

HEREFORD

GENOMIC BREEDING VALUE REPORT

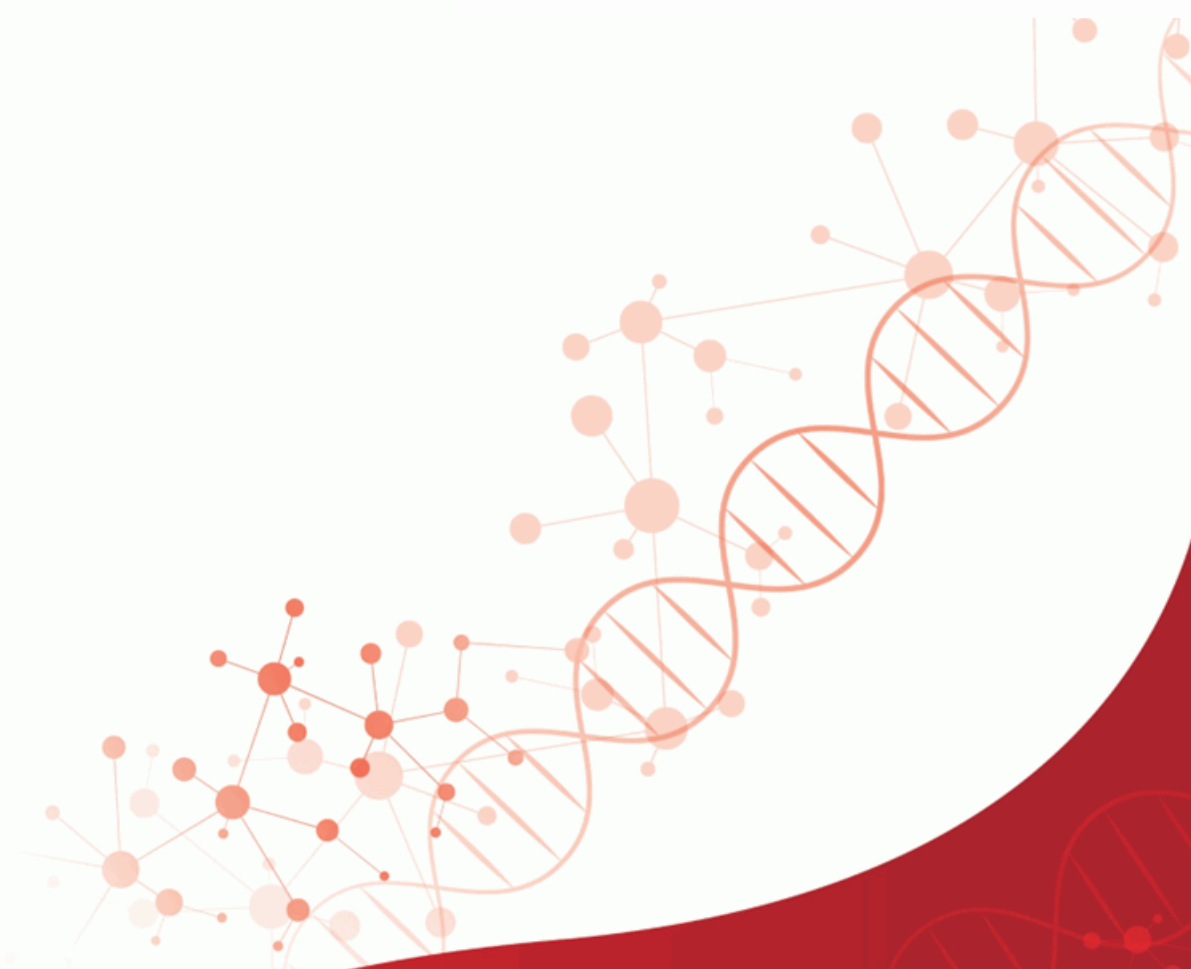
September 2026



PENHOEK FARMING

Herd Number: 673787

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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 Carcass Value

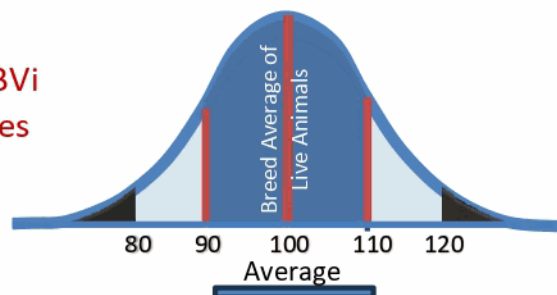
Select for more meat on the carcass as measured from end weight in Phase C and D Growth Tests and RTU scanning.

LOGIX Production Value

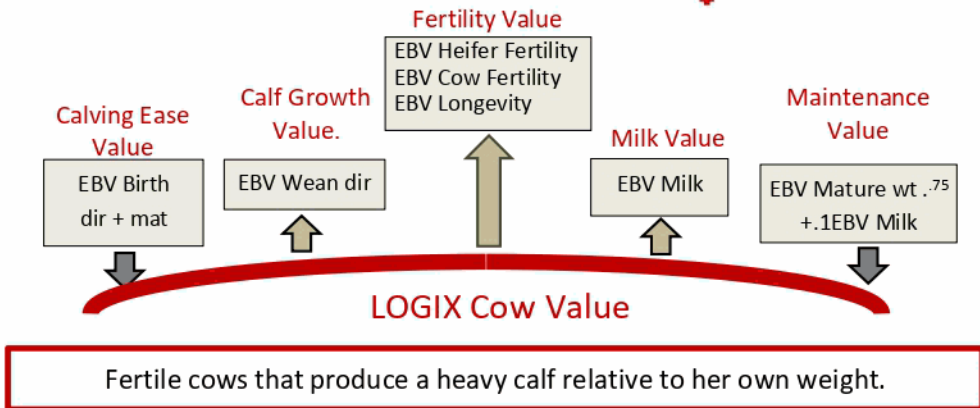


80% LOGIX Cow Value +
20% LOGIX Growth Value

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)

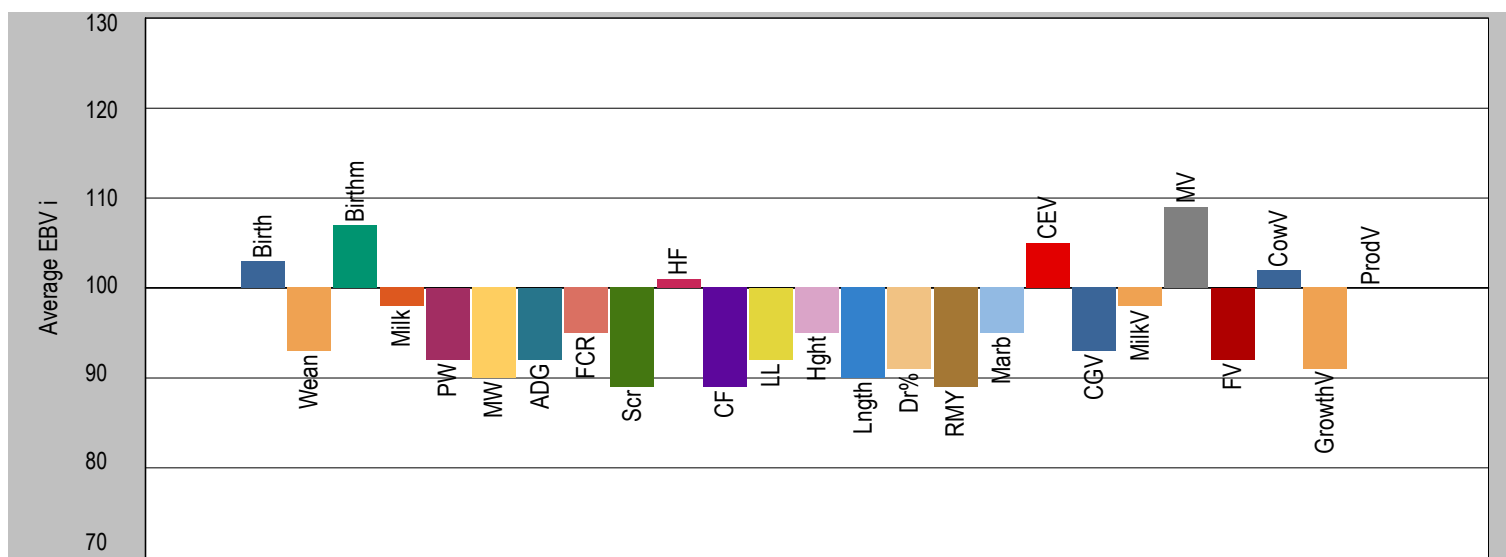
- Maintenance Value >110
 - Cow Value and Fertility Value average to high
- Lighter cows have a lower maintenance.

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

	EBVi	Description / Measurement	Goal	Low Value	High Value
Selection Values	Calving Ease Value	Difficult calving due to high birth weight	Average birth weight	High	Low
	Calf Growth Value	Calf's genetic ability for prewean growth	Heavy weaner	Light	Heavy
	Milk Value	Cow's genetic mothering and milking ability	Enough milk for calf	Less	More
	Maintenance Value	Maintenance requirement of cow (weight and milk)	Low cow maintenance	High	Low
	Fertility Value	Fertility and retention of cows and heifers	Fertile cows	Low	High
	Cow Value	Combination of calving ease, calf growth, milk, maintenance and fertility values (Rand-value per Ha)	Profitable cows	Loss	Profit
	Weaner Calf Value	Heavier weaners and more milk, with lower birth and cow weights	Heavy weaner	Light	Heavy
	Growth Value	Efficient growth on veld and in feedlot (Rand-value per animal)	Profitable growth	Loss	Profit
	Production Value	Combination of Cow- and Growth Values (Rand-value)	Profitable animals	Loss	Profit
	Carcass Value	Meat on carcass (Weight and RTU EBVs)	Meat on carcass	Less	More
Birth	Cow weight - birth	Cow weight at birth of calves	Mature cow weight	Light	Heavy
	Birth weight direct	Birth weight (Calf's genetic ability)	Average birth weight	Heavy	Light
	Cow-Calf birth	EBV Birth dir / EBV Mature cow weight	Average	Low	High
Wean	Cow Weight wean	Cow weight at weaning of calves	Mature cow weight	Light	Heavy
	Weaning weight direct	Weaning weight (Calf's genetic ability)	Heavy weaners	Light	Heavy
	Weaning weight mat	Weaning weight (Dam's genetic ability)	Good mothers	Poor	Good
	Cow-Calf Wean	EBV Wean dir / EBV Mature cow weight	High cow-calf ratio	Low	High
Growth & Adaptation	Post-Wean weight	12- and 18mnth weights	Post-wean growth	Low	High
	Ave. Daily Gain	Average daily gain in growth test (Phase C and D)	Good growth	Poor	Good
	Veld Growth	ADG on veld (Phase B)	Good adaptation	Poor	Good
	Feed Conversion Ratio	100g feed intake /g weight gain	Feed Efficiency	Poor	Good
	Final Test Weight	Final weight in growth test (Phase C and D)	Heavy Carcasses	Light	Heavy
	Skin Thickness	Measured in growth tests	Thicker skin	Thin	Thick
Fertility	Scrotal Circumference	Scrotal circumference in growth test	Fertile bulls	Less	More
	Heifer Fertility	Age at first calving	Fertile heifers	Less	More
	Cow Fertility	First 3 inter-calving periods (ICPs)	Fertile cows	Less	More
	Longevity	Retention of progeny	Acceptable progeny	Poor	Good
Frame	Height	Shoulder / Hip height in growth test	Average height	Short	Tall
	Length	Length in growth test	Longer (more meat)	Short	Long
	Length:Height	EBV Length / EBV Height	Longer, not higher	Less desirable	More desirable
Carcass	Eye Muscle Area	RTU Eye muscle area	Muscle in carcass	Small	Big
	Fat	RTU P8 Backfat Thickness	Carcass quality & adaptability	Thin	Thick
	Marbling	RTU % Marbling	Juicy meat	Low	High
	Dressing%	Carcass weight / Live weight	High dressing %	Low	High

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	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	0.56	103	0.77
	Wean Weight	15.0	93	18.0
	Birth Mat.	0.31	107	0.57
	Milk (Wn.Mat.)	7.3	98	8.0
Postwean Growth	Postwean Wt	27.7	92	33.0
	Mature Weight	24	90	34
	ADG	104	92	133
	FCR	-69	95	-75
Fertility	Scrotal Circumf.	10.5	89	16.0
	Heifer Fertility	-6.1	101	-5.6
	Cow Fertility	-1.2	89	-2.9
	Longevity	32.7	92	36.2
Frame	Height	19	95	22
	Length	21	90	31
Carcass	Dressing%	-0.03	91	0.10
	RedMeatYield	-0.8	89	1.3
	Marbling	-0.54	95	-0.29

Selection Value	Ave. Herd
Calving Ease	105
Calf Growth	93
Milk	98
Maintenance	109
Fertility	92
Cow Value	102
Growth Value	91
Production Value	100

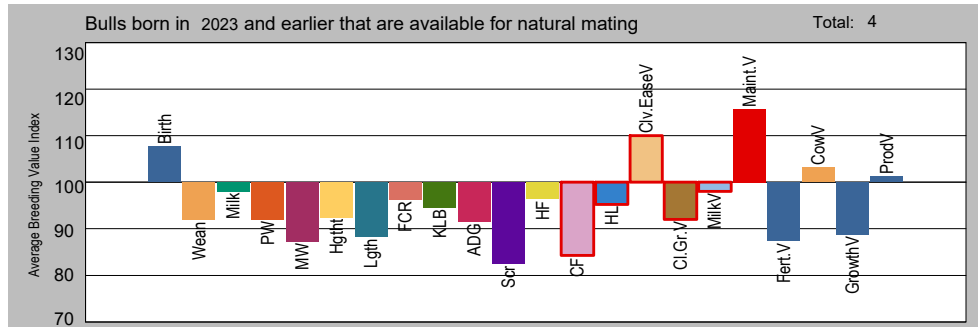
- Average of live animals in the breed: 100
- Above 100: **more favourable**,
- Below 100: **less favourable**

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

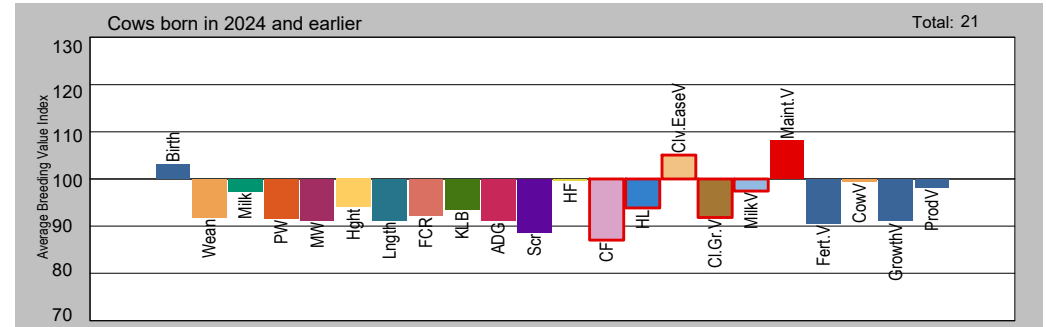
Genetic Windows

Bulls on the farm



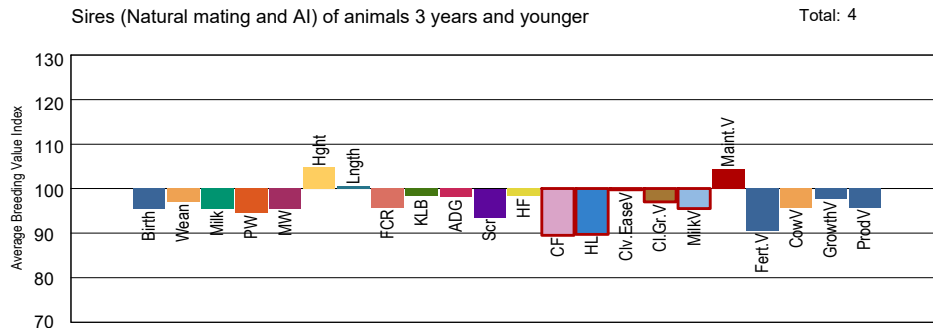
Animals available for breeding

Cow Herd

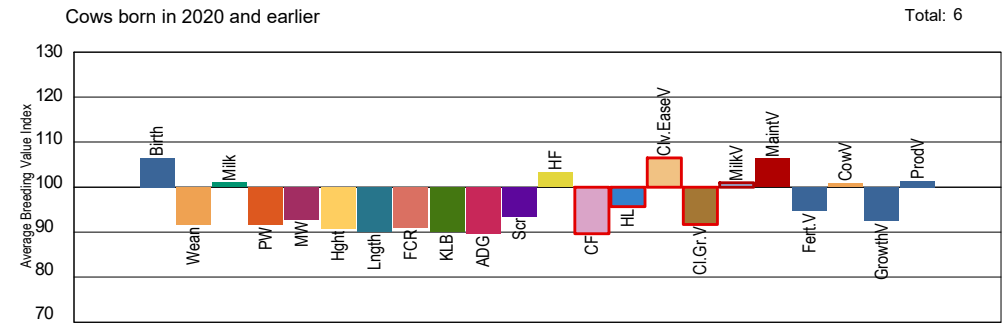


Results of previous selection decisions

Sires of young animals

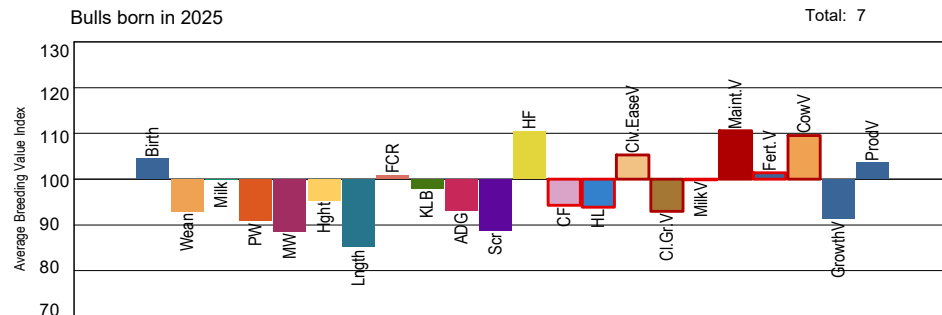


Cows older than 6 years

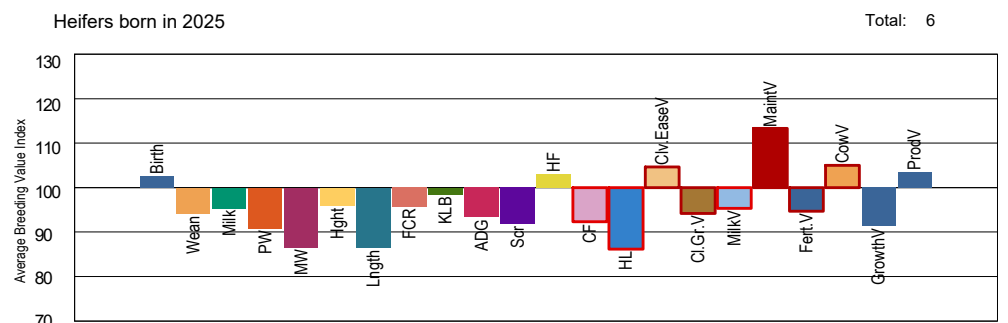


Selection possibilities

Bull calves



Heifer calves

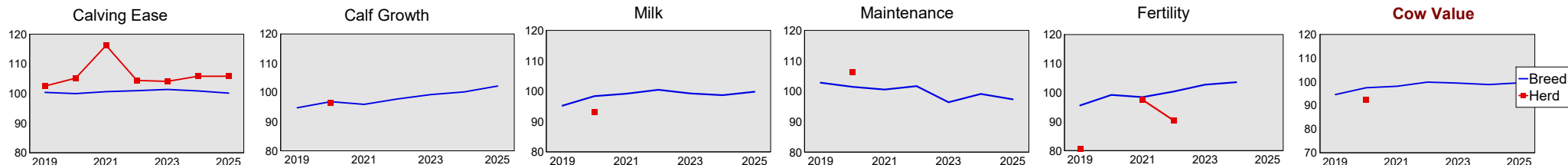


Summary of Cow Herd

			Selection Values (SV)								Calf Weight		Dam		Growth & Efficiency				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	100	98	101	100	100	99	99
2017	1	★★★★	108	92	83	111	84	92			106	92	106	83	88	89	82	83	82	95	80	95	85	84
2018	4	★★★★☆	117	87	101	107	97	107	93	106	110	87	119	101	87	92	91	92	96	102	92	87	92	91
2019	2	★★★★	87	99	111	103	97	96	93	95	96	99	79	111	101	96	91	91	96	107	91	94	92	93
2021	2	★★★★★	110	90	107	107	110	116	93	114	114	90	93	107	92	92	94	96	95	117	97	112	94	94
2022	3	★★★★☆	111	89	98	111	90	103	91	101	107	89	110	98	89	88	92	96	88	97	88	96	96	91
2023	7	★★★★	103	92	96	107	84	96	91	95	100	92	109	96	92	92	92	95	86	93	83	90	96	93
2024	3	★★★☆☆	97	95	86	111	86	89	87	87	93	95	112	86	94	89	89	93	83	99	83	85	93	89
2025	6	★★★★☆	105	94	95	113	95	105	91	104	103	94	106	95	91	87	93	99	92	103	92	86	96	87
Cows in Herd Average:			105	92	97	109	93	101	91	100	104	92	104	97	92	91	91	93	90	102	88	93	93	90

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.



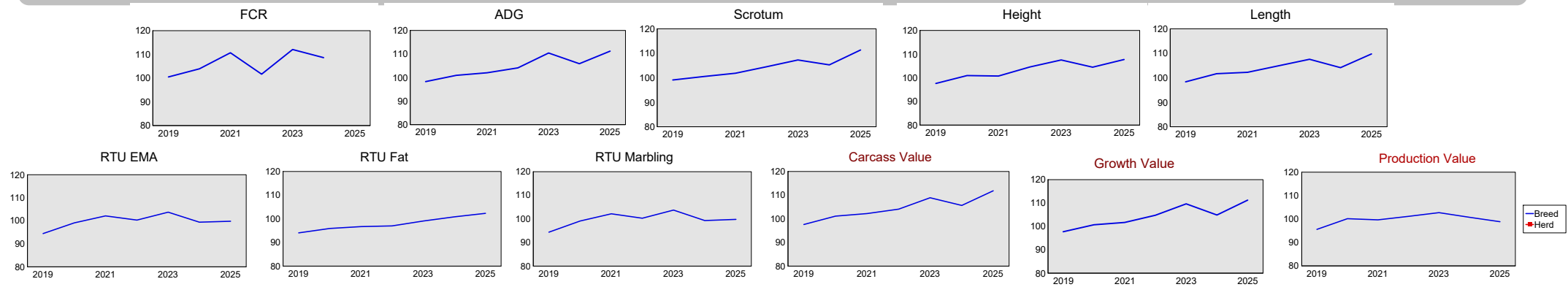
Herd

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance						Fertility						Cow Value
	Birth Weight		Mat EBV	Calv. Ease	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Milk	Postwean Weight		Mature Weight		Mainte-nance	Heifer Fert.		Cow Fert.		Longevity		Ferti-ility	
	Number	Dir EBV			Number	EBV		Number	EBV		Number	EBV	Number	EBV		Number	EBV	Number	EBV	Number	EBV		
2019	6	0.46	0.66	103												3	3.1			3	29.4	81	
2020	6	0.35	0.55	105	5	16.5	96	5	5.89	93	5	30.3		106						4	31.0		92
2021	10	-0.24	0.25	116												4	-9.5			9	31.4	98	
2022	11	0.64	0.25	104												3	-3.7			2	28.4	90	
2023	12	0.68	0.24	104																			
2024	10	0.62	0.16	106																			
2025	11	0.46	0.34	106																			

Breed

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance				Fertility						Cow Value			
	Birth Weight		Mat EBV	Calv. Ease	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Postwean Weight		Mature Weight		Maine- nance	Heifer Fert.		Cow Fert.		Longevity			Ferti- lity		
	Number	Dir EBV			Number	EBV		Number	EBV	Number	EBV	Number	EBV		Number	EBV	Number	EBV	Number	EBV			Number	EBV
2016	1782	0.81	0.42	101	985	14.3	91	985	6.12	94	448	28.0	250	28	105	395	-6.4	304	-2.1	1860	26.0	94	92	
2017	1720	0.80	0.48	101	1155	14.8	93	1155	6.19	94	481	29.8	306	28	105	402	-5.9	313	-2.3	1792	27.4	95	93	
2018	1744	0.77	0.45	101	1213	14.9	93	1213	6.14	94	553	29.2	278	29	104	417	-5.9	305	-2.1	1865	28.9	96	93	
2019	1757	0.80	0.49	100	1239	15.7	95	1239	6.57	95	553	30.8	300	31	103	430	-5.3	325	-2.5	1826	30.2	96	95	
2020	1742	0.79	0.55	100	1243	16.6	97	1243	7.48	98	519	32.3	246	33	101	394	-5.9	302	-3.1	1839	30.8	99	98	
2021	1690	0.76	0.52	101	1171	16.2	96	1171	7.70	99	493	32.7	187	32	101	361	-5.2	246	-2.8	1674	31.0	98	98	
2022	1795	0.71	0.53	101	1271	17.0	98	1271	8.08	100	520	33.5	198	30	102	356	-6.3	129	-3.0	1136	31.4	100	100	
2023	1773	0.71	0.51	101	1235	17.7	99	1235	7.73	99	513	35.8	62	33	96	180	-6.4	37	-3.3			103	100	
2024	1801	0.76	0.51	101	1081	18.1	100	1081	7.58	99	560	34.6	8	43	99	44	-5.7					104	99	
2025	1633	0.80	0.54	100	854	18.9	102	854	7.90	100	177	38.9			97								100	100
2026	626	0.82	0.62	99	56	21.7	109	56	10.03	107													100	100

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			
2019																									
2020																									
2021																									
2022																									
2023																									
2024																									
2025																									

Breed

Birth Year	Growth									Frame						Carcass								Selection Values		
	FCR			ADG			Scrotum			Height			Length			RTU Number	EMA		Fat		Marbling		Cracss Value	Growth Value	Prod Value	
	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi		EBV	EBVi	EBV	EBVi						
2017	37	-71	97	180	110	94	177	13.5	95	177	20	96	177	25	95	132	0.25	97	-0.71	93	-0.25	101	95	94	92	
2018	97	-70	97	261	120	96	261	14.3	97	261	21	97	261	28	97	213	0.34	98	-0.63	94	-0.48	96	96	97	94	
2019	59	-76	101	260	127	98	220	15.4	99	260	21	98	260	29	98	242	0.51	100	-0.63	94	-0.55	94	98	98	96	
2020	45	-80	104	259	137	101	220	16.2	101	259	23	101	259	32	102	258	0.73	103	-0.44	96	-0.33	99	101	101	100	
2021	49	-89	111	219	141	102	224	16.9	102	224	23	101	224	33	102	209	0.89	105	-0.36	97	-0.18	102	102	102	100	
2022	56	-77	102	205	149	104	206	18.2	104	206	25	105	206	36	105	177	0.90	105	-0.33	97	-0.27	100	104	105	101	
2023	8	-91	112	231	172	110	232	19.6	107	232	27	108	232	38	108	204	1.20	109	-0.14	99	-0.10	104	109	110	103	
2024	3	-86	109	132	155	106	135	18.6	105	141	25	104	141	35	104	124	0.91	105	0.04	101	-0.32	99	106	105	101	
2025				105	175	111	112	21.7	111	120	27	108	120	40	110	111	1.18	109	0.19	102	-0.29	100	112	111	99	
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.
			Name																										
GH 220031		GH 200011 GH 150032	100	96	99	116	103	110	89	108	100	96	102	99	92	84	95	109	85	114	96	86	98	79	92	87	95	11	
PACO 231			76	72	57	41	40	57	38	53	0.79	16.3	0.50	7.5	28.0	17	115	-86	8.6	-15.0	-2.4	30.1	21	10	-0.06	-1.29	-0.54		
											86	72	53	57	58	41	64	5	73	44	25	52	75	71	66	60	59		
HVR 180004		SLM 130041 HVR 130022	107	108	87	81	97	98	110	100	100	108	117	87	110	122	119	126	96	88	110	89	97	100	103	93	99	58	50
LUTHER 804			90	93	82	72	65	79	50	73	0.74	21.5	-0.13	4.1	39.5	57	204	-109	13.7	2.6	-4.4	31.5	21	31	0.77	-0.71	-0.35	18	11
											95	93	78	82	84	72	85	11	89	73	41	80	90	89	83	80	78		21
KC 140014		KC 070017 KC 020006	101	95	103	104	71	93	89	92	104	95	93	103	95	95	91	94	86	77	78	91	98	97	95	97	96	12	5
VIC 414			80	78	63	44	50	62	23	54	0.45	15.7	0.87	8.9	29.7	28	99	-67	8.8	10.1	0.5	32.0	21	28	0.15	-0.29	-0.49		
											87	78	65	63	58	44	25	19	27	56	30	64	28	27	16	15	14		
KJA 110057		KJA 080016 KJA 040415	130	84	115	112	88	119	97	118	121	84	123	115	86	86	99	99	101	94	87	96	89	92	106	98	95	261	188
CAMPBELL 157K			97	98	91	78	78	86	52	79	-0.81	11.4	-0.38	12.3	23.7	20	128	-74	16.7	-1.1	-0.9	34.6	15	23	0.98	-0.22	-0.53	23	34
											99	98	92	91	70	78	85	15	90	88	55	92	90	89	60	55	54		85
KJA 170017		KJA 110057 KJA 140054	126	82	117	110	115	126	97	124	127	82	101	117	85	87	100	102	102	114	107	111	102	99	101	108	94	6	
KOWIE			77	73	61	47	52	61	32	55	-1.21	10.6	0.54	12.9	23.1	21	132	-78	17.1	-15.4	-4.0	41.3	24	29	0.58	0.75	-0.59		
											83	73	64	61	42	47	51	10	54	60	35	62	55	54	38	35	34		
KJA 180038		KJA 110057 KJA 150049	100	90	102	106	78	92	92	91	97	90	109	102	92	93	93	93	76	90	76	91	100	95	92	98	100	32	
LOFTUS			82	69	56	45	52	59	40	55	0.99	13.7	0.19	8.4	28.0	27	108	-66	4.2	1.0	0.7	32.4	23	26	-0.07	-0.27	-0.28		
											92	69	59	56	46	45	64	9	73	58	32	65	74	71	32	29	28		
KJA 210021		BR234F KJA 150010	90	112	90	91	90	82	112	85	81	112	122	90	108	110	113	104	113	86	96	106	116	119	127	90	90	11	7
OLYF			72	79	47	29	36	53	41	51	2.20	23.0	-0.33	4.9	38.4	44	180	-81	22.4	4.0	-2.3	38.7	32	49	2.50	-1.08	-0.77	4	
											85	79	43	47	42	29	68	6	77	39	19	51	79	76	61	54	53		
KJA 210024		BR234F KJA 150034	109	90	91	105	91	99	98	99	104	90	113	91	86	95	91	77	100	103	90	76	105	109	67	128	77	3	3
OELOFSE			67	73	46	22	34	48	38	46	0.48	13.6	0.04	5.4	23.9	28	101	-46	15.7	-7.5	-1.3	25.7	26	39	-1.94	2.67	-1.38		
											79	73	42	46	37	22	60	6	70	37	15	49	72	68	61	53	52		
SLM 130041		47R SLM 030014	90	97	99	96	82	87	94	86	92	97	95	99	96	103	96	96	94	87	88	82	95	100	97	89	74	264	206
STANMORE 1341			98	98	94	87	83	90	58	84	1.34	16.5	0.79	7.8	30.4	37	119	-69	13.2	3.1	-1.0	28.2	19	31	0.27	-1.16	-1.56	52	67
											99	98	95	94	83	87	92	21	94	91	64	95	95	94	85	82	81		143
SLM 150015		SLM 120030 SLM 030014	96	93	102	105	93	99	95	98	99	93	94	102	94	94	94	99	108	99	93	88	85	90	97	90	111	14	11
515			81	83	67	44	57	65	39	60	0.85	15.0	0.81	8.4	29.1	28	112	-75	20.2	-5.3	-1.8	30.7	13	21	0.26	-1.02	0.22	5	2
											88	83	66	67	48	44	59	12	67	60	39	72	68	66	59	54	53		4

Growth Tests

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

Animal					Weight		Frame				Growth				Carcass			
Test Code	Sex	Test no	Sire ID	Cow	Wean	End-	Length	Height	Length/	Scrotum	Intake	ADG	FCR	Growth	EMA	Fat	Marbling	Carcass
Test station		ID	Dam ID	Value	dir	weight			Height					Value				Value
202101 D11 M																		
GANZEKRAAL		GH 200011	 HVR 180004	135	75	75	68	78	66	65	125	86	100	78	85	77	117	77
HEREFORDS		90527599	 GH 180010	72	91	83	-1 83	9 85	1.10 84	-1.4 84	-0.02 7	80 78	-75 7	45	-0.59 79	-2.31 75	0.54 73	77

Breeding Values and Accuracies: Bulls

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

Inbreeding in red is high

Value <80 Value >120

Breeding values with an accuracy < 5% are not printed

Animal				Selection Values								Birth		Wean				Growth			Fertility				Frame		Carcass				
Index EBV Acc	ID Number Name	% Inbreeding	Sire ID Dam ID	Calv. Ease V	Calf Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Carcass Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	FCR	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	EMA	Fat	Marbling	
GH 200011	90527599	1	 HVR 180004 GH 180010	132	75	110	154	112	135	78	130	77	127	114	59	75	110	108	78	86	100	65	128	93	100	78	68	85	77	117	
NERO 011				85	91	73	60	54	72	45	67	77	-1.22	0.00	-9	7.3	10.8	123	18.6	80	-75	-1.4	-24.6	-1.9	36.3	9	-1	-0.59	-2.31	0.54	
													94	67	60	91	73	75	78	78	7	84	65	31	66	85	83	79	75	73	
PF 200002	91070755	1	KC 140014 KRM 160003	114	101	99	98	75	101	99	101	100	113	104	101	101	99	100	99	100	103	100	73	87	93	103	103	101	106	95	98
PF 200002				67	69	46	32	35	50	22	44	24	-0.21	0.41	35	18.4	7.7	104	32.4	132	-78	15.7	12.8	-0.9	33.1	24	32	0.96	-0.52	-0.38	
													75	51	32	69	46	49	50	26	15	28	37	23	46	29	28	24	23	22	
PF 220002	95104923	1	 KJA 180038 PF 170001	96	94	90	109	81	88	86	86	85	93	110	91	94	90	91	94	87	89	79	93	78	93	93	93	88	98	94	
PF 220002				66	44	36	26	32	40	22	36	16	1.31	0.17	25	15.5	5.0	84	28.9	86	-61	5.5	-0.7	0.4	33.1	18	21	-0.36	-0.20	-0.60	
													75	47	26	44	36	35	32	33	7	37	37	19	40	38	37	17	15	15	
PF 230009	97057590	1	KJA 180038 BH 160024	98	98	93	102	82	89	92	88	90	98	103	98	98	93	94	97	93	93	86	92	79	95	96	94	93	98	96	
PF 230009				68	47	42	28	35	43	24	39	18	0.94	0.46	32	17.1	6.0	91	31.0	106	-66	8.9	0.0	0.3	33.9	20	25	-0.03	-0.25	-0.49	
													77	47	28	47	42	39	36	34	11	38	40	21	45	39	38	19	17	17	
KJA 240009	98413792	5	KJA 210021 KJA 190047	81	108	104	95	94	87	104	88	107	81	101	104	108	104	108	107	103	99	111	94	95	103	105	107	113	93	97	
STEEFAANS				63	53	40	30	31	43	26	40	33	2.14	0.54	38	21.5	9.0	121	37.5	143	-74	21.5	-1.4	-2.1	37.5	25	38	1.50	-0.75	-0.42	
													74	39	30	53	40	41	28	41	6	46	34	20	38	47	45	35	31	30	
PF 240003	98606809		KJA 180038 KRM 160003	107	92	98	104	79	96	94	95	92	100	119	95	92	98	94	91	95	97	89	82	84	93	97	93	98	95	98	
PF 240003				68	51	43	32	36	45	28	42	27	0.80	-0.20	29	14.5	7.3	91	26.9	113	-71	10.4	6.5	-0.5	33.2	21	24	0.36	-0.57	-0.40	
													77	48	32	51	43	42	38	39	12	44	38	24	45	45	43	28	26	25	
PF 240012	98606890	3	KJA 180038 KJA 180045	92	97	95	102	81	85	92	84	91	89	108	97	97	95	95	97	91	90	86	94	75	96	95	95	93	96	94	
PF 240012				68	50	42	35	38	46	26	42	26	1.59	0.25	31	16.6	6.6	93	30.9	100	-62	9.2	-1.3	0.9	34.3	20	26	0.00	-0.46	-0.58	
													77	48	35	50	42	42	33	41	7	45	43	26	45	45	44	27	25	25	
PF 250001	6020387046	2	GH 220031 PF 210006	100	94	102	113	111	114	90	112	87	103	94	86	94	102	103	94	94	102	88	121	99	97	95	84	94	92	94	
PF 250001				62	44	36	26	29	39	24	36	34	0.52	0.80	20	15.6	8.5	112	29.3	111	-77	9.7	-19.9	-2.8	34.9	19	15	0.05	-0.86	-0.56	
													73	39	26	44	36	35	34	36	7	40	35	17	36	41	39	36	33	32	
PF 250003	6020387053		GH 220031 KRM 160003	115	91	99	108	91	110	93	108	90	110	113	91	91	99	96	87	96	105	93	94	94	91	96	85	98	90	95	
PF 250003				67	52	43	31	31	44	28	41	38	0.02	0.05	24	14.3	7.6	96	24.7	117	-82	12.6	-1.5	-2.0	32.1	20	16	0.37	-1.08	-0.53	
													76	47	31	52	43	42	41	39	12	44	33	21	40	45	43	40	37	36	
PF 250006	6020387152		GH 220031 PF 170001	99	96	89	114	94	98	85	95	84	98	105	86	96	89	93	92	88	97	83	105	88	90	91	82	88	93	91	
PF 250006				65	45	36	25	28	39	22	36	32	0.95	0.36	20	16.3	4.9	90	28.0	90	-71	7.7	-8.7	-1.1	32.0	17	13	-0.35	-0.71	-0.73	
													74	46	25	45	36	35	36	33	6	38	32	16	35	38	37	34	31	30	
PF 250007	6020387095	3	GH 220031 KJA 180032	123	84	108	111	114	126	90	123	86	122	103	87	84	108	100	83	93	102	89	123	104	91	97	84	92	90	96	
PF 250007				66	51	42	33	34	44	26	40	36	-0.89	0.46	21	11.3	10.4	105	22.3	107	-77	10.3	-21.3	-3.5	32.2	21	15	-0.07	-1.05	-0.50	
													76	45	33	51	42	42	36	41	6	46	38	23	40	47	45	38	35	34	
PF 250008	6020387103	3	GH 220031 PF 220004	100	94	103	111	105	112	90	110	86	99	103	88	94	103	103	93	94		85	115	96	94	98	86	92	91	97	
PF 250008				62	44	35	27	30	39	23	36	34	0.80	0.45	21	15.3	8.9	112	28.4	109		8.3	-16.1	-2.3	33.6	21	17	-0.07	-0.92	-0.45	
													73	38	27	44	35	35	33	38		43	35	18	36	44	42	35	32	31	

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	
ID Number Name																														
PF 250011	5	GH 220031	94	99	95	107	93	94	90	93	90	93	103	93	99	95	98	96	92	98	91	105	85	93	94	87	93	91	91	
6020387129		KJA 180045	67	51	42	34	34	45	25	41	38	1.26	0.43	26	17.4	6.4	99	30.1	104	-73	11.4	-9.3	-0.7	33.2	19	18	0.01	-0.97	-0.71	
PF 250011												76	46	34	51	42	42	37	41	6	45	39	24	40	46	44	40	37	36	
PF 250012	4	GH 220031	106	93	103	110	102	113	91	111	91	106	101	89	93	103	101	91	95		92	110	94	101	97	88	95	94	93	
6020387137		PF 210004	52	44	36	27	30	37	22	34	34	0.29	0.54	23	14.9	8.7	108	27.2	114		12.1	-12.2	-1.9	36.8	21	19	0.13	-0.62	-0.64	
PF 250012												58	39	27	44	36	36	33	37		41	35	18	36	42	40	36	33	32	

Breeding Values and Accuracies: Cows

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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																														
PF 170001 86089182 PHYLLIDA 17-01	1	KC 140014 BH 130047		108 76	92 54	83 46	111 26	84 38	92 46			82 12	106 0.34 76	106 0.32 75	89 22 26	92 14.5 54	83 3.1 46	83 68 42	88 25.3 40	82 65 17	85 -55 11	82 6.8 18	95 -2.5 45	80 0.2 21	95 33.8 47	85 13 19	84 15 18	85 -0.65 12	99 -0.12 11	87 -0.91 11
KJA 180032 88055504 LIDA	5	KJA 110057 KJA 120045		130 79	80 73	113 62	107 51	124 55	127 63	91 33	125 57	87 36	127 -1.24 82	108 0.24 74	91 25 51	80 9.4 73	113 11.8 62	99 103 62	81 21.0 42	91 99 53	95 -68 10	92 12.0 56	132 -27.5 62	111 -4.6 40	96 34.3 62	96 20 57	89 20 56	92 -0.09 38	92 -0.81 34	97 -0.45 34
KJA 180042 90812496 KJA 180042				112 64									98 0.93 63	134 -0.83 65								97 -3.3 20		55 16.3 33						
KJA 180045 88061817 DALEEN		SLM 130041 KJA 140001		91 80	100 73	92 63	99 54	83 55	82 64	91 31	81 57	94 42	90 1.51 82	104 0.40 76	101 35 54	100 18.0 73	92 5.6 63	93 88 63	98 31.5 46	89 92 50	87 -59 10	96 14.2 52	97 -3.6 63	74 1.0 40	100 36.2 62	90 16 52	95 26 52	94 0.07 43	94 -0.64 41	88 -0.87 41
KJA 180052 88055587 DALEEN	6	KJA 110057 KJA 140041		136 81	80 73	97 62	116 50	84 56	112 63	96 31	111 57	91 32	124 -1.00 83	131 -0.68 76	84 17 50	80 9.6 73	97 7.1 62	88 79 62	81 20.9 42	94 110 50	95 -69 9	100 16.2 53	83 6.1 63	92 -1.6 41	96 34.4 63	90 16 54	88 19 53	95 0.10 33	98 -0.19 30	90 -0.75 30
KJA 190047 89989651 DALEEN 947	1	SLM 150015 KJA 160034		81 74	102 72	120 66	99 52	97 49	92 61	97 30	92 55	97 32	90 1.48 78	77 1.50 64	99 33 52	102 18.6 72	120 13.7 66	119 146 63	103 34.6 36	93 105 45	93 -66 11	109 20.5 51	102 -6.7 57	93 -1.9 34	100 36.4 55	94 19 52	96 26 50	100 0.50 34	96 -0.43 31	105 -0.06 30
PF 190003 89641922 PF 190003	1	KC 140014 BH 130042		93 75	96 54	101 46	106 31	96 41	100 48	88 20	98 42	86 20	102 0.61 79	80 1.38 66	93 26 31	96 16.4 54	101 8.3 46	101 108 44	99 32.5 41	89 91 23	91 -63 15	82 6.8 24	111 -13.2 53	88 -1.0 23	87 30.3 46	90 16 24	89 20 24	92 -0.06 20	91 -0.96 19	95 -0.54 18
PF 210004 93121028 PF 210004	4	KJA 170017 KJA 180045		112 70	90 52	107 44	104 36	101 44	113 48	94 22	111 43	96 28	113 -0.21 77	100 0.58 56	94 28 36	90 13.6 52	107 9.9 44	100 105 44	90 26.3 32	94 112 36	95 -68 7	99 15.6 38	106 -9.4 55	91 -1.5 27	116 43.4 50	96 20 38	97 28 37	98 0.33 29	101 0.06 27	91 -0.73 26
PF 210006 93120970 PF 210006	1	KJA 170017 BH 130042		107 71	90 52	107 45	110 32	119 43	119 47	92 24	117 42	89 25	114 -0.29 77	85 1.17 57	89 22 32	90 13.6 52	107 10.1 45	103 112 43	93 28.8 37	93 107 32	95 -68 13	90 10.9 34	128 -24.8 55	102 -3.2 25	108 39.7 50	92 17 34	90 20 33	95 0.16 26	96 -0.44 24	94 -0.59 24
PF 220003 95104949 PF 220003		KJA 180038 KJA 180042		103 68	97 35	80 28	117 22	89 35	94 36	88 20	92 33	88 15	96 1.03 76	117 -0.14 52	84 17 22	97 16.6 35	80 2.2 28	87 75 28	91 27.0 24	92 105 32		91 11.5 36	98 -4.5 46	88 -1.1 16	85 29.5 42	96 20 37	89 20 35	77 -1.19 16	114 1.30 14	93 -0.65 14
PF 220004 95104956 PF 220004	16	KJA 180038 KJA 180032		114 71	85 50	112 42	106 34	107 42	115 46	91 26	113 42	87 24	114 -0.29 78	101 0.55 55	92 26 34	85 11.7 50	112 11.4 42	102 109 42	88 25.0 32	92 103 41	94 -67 7	84 8.1 46	117 -17.1 53	96 -2.2 25	102 37.0 49	98 21 47	92 23 45	92 -0.08 25	95 -0.54 22	98 -0.37 22
PF 220007 95104972 PF 220007	17	KJA 180038 KJA 180052		116 71	86 50	103 42	111 34	75 43	100 47	94 25	99 43	90 22	111 -0.05 78	113 0.05 55	88 22 34	86 12.0 50	103 8.8 42	97 97 42	88 25.3 32	93 109 41	94 -68 6	88 10.2 45	76 10.7 53	80 0.1 26	102 37.1 49	95 19 46	91 22 44	93 0.01 23	98 -0.23 21	95 -0.52 20

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																																
PF 230001	2	KJA 180038	110	94	79	117	83		96	88	94	88	102	121	84	94	79	84	88	92			91	94	86	73	96	89	77	114	93	
97057533		KJA 180042	65	35	28	22	28		35	20	32	15	0.65	-0.27	17	15.4	1.9	68	25.0	105			11.5	-1.1	-0.8	24.3	20	20	-1.19	1.30	-0.65	
PF 230001														75	44	22	35	28	28	24	32			36	31	16	37	37	35	16	14	14
PF 230004	17	KJA 180038	90	96	105	103	95		98	95	97	94	92	97	96	96	105	103	97	97	98			89	100	95	92	104	100	96	100	92
97057566		KJA 180021	68	50	42	34	38		45	26	41	28	1.34	0.71	30	16.2	9.3	110	31.4	123	-72		10.6	-5.5	-2.1	32.5	25	31	0.21	0.00	-0.65	
PF 230004														77	47	34	50	42	42	34	42	6		46	43	26	45	47	45	29	27	27
PF 230005		KJA 180038	116	86	99	111	81		101	94	100	90	108	121	88	86	99	93	87	93	94			88	87	84	94	95	91	93	98	95
97057574		KJA 180052	68	50	42	34	38		45	25	41	22	0.15	-0.27	22	12.0	7.6	88	24.9	109	-68		10.2	3.5	-0.5	33.4	19	22	0.01	-0.23	-0.52	
PF 230005														77	48	34	50	42	42	32	41	6		45	43	26	45	46	44	23	21	20
PF 230006		KJA 180038	115	88	100	104	79		100	94	99	92	108	117	95	88	100	93	87	95	97			89	82	84	93	97	93	98	95	98
97057632		KRM 160003	68	51	43	32	36		45	28	42	27	0.14	-0.11	29	13.0	8.0	89	24.7	113	-71		10.4	6.5	-0.5	33.2	21	24	0.36	-0.57	-0.40	
PF 230006														77	48	32	51	43	42	38	39	12		44	38	24	45	45	43	28	26	25
PF 230008	1	KJA 180038	99	93	91	109	81		90	86	88	85	95	109	91	93	91	90	93	87	89			79	93	78	93	93	90	88	98	94
97057582		PF 170001	66	44	36	26	32		40	22	36	16	1.13	0.20	25	15.1	5.2	83	28.2	86	-61		5.5	-0.7	0.4	33.1	18	21	-0.36	-0.20	-0.60	
PF 230008														75	47	26	44	36	35	32	33	7		37	37	19	40	38	37	17	15	15
PF 230011	3	KJA 180038	101	93	98	102	81		93	92	92	91	99	105	97	93	98	94	93	91	90			86	94	75	96	95	95	93	96	94
97057624		KJA 180045	68	50	42	35	38		46	26	42	26	0.85	0.35	31	14.9	7.4	91	28.3	100	-62		9.2	-1.3	0.9	34.3	20	26	0.00	-0.46	-0.58	
PF 230011														77	48	35	50	42	42	33	41	7		45	43	26	45	45	44	27	25	25
PF 230012	1	KJA 180038	93	95	100	106	87		95	90	93	87	95	96	93	95	100	99	97	91	92			79	101	82	89	95	92	92	94	97
97428247		PF 190003	65	44	36	27	33		40	24	37	18	1.10	0.75	26	15.7	8.0	103	31.3	99	-64		5.5	-6.1	-0.2	31.3	19	23	-0.07	-0.62	-0.41	
PF 230012														75	44	27	44	36	36	32	34	9		38	39	20	40	39	37	19	17	17
PF 240005	1	KJA 180038	104	91	84	110	87		91	84	88	82	99	114	91	91	84	83	89	84	85			79	101	81	92	87	85	86	99	90
98606825		BH 130047	68	51	43	26	37		44	23	40	18	0.84	0.00	24	14.3	3.2	67	25.6	75	-56		5.6	-6.3	0.0	32.7	15	16	-0.58	-0.13	-0.75	
PF 240005														77	50	26	51	43	40	37	34	8		38	43	22	45	39	37	18	17	16
PF 240008		KJA 180038	98	99	76	117	83		85	88	83	88	88	124	84	99	76	85	93	92			91	94	86	73	96	89	77	114	93	
98606841		KJA 180042	65	35	28	22	28		35	20	32	15	1.64	-0.41	17	17.7	0.8	70	28.4	105			11.5	-1.1	-0.8	24.3	20	20	-1.19	1.30	-0.65	
PF 240008														74	44	22	35	28	28	24	32			36	31	16	37	37	35	16	14	14
PF 240011	1	KJA 180038	90	96	99	106	87		92	90	90	87	92	97	93	96	99	100	99	91	92			79	101	82	89	95	92	92	94	97
98606866		PF 190003	65	44	36	27	33		40	24	37	18	1.36	0.71	26	16.3	7.7	104	32.1	99	-64		5.5	-6.1	-0.2	31.3	19	23	-0.07	-0.62	-0.41	
PF 240011														75	44	27	44	36	36	32	34	9		38	39	20	40	39	37	19	17	17
PF 250002		GH 220031	102	94	102	111	100		110	88	108	86	107	89	88	94	102	102	93	92	100			83	112	92	87	94	84	92	89	95
6020387061		PF 190003	64	45	37	26	29		39	23	36	34	0.22	1.00	22	15.3	8.4	108	28.7	103	-75		7.7	-14.1	-1.7	30.2	19	15	-0.06	-1.13	-0.54	
PF 250002														74	42	26	45	37	36	36	34	8		38	35	17	35	39	38	35	32	31
PF 250004	3	GH 220031	122	86	99	116	94		114	92	113	88	117	115	84	86	99	95	85	95	102			93	98	94	91	94	83	93	93	93
6020387079		KJA 180052	67	51	42	33	34		45	25	41	36	-0.48	-0.04	17	12.1	7.7	94	23.2	113	-78		12.4	-4.5	-2.0	32.3	19	14	0.02	-0.74	-0.65	
PF 250004														76	46	33	51	42	42	36	40	5		45	39	23	41	46	44	37	34	33

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																														
PF 250005		GH 220031	110	97	78	122	95	104			87	104	117	80	97	78	87		87	93		96	105	96	71	95	81	77	108	90
6020387087		KJA 180042	64	36	28	21	22	34			32	0.50	-0.12	13	16.6	1.5	75		24.9	109		13.7	-9.2	-2.4	23.2	19	12	-1.19	0.79	-0.77
PF 250005												74	42	21	36	28	28		29	32		36	24	12	31	37	36	33	30	30
PF 250009	2	GH 220031	97	98	88	116	96	98	89	96	87	93	111	84	98	88	95		93	94		88	106	92	86	97	84	85	100	94
6020387111		PF 220003	62	40	32	23	27	36	22	33	32	1.27	0.13	17	17.3	4.5	94		28.7	110		10.0	-9.8	-1.7	29.8	21	15	-0.63	0.01	-0.59
PF 250009												73	37	23	40	32	32		31	36		41	32	15	34	42	40	34	31	30
PF 250010	3	GH 220031	102	94	99	113	89	103	91	101	87	98	109	86	94	99	100		93	94		87	95	88	94	96	85	93	93	95
6020387160		PF 220007	62	44	35	27	30	39	23	36	34	0.89	0.20	19	15.4	7.6	105		28.5	112		9.4	-2.2	-1.1	33.6	20	16	-0.02	-0.76	-0.53
PF 250010												73	38	27	44	35	35		33	38		43	35	18	36	44	42	35	32	31
PF 250013	3	KJA 210024	95	96	106	102	94	101	97	100	95	97	95	97	96	106	103		94	92	85	104	102	92	88	100	102	84	112	91
6020387145		KJA 190047	50	51	40	28	30	39	24	36	33	0.98	0.77	30	16.1	9.6	111		29.3	103	-56	18.1	-7.1	-1.6	31.0	22	33	-0.72	1.13	-0.72
PF 250013												56	38	28	51	40	40		26	37	6	43	34	19	37	45	42	35	31	30

Selection List on Cow Value

Bulls 2 years and older

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	Polled HH: Horned, PcPc: Polled, PcH: Polled horn carrier	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									
														★★★★★												
1	GH 200011	NERO 011	HVR 180004	GH 180010	1.2	HH	0	0	0		132	85	75	91	110	73	154	60	112	54	135	72	78	45	130	67
														★★★★☆												
1	PF 200002	PF 200002	KC 140014	KRM 160003	0.6						114	67	101	69	99	46	98	32	75	35	101	50	99	22	101	44
														★★★★												
1	PF 240003	PF 240003	KJA 180038	KRM 160003	0.0						107	68	92	51	98	43	104	32	79	36	96	45	94	28	95	42
														★★★★☆												
1	KJA 240009	STEFAANS	KJA 210021	KJA 190047	5.3						81	63	108	53	104	40	95	30	94	31	87	43	104	26	88	40
2	PF 220002	PF 220002	KJA 180038	PF 170001	1.2	PcH	0	0	0		96	66	94	44	90	36	109	26	81	32	88	40	86	22	86	36
3	PF 230009	PF 230009	KJA 180038	BH 160024	1.0						98	68	98	47	93	42	102	28	82	35	89	43	92	24	88	39
4	PF 240012	PF 240012	KJA 180038	KJA 180045	3.3						92	68	97	50	95	42	102	35	81	38	85	46	92	26	84	42

Selection List on Cow Value

Cows 2 years and older

ID	Name	Sire ID	Dam ID	% Inbreeding	Polled HH: Horned, PcPc: Polled, PcH: Polled horn carrier	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								
1	KJA 180032	LIDA	KJA 110057	KJA 120045	4.8					130	79	80	73	113	62	107	51	124	55	127	63	91	33	125	57
1	KJA 180052	DALEEN	KJA 110057	KJA 140041	6.2					136	81	80	73	97	62	116	50	84	56	112	63	96	31	111	57
2	PF 210004	PF 210004	KJA 170017	KJA 180045	3.9					112	70	90	52	107	44	104	36	101	44	113	48	94	22	111	43
3	PF 210006	PF 210006	KJA 170017	BH 130042	0.6					107	71	90	52	107	45	110	32	119	43	119	47	92	24	117	42
4	PF 220004	PF 220004	KJA 180038	KJA 180032	16.5					114	71	85	50	112	42	106	34	107	42	115	46	91	26	113	42
1	PF 190003	PF 190003	KC 140014	BH 130042	1.0					93	75	96	54	101	46	106	31	96	41	100	48	88	20	98	42
2	PF 220007	PF 220007	KJA 180038	KJA 180052	16.6					116	71	86	50	103	42	111	34	75	43	100	47	94	25	99	43
3	PF 230005	PF 230005	KJA 180038	KJA 180052	16.6					116	68	86	50	99	42	111	34	81	38	101	45	94	25	100	41
4	PF 230006	PF 230006	KJA 180038	KRM 160003	0.0					115	68	88	51	100	43	104	32	79	36	100	45	94	28	99	42
1	KJA 190047	DALEEN 947	SLM 150015	KJA 160034	1.4					81	74	102	72	120	66	99	52	97	49	92	61	97	30	92	55
2	PF 170001	PHYLLIDA 17-01	KC 140014	BH 130047	1.3	PcH	0	0	0	108	76	92	54	83	46	111	26	84	38	92	46				
3	PF 220003	PF 220003	KJA 180038	KJA 180042	0.0					103	68	97	35	80	28	117	22	89	35	94	36	88	20	92	33
4	PF 230001	PF 230001	KJA 180038	KJA 180042	0.0					110	65	94	35	79	28	117	22	83	28	96	35	88	20	94	32
5	PF 230004	PF 230004	KJA 180038	KJA 180021	2.5					90	68	96	50	105	42	103	34	95	38	98	45	95	26	97	41
6	PF 230008	PF 230008	KJA 180038	PF 170001	1.2					99	66	93	44	91	36	109	26	81	32	90	40	86	22	88	36
7	PF 230011	PF 230011	KJA 180038	KJA 180045	3.3					101	68	93	50	98	42	102	35	81	38	93	46	92	26	92	42
8	PF 230012	PF 230012	KJA 180038	PF 190003	1.0					93	65	95	44	100	36	106	27	87	33	95	40	90	24	93	37
9	PF 240005	PF 240005	KJA 180038	BH 130047	1.3					104	68	91	51	84	43	110	26	87	37	91	44	84	23	88	40
10	PF 240011	PF 240011	KJA 180038	PF 190003	1.0					90	65	96	44	99	36	106	27	87	33	92	40	90	24	90	37
1	KJA 180045	DALEEN	SLM 130041	KJA 140001	0.1					91	80	100	73	92	63	99	54	83	55	82	64	91	31	81	57

Selection List on Cow Value

Cows 2 years and older

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	Polled HH:Horned, PcPc:Polled, PcH: Polled horn carrier	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									
2	PF 240008	PF 240008	KJA 180038	KJA 180042	0.0													

Selection List on Cow Value
Bull Calves younger than 2 years

ID Sorted on ID		Name	Sire ID	Dam ID	% Inbreeding HH: Horned, PcPc: Polled, PcH: Polled horn carrier	Polled nt821	Myostatin Q204X	Genomic F94L	tested	Calving Ease Value Acc	Calf Growth Value Acc	Milk Value Acc	Maint. Value Acc	Fertility Value Acc	Cow Value Acc	Growth Value Acc	Prod Value Acc									
										★★★★★																
1	PF 250007	PF 250007	GH 220031	KJA 180032	3.1					123	66	84	51	108	42	111	33	114	34	126	44	90	26	123	40	
										★★★★★																
1	PF 250001	PF 250001	GH 220031	PF 210006	1.7					100	62	94	44	102	36	113	26	111	29	114	39	90	24	112	36	
2	PF 250003	PF 250003	GH 220031	KRM 160003	0.0					115	67	91	52	99	43	108	31	91	31	110	44	93	28	108	41	
3	PF 250008	PF 250008	GH 220031	PF 220004	3.2					100	62	94	44	103	35	111	27	105	30	112	39	90	23	110	36	
4	PF 250012	PF 250012	GH 220031	PF 210004	4.0					106	52	93	44	103	36	110	27	102	30	113	37	91	22	111	34	
										★★★★★																
1	PF 250006	PF 250006	GH 220031	PF 170001	0.5					99	65	96	45	89	36	114	25	94	28	98	39	85	22	95	36	
2	PF 250011	PF 250011	GH 220031	KJA 180045	5.1					94	67	99	51	95	42	107	34	93	34	94	45	90	25	93	41	

Selection List on Cow Value
Heifers younger than 2 years

ID		Name	Sire ID	Dam ID	% Inbreeding	Polled HH:Horned, PcPc:Polled, PcH: Polled horn carrier	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	PF 250002	PF 250002	GH 220031	PF 190003	0.4					102	64	94	45	102	37	111	26	100	29	110	39	88	23	108	36	
2	PF 250004	PF 250004	GH 220031	KJA 180052	3.1					122	67	86	51	99	42	116	33	94	34	114	45	92	25	113	41	
									★★★★☆																	
1	PF 250005	PF 250005	GH 220031	KJA 180042	0.0					110	64	97	36	78	28	122	21	95	22	104	34					
2	PF 250010	PF 250010	GH 220031	PF 220007	3.2					102	62	94	44	99	35	113	27	89	30	103	39	91	23	101	36	
3	PF 250013	PF 250013	KJA 210024	KJA 190047	3.1					95	50	96	51	106	40	102	28	94	30	101	39	97	24	100	36	
									★★★★																	
1	PF 250009	PF 250009	GH 220031	PF 220003	1.6					97	62	98	40	88	32	116	23	96	27	98	36	89	22	96	33	

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.

