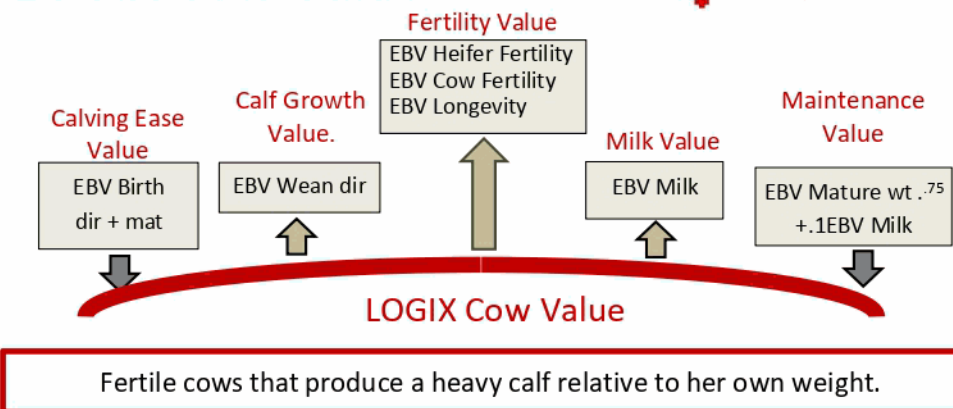
EBVi (Breeding Value Index): Genetic potential relative to the average (100) of the live (active) animals in the breed. Roughly 50% of the animals have values between 90 and 110. Values above 100, depending on the trait, tend to be in the more favourable direction.

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)

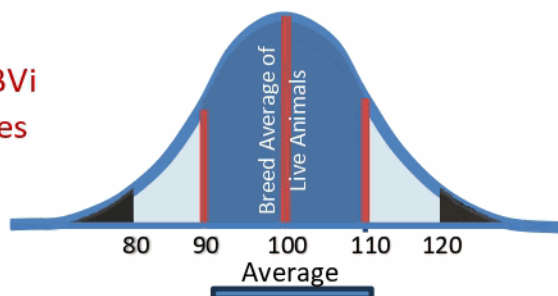
- WeanerCalf / Growth Value > 120
 - Cow Value and Fertility Value average to high
- Growers are usually heavier at birth (lower Calving Ease Value), and maturity (lower Maintenance Value).

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

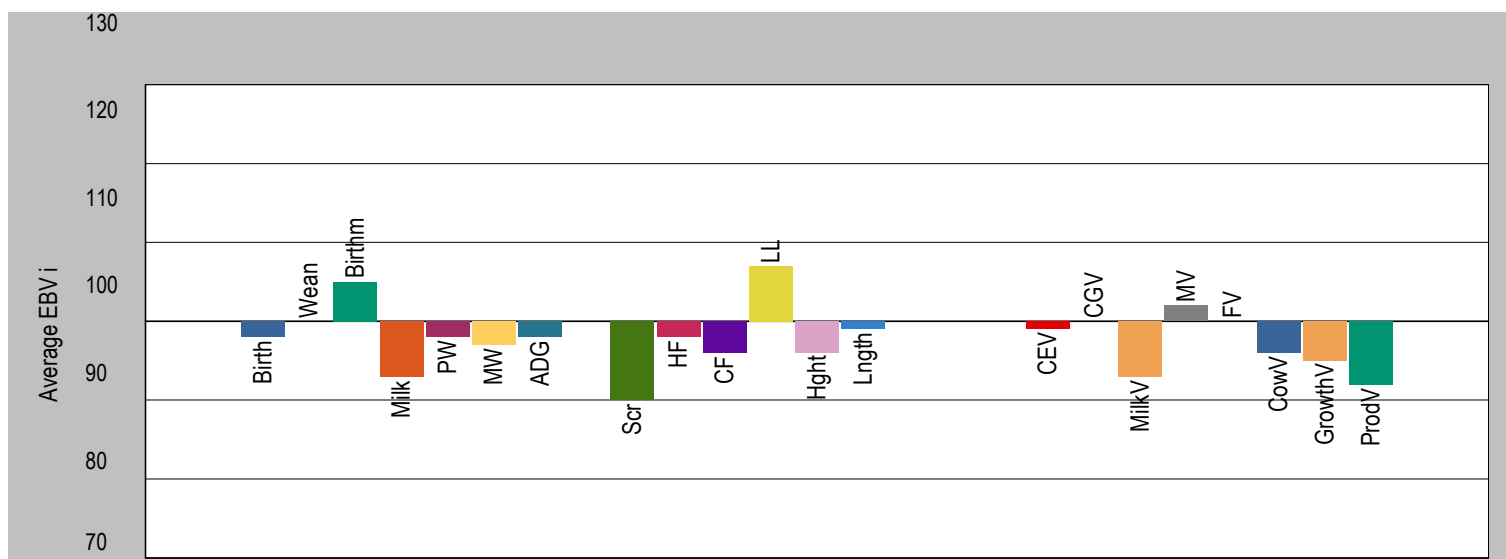
Larger groups result in more accurate and stable breeding values, as the mean and distribution of the group can be more accurately determined and are thus more representative. Groups should preferably have more than 5 animals. Weigh all the animals in the same group on the same day, as corrections for 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	Lnght:	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
Prewrite Growth	Birth Weight	1.28	98	1.11
	Wean Weight	14.6	100	14.7
	Birth Mat.	-0.26	105	-0.07
	Milk (Wn.Mat.)	-1.5	93	0.7
Postwean Growth	Postwean Wt	21.3	98	23.1
	Mature Weight	17	97	19
	ADG	88	98	95
	FCR			
Fertility	Scrotal Circumf.	5.2	90	10.4
	Heifer Fertility	-2.5	98	-3.8
	Cow Fertility	-5.0	96	-5.8
	Longevity	38.1	107	33.0
Frame	Height	10	96	12
	Length	23	99	24
Carcass	Dressing%			
	RedMeatYield			
	Marbling			

Selection Value	Ave. Herd
Calving Ease	99
Calf Growth	100
Milk	93
Maintenance	102
Fertility	100
Cow Value	96
Growth Value	95
Production Value	92

- 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

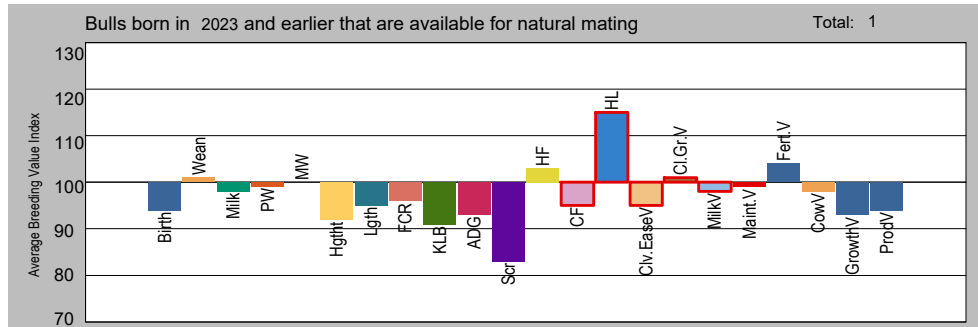
Milk: Cows with more milk and better mothering ability

Maintenance: Animals with low maintenance requirements (lower mature weight).

Fertility: Cows/daughters that calve

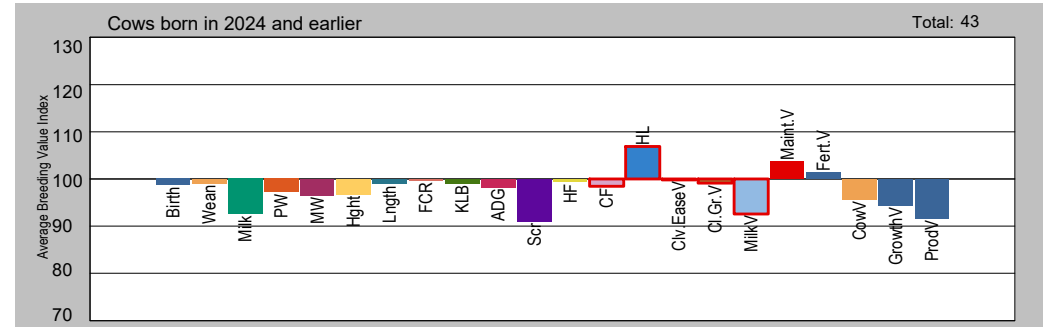
Genetic Windows

Bulls on the farm



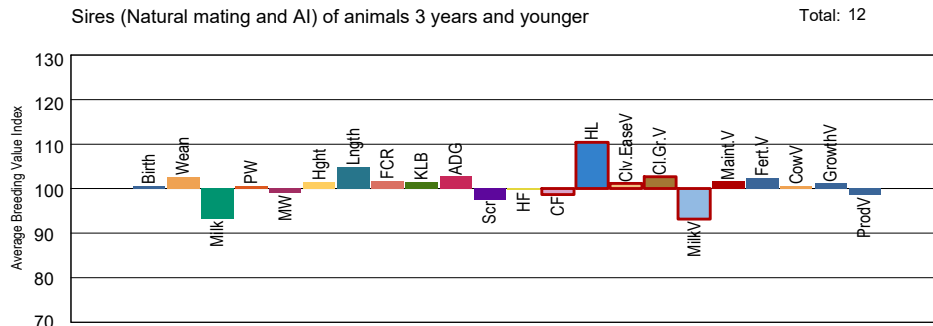
Animals available for breeding

Cow Herd

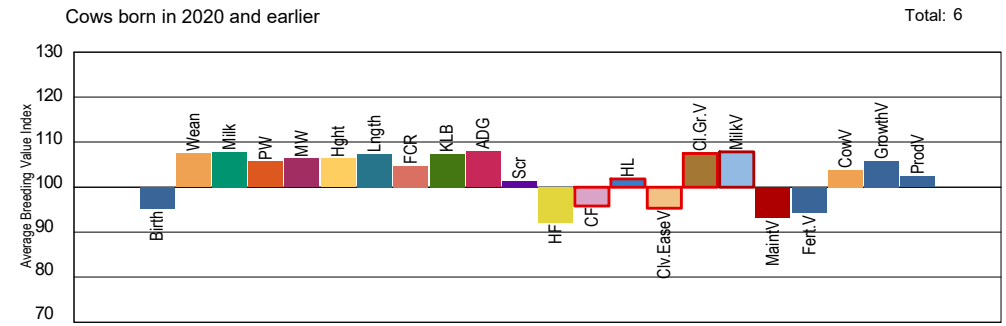


Results of previous selection decisions

Sires of young animals

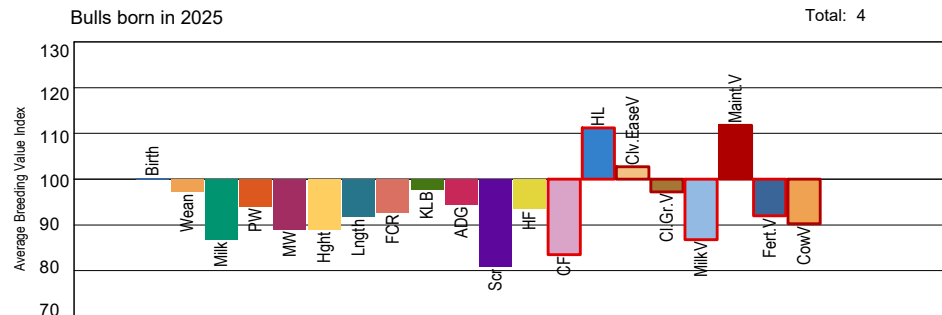


Cows older than 6 years

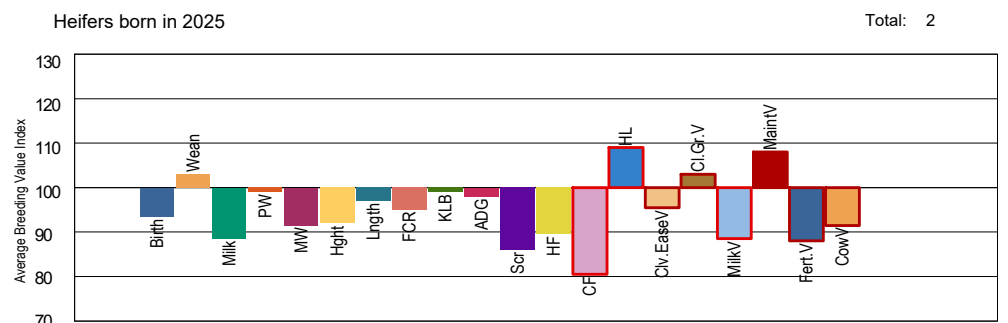


Selection possibilities

Bull calves



Heifer calves



Summary of Cow Herd

			Selection Values (SV)								Calf Weight		Dam		Growth & Efficiency				Fertility				Frame		
Birth Year	No. Cows	Average Cow Value	Calving Ease	Calf Grwth	Milk	Maint.	Fertility	Cow Value	Growth Value	Prod Value	Birth Weight	Wean Weight	Birth Mat.	Milk (Wn.Mat)	Postwn Weight	Mature Weight	ADG	Kleiber	Scrotal Circumf.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	
Cows in Breed Average:			100	100	100	101	100	100	99	99	100	100	100	100	100	100	99	99	99	99	100	100	100	99	99
2014	1	★★★★★	95	106	130	93	95	112	110	110	95	106	104	130	98	104	112	107	114	99	89	103	111	111	
2016	1	★★★★★	83	117	116	85	102	113	120	114	82	117	98	116	116	115	117	114	116	86	114	107	118	119	
2017	1	★★★★★	114	119	122	79	112	136	120	134	112	119	104	122	123	123	125	124	92	100	124	101	136	124	
2018	2	★★	100	94	86	102	82	78	94	77	101	94	98	86	92	98	97	103	91	89	75	100	85	91	
2020	1	★★★★☆	81	116	107	98	94	107	97	103	81	116	94	107	114	101	100	94	104	90	99	100	104	109	
2021	2	★★★★☆	86	110	96	94	100	101	101	98	84	110	108	96	107	107	104	105	88	106	91	103	101	104	
2022	3	★★★★	106	96	85	119	96	93	90	93	107	96	95	85	95	82	93	98	85	91	96	108	81	86	
2023	28	★★★★	100	97	89	105	104	94	89	86	99	97	107	89	95	95	96	96	90	102	100	108	96	98	
2024	4	★★★★	108	97	97	105	98	98	107	102	107	97	102	97	96	94	101	104	91	96	96	107	95	98	
2025	2	★★★★	96	103	89	108	88	92			94	103	110	89	99	92	98	99	86	90	81	109	92	97	
Cows in Herd Average:			97	106	102	99	97	102	103	102	96	106	102	102	104	101	104	104	96	95	97	105	102	104	

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		Mat EBV	Calv. Ease	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Postwean Weight		Mature Weight		Mainte- nance	Heifer Fert.		Cow Fert.		Longevity		Ferti- lity	
	Number	Dir EBV			Number	EBV		Number	EBV	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		Mainte-nance	Heifer Fert.		Cow Fert.		Longevity			Ferti-lity	
	Number	Dir EBV			Number	EBV		Number	EBV	Number	EBV	Number	EBV		Number	EBV	Number	EBV	Number	EBV			Number
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			

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.	
AJ 150020		KTZ 100026	AJ 090031	117	77	83	128	116	86	74	79	111	77	114	83	73	78	85	91	79	110	113	112	87	85	79	109	96	103	49	
150020				91	89	65	7	66	71	37	64	0.14	2.0	-0.63	-4.5	2.1	-2	30	-10	-1.0	-12.0	-8.5	40.9	4	8	-0.92	1.35	0.06	6	7	
AJ 170038		DJW 080079	AJ 130037	93	106	91	92	99	96	99	94	92	106	130	91	102	109	99	105	90	99	91	111	96	104	112	90	102	36	15	
AJ17-0038				84	77	56	16	60	64	30	57	1.76	17.7	-1.24	-1.9	24.4	28	90	-26	5.2	-3.0	-3.9	40.3	9	28	1.73	-1.14	0.56			
				89	77	65	16	60	65	56	31	16	65	56	31	16	36	18	42	68	37	75	24	23	18	17	17				
AJ 190083		LL 140216	AJ 140040	101	98	93	102	112	100			102	98	99	93	102	97	102	100	100	123	91	111	100	102	99	105	100	22	4	
AJ19-0083				78	71	47	12	48	57			0.95	13.4	-0.04	-1.4	24.8	16	102	-20	10.4	-22.4	-3.9	40.6	12	27	0.72	0.85	0.41			
				78	71	47	12	48	86	71	21	12	48	47	21	12	23	10	26	52	26	66	25	24	11	12	9				
AJ 190088		LL 140216	AJ 140030	111	96	88	99	100	95			107	96	113	88	97	100	97	100	87	106	88	108	94	99	98	101	102	17	4	
AJ19-0088				78	71	48	12	47	57			0.54	12.7	-0.56	-2.9	20.5	20	81	-19	3.2	-8.8	-3.3	38.4	9	23	0.63	0.38	0.56			
				78	71	48	12	47	85	71	22	12	48	48	22	12	22	11	25	49	27	65	19	19	12	12	11				
AJ 200025		KVS 160203	AJ 120027	92	109	86	91	111	102	101	99	93	109	86	103	110	103	106	94	104	109	113	107	108	113	93	101	10			
AJ20-0025				75	52	39	12	46	48	20	42	1.76	19.4	-0.16	-3.5	25.8	29	106	-26	7.0	-6.7	-7.6	41.6	16	33	1.86	-0.76	0.51	10		
				75	52	39	12	46	81	52	22	12	49	39	22	12	23	14	26	50	27	61	20	20	12	11	10				
BR 140016		RH 070008	LL 060049	86	76	137	82	72	66	99	67	82	76	108	137	59	116	101	80	82	82	71	91	87	98	88	52	132	72	129	
ACE				95	97	93	86	89	88	87	88	2.69	1.4	-0.36	11.8	-8.5	35	100	3	0.8	10.4	0.2	26.9	4	22	-0.25	-5.92	2.99	5	41	82
				96	97	93	86	89	96	97	91	86	92	93	91	86	87	86	88	89	85	94	89	88	87	86	86				
BR 170021		VV 130073	RH 110028	83	108	106	85	98	99	107	98	81	108	100	106	102	116	109	101	91	104	97	94	102	109	112	85	95	48	32	
DROPBOX				88	87	64	25	58	69	42	64	2.75	18.8	-0.07	2.5	24.5	35	131	-21	5.7	-6.9	-5.1	29.1	13	35	1.74	-1.68	0.02	1	5	6
				92	87	64	25	58	70	64	36	25	70	64	36	25	39	40	45	60	35	78	46	44	39	35	34				
BR 200034		VV 150167	RH 120002	99	98	76	121	84	83	89	80	94	98	117	76	92	81	89	85	77	91	67	116	83	89	83	106	91			
GERMAN				87	85	84	81	83	79	82	80	1.63	13.4	-0.74	-6.4	17.1	1	47	-2	-2.4	3.1	1.0	43.8	2	12	-0.59	0.99	-0.34			
				88	85	85	84	84	85	84	82	81	85	84	82	81	81	81	82	83	82	85	82	82	81	81	81				
BR 200038		VV 150167	VV 140061	106	103	93	104	104	103	95	99	102	103	110	93	97	95	95	96	98	105	95	112	90	96	90	111	99	18	11	
GENERAL				80	81	56	17	48	62	20	54	0.93	16.1	-0.47	-1.5	20.6	14	75	-16	9.1	-7.6	-4.8	41.0	6	20	-0.07	1.66	0.37			
				86	81	54	17	48	54	56	26	17	54	56	26	17	23	16	25	49	34	62	25	24	20	18	18				
DJW 170040		DJW 130035	SZ 100046	81	112	110	95	93	103	118	104	88	112	82	110	118	103	118	100	131	85	100	104	129	136	104	154	118	42	12	
170040DJW				84	80	55	31	52	64	48	61	2.11	21.1	0.63	3.9	36.7	22	174	-20	27.1	8.0	-5.7	35.9	29	63	1.10	7.13	1.90			
				91	80	58	55	55	58	55	49	31	58	55	49	31	62	26	72	58	26	72	74	70	65	58	57				
JL 110044		HN 050046	JL 040233	116	118	117	74	107	130	127	130	121	118	77	117	129	130	131	113	76	109	109	93	156	133	127	82	99	155	105	
JL110044				95	96	89	67	79	84	78	83	-0.74	24.3	0.81	6.0	45.4	48	228	-35	-2.7	-11.4	-7.7	28.0	46	60	3.01	-2.08	0.32	10	29	63
				97	96	88	89	88	88	89	84	67	88	89	84	67	75	76	84	85	58	94	82	80	83	80	78				

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 Value	Grwth Value	Value	Value	Value	Value	Value	Value	Dir	Dir	Mat.	Mat.	wt	weight					Fertility	Fertility	ty						Grwth Test	Dgt/Calvs.
KT 110020		VV 040074	KT 000033	96	105	88	111	53	78	93	76	100	105	89	88	119	89	97	97	96	61	56	91	83	93	97	71	72	207	194	
TOMBSTONE				99	98	97	96	97	91	96	92	1.10	17.2	0.36	-2.9	38.2	8	84	-17	8.4	27.3	3.2	26.7	2	16	0.53	-3.53	-1.81	1	43	95
KVS 160203		KVS 130175	KVS 120170	92	120	85	81	115	114	115	113	94	120	94	85	113	124	116	115	108	107	115	112	131	126	131	91	103	127	53	
KVS160203				90	90	55	17	65	70	26	61	1.59	25.6	0.15	-4.0	33.4	42	165	-37	14.5	-9.0	-8.9	41.0	31	53	3.31	-0.96	0.68	3	3	
KVS 170199		KTZ 120010	KVS 140139	102	105	92	103	101	102	106	101	103	105	95	92	108	96	109	106	96	101	94	111	98	100	98	117	95	64	18	
KVS170199				84	82	52	21	55	64	38	59	0.81	17.2	0.14	-1.6	29.7	15	135	-27	8.0	-4.9	-4.5	40.2	11	25	0.60	2.43	0.00			
VV 110075		VV 020194	VV 050002	85	110	131	90	77	104	111	103	74	110	106	131	95	107	108	108	119	79	79	96	109	106	104	93	88	43	31	
VV110075				94	94	93	86	92	87	86	87	3.35	20.3	-0.30	10.3	19.0	26	129	-30	20.6	12.6	-1.4	30.5	18	31	1.08	-0.74	-0.53	3	26	67
VV 130073		VV 020194	VV 060003	81	122	101	77	98	110	127	112	86	122	91	101	112	127	126	119	130	90	107	100	115	123	139	67	89	171	71	
VV130073				97	97	95	92	94	90	92	90	2.34	27.0	0.27	1.0	32.4	45	207	-42	26.5	4.1	-7.2	32.9	21	50	3.96	-4.03	-0.47	1	39	79
VV 140112		JL 050119	VV 120051	113	105	97	98	103	109	91	103	109	105	110	97	102	101	93	98	101	93	104	114	96	104	88	150	113	153	124	
VV140112				97	97	94	90	93	89	91	89	0.35	17.2	-0.46	-0.3	24.4	20	67	-18	10.7	1.7	-6.7	42.2	10	29	-0.21	6.68	1.51	15	37	67
VV 160202		VV 120148	VV 130189	118	95	111	114	93	105	105	103	119	95	92	111	91	84	106	104	98	73	113	107	93	98	97	105	92	92	67	
VV160202				98	97	96	94	95	90	94	91	-0.49	12.0	0.24	4.1	16.2	4	119	-25	9.5	17.6	-8.4	37.8	8	22	0.50	0.83	-0.25	14	21	
VV 200176		VV 130121	VV 160054	102	113	110	89	101	117	110	114	103	113	96	110	111	111	114	112	112	91	108	108	110	115	110	105	103	29	25	
VV200176				94	95	92	90	91	87	90	88	0.84	22.0	0.07	3.7	31.5	30	157	-34	16.6	3.1	-7.3	38.3	18	41	1.60	0.86	0.65			

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	ID Number Name	Sire ID Dam ID	Calv. Ease V	Calv 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
BR 230030 96632658 KNOX	3	BR 200038 BR 210019		95 86	101 86	98 82	99 80	104 82	98 79	93 80	94 79	94 80	94 1.63 87	107 -0.33 82	100 19 80	101 15.0 86	98 0.1 82	98 50 83	99 22.2 80	93 63 80	96 -15 80	83 1.0 80	103 -6.1 81	95 -4.7 81	115 43.1 83	92 7 80	95 19 80	94 0.26 80	111 1.67 80	104 0.74 80
EVH 240003 97171359 EVH 240003	2	BR 200034 DJW 200066		87 51	107 45	92 40	108 18	89 33	94 39	93 22	90 36	95 25	87 2.19 53	106 -0.29 42	91 11 18	107 18.4 45	92 -1.8 40	102 60 34	103 25.5 26	94 71 26	96 -15 14	90 5.2 29	91 3.7 35	83 -2.4 22	108 38.6 42	93 8 29	99 23 28	95 0.32 26	112 1.78 24	100 0.44 24
EVH 240004 97171466 EVH 240004	6	VV 200176 BR 140010		99 57	110 54	120 48	91 18	98 39	114 45			112 21	99 1.19 60	100 -0.08 47	107 26 18	110 20.0 54	120 6.7 48	122 107 40	104 26.6 25	113 151 21	110 -31 15	113 17.3 23	95 0.0 42	98 -5.5 27	106 36.8 48	110 18 24	113 39 23	110 1.60 22	97 -0.18 20	95 0.05 20
EVH 240005 97246771 EVH 240005	5	VV 200176 BR 160038		90 57	115 56	113 49	87 17	102 38	114 46			114 20	93 1.75 60	97 0.04 46	113 32 17	115 22.9 56	113 4.6 49	118 99 41	113 33.4 24	116 162 19	111 -33 14	114 17.8 21	89 5.0 42	111 -8.0 26	107 38.0 46	114 20 21	117 43 21	118 2.27 20	94 -0.58 19	101 0.53 18
EVH 240006 97772008 EVH 240006	4	BR 200034 BR 210017		91 49	101 45	79 37	112 11	93 31	87 37			85 16	90 1.98 52	109 -0.44 38	88 8 11	101 15.2 45	79 -5.5 37	87 23 31	98 21.2 16	90 54 17	90 -8 17	77 -2.0 20	104 -6.7 32	75 -0.8 20	110 39.6 41	83 2 20	89 13 19	88 -0.26 17	94 -0.52 15	92 -0.22 15
EVH 250003 98677024 EVH 250003	3	BR 200034 BR 220008		104 49	94 44	78 38	120 12	93 31	86 37			83 14	102 0.93 52	105 -0.28 39	82 2 12	94 11.6 44	78 -6.0 38	81 8 31	91 15.9 18	88 45 15	91 -9 13	78 -1.8 17	92 2.9 33	87 -3.1 19	113 42.0 40	81 1 17	85 8 16	83 -0.61 14	104 0.66 13	93 -0.18 12
EVH 250004 98677032 EVH 250004	2	BR 200034 XX 180033		99 51	89 42	89 43	107 16	85 32	76 38	92 21	75 35	85 20	96 1.43 53	110 -0.47 43	92 12 16	89 8.8 42	89 -2.7 43	82 11 34	82 9.6 24	93 63 21	87 -4 19	82 0.4 24	90 4.1 33	73 -0.4 20	109 39.4 43	85 3 24	89 13 23	84 -0.57 20	92 -0.83 19	101 0.49 18
EVH 250005 99075566 EVH 250005	4	BR 200034 BR 220010		102 49	98 45	81 38	123 12	92 32	90 38			84 14	100 1.12 52	108 -0.36 39	80 0 12	98 13.5 45	81 -5.1 38	87 24 32	95 19.1 18	90 52 16	91 -9 14	79 -0.9 18	96 -0.6 34	79 -1.6 21	114 42.5 41	81 1 18	86 10 17	84 -0.55 15	99 0.11 14	91 -0.28 13
EVH 250006 99075574 EVH 250006	3	BR 200034 VV 170190		106 52	108 46	99 44	97 20	98 35	109 40	105 24	106 37	102 24	103 0.86 54	110 -0.47 45	102 21 20	108 19.3 46	99 0.5 44	106 69 37	108 29.0 26	107 124 24	102 -22 23	84 2.0 27	96 -0.3 35	95 -4.8 25	109 38.9 44	109 18 27	107 32 26	101 0.89 25	102 0.40 24	96 0.13 23

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Animal				Selection Values								Birth		Wean				Growth			Fertility				Frame		Carcass		
Index EBV Acc	% Inbreeding	Sire ID Dam ID	Calv. Ease V	Calf Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Carcass Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	FCR	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	EMA	Fat	Marbling
ID Number Name																													
BR 140010 290971027 AVA	4	VV 110075 KT 100010	95 79	106 67	130 75	93 28	95 58	112 62	110 30	110 56	109 30	95 1.55 80	104 -0.23 76	104 23 28	106 17.9 67	130 9.8 75	128 122 57	98 21.7 39	112 145 32	108 -29 23	114 18.0 36	99 -3.2 65	89 -3.6 40	103 35.2 69	111 19 36	111 37 35	110 1.59 32	89 -1.22 29	88 -0.56 29
BR 160038 291074359 CLEOPATRA	1	VV 130073 VV 130107	83 91	117 89	116 89	85 83	102 86	113 83	120 83	114 83	113 83	82 2.66 91	98 0.00 89	115 33 83	117 23.8 89	116 5.5 89	121 106 87	116 35.4 84	117 166 83	111 -33 83	116 18.9 83	86 6.9 87	114 -8.7 84	107 37.6 88	118 23 83	119 45 83	126 2.94 83	83 -2.02 83	100 0.41 83
VV 170190 291119550 VV170190	3	JL 110044 VV 120186	114 76	119 74	122 71	79 37	112 54	136 63	120 42	134 59	118 44	112 0.09 78	104 -0.21 69	123 41 37	119 25.2 74	122 7.3 71	125 116 61	123 40.9 48	125 201 42	117 -40 40	92 6.3 46	100 -3.7 55	124 -10.6 41	101 34.0 66	136 34 46	124 51 44	119 2.36 45	97 -0.19 43	102 0.60 42
VV 180153 291177780 VV180153	3	KT 110020 VV 090047	100 75	106 74	71 71	109 23	78 55	85 62	94 25	83 55	90 25	102 0.93 77	93 0.19 69	91 11 23	106 18.1 74	71 -8.2 71	83 14 56	110 30.5 34	98 87 28	98 -17 20	95 7.5 31	89 4.6 57	69 0.5 42	97 30.8 65	83 2 31	91 15 30	95 0.34 26	80 -2.38 24	77 -1.46 23
XX 180033 291186211 SANTA-RAY ACE XX180033	1	BR 140016 KSS 130031	99 73	81 63	101 68	95 28	85 46	70 56	94 34	70 52	85 32	99 1.23 75	103 -0.20 65	104 23 28	81 4.2 63	101 1.1 68	81 9 53	73 2.1 42	96 79 36	88 -6 30	87 3.2 39	89 5.1 48	80 -1.7 29	103 35.0 62	86 4 40	90 14 39	84 -0.55 34	78 -2.64 31	111 1.31 30
DJW 200066 291308393 200066DJW	1	VV 140112 DJW 100013	81 72	116 71	107 60	98 33	94 50	107 59	97 34	103 54	104 46	81 2.75 75	94 0.15 62	101 20 33	116 23.4 71	107 2.9 60	120 102 55	114 33.8 48	100 94 48	106 -27 18	104 12.8 52	90 4.3 55	99 -5.7 36	100 33.3 60	104 14 51	109 34 50	106 1.24 47	118 2.56 44	110 1.21 43
BR 210012 291342095 HERITAGE	3	BR 170021 JR 140045	88 69	116 70	110 52	82 17	97 41	110 54	111 26	109 48	112 22	81 2.78 73	113 -0.57 53	119 37 17	116 23.6 70	110 3.8 52	115 91 46	111 31.9 26	115 158 26	110 -32 24	98 9.4 29	95 -0.2 40	97 -5.2 27	103 35.0 56	118 23 30	118 44 28	118 2.22 23	88 -1.33 21	101 0.51 20
BR 210017 291342145 HOPE	3	BR 170021 VV 140108	84 69	104 70	82 51	105 17	102 43	91 55	91 26	87 49	85 24	86 2.33 73	102 -0.14 52	95 14 17	104 17.1 70	82 -4.6 51	91 32 46	103 25.3 24	92 61 25	94 -13 24	78 -1.6 29	116 -16.4 45	84 -2.5 28	103 35.3 56	83 2 29	89 13 27	92 0.08 25	83 -2.03 22	94 -0.10 22
BR 220004 291390409 JUNE	7	VV 160202 VV 180153	103 69	100 71	92 53	113 19	86 44	93 56			92 18	105 0.64 73	92 0.23 52	86 6 19	100 14.8 71	92 -1.6 53	98 50 48	100 23.4 28	100 94 20	99 -19 14	94 7.3 22	82 10.8 47	91 -3.9 31	102 34.6 54	86 3 22	92 15 21	94 0.25 19	92 -0.80 18	84 -0.90 17
BR 220008 291390441 JESSICA	6	VV 160202 BR 180033	109 68	91 68	79 55	119 19	102 43	89 54			82 16	110 0.23 72	94 0.18 53	82 2 19	91 9.9 68	79 -5.6 55	79 3 47	89 14.7 27	88 43 20	96 -15 13	79 -1.3 21	92 2.6 48	106 -7.1 28	111 40.3 53	79 0 20	82 5 20	83 -0.64 17	101 0.33 16	94 -0.03 16
BR 220010 291390466 JULIET	3	VV 160202 VV 140108	106 70	98 71	85 55	125 19	100 46	97 56	90 20	93 49	83 20	106 0.61 74	98 0.01 55	79 -1 19	98 13.6 71	85 -3.9 55	92 34 48	97 21.1 28	91 57 21	96 -15 17	82 0.5 24	100 -4.2 51	92 -4.1 32	112 41.2 56	79 0 23	84 7 22	85 -0.51 20	92 -0.77 19	92 -0.23 18
AJ 230028 95472189 AJ23-0028	9	AJ 150020 AJ 130024	109 66	80 52	86 46	129 5	103 43	82 46	74 20	76 41	76 6	105 0.70 70	111 -0.49 51	77 -2 5	80 3.9 52	86 -3.4 46	76 -5 34	77 5.1 14	84 26 20	91 -10 19	72 -4.7 23	103 -6.1 49	98 -5.4 27	107 38.1 53	81 1 23	81 3 22	77 -1.16 6	108 1.25 6	97 0.18 5

Breeding Values and Accuracies: Cows

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Animal			Selection Values								Birth		Wean				Growth			Fertility				Frame		Carcass			
Index EBV Acc	% Inbreeding	Sire ID Dam ID	Calv. Ease V	Calf Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Carcass Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	FCR	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	EMA	Fat	Marbling
ID Number Name																													
AJ 230029	95472015	AJ 170038	99	102	91	96	92	92	95	89	96	96	125	104	102	91	92	98	96	101	87	91	87	110	94	101	107	92	101
95472015	21	AJ 180066	65	46	38	11	41	42	20	38	12	1.45	-1.05	23	15.7	-2.0	36	21.7	77	-21	3.3	3.5	-3.1	39.9	9	25	1.39	-0.84	0.49
AJ23-0029			70									70	46	38	32	22	25	13	29	47	26	49	17	16	12	12	11		
AJ 230034	95472031	AJ 150020	107	90	88	108	110	92	83	87	86	102	119	91	90	88	83	86	90	98	83	104	107	112	90	91	90	103	100
95472031	6	AJ 120072	67	54	47	8	45	47	24	42	10	0.98	-0.80	11	9.3	-3.0	13	12.2	54	-17	1.1	-7.1	-7.1	41.0	6	14	-0.04	0.55	0.39
AJ23-0034			71									71	53	8	54	47	36	18	25	20	28	51	29	54	24	23	10	9	9
AJ 230035	96284567	AJ 150020	112	86	85	116	110	90	79	84	80	107	114	84	86	85	78	84	87	94	81	111	104	107	83	84	87	105	99
96284567	5	AJ 150049	66	52	44	9	44	46	24	42	12	0.48	-0.59	4	6.9	-3.8	1	11.1	38	-13	0.1	-12.2	-6.7	37.7	2	7	-0.30	0.89	0.33
AJ23-0035			70									70	51	9	52	44	35	18	25	19	28	49	29	54	24	23	12	11	11
AJ 230044	97350698	KVS 170199	114	93	82	109	100	92	93	89	92	112	103	91	93	82	81	96	98	99	83	101	95	106	88	92	89	112	97
97350698	1	AJ 190062	65	50	38	12	36	43	20	38	16	0.08	-0.17	10	11.1	-4.8	8	20.1	86	-19	0.9	-4.8	-4.7	36.9	5	15	-0.13	1.72	0.21
AJ23-0044			71									71	41	12	50	38	33	23	23	16	24	40	20	48	25	25	16	15	15
AJ 230051	97350730	KVS 170199	98	99	101	106	105	101	101	98	97	100	95	92	99	101	103	104	104	103	103	110	92	108	97	99	96	110	96
97350730	1	AJ 140040	65	50	43	13	40	45	24	41	16	1.14	0.11	11	14.3	1.1	61	26.4	113	-23	11.8	-11.9	-4.2	38.2	10	23	0.44	1.54	0.08
AJ23-0051			71									71	43	13	50	43	35	25	28	16	30	46	24	49	30	30	17	16	15
AJ 230055	97350748	DJW 170040	93	104	102	100	104	102	108	101	109	96	94	98	104	102	105	107	109	101	119	99	103	108	114	117	99	140	108
97350748	1	AJ 150034	65	49	43	17	38	44	28	41	32	1.46	0.16	18	16.7	1.2	66	28.7	135	-22	20.8	-3.1	-6.4	38.2	20	43	0.69	5.32	1.08
AJ23-0055			70									70	46	17	49	43	36	28	36	14	42	43	24	48	42	40	33	30	29
AJ 230056	97350763	AJ 170038	103	97	85	102	100	91			91	98	117	98	97	85	85	96	93	99	81	102	91	109	88	94	97	98	101
97350763	2	AJ 180019	66	48	42	10	40	44			10	1.30	-0.73	17	13.3	-3.8	18	20.2	67	-19	-0.1	-5.7	-3.9	39.4	5	18	0.50	-0.05	0.51
AJ23-0056			71									71	46	10	48	42	33	19	21	11	23	45	25	49	16	15	10	10	9
AJ 230068	96156369	AJ 170038	99	96	91	101	98	89	90	86	94	97	107	98	96	91	89	92	95	100	90	94	97	108	97	100	101	99	100
96156369	3	AJ 150037	65	47	43	9	40	43	24	39	10	1.36	-0.35	18	12.5	-2.0	27	17.1	75	-20	5.2	0.6	-5.1	38.4	10	24	0.84	0.04	0.39
AJ23-0068			69									69	47	9	47	43	33	18	25	20	29	45	27	49	23	22	10	10	9
AJ 230075	96128061	DJW 170040	93	92	100	114	98	88	92	85	95	96	92	85	92	100	97	94	96	92	99	92	101	105	102	103	86	144	106
96128061		AJ 200038	65	51	36	16	37	44	26	40	30	1.42	0.23	5	10.3	0.7	47	18.2	80	-11	9.8	2.6	-6.0	36.7	13	28	-0.41	5.91	0.89
AJ23-0075			71									71	43	16	51	36	34	26	33	16	38	42	22	47	38	37	32	29	29
AJ 230095	96128095	AJ 150020	90	89	82	118	104	80	77	75	79	89	108	83	89	82	79	85	84	92	78	104	99	106	84	84	83	103	96
96128095	5	AJ 130046	68	54	48	9	44	48	24	43	10	2.08	-0.37	3	8.9	-4.7	4	11.6	26	-11	-1.5	-7.2	-5.5	36.9	2	7	-0.61	0.58	0.12
AJ23-0095			72									72	53	9	54	48	37	17	24	20	28	50	29	54	23	22	10	9	9
AJ 230097	96128111	KVS 160203	89	112	93	90	111	107			104	87	110	112	112	93	101	106	105	108	97	110	105	107	111	111	114	94	102
96128111	1	AJ 140030	68	54	44	12	44	47			12	2.22	-0.46	30	21.3	-1.4	56	28.1	116	-29	8.9	-12.1	-6.9	37.8	18	36	1.90	-0.60	0.62
AJ23-0097			72									72	50	12	54	44	37	22	23	13	26	51	28	53	20	20	12	11	11
AJ 230098	96128129	DJW 170040	90	103	92	103	88	89	101	88	103	90	103	96	103	92	97	103	102	99	103	93	82	102	104	109	96	139	108
96128129	1	AJ 130061	65	48	40	17	40	44	28	41	32	1.94	-0.20	16	16.2	-1.6	47	25.8	105	-18	11.8	1.7	-2.0	34.4	14	35	0.48	5.19	1.07
AJ23-0098			70									70	46	17	48	40	35	29	36	16	41	44	25	50	39	37	33	30	30

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Index EBV Acc		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	% Inbreeding																												
AJ 230100 96128145 AJ23-0100	2	AJ 190088 AJ 200063	90 64	105 49	81 36	102 8	104 34	94 42			92 7	91 1.87 70	102 -0.16 40	98 17 8	105 17.5 49	81 -5.1 36	89 28 31	102 24.3 14	95 74 14	99 -19 8	84 1.9 15	103 -6.4 35	98 -5.5 22	109 38.8 44	97 11 13	98 22 13	98 0.61 7	100 0.18 7	100 0.40 6
AJ 230101 96128152 AJ23-0101	3	AJ 190088 AJ 200057	107 63	102 48	87 35	96 8	104 35	100 41			99 8	107 0.55 69	101 -0.12 39	105 24 8	102 15.8 48	87 -3.2 35	89 28 30	100 22.9 15	101 99 16	103 -23 9	93 6.7 17	102 -5.2 40	102 -6.2 22	106 37.3 44	105 15 15	105 30 15	104 1.09 8	100 0.26 8	102 0.60 7
AJ 230103 97399653 AJ23-0103	2	AJ 190088 AJ 200047	90 63	107 48	90 33	96 7	107 35	100 41			101 8	90 1.97 69	103 -0.20 38	104 23 7	107 18.3 48	90 -2.3 33	96 45 29	103 25.6 14	102 102 16	104 -25 12	93 6.8 18	106 -8.5 39	102 -6.1 22	109 39.4 44	105 15 16	106 31 16	106 1.23 8	101 0.33 8	102 0.56 7
AJ 230106 97399703 AJ23-0106	1	DJW 170040 AJ 200061	95 65	103 52	94 40	103 16	101 36	98 45	101 27	96 41	105 32	97 1.41 71	98 0.01 43	95 15 16	103 16.1 52	94 -1.0 40	99 52 36	103 25.7 26	105 118 33	100 -20 16	109 15.3 39	96 -0.7 42	101 -6.0 21	108 38.7 46	110 18 39	113 39 37	99 0.67 33	143 5.77 30	109 1.12 29
AJ 230109 97399679 AJ23-0109	1	KVS 160203 AJ 180065	87 67	113 53	92 42	87 12	113 43	108 46			109 12	87 2.23 72	107 -0.34 49	115 33 12	113 22.0 53	92 -1.6 42	100 55 36	108 29.4 22	108 130 23	110 -32 13	98 9.6 26	104 -7.3 50	113 -8.5 27	112 41.2 52	115 21 20	114 40 20	118 2.28 12	94 -0.60 11	104 0.71 11
AJ 230110 97399711 AJ23-0110	1	KVS 160203 AJ 140005	89 68	104 52	81 41	99 10	107 43	94 46			95 9	94 1.67 72	91 0.26 50	101 20 10	104 16.9 52	81 -5.1 41	87 23 34	100 23.2 20	99 89 20	103 -23 12	84 1.8 22	96 -0.5 50	115 -8.9 27	107 37.6 52	103 14 22	101 25 21	102 0.92 9	98 -0.07 9	102 0.56 8
AJ 230114 97399687 AJ23-0114	8	AJ 200025 AJ 210028	100 62	102 40	84 29	98 8	117 33	101 37			95 8	97 1.40 68	111 -0.49 38	102 22 8	102 15.8 40	84 -4.2 29	87 23 26	98 21.8 14	96 80 16	102 -22 9	87 3.3 18	113 -14.1 39	110 -7.8 20	114 42.2 41	96 10 13	99 23 13	105 1.21 8	94 -0.54 7	101 0.48 7
AJ 230119 97399695 AJ23-0119	10	AJ 200025 AJ 210025	94 63	107 35	91 29	92 8	108 31	102 35			101 8	91 1.91 69	114 -0.60 38	109 27 8	107 18.4 35	91 -2.1 29	95 43 24	102 25.0 16	101 99 17	105 -26 9	92 5.9 19	102 -5.5 34	105 -6.8 19	113 41.6 41	102 13 13	105 30 13	111 1.67 9	93 -0.73 8	102 0.58 8
AJ 230123 96562251 AJ23-0123	6	AJ 150020 AJ 140006	107 67	88 54	88 47	114 10	114 44	92 47	82 24	86 42	83 12	103 0.88 71	112 -0.53 52	86 6 10	88 8.1 54	88 -3.0 47	82 11 37	87 13.2 18	89 48 25	96 -15 19	81 0.2 29	109 -11.1 50	112 -8.3 29	108 38.4 54	85 3 25	87 11 24	91 -0.01 12	105 0.80 11	99 0.37 11
AJ 230125 96562277 AJ23-0125	8	AJ 150020 AJ 170078	119 66	75 50	76 44	132 7	109 43	80 45	69 22	73 40	71 6	116 -0.24 70	104 -0.22 50	75 -4 7	75 1.2 50	76 -6.5 44	62 -39 34	73 2.0 13	77 -1 20	84 -1 20	66 -7.9 23	107 -9.4 49	105 -6.7 27	109 39.1 52	80 0 23	79 2 22	74 -1.34 6	105 0.80 5	95 0.03 5
AJ 230126 96562285 AJ23-0126	7	AJ 170038 AJ 160029	104 65	98 47	91 42	101 12	86 41	88 43	92 20	85 38	90 14	100 1.14 69	122 -0.91 47	98 17 12	98 13.5 47	91 -1.9 42	91 32 34	97 20.6 22	93 65 25	100 -20 12	86 2.5 28	88 5.6 47	79 -1.5 26	108 38.5 49	86 4 18	93 17 17	103 0.99 14	96 -0.34 13	101 0.51 13
AJ 230128 96562301 AJ23-0126	4	AJ 150020 AJ 180012	116 67	86 54	94 48	109 8	106 44	92 47	84 24	87 42	86 10	109 0.32 71	118 -0.77 52	90 10 8	86 6.8 54	94 -1.2 48	84 15 37	82 9.2 18	90 52 25	96 -16 20	84 1.8 28	105 -7.7 50	101 -6.0 29	110 39.7 53	89 6 24	91 14 23	89 -0.11 10	103 0.55 9	99 0.34 9

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		Sire ID Dam ID	Calv. Ease V	Calv 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	% Inbreeding																												
AJ 230130 96562327 AJ23-0130	4	AJ 150020 AJ 150018	113 67	84 54	85 48	111 8	104 44	84 47	81 24	79 42	83 10	108 0.39 71	111 -0.50 52	88 8	84 5.7 54	85 -3.9 48	74 -8 37	80 8.0 18	88 43 25	95 -14 20	82 0.7 28	106 -8.6 50	93 -4.3 29	111 40.5 54	87 4 24	88 12 23	87 -0.30 10	103 0.52 9	98 0.30 9
AJ 230132 96562343 AJ23-0132	1	DJW 170040 AJ 120060	96 65	94 48	86 41	108 17	108 40	90 44	94 28	87 41	96 32	102 0.93 70	83 0.59 46	91 11 17	94 11.6 48	86 -3.5 41	85 19 35	97 21.1 28	97 83 35	92 -11 17	93 6.7 40	103 -6.5 44	112 -8.3 26	100 32.8 50	101 13 41	105 30 39	88 -0.21 33	140 5.40 30	109 1.12 29
EVH 230001 96453956 ROSY	2	BR 200038 BR 210012	94 53	109 53	101 38	93 12	101 32	106 41			104 14	91 1.85 57	112 -0.52 38	107 26 12	109 19.8 53	101 1.1 38	107 71 34	104 26.2 18	105 116 17	104 -24 15	98 9.3 19	100 -3.9 32	96 -5.0 22	107 38.0 42	104 14 19	107 32 19	104 1.07 15	100 0.16 14	100 0.44 13
AJ 240006 96562392 AJ24-0006	3	AJ 190083 AJ 210071	107 64	92 48	90 33	107 8	119 35	99 41			90 8	105 0.70 70	106 -0.31 39	92 11 8	92 10.4 48	90 -2.2 33	87 22 30	94 18.6 14	94 71 17	96 -15 11	91 5.3 19	125 -23.7 40	102 -6.3 21	112 41.1 44	93 8 18	95 19 17	95 0.35 8	105 0.82 8	99 0.31 7
EVH 240001 96539952 SUNSHINE	1	VV 160202 XX 180033	109 59	88 56	106 52	104 22	89 41	88 48	100 22	86 43	92 21	109 0.37 61	98 0.02 51	94 14 22	88 8.1 56	106 2.6 52	95 43 43	82 9.1 31	101 99 23	96 -16 18	93 6.3 25	81 11.3 45	96 -5.0 27	105 36.4 50	90 6 26	94 18 25	90 -0.02 22	91 -0.91 20	101 0.53 20
EVH 240002 96539960 RAINBOW	6	VV 160202 VV 170190	116 59	107 60	116 53	95 24	103 43	120 50	113 25	118 45	109 26	115 -0.20 61	98 0.01 52	103 22 24	107 18.6 60	116 5.7 53	118 99 46	107 28.5 33	115 160 25	111 -32 23	95 7.9 28	86 6.9 47	118 -9.5 31	104 35.9 51	115 21 28	111 36 27	108 1.43 27	101 0.32 25	97 0.18 25
EVH 240007 97772016 FLOWER	4	BR 200034 VV 180153	99 51	102 46	74 45	115 13	81 35	84 40			87 16	98 1.28 53	105 -0.27 45	86 6 13	102 15.7 46	74 -7.3 45	83 14 35	101 23.8 20	93 67 18	92 -10 15	86 2.6 20	90 3.9 36	68 0.7 25	106 37.3 44	83 2 20	90 14 20	89 -0.13 17	93 -0.70 15	84 -0.90 15
EVH 250001 98677008 DAISY	3	BR 200034 BR 210012	90 49	107 45	93 37	99 11	91 30	95 37			98 15	87 2.21 52	115 -0.65 38	100 19 11	107 18.5 45	93 -1.3 37	100 55 31	102 24.5 17	102 103 17	98 -18 17	87 3.5 20	93 1.4 30	82 -2.1 19	109 39.4 41	100 12 20	104 28 19	101 0.81 16	97 -0.17 14	96 0.09 14
EVH 250002 98677016 MAISY	4	BR 200034 BR 220004	101 49	99 45	84 38	117 12	85 31	88 37			89 14	100 1.14 52	105 -0.25 38	83 4 12	99 14.1 45	84 -4.0 38	91 32 32	96 20.3 18	94 70 15	92 -11 13	85 2.5 17	86 6.9 33	79 -1.5 20	109 39.2 40	84 3 17	90 14 17	89 -0.17 15	99 0.10 13	87 -0.62 13

Selection List on Cow Value
Bulls 2 years and older

ID Sorted on ID		Name		Sire ID	Dam ID	% Inbreeding	Horned / Polled	Myostatin				Calving Ease Value Acc	Calf Growth Value Acc	Milk Value Acc	Maint. Value Acc	Fertility Value Acc	Cow Value Acc	Growth Value Acc	Prod Value Acc	
												★★★★★								
1	EVH 240004	EVH 240004		VV 200176	BR 140010	6.0						9957	11054	12048	9118	9839	11445			
2	EVH 240005	EVH 240005		VV 200176	BR 160038	4.6						9057	11556	11349	8717	10238	11446			
												★★★★★								
1	BR 230030	KNOX		BR 200038	BR 210019	2.5	HH	0	0	0		9586	10186	9882	9980	10482	9879	9380	9479	
2	EVH 240003	EVH 240003		BR 200034	DJW 200066	2.1						8751	10745	9240	10818	8933	9439	9322	9036	
												★★★★☆								
1	EVH 240006	EVH 240006		BR 200034	BR 210017	4.4						9149	10145	7937	11211	9331	8737			

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	VV 170190	VV170190	JL 110044	VV 120186	3.0													
1	EVH 240002	RAINBOW	VV 160202	VV 170190	6.2													
1	BR 140010	AVA	VV 110075	KT 100010	3.5													
2	BR 160038	CLEOPATRA	VV 130073	VV 130107	1.1	HH	0	0	0									
3	BR 210012	HERITAGE	BR 170021	JR 140045	2.6													
1	AJ 230051	AJ23-0051	KVS 170199	AJ 140040	1.3													
2	AJ 230055	AJ23-0055	DJW 170040	AJ 150034	0.8													
3	AJ 230097	AJ23-0097	KVS 160203	AJ 140030	1.3													
4	AJ 230101	AJ23-0101	AJ 190088	AJ 200057	2.7													
5	AJ 230103	AJ23-0103	AJ 190088	AJ 200047	1.9													
6	AJ 230109	AJ23-0109	KVS 160203	AJ 180065	1.2													
7	AJ 230114	AJ23-0114	AJ 200025	AJ 210028	7.8													
8	AJ 230119	AJ23-0119	AJ 200025	AJ 210025	10.0													
9	DJW 200066	200066DJW	VV 140112	DJW 100013	0.8													
10	EVH 230001	ROSY	BR 200038	BR 210012	2.1													
1	AJ 230029	AJ23-0029	AJ 170038	AJ 180066	20.9													
2	AJ 230034	AJ23-0034	AJ 150020	AJ 120072	6.1													
3	AJ 230035	AJ23-0035	AJ 150020	AJ 150049	5.1													
4	AJ 230044	AJ23-0044	KVS 170199	AJ 190062	0.7													
5	AJ 230056	AJ23-0056	AJ 170038	AJ 180019	1.9													

Selection List on Cow Value

Cows 2 years and older

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	Horned / Polled	Myostatin nt821 Q204X F94L 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	
											★★★				
6	AJ 230100	AJ23-0100	AJ 190088	AJ 200063	1.6		90 64	105 49	81 36	102 8	104 34	94 42			
7	AJ 230106	AJ23-0106	DJW 170040	AJ 200061	0.6		95 65	103 52	94 40	103 16	101 36	98 45	101 27	96 41	
8	AJ 230110	AJ23-0110	KVS 160203	AJ 140005	0.7		89 68	104 52	81 41	99 10	107 43	94 46			
9	AJ 230123	AJ23-0123	AJ 150020	AJ 140006	6.2		107 67	88 54	88 47	114 10	114 44	92 47	82 24	86 42	
10	AJ 230128	AJ23-0126	AJ 150020	AJ 180012	4.1		116 67	86 54	94 48	109 8	106 44	92 47	84 24	87 42	
11	AJ 230132	AJ23-0132	DJW 170040	AJ 120060	0.6		96 65	94 48	86 41	108 17	108 40	90 44	94 28	87 41	
12	AJ 240006	AJ24-0006	AJ 190083	AJ 210071	2.6		107 64	92 48	90 33	107 8	119 35	99 41			
13	BR 210017	HOPE	BR 170021	VV 140108	2.7		84 69	104 70	82 51	105 17	102 43	91 55	91 26	87 49	
14	BR 220004	JUNE	VV 160202	VV 180153	7.1		103 69	100 71	92 53	113 19	86 44	93 56			
15	BR 220010	JULIET	VV 160202	VV 140108	2.7		106 70	98 71	85 55	125 19	100 46	97 56	90 20	93 49	
											★★★				
1	AJ 230028	AJ23-0028	AJ 150020	AJ 130024	9.2		109 66	80 52	86 46	129 5	103 43	82 46	74 20	76 41	
2	AJ 230068	AJ23-0068	AJ 170038	AJ 150037	3.1		99 65	96 47	91 43	101 9	98 40	89 43	90 24	86 39	
3	AJ 230075	AJ23-0075	DJW 170040	AJ 200038	0.3		93 65	92 51	100 36	114 16	98 37	88 44	92 26	85 40	
4	AJ 230095	AJ23-0095	AJ 150020	AJ 130046	5.1		90 68	89 54	82 48	118 9	104 44	80 48	77 24	75 43	
5	AJ 230098	AJ23-0098	DJW 170040	AJ 130061	0.8		90 65	103 48	92 40	103 17	88 40	89 44	101 28	88 41	
6	AJ 230125	AJ23-0125	AJ 150020	AJ 170078	7.5		119 66	75 50	76 44	132 7	109 43	80 45	69 22	73 40	
7	AJ 230126	AJ23-0126	AJ 170038	AJ 160029	6.7		104 65	98 47	91 42	101 12	86 41	88 43	92 20	85 38	
8	AJ 230130	AJ23-0130	AJ 150020	AJ 150018	4.1		113 67	84 54	85 48	111 8	104 44	84 47	81 24	79 42	
9	BR 220008	JESSICA	VV 160202	BR 180033	5.8		109 68	91 68	79 55	119 19	102 43	89 54			
10	EVH 240001	SUNSHINE	VV 160202	XX 180033	1.4		109 59	88 56	106 52	104 22	89 41	88 48	100 22	86 43	
11	EVH 240007	FLOWER	BR 200034	VV 180153	3.7		99 51	102 46	74 45	115 13	81 35	84 40			
12	VV 180153	VV180153	KT 110020	VV 090047	2.8		100 75	106 74	71 71	109 23	78 55	85 62	94 25	83 55	
											★★				
1	XX 180033	SANTA-RAY ACE XX180033	BR 140016	KSS 130031	1.1		99 73	81 63	101 68	95 28	85 46	70 56	94 34	70 52	

Selection List on Cow Value

Bull Calves younger than 2 years

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									
Sorted on ID							nt821	Q204X	F94L	Acc	Acc	Acc	Acc	Acc	Acc	Acc	Acc									
										★★★★☆																
1	EVH 250006	EVH 250006	BR 200034	VV 170190	2.7					106	52	108	46	99	44	97	20	98	35	109	40	105	24	106	37	
										★★★★																
1	EVH 250005	EVH 250005	BR 200034	BR 220010	3.5					102	49	98	45	81	38	123	12	92	32	90	38					
										★★★★☆																
1	EVH 250003	EVH 250003	BR 200034	BR 220008	3.2					104	49	94	44	78	38	120	12	93	31	86	37					
										★★																
1	EVH 250004	EVH 250004	BR 200034	XX 180033	1.9					99	51	89	42	89	43	107	16	85	32	76	38	92	21	75	35	

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	
						nt821	Q204X	F94L	Genomic tested									
1	EVH 250001	DAISY	BR 200034	BR 210012	3.2					9049	10745	9337	9911	9130	9537			
1	EVH 250002	MAISY	BR 200034	BR 220004	3.8					10149	9945	8438	11712	8531	8837			

	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.

