

HEREFORD

GENOMIC BREEDING VALUE REPORT

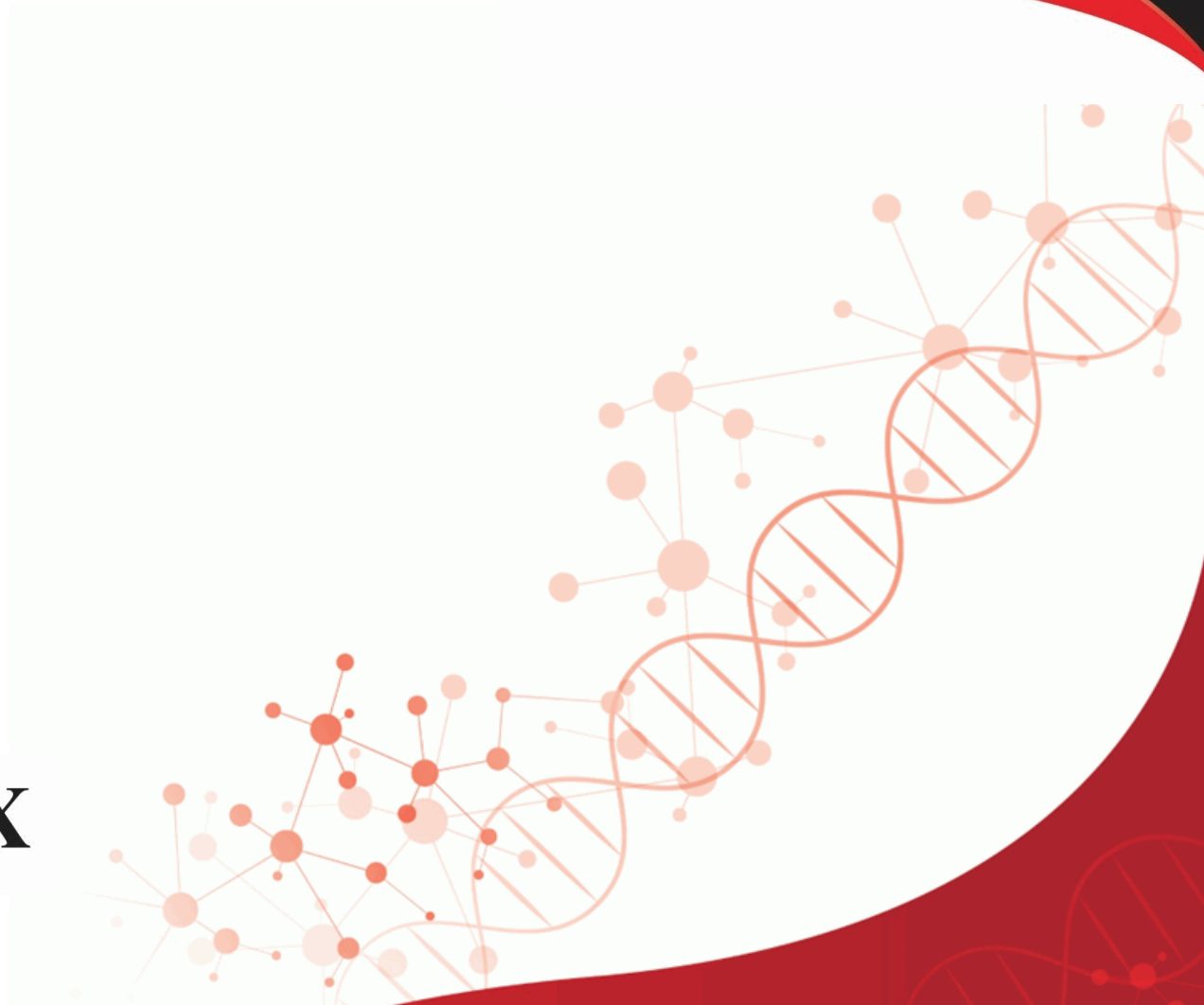
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EBVs, EBVi's and GEBVs

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

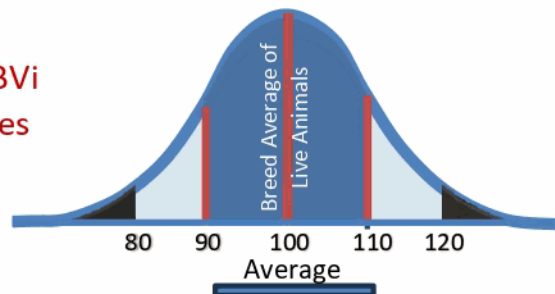
Select for more meat on the carcass as measured from end weight in Phase C and D Growth Tests and RTU scanning.

LOGIX Production Value

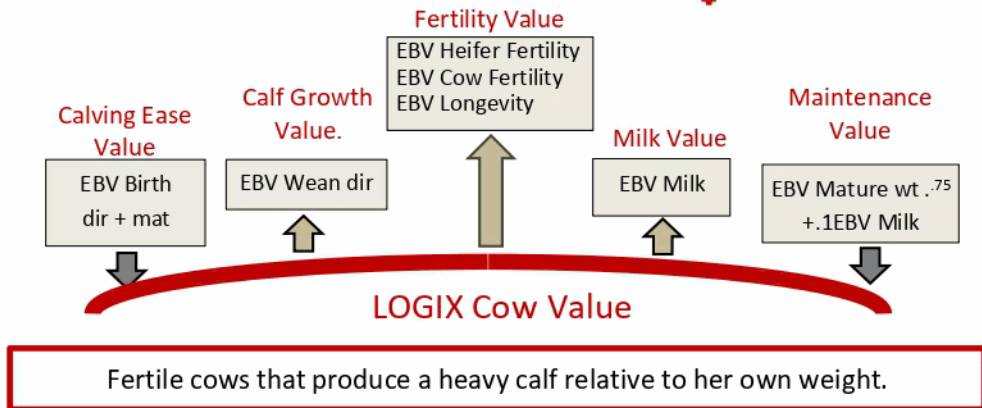


80% LOGIX Cow Value +
20% LOGIX Growth Value

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)

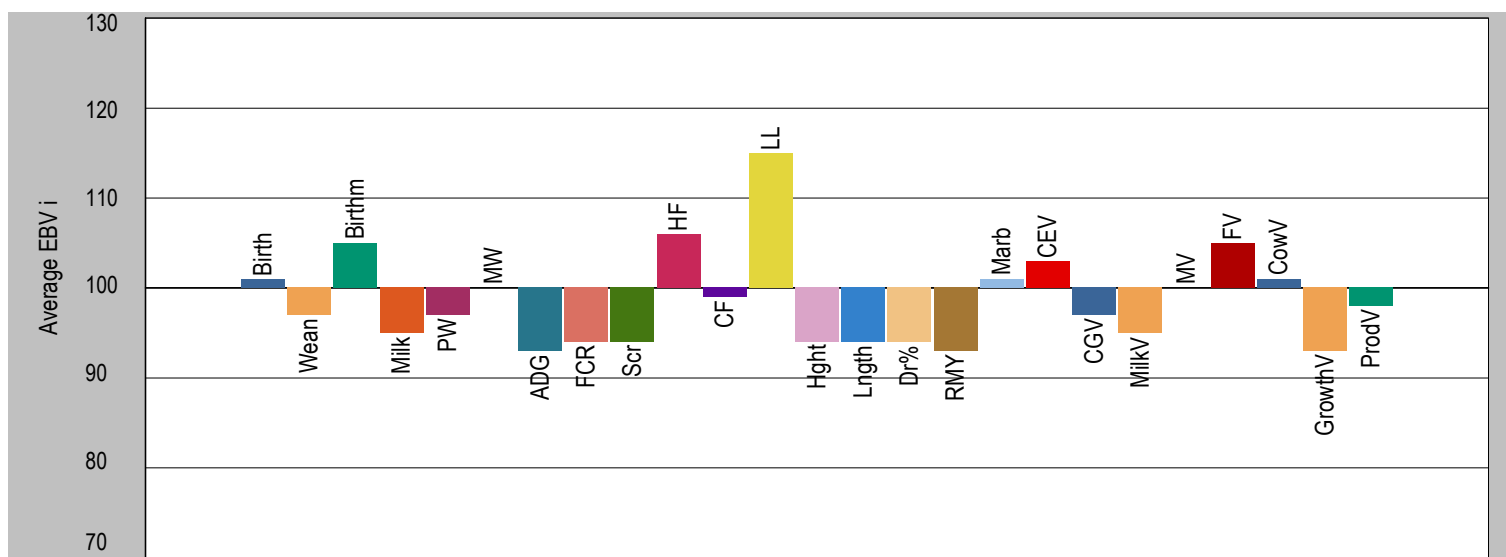
- Maintenance Value >110
 - Cow Value and Fertility Value average to high
- Lighter cows have a lower maintenance.

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	Lngth:	Length
ADG:	Average Daily Gain	Dr%:	Dressing%
FCR:	Feed Conversion Ratio	RMY:	Red Meat Yield
		Marb:	Marbling

Selection Values:

CEV:	Calving Ease Value
CGV:	Calf Growth Value
MilkV:	Milk Value
MV:	Maintenance Value
FV:	Fertility Value
CowV:	Cow Value (CV)
GrowthV:	Growth Value (GV)
ProdV:	Production Value (PV)

	Trait	EBV Herd	EBV Index	EBV Breed
Prewrite Growth	Birth Weight	0.67	101	0.77
	Wean Weight	16.8	97	18.0
	Birth Mat.	0.37	105	0.57
	Milk (Wn.Mat.)	6.6	95	8.0
Postwean Growth	Postwean Wt	31.1	97	33.0
	Mature Weight	33	100	34
	ADG	106	93	133
	FCR	-67	94	-75
Fertility	Scrotal Circumf.	13.0	94	16.0
	Heifer Fertility	-9.5	106	-5.6
	Cow Fertility	-2.7	99	-2.9
	Longevity	42.7	115	36.2
Frame	Height	19	94	22
	Length	25	94	31
Carcass	Dressing%	0.02	94	0.10
	RedMeatYield	-0.1	93	1.3
	Marbling	-0.25	101	-0.29

Selection Value	Ave. Herd
Calving Ease	103
Calf Growth	97
Milk	95
Maintenance	100
Fertility	105
Cow Value	101
Growth Value	93
Production Value	98

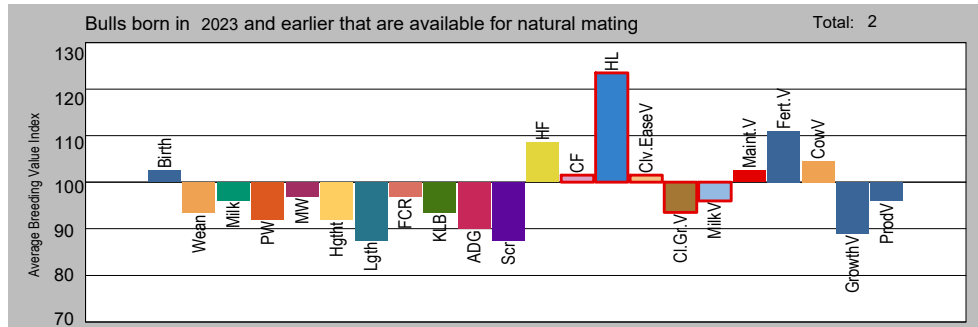
- Average of live animals in the breed: 100
- Above 100: **more favourable**,
- Below 100: **less favourable**

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

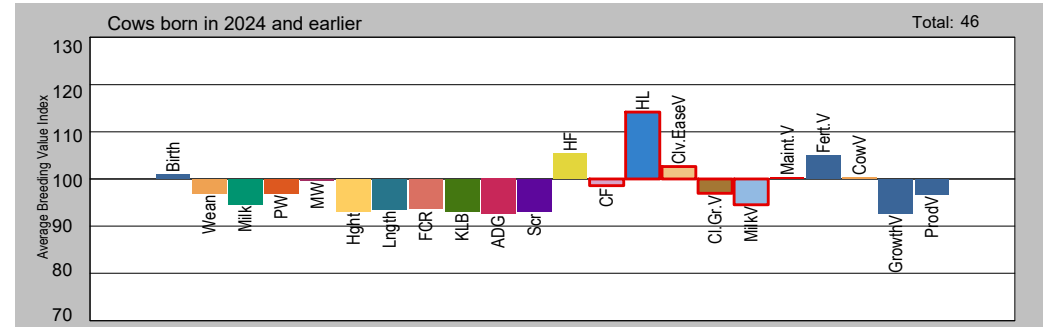
Genetic Windows

Bulls on the farm



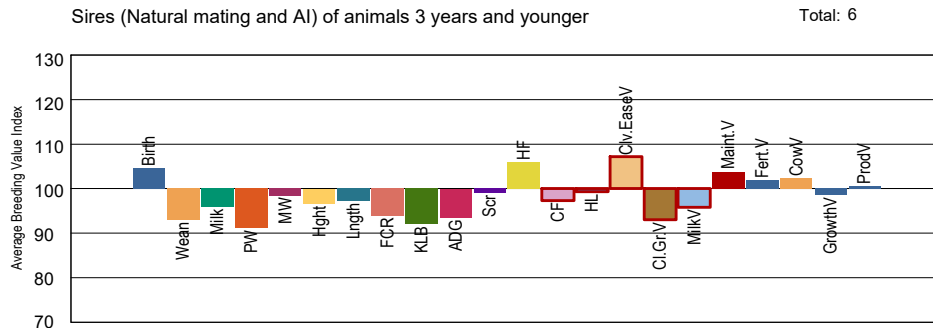
Animals available for breeding

Cow Herd

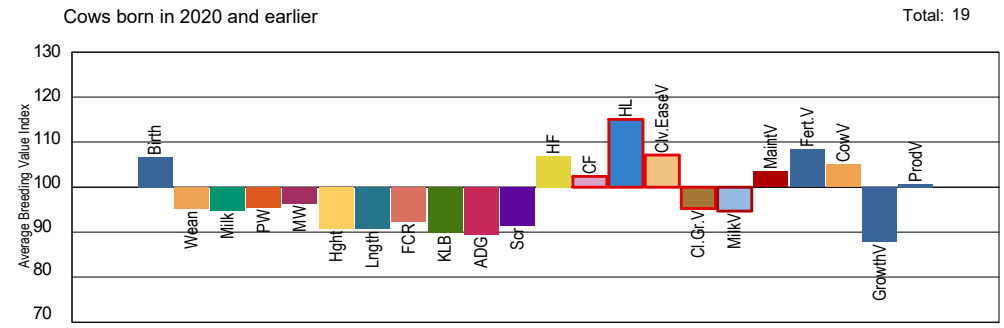


Results of previous selection decisions

Sires of young animals

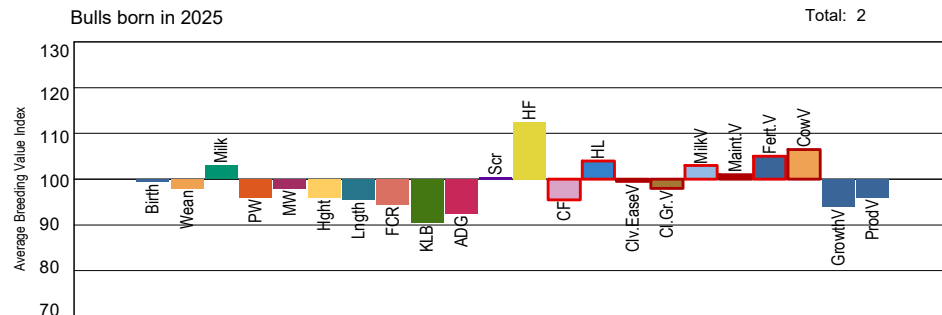


Cows older than 6 years

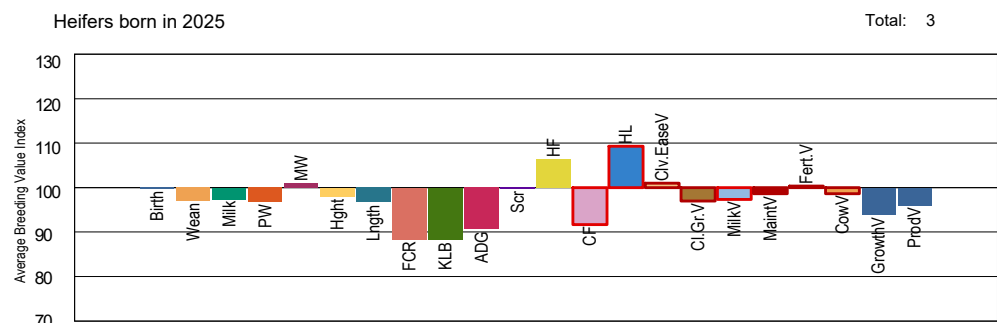


Selection possibilities

Bull calves



Heifer calves

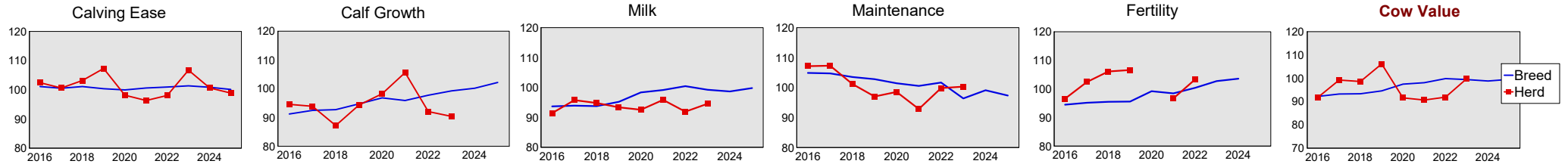


Summary of Cow Herd

			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	99	100	100	100	99	100	100	99	99	99	99	99	99
2014	1	★★★★★	122	99	111	101	119	133	91	130	123	99	100	111	97	97	95	93	94	123	106	110	95	97
2015	2	★★★★☆	95	107	104	98	115	105			98	107	92	104	107	102	99	101	95	107	110	125	92	93
2017	4	★★★★☆	104	92	97	111	114	109	78	103	108	92	94	97	92	88	80	78	89	117	104	109	87	87
2018	6	★★★★☆	113	91	92	103	105	104	88	95	112	91	107	92	90	97	89	90	93	103	103	109	92	91
2019	5	★★★★☆	108	97	89	101	106	101	92	100	103	97	116	89	98	99	92	93	90	103	100	123	91	92
2020	1	★★★★	92	102	95	102	97	91	91	89	92	102	101	95	107	97	93	97	89	96	92	123	92	91
2021	7	★★★★	92	106	95	93	96	90	98	90	91	106	100	95	106	107	99	100	95	98	91	114	98	100
2022	7	★★★★	103	94	91	100	103	96	94	95	96	94	117	91	93	101	94	95	96	106	98	105	94	95
2023	6	★★★★☆	103	96	95	100	108	102	94	98	102	96	104	95	96	100	91	93	88	108	99	120	91	91
2024	7	★★★★☆	101	97	96	99	104	101	97	97	99	97	106	96	97	100	94	93	97	105	96	117	95	96
2025	3	★★★★	101	97	97	99	100	99	94	96	100	97	106	97	97	101	91	88	100	106	92	109	98	97
Cows in Herd Average:			103	98	97	101	106	103	92	99	102	98	104	97	98	99	92	93	93	107	99	115	93	94

Genetic Trends for On-Farm Traits

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



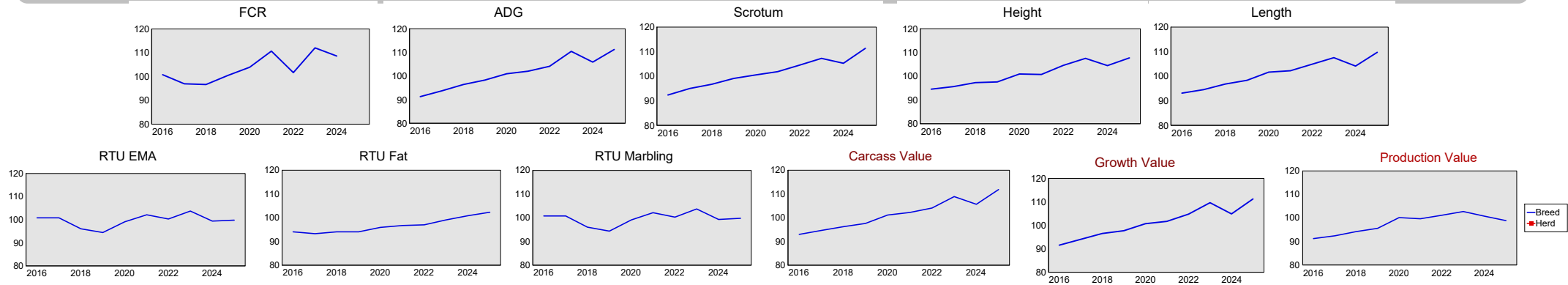
Herd

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance					Fertility								Cow Value
	Birth Weight		Calv. Ease	Dir EBV	Mat EBV	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Postwean Weight		Mature Weight		Maintenance	Heifer Fert.		Cow Fert.		Longevity		Ferti- lity		
	Number	EBV				Number	EBV		Number	EBV	Milk	Number	EBV	Number		EBV	Number	EBV	Number	EBV	Number		EBV	
2016	41	0.70	0.38	102		21	15.7	95	21	5.47	91	10	27.0	2	37	107	9	-8.4	7	-1.9	41	21.4	97	92
2017	45	0.73	0.61	101		11	15.4	94	11	6.75	96	5	30.3	2	26	107	13	-11.0	13	-2.7	45	31.3	102	99
2018	54	0.65	0.36	103		10	12.6	87	10	6.42	95	8	26.0	5	33	101	14	-11.8	11	-3.4	56	31.0	106	99
2019	48	0.50	0.16	107		11	15.6	94	11	6.05	93	5	29.5			97	7	-6.8	3	-3.4	47	33.3	107	106
2020	52	1.15	0.26	98		22	17.2	98	22	5.80	93	17	31.4			99					52	33.5		92
2021	59	1.43	0.12	96		6	20.4	106	6	6.70	96	6	36.8			93	6	-4.6	2	-2.5	56	32.1	97	91
2022	59	1.35	0.02	98		25	14.6	92	25	5.63	92	6	27.1			100	7	-11.0			35	32.3	103	92
2023	44	0.47	0.25	107		27	13.9	90	27	6.40	95	3	33.1			100								100
2024	29	0.86	0.36	101																				
2025	30	1.00	0.33	99																				

Breed

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance						Fertility								Cow Value			
	Birth Weight		Calv. Ease	Dir EBV	Mat EBV	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Postwean Weight		Mature Weight		Maintenance	Heifer Fert.		Cow Fert.		Longevity		Ferti- lity						
	Number	EBV				Number	EBV		Number	EBV	Milk	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
2026	626	0.82	0.62	99		56	21.7	109		56	10.03	107																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			
2017																									
2018																									
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	Name	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
					Value	Value	Value	Value	Value	Value	Value	Dir	Dir	Mat.	Mat.	wt	weight							Fertility	Fertility	ty					
EWK 100072	060645 TF 030019	1072			107	112	103	101	116	118	102	118	110	112	95	103	117	98	103	109	97	120	106	104	107	103	99	106	111	83	51
					94	92	83	49	75	76	44	70	0.02	23.0	0.78	8.9	43.8	31	144	-87	14.7	-19.2	-3.9	38.1	27	34	0.42	0.54	0.25		
													97	92	89	83	86	49	45	41	47	81	54	90	48	47	39	37	36	14	36
EWK 120063	EWK 100072 EWK 090065	EWK1263			93	116	108	93	112	107	103	107	102	116	78	108	119	107	104	111	97	106	111	110	102	101	94	108	111	19	2
					85	76	70	35	61	63	28	56	0.64	24.5	1.47	10.3	45.5	40	150	-90	14.2	-9.9	-4.6	40.9	23	31	0.08	0.77	0.25		
													90	76	75	70	68	35	30	22	34	67	38	77	32	31	24	22	22	4	11
EWK 120073	WDW 090006 EWK 060013	EWK1273			103	81	101	118	99	98	87	96	103	81	100	101	82	82	87	95	107	98	102	96	93	90	93	81	89	15	5
					83	76	61	33	54	60	25	53	0.56	10.1	0.55	8.1	21.3	15	86	-68	19.4	-4.4	-3.2	34.2	18	20	-0.04	-1.94	-0.81		
													89	76	70	61	66	33	28	19	31	54	35	74	28	27	15	14	14	3	4
EWK 140008	WDW 080082 TF 030019	140008			89	102	106	106	96	100	85	98	98	102	79	106	99	92	82	82	92	128	76	72	93	94	102	100	115	11	2
					81	76	62	49	59	64	47	61	0.91	18.7	1.41	9.7	32.2	26	66	-52	11.9	-24.9	0.8	23.9	18	25	0.64	-0.05	0.42		
													87	76	67	62	63	49	52	41	54	61	42	74	54	53	48	46	45		
EWK 140021	EWK 100072 EWK 090095	EWK1421			105	93	98	108	106	110	94	109	108	93	94	98	90	92	95	99	99	108	99	108	98	97	92	107	106	4	
					77	70	59	32	54	56	26	50	0.15	15.1	0.81	7.5	26.5	25	114	-74	15.2	-11.3	-2.8	39.7	21	28	-0.10	0.63	-0.02		
													82	70	67	59	64	32	28	22	30	60	36	66	30	29	23	21	21	2	3
EWK 160034	WDW 120053 EWK 120025	EWK1634			86	106	85	89	81	75	102	77	75	106	119	85	106	113	105	107	94	93	79	86	100	102	99	100	94	99	28
					88	87	58	42	59	66	39	61	2.65	20.3	-0.22	3.7	36.7	47	150	-84	13.1	-0.7	0.3	29.9	23	32	0.44	-0.05	-0.57		
													97	87	70	58	72	42	41	34	44	64	31	82	45	44	41	38	38	1	1
EWK 190013	WDW 130138 EWK 140005	EWK 190013			118	85	100	100	110	111	89	108	118	85	100	100	85	99	89	96	81	107	107	110	88	85	91	78	97	23	10
					79	80	55	33	48	58	26	52	-0.59	11.6	0.58	8.0	23.3	33	91	-70	6.6	-10.2	-4.0	40.8	15	16	-0.14	-2.17	-0.42		
													90	80	56	55	58	33	27	23	29	48	28	67	29	28	23	22	22		
EWK 220005	WDW 170177 BMH 160017	EWK 220005			94	97	101	97	96	97	95	96	91	97	107	101	94	102	93	90	103	110	84	96	98	97	102	107	100	40	
					80	70	48	38	44	55	32	50	1.43	16.5	0.27	8.4	29.4	36	106	-62	17.7	-12.7	-0.5	34.4	21	28	0.64	0.66	-0.30		
													93	70	51	48	46	38	36	25	38	44	26	62	38	37	34	33	32		
EWK 220020	WDW 170177 EWK 180035	EWK 220020			111	91	91	93	103	103	98	102	108	91	108	91	89	107	95	89	98	110	94	100	99	100	99	105	105	6	
					73	69	46	34	41	52	24	46	0.17	14.2	0.26	5.3	26.2	41	115	-61	14.9	-12.6	-2.1	36.4	22	31	0.46	0.47	-0.02		
													83	69	50	46	52	34	27	20	29	43	25	56	29	29	25	24	24		
H65	041C E066	GERBER HIGH TIME H65			113	79	93	150	96	108			115	79	97	93	72	63	79		87	104	91	97	73	80	107	100	99	21	14
					68	75	24	10	20	41			-0.33	8.9	0.70	5.9	15.3	-5	55		9.6	-8.0	-1.5	34.7	6	11	1.04	-0.05	-0.34		
													86	75	28	24	11	10	11		12	11	5	45	12	12	11	10	10		
WDW 110113	WDW 080082 WDW 070083	WDW110113			107	96	83	111	99	102	76	98	105	96	105	83	91	89	74	71	91	100	106	78	85	84	88	95	90	12	8
					83	80	66	51	59	66	48	62	0.40	16.5	0.36	3.1	27.5	22	34	-38	11.5	-5.8	-3.8	26.5	13	15	-0.41	-0.53	-0.75		
													87	80	73	66	64	51	51	42	53	63	39	74	53	53	46	44	44	1	22

Sires

Bull		Selection Values									Calf		Dam		Growth				Fertility				Frame		Carcass			Measured Progeny	
ID	Index EBV Acc	Sire ID	Calv. Ease Value	Calf Grwth Value	Milk Value	Maint. Value	Fertility Value	Cow Value	Growth Value	Prod Value	Birth Dir	Wean Dir	Birth Mat.	Wean Mat.	Post wn wt	Mature weight	ADG	FCR	Scrotal	Heifer Fertility	Cow Fertility	Long-evi ty	Height	Length	EMA	Fat	Marbling	Birth Grwth Test	Wean Dgt/Calvs.
WDW 130138	WLB90X WDW 090015		114	89	93	95	99	103	94	102	107	89	117	93	91	105	94	96	86	100	101	95	91	91	101	83	94	121	38
LEGO			94	91	81	61	70	77	45	71	0.23	13.2	-0.11	5.8	27.0	39	110	-70	9.1	-5.5	-3.0	34.0	17	22	0.62	-1.76	-0.57	16	27
WDW 170177	BH 130012 WDW 100038		99	84	87	101	94	82	92	81	87	84	128	87	82	99	89	79	94	112	84	82	92	93	92	115	104	74	33
MONTENEGRO			87	90	64	52	58	69	40	63	1.72	11.3	-0.58	4.2	21.7	33	91	-48	13.1	-13.7	-0.5	28.1	18	24	-0.11	1.45	-0.10		
WDW 200023	652D WDW 170137		108	122	103	82	113	113	119	116	109	122	99	103	125	120	116	115	131	93	124	111	130	129	120	107	109	163	42
BOLT PERMORNANCE			85	91	50	41	48	63	46	60	0.08	27.4	0.60	8.7	49.3	54	194	-94	31.5	-0.8	-6.7	41.1	41	59	1.98	0.67	0.15	7	

Breeding Values and Accuracies: Bulls

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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
EWK 230008	95741518	10	EWK 190013 WDW 160162	97 67	94 54	88 39	104 28	112 34	98 44	89 22	96 40	83 20	96 1.05 77	102 0.49 46	96 30 28	94 15.3 54	88 4.5 39	87 75 40	91 27.4 36	89 92 22	96 -69 20	88 9.9 24	113 -14.9 33	103 -3.4 21	113 41.9 49	95 19 24	87 18 24	95 0.12 20	74 -2.59 19	87 -0.90 19
EWK 230042	96099445	7	EWK 190013 EWK 150027	106 67	93 67	104 47	101 20	110 36	111 47			88 13	109 0.13 76	94 0.81 48	98 31 20	93 15.0 67	104 9.1 47	99 102 45	93 28.5 38	91 99 17	98 -72 14	87 9.6 18	104 -8.7 38	100 -3.0 21	134 51.5 49	89 16 18	88 18 18	89 -0.30 13	91 -0.95 13	101 -0.24 12
EWK 240019	98327604		WDW 200023 EWK 180010	114 66	106 54	97 47	97 27	117 35	116 45	103 25	116 41	106 32	115 -0.35 76	98 0.64 45	102 36 27	106 20.3 54	97 7.2 47	101 108 43	105 36.1 40	102 142 34	105 -82 12	110 20.9 38	101 -6.2 37	120 -6.0 21	124 46.9 48	109 28 38	109 39 37	102 0.68 34	105 0.50 31	107 0.04 30
EWK 240021	98327612		WDW 200023 EWK 170008	105 68	107 55	105 47	100 27	110 35	111 45	104 25	112 41	108 32	109 0.07 77	91 0.95 47	98 32 27	107 20.9 55	105 9.4 47	110 127 43	111 40.0 41	103 145 34	104 -80 13	115 23.5 38	97 -3.5 36	109 -4.3 20	130 49.4 48	111 30 38	112 42 37	108 1.11 34	97 -0.30 31	102 -0.20 30
EWK 240022	98210362	1	EWK 220005 EWK 170034	102 67	97 48	90 42	101 26	108 36	99 42	89 20	97 38	90 20	99 0.86 76	110 0.17 46	99 33 26	97 16.8 48	90 5.0 42	90 82 39	96 30.3 34	87 85 22	87 -58 17	94 13.2 24	108 -10.8 37	97 -2.4 22	128 48.5 48	94 19 24	92 23 23	96 0.19 21	101 0.08 20	102 -0.20 20
EWK 250015	6020129745		EWK 220005 EWK 180008	97 65	96 43	101 34	103 21	103 32	103 38			94 18	98 0.91 75	98 0.65 42	96 30 21	96 16.1 43	101 8.4 34	99 103 33	94 28.9 32	91 101 21	93 -66 14	102 16.8 22	108 -11.2 35	96 -2.3 20	105 38.3 42	95 19 22	94 25 22	96 0.20 18	104 0.36 17	103 -0.16 17
EWK 250019	6020129729		EWK 220005 EWK 140037	102 67	100 52	105 46	99 23	107 36	110 43	93 20	109 38	96 20	101 0.71 76	105 0.36 48	100 33 23	100 18.0 52	105 9.3 46	104 114 40	98 31.7 40	94 110 23	96 -70 17	99 15.4 24	117 -17.2 39	95 -2.1 23	103 37.4 46	97 20 24	97 28 23	97 0.27 20	106 0.56 19	105 -0.04 19

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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																													
EWK 140037 80397656 EWK1437		EWK 100072 EWK 090011	122 84	99 76	111 78	101 26	119 56	133 61	91 26	130 54	96 20	123 -0.96 85	100 0.58 81	97 31 26	99 17.4 76	111 11.2 78	110 127 60	97 30.8 64	95 113 27	102 -78 23	94 13.1 30	123 -21.7 63	106 -3.8 39	110 40.5 67	95 19 29	97 28 28	92 -0.09 20	105 0.46 19	110 0.22 19
EWK 150027 82854415 EWK1527	4	EWK 120063 EWK 080047	94 82	108 67	106 75	102 22	104 51	101 56			94 14	100 0.75 84	86 1.14 79	97 31 22	108 21.4 67	106 9.7 75	113 133 55	107 37.5 50	94 111 20	101 -76 14	94 13.1 22	100 -5.6 59	96 -2.2 31	133 50.7 64	91 17 22	91 22 21	88 -0.36 14	103 0.29 13	105 -0.04 12
EWK 150032 82854464 EWK1532	1	EWK 120063 EWK 060028	95 82	105 67	102 75	93 30	125 51	108 58			98 12	96 1.03 84	97 0.68 79	106 40 30	105 20.2 67	102 8.6 75	103 112 57	106 36.8 54	103 143 19	104 -80 13	96 13.8 20	113 -14.7 60	123 -6.5 29	116 43.2 64	92 18 20	94 25 19	90 -0.23 13	106 0.56 12	97 -0.43 12
EWK 170008 85941045 EWK170008	1	EWK 120073 EWK 140006	99 80	93 61	108 65	123 32	101 49	113 55			92 13	107 0.27 83	83 1.26 75	77 10 32	93 15.0 61	108 10.2 65	112 132 53	98 31.5 50	90 96 20	92 -64 16	99 15.4 22	101 -6.2 55	94 -2.0 31	121 45.5 61	93 18 21	95 26 20	96 0.24 13	88 -1.27 13	95 -0.55 13
EWK 170024 85941177 EWK170024	8	EWK 140008 EWK 140025	100 78	87 53	111 48	106 28	123 50	108 49	80 28	105 45	84 24	105 0.37 81	89 1.03 72	92 25 28	87 12.6 53	111 11.2 48	103 112 43	89 26.0 45	77 48 29	76 -45 24	85 8.7 31	148 -38.5 56	96 -2.2 32	90 31.6 62	87 14 31	86 17 31	90 -0.20 25	96 -0.46 24	106 0.01 24
EWK 170034 85941029 EWK170034		WDW 130138 EWK 120049	113 81	97 65	79 69	105 35	114 53	104 58	83 26	101 52	84 23	109 0.13 83	112 0.09 77	95 29 35	97 16.7 65	79 1.9 69	82 64 56	97 30.8 52	82 65 27	83 -54 24	85 8.6 28	105 -9.0 59	110 -4.4 34	128 48.8 65	89 16 29	86 17 28	90 -0.25 24	95 -0.50 22	104 -0.10 22
EWK 170044 86684768 170044		WDW 110113 EWK 090087	105 78	90 50	91 47	111 28	116 49	109 48	71 26	104 44	78 24	109 0.13 81	93 0.84 73	89 23 28	90 13.9 50	91 5.2 47	89 80 42	84 22.9 40	71 23 29	72 -39 22	87 9.7 31	114 -14.9 54	114 -5.1 32	96 34.5 60	80 10 31	80 11 30	80 -0.99 24	100 -0.06 23	95 -0.53 23
EWK 180002 86745668 180002	1	EWK 120073 EWK 120025	123 75	81 57	76 55	111 22	92 42	91 48	87 20	89 42	87 13	112 -0.10 78	143 -1.17 67	90 23 22	81 10.2 57	76 1.1 55	69 36 45	81 20.7 47	87 83 21	93 -66 17	96 13.8 23	97 -3.5 41	88 -1.0 26	105 38.6 59	91 17 22	89 20 21	88 -0.40 13	89 -1.09 13	90 -0.76 13
EWK 180004 87159992 180004	1	WDW 130138 FF 130266	108 81	81 58	77 50	106 35	98 46	81 52	76 27	78 47	73 24	102 0.64 83	117 -0.10 78	95 29 35	81 9.8 58	77 1.4 50	68 33 48	80 20.2 51	78 49 27	82 -53 25	77 4.2 29	105 -9.2 45	93 -1.8 30	98 35.5 64	80 10 30	77 8 29	82 -0.84 25	83 -1.77 23	90 -0.78 22
EWK 180008 88173422 EWK180008	4	EWK 140021 EWK 110040	110 75	90 52	105 48	109 19	111 46	116 45			91 12	117 -0.47 79	86 1.15 67	90 23 19	90 13.7 52	105 9.3 48	100 106 40	88 25.5 44	90 97 21	97 -71 14	100 16.0 23	106 -9.8 53	107 -4.0 29	114 42.2 56	92 17 22	91 22 21	90 -0.24 12	101 0.06 11	106 -0.02 11
EWK 180012 88173463 EWK180012	14	EWK 140021 EWK 140027	105 74	100 55	96 57	107 21	133 48	117 48			94 15	106 0.33 74	100 0.56 73	93 26 21	100 17.8 55	96 6.7 57	99 103 44	97 30.8 49	93 107 20	100 -75 16	95 13.4 21	131 -27.0 57	118 -5.7 31	119 44.7 57	94 19 21	93 24 21	90 -0.25 15	104 0.38 15	104 -0.08 14
EWK 180035 88000989 EWK1835		WDW 130138 EWK 140034	116 79	88 72	96 63	96 43	108 53	110 60	86 26	107 53	84 23	120 -0.71 82	93 0.85 73	104 38 43	88 12.8 72	96 6.7 63	86 73 59	90 26.5 64	85 77 27	85 -56 24	86 8.9 29	113 -14.7 59	101 -3.0 37	98 35.1 63	88 15 29	88 19 29	90 -0.26 24	94 -0.68 22	100 -0.27 22

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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																													
EWK 180041 88001045 EWK1841		WDW 130138 EWK 130023	115 78	104 75	101 73	88 44	90 51	107 62	104 26	107 55	103 22	115 -0.34 81	101 0.54 71	112 46 44	104 19.6 75	101 8.1 73	98 101 64	104 35.6 65	102 142 26	100 -76 23	104 18.2 28	67 17.2 60	110 -4.5 31	118 44.3 62	106 26 28	106 37 27	109 1.21 23	89 -1.12 21	103 -0.13 21
EWK 190012 89403281 EWK 190012	2	WDW 130138 EWK 160006	94 78	99 59	93 52	99 34	99 46	92 52	92 26	91 47	91 24	96 1.04 81	96 0.73 72	101 35 34	99 17.7 59	93 6.0 52	94 91 48	101 33.7 50	90 95 28	89 -60 24	90 11.0 29	98 -4.5 48	96 -2.3 28	113 42.1 61	93 18 30	93 24 29	101 0.59 25	88 -1.18 23	101 -0.25 23
EWK 190022 90017286 EWK 190022	1	WDW 130138 EWK 150019	131 78	90 70	87 63	96 38	114 50	118 58	105 28	118 52	102 25	120 -0.73 81	144 -1.22 72	105 38 38	90 13.7 70	87 4.2 63	80 60 57	92 27.7 54	106 154 29	106 -83 25	98 14.7 31	101 -6.0 58	114 -5.1 31	126 47.9 62	98 21 31	100 31 31	106 0.99 26	92 -0.83 24	98 -0.36 24
EWK 190040 91359893 EWK 190040		WDW 130138 EWK 120049	113 78	91 72	91 64	111 35	127 52	118 58	81 26	114 52	84 23	108 0.20 81	115 -0.04 71	89 22 35	91 14.0 72	91 5.4 64	90 81 57	91 27.0 52	80 59 27	80 -50 24	84 8.1 28	124 -21.8 58	113 -4.9 37	128 48.5 62	85 13 29	88 19 28	89 -0.33 24	100 -0.06 22	95 -0.53 22
EWK 190046 91366104 EWK 190046		WDW 130138 EWK 140048	94 78	103 71	85 62	104 33	102 49	88 57	91 26	87 51	90 22	90 1.48 81	110 0.18 70	96 30 33	103 19.2 71	85 3.5 62	91 84 55	104 35.6 50	93 108 27	98 -73 23	87 9.4 29	104 -8.1 57	93 -1.8 29	123 46.3 62	91 17 28	90 21 27	94 0.04 23	92 -0.82 22	101 -0.23 21
EWK 190048 91350835 EWK 190048		WDW 130138 EWK 150027	107 75	102 70	89 63	96 32	86 48	91 56	93 24	90 50	92 22	101 0.71 79	115 -0.05 67	105 39 32	102 19.0 70	89 4.9 63	91 85 55	101 33.5 46	92 103 25	97 -71 22	89 10.5 27	86 3.9 57	82 -0.1 29	127 48.1 59	88 15 27	90 21 27	93 -0.02 22	93 -0.74 21	99 -0.32 20
EWK 200036 90941147 EWK 200036	7	EWK 160034 EWK 140019	92 74	102 70	95 57	102 25	97 42	91 52	91 23	89 46	91 22	92 1.37 79	101 0.52 64	97 31 25	102 19.0 70	95 6.5 57	99 103 51	107 37.4 58	93 107 24	97 -71 20	89 10.4 26	96 -2.8 44	92 -1.7 24	123 46.6 58	92 18 26	91 22 26	88 -0.38 23	100 -0.01 22	97 -0.44 22
EWK 210023 92496744 EWK 210023	3	EWK 160034 EWK 160006	75 74	109 68	92 45	95 26	92 45	74 51	96 24	75 46	97 24	76 2.54 79	94 0.82 62	105 39 26	109 21.9 68	92 5.6 45	98 101 46	112 40.7 56	95 116 26	95 -68 21	94 13.0 27	96 -3.1 56	86 -0.7 23	116 43.1 56	98 21 28	98 29 27	100 0.52 24	97 -0.32 23	101 -0.24 23
EWK 210026 92496660 EWK 210026	6	EWK 160034 EWK 180012	106 71	96 65	90 42	99 24	119 45	108 48	94 22	107 43	96 22	100 0.73 77	114 0.02 57	101 35 24	96 16.4 65	90 5.0 42	88 78 44	93 28.6 52	97 121 23	102 -77 19	93 12.3 24	123 -21.3 55	106 -3.8 25	112 41.4 54	95 19 25	95 26 24	92 -0.06 22	102 0.15 21	98 -0.36 20
EWK 210034 92496074 EWK 210034	3	EWK 160034 EWK 150027	92 72	105 55	93 47	95 24	94 41	87 46	98 22	87 41	98 20	89 1.61 78	108 0.24 58	105 39 24	105 20.2 55	93 6.0 47	96 97 42	105 36.0 44	99 131 23	104 -80 18	94 13.1 25	96 -3.1 44	88 -1.0 22	120 45.1 56	96 20 25	96 27 24	94 0.04 21	102 0.12 20	100 -0.31 20
EWK 210039 92496116 EWK 210039	2	EWK 160034 EWK 160008	72 71	118 68	94 45	83 29	78 44	68 51	101 23	69 45	104 22	78 2.43 78	86 1.12 57	119 53 29	118 25.6 68	94 6.2 45	101 107 47	117 43.8 52	103 145 24	105 -81 20	96 14.2 26	80 8.0 55	81 -0.1 21	103 37.7 55	103 24 27	105 36 26	103 0.71 23	99 -0.14 22	101 -0.22 22
EWK 210044 92496157 EWK 210044	1	EWK 160034 EWK 180041	90 71	117 69	87 47	85 31	80 45	75 52	110 23	77 46	110 22	84 1.93 77	114 -0.02 57	118 52 31	117 25.0 69	87 4.0 47	94 92 49	117 44.0 56	111 173 24	109 -87 20	106 19.1 26	67 17.1 56	94 -2.0 22	115 42.7 57	111 29 26	112 43 26	112 1.38 23	95 -0.52 22	102 -0.21 22

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ID Number Name																													
EWK 210046 92496397 EWK 210046	6	EWK 160034 EWK 140037	106 77	96 70	107 49	97 25	106 47	113 52	93 23	111 46	95 22	108 0.17 81	96 0.71 67	102 36 25	96 16.3 70	107 10.1 49	102 110 48	95 29.7 55	97 120 25	102 -78 20	91 11.6 26	117 -17.5 56	89 -1.3 27	109 40.4 58	94 19 27	96 27 26	92 -0.10 23	102 0.17 21	101 -0.24 21
EWK 210048 92496413 EWK 210048	1	WDW 130138 EWK 140006	101 76	98 70	105 54	98 34	105 50	106 55	93 26	105 49	93 23	105 0.37 80	91 0.94 67	101 34 34	98 17.2 70	105 9.3 54	103 110 53	102 34.0 56	93 107 27	92 -65 24	89 10.2 29	108 -11.0 59	94 -1.9 30	122 46.2 60	92 18 29	96 26 29	101 0.56 24	88 -1.18 22	97 -0.43 22
EWK 220006 93958064 EWK 220006	1	WDW 170177 EWK 190014	104 69	84 68	92 46	106 31	107 40	95 50	84 24	93 45	80 24	97 0.98 76	117 -0.11 55	94 27 31	84 11.0 68	92 5.7 46	83 67 48	84 22.8 42	83 69 27	81 -51 20	83 7.5 29	114 -15.0 43	99 -2.7 22	100 36.3 54	83 12 29	83 14 28	85 -0.64 25	103 0.24 24	99 -0.33 24
EWK 220007 93958072 EWK 220007		WDW 170177 EWK 190017	102 71	91 66	87 43	98 29	105 37	96 49	97 22	96 44	95 24	91 1.44 77	127 -0.53 59	103 36 29	91 14.4 66	87 4.3 43	82 65 46	91 27.4 38	99 128 26	91 -64 17	98 14.9 27	106 -9.7 40	102 -3.3 19	101 36.6 52	90 16 28	94 25 27	94 0.03 25	111 1.01 24	92 -0.66 23
EWK 220010 93958015 EWK 220010	1	WDW 170177 EWK 150032	92 72	101 69	94 50	95 31	109 44	96 52	100 22	97 46	97 22	89 1.60 78	109 0.22 59	105 39 31	101 18.5 69	94 6.3 50	94 92 50	98 31.8 48	100 132 25	95 -69 17	99 15.4 27	109 -11.5 56	105 -3.6 22	107 39.1 54	97 20 27	98 29 26	95 0.13 23	111 1.04 22	102 -0.19 22
EWK 220018 93957991 EWK 220018	1	WDW 170177 EWK 180025	101 70	90 69	94 48	97 36	90 45	90 53	90 28	88 48	90 30	95 1.16 77	115 -0.03 56	103 37 36	90 13.7 69	94 6.3 48	87 75 51	90 26.8 48	90 94 31	86 -57 23	93 12.2 33	99 -5.0 56	82 -0.1 25	106 38.9 54	93 18 33	93 24 33	91 -0.19 30	110 0.91 29	103 -0.14 28
EWK 220025 93958536 EWK 220025	1	WDW 170177 EWK 180010	107 70	90 68	86 47	107 31	104 44	99 51	91 22	97 45	89 22	99 0.82 77	118 -0.18 56	93 27 31	90 13.8 68	86 3.8 47	83 67 49	84 22.8 46	90 95 26	88 -60 18	93 12.2 28	106 -10.0 55	100 -2.9 23	104 37.8 53	92 17 27	92 23 27	90 -0.26 23	110 0.90 22	105 -0.05 22
EWK 220030 93958577 EWK 220030	1	WDW 170177 EWK 170005	114 70	83 69	92 45	108 28	103 43	102 50	87 22	99 44	85 22	106 0.34 77	122 -0.31 56	91 25 28	83 10.9 69	92 5.6 45	84 68 47	86 24.2 48	86 81 26	86 -57 17	97 14.4 28	108 -11.0 53	98 -2.6 24	97 34.9 52	89 16 27	88 19 27	90 -0.23 23	97 -0.32 22	101 -0.23 22
EWK 220040 93958676 EWK 220040	6	EWK 160034 EWK 140037	98 72	119 71	91 49	87 25	104 46	95 51	110 23	97 45	113 22	95 1.16 78	110 0.16 59	115 49 25	119 25.9 71	91 5.3 49	101 106 48	115 42.5 48	113 181 25	114 -93 20	107 19.3 26	103 -7.7 57	98 -2.5 25	117 44.0 56	111 29 27	115 45 26	109 1.22 23	104 0.34 21	108 0.08 21
EWK 230015 95741294 EWK 230015	16	EWK 190013 EWK 190046	104 66	94 54	92 42	102 23	108 35	103 43			87 16	103 0.56 75	105 0.36 45	98 31 23	94 15.7 54	92 5.7 42	90 83 40	95 29.9 38	91 100 19	97 -71 16	84 8.0 20	105 -9.2 37	100 -2.9 20	126 47.8 48	90 16 20	88 19 20	93 -0.05 16	85 -1.50 15	99 -0.32 15
EWK 230018 95741369 EWK 230018	14	EWK 190013 EWK 190012	115 66	88 50	100 38	99 24	107 34	109 41			87 16	118 -0.53 75	95 0.76 45	100 34 24	88 12.9 50	100 7.8 38	91 84 37	89 25.9 38	89 93 19	92 -65 17	86 8.8 21	103 -7.3 34	102 -3.2 20	122 46.2 48	90 17 21	89 20 20	96 0.22 17	83 -1.68 16	99 -0.33 16
EWK 230019 95741336 EWK 230019	16	EWK 190013 EWK 190048	114 65	93 67	95 43	100 23	100 35	106 46			85 16	111 -0.07 75	107 0.28 44	100 33 23	93 14.9 67	95 6.6 43	91 84 44	92 27.8 37	87 86 18	94 -68 16	83 7.2 20	97 -3.5 37	94 -2.0 21	127 48.4 48	85 13 20	84 15 19	89 -0.31 16	85 -1.48 15	97 -0.42 15

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																													
EWK 230027 95741401 EWK 230027	1	WDW 170177 EWK 140027	92 69	104 70	91 49	100 30	128 41	101 51	94 24	100 46	94 24	88 1.65 77	110 0.16 52	100 33 30	104 19.7 70	91 5.3 49	96 95 50	102 34.2 58	94 112 27	93 -67 20	97 14.4 29	130 -26.6 44	114 -5.1 25	108 39.7 54	95 20 29	96 27 29	94 0.07 25	109 0.83 24	105 -0.03 23
EWK 230028 95741385 EWK 230028	5	EWK 190013 EWK 200036	97 65	98 67	95 41	101 21	106 33	98 45			89 16	97 1.00 75	102 0.48 42	99 33 21	98 17.3 67	95 6.5 41	95 94 43	100 33.2 56	92 104 18	97 -72 15	86 9.2 19	101 -6.0 33	100 -3.0 19	127 48.1 48	92 17 19	90 21 19	91 -0.17 16	89 -1.08 15	98 -0.40 15
EWK 230030 95741435 EWK 230030	1	WDW 170177 EWK 140006	96 69	98 70	97 48	100 31	100 41	96 51	94 25	95 46	94 24	95 1.16 77	103 0.44 53	100 33 31	98 17.2 70	97 7.1 48	96 97 50	98 31.9 57	92 105 28	85 -56 21	94 13.0 29	111 -13.0 44	86 -0.7 26	110 40.7 54	95 19 29	98 29 29	98 0.35 25	105 0.45 24	103 -0.16 24
EWK 240003 97089833 EWK 240003	1	WDW 170177 EWK 210048	97 66	92 57	95 42	100 31	99 38	95 46	92 24	94 42	90 24	93 1.28 74	110 0.15 48	100 34 31	92 14.8 57	95 6.5 42	90 83 43	93 28.6 42	91 99 27	86 -57 20	91 11.6 29	110 -12.3 43	89 -1.2 22	102 37.1 49	92 18 29	94 25 28	96 0.23 25	102 0.14 24	100 -0.26 24
EWK 240005 98202534 EWK 240005	4	EWK 220005 EWK 210023	85 63	102 49	97 33	96 23	94 32	86 39	96 20	86 35	96 20	86 1.84 73	100 0.56 40	104 38 23	102 18.9 49	97 7.1 33	98 100 35	102 34.6 36	94 111 22	92 -65 16	99 15.4 23	103 -7.9 36	85 -0.6 17	106 38.7 42	98 21 24	98 29 23	101 0.58 21	102 0.17 20	100 -0.27 20
EWK 240011 98198971 EWK 240011	2	EWK 220005 EWK 190022	120 65	91 50	95 40	96 27	107 34	113 42	100 21	113 38	99 21	110 0.02 75	125 -0.43 44	103 37 27	91 14.4 50	95 6.6 40	88 79 39	91 27.4 36	99 130 23	98 -73 18	101 16.2 24	105 -9.3 37	99 -2.8 20	123 46.5 46	98 21 25	99 30 24	104 0.81 22	100 -0.09 20	99 -0.33 20
EWK 240012 98200728 EWK 240012	3	EWK 220005 EWK 170029	85 66	93 49	99 43	95 31	109 36	93 44	90 24	91 40	89 22	82 2.08 76	107 0.30 45	105 39 31	93 15.1 49	99 7.5 43	92 86 41	93 28.3 34	87 84 25	82 -52 21	97 14.4 26	111 -13.1 37	100 -2.8 22	116 43.5 48	90 16 27	91 22 26	92 -0.09 22	97 -0.37 21	94 -0.56 21
EWK 240015 98400906 EWK 240015		H65 EWK 170033	126 63	86 47	95 27	119 18	105 30	119 36			84 13	127 -1.27 74	99 0.61 39	81 14 18	86 11.9 47	95 6.6 27	93 90 31	79 19.4 24	86 79 14	88 -60 12	88 10.1 16	108 -10.8 29	96 -2.2 19	115 43.1 43	84 13 16	87 18 15	84 -0.72 13	97 -0.30 13	106 -0.01 12
EWK 240016 98327620 EWK 240016	1	WDW 200023 EWK 200036	97 65	114 58	97 44	92 24	107 33	99 44	105 26	99 40	107 34	97 1.01 75	101 0.52 42	108 42 24	114 23.8 58	97 7.1 44	105 115 42	118 44.3 43	105 150 35	106 -83 14	110 21.0 38	94 -1.8 33	108 -4.2 17	128 48.6 48	111 29 39	110 41 38	104 0.80 35	104 0.33 33	103 -0.14 31
EWK 240027 98210305 EWK 240027	2	EWK 220020 EWK 150027	98 66	101 48	97 44	97 20	105 34	99 41			94 14	100 0.80 75	98 0.66 47	102 36 20	101 18.6 48	97 7.1 44	98 100 37	100 33.0 36	95 113 17	95 -69 12	96 14.0 18	105 -9.1 36	95 -2.1 20	127 48.1 46	95 19 18	96 26 18	94 0.05 14	104 0.38 14	105 -0.03 13
EWK 250007 6020129703 EWK 250007	13	EWK 220005 EWK 220030	110 63	87 49	99 33	102 23	99 31	103 39			91 20	106 0.36 74	113 0.05 38	97 30 23	87 12.5 49	99 7.5 33	90 83 35	88 25.0 34	89 94 22	88 -59 15	100 16.0 23	109 -11.8 34	91 -1.5 18	96 34.6 40	94 19 23	93 24 23	96 0.20 21	102 0.17 20	100 -0.27 19
EWK 250020 6020129737 EWK 250020	2	EWK 220005 EWK 210048	93 65	99 49	102 36	98 25	100 33	97 41	94 21	97 37	95 20	94 1.25 75	100 0.56 42	102 35 25	99 17.7 49	102 8.5 36	100 106 37	100 32.9 36	93 107 22	91 -63 18	96 14.0 24	109 -11.8 37	89 -1.2 20	109 40.3 43	95 20 24	97 27 24	101 0.60 21	98 -0.26 20	98 -0.37 20

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Inbreeding in red is high

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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	
EWK 250021	6020129380	1	EWK 220005 EWK 170034	100 86	105 84	91 83	96 81	102 67	96 79	94 81	95 79	96 81	99 0.83	104 0.40	104 38	105 20.1	91 5.5	95 94	102 34.4	90 96	86 -58	103 17.6	101 -6.2	95 -2.2	123 46.4	105 25	100 31	104 0.79	103 0.27	115 0.42	
														88 83		81 84 83 83				57 81 81			82 37 81 83				82 82		81 81 81		

Selection List on Cow Value

Bulls 2 years and older

ID Name Sorted on ID		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	EWK 230042 EWK 230042	EWK 190013	EWK 150027	7.3						106 67	93 67	104 47	101 20	110 36	111 47			
2	EWK 240019 EWK 240019	WDW 200023	EWK 180010	0.0						114 66	106 54	97 47	97 27	117 35	116 45	103 25	116 41	
3	EWK 240021 EWK 240021	WDW 200023	EWK 170008	0.3						105 68	107 55	105 47	100 27	110 35	111 45	104 25	112 41	
										★★★★								
1	EWK 230008 EWK 230008	EWK 190013	WDW 160162	10.0						97 67	94 54	88 39	104 28	112 34	98 44	89 22	96 40	
2	EWK 240022 EWK 240022	EWK 220005	EWK 170034	1.3						102 67	97 48	90 42	101 26	108 36	99 42	89 20	97 38	

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	EWK 140037	EWK1437	EWK 100072	EWK 090011	0.3					122	84	99	76	111	78	101	26	119	56	133	61	91	26	130	54	
1	EWK 170008	EWK170008	EWK 120073	EWK 140006	0.8					99	80	93	61	108	65	123	32	101	49	113	55					
2	EWK 180008	EWK180008	EWK 140021	EWK 110040	4.4					110	75	90	52	105	48	109	19	111	46	116	45					
3	EWK 180012	EWK180012	EWK 140021	EWK 140027	14.1					105	74	100	55	96	57	107	21	133	48	117	48					
4	EWK 180035	EWK1835	WDW 130138	EWK 140034	0.2					116	79	88	72	96	63	96	43	108	53	110	60	86	26	107	53	
5	EWK 190022	EWK 190022	WDW 130138	EWK 150019	0.7					131	78	90	70	87	63	96	38	114	50	118	58	105	28	118	52	
6	EWK 190040	EWK 190040	WDW 130138	EWK 120049	0.2					113	78	91	72	91	64	111	35	127	52	118	58	81	26	114	52	
7	EWK 210046	EWK 210046	EWK 160034	EWK 140037	6.4					106	77	96	70	107	49	97	25	106	47	113	52	93	23	111	46	
8	EWK 240011	EWK 240011	EWK 220005	EWK 190022	2.1					120	65	91	50	95	40	96	27	107	34	113	42	100	21	113	38	
9	EWK 240015	EWK 240015	H65	EWK 170033	0.0					126	63	86	47	95	27	119	18	105	30	119	36					
1	EWK 150027	EWK1527	EWK 120063	EWK 080047	3.6					94	82	108	67	106	75	102	22	104	51	101	56					
2	EWK 150032	EWK1532	EWK 120063	EWK 060028	0.6					95	82	105	67	102	75	93	30	125	51	108	58					
3	EWK 170024	EWK170024	EWK 140008	EWK 140025	7.6					100	78	87	53	111	48	106	28	123	50	108	49	80	28	105	45	
4	EWK 170034	EWK170034	WDW 130138	EWK 120049	0.2					113	81	97	65	79	69	105	35	114	53	104	58	83	26	101	52	
5	EWK 170044	170044	WDW 110113	EWK 090087	0.2					105	78	90	50	91	47	111	28	116	49	109	48	71	26	104	44	
6	EWK 180041	EWK1841	WDW 130138	EWK 130023	0.4					115	78	104	75	101	73	88	44	90	51	107	62	104	26	107	55	
7	EWK 210026	EWK 210026	EWK 160034	EWK 180012	6.5					106	71	96	65	90	42	99	24	119	45	108	48	94	22	107	43	
8	EWK 210048	EWK 210048	WDW 130138	EWK 140006	1.4					101	76	98	70	105	54	98	34	105	50	106	55	93	26	105	49	
9	EWK 220030	EWK 220030	WDW 170177	EWK 170005	1.3					114	70	83	69	92	45	108	28	103	43	102	50	87	22	99	44	
10	EWK 230015	EWK 230015	EWK 190013	EWK 190046	15.8					104	66	94	54	92	42	102	23	108	35	103	43					
11	EWK 230018	EWK 230018	EWK 190013	EWK 190012	13.9					115	66	88	50	100	38	99	24	107	34	109	41					
12	EWK 230019	EWK 230019	EWK 190013	EWK 190048	16.2					114	65	93	67	95	43	100	23	100	35	106	46					
13	EWK 230027	EWK 230027	WDW 170177	EWK 140027	0.7					92	69	104	70	91	49	100	30	128	41	101	51	94	24	100	46	

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 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	EWK 180002	180002	EWK 120073	EWK 120025	0.7		123 75	81 57	76 55	111 22	92 42	91 48	87 20	89 42	
2	EWK 190012	EWK 190012	WDW 130138	EWK 160006	2.0		94 78	99 59	93 52	99 34	99 46	92 52	92 26	91 47	
3	EWK 190048	EWK 190048	WDW 130138	EWK 150027	0.2		107 75	102 70	89 63	96 32	86 48	91 56	93 24	90 50	
4	EWK 200036	EWK 200036	EWK 160034	EWK 140019	6.6		92 74	102 70	95 57	102 25	97 42	91 52	91 23	89 46	
5	EWK 220006	EWK 220006	WDW 170177	EWK 190014	0.9		104 69	84 68	92 46	106 31	107 40	95 50	84 24	93 45	
6	EWK 220007	EWK 220007	WDW 170177	EWK 190017	0.3		102 71	91 66	87 43	98 29	105 37	96 49	97 22	96 44	
7	EWK 220010	EWK 220010	WDW 170177	EWK 150032	0.6		92 72	101 69	94 50	95 31	109 44	96 52	100 22	97 46	
8	EWK 220018	EWK 220018	WDW 170177	EWK 180025	0.6		101 70	90 69	94 48	97 36	90 45	90 53	90 28	88 48	
9	EWK 220025	EWK 220025	WDW 170177	EWK 180010	0.6		107 70	90 68	86 47	107 31	104 44	99 51	91 22	97 45	
10	EWK 220040	EWK 220040	EWK 160034	EWK 140037	6.4		98 72	119 71	91 49	87 25	104 46	95 51	110 23	97 45	
11	EWK 230028	EWK 230028	EWK 190013	EWK 200036	5.2		97 65	98 67	95 41	101 21	106 33	98 45			
12	EWK 230030	EWK 230030	WDW 170177	EWK 140006	1.0		96 69	98 70	97 48	100 31	100 41	96 51	94 25	95 46	
13	EWK 240003	EWK 240003	WDW 170177	EWK 210048	1.1		97 66	92 57	95 42	100 31	99 38	95 46	92 24	94 42	
14	EWK 240012	EWK 240012	EWK 220005	EWK 170029	2.6		85 66	93 49	99 43	95 31	109 36	93 44	90 24	91 40	
15	EWK 240016	EWK 240016	WDW 200023	EWK 200036	1.1		97 65	114 58	97 44	92 24	107 33	99 44	105 26	99 40	
16	EWK 240027	EWK 240027	EWK 220020	EWK 150027	2.0		98 66	101 48	97 44	97 20	105 34	99 41			
											★★★				
1	EWK 180004	180004	WDW 130138	FF 130266	1.0		108 81	81 58	77 50	106 35	98 46	81 52	76 27	78 47	
2	EWK 190046	EWK 190046	WDW 130138	EWK 140048	0.2		94 78	103 71	85 62	104 33	102 49	88 57	91 26	87 51	
3	EWK 210034	EWK 210034	EWK 160034	EWK 150027	3.4		92 72	105 55	93 47	95 24	94 41	87 46	98 22	87 41	
4	EWK 240005	EWK 240005	EWK 220005	EWK 210023	3.5		85 63	102 49	97 33	96 23	94 32	86 39	96 20	86 35	
											★★				
1	EWK 210023	EWK 210023	EWK 160034	EWK 160006	3.4		75 74	109 68	92 45	95 26	92 45	74 51	96 24	75 46	
2	EWK 210044	EWK 210044	EWK 160034	EWK 180041	1.0		90 71	117 69	87 47	85 31	80 45	75 52	110 23	77 46	
											★★				
1	EWK 210039	EWK 210039	EWK 160034	EWK 160008	1.9		72 71	118 68	94 45	83 29	78 44	68 51	101 23	69 45	

Selection List on Cow Value

Bull Calves younger than 2 years

ID Sorted on ID		Name	Sire ID	Dam ID	% Inbreeding	Polled HH: Horned, PcPc: Polled, PcH: Polled horn carrier	Myostatin			Genomic tested	Calving Ease Value Acc	Calf Growth Value Acc	Milk Value Acc	Maint. Value Acc	Fertility Value Acc	Cow Value Acc	Growth Value Acc	Prod Value Acc	
											★★★★★								
1	EWK 250019	EWK 250019	EWK 220005	EWK 140037	0.2						10267	10052	10546	9923	10736	11043	9320	10938	
											★★★★☆								
1	EWK 250015	EWK 250015	EWK 220005	EWK 180008	0.4						9765	9643	10134	10321	10332	10338			

Selection List on Cow Value

Heifers 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	EWK 250007	EWK 250007	EWK 220005	EWK 220030	13.4				110	63	87	49	99	33	102	23	99	31	103	39				
									★★★★															
1	EWK 250020	EWK 250020	EWK 220005	EWK 210048	1.9				93	65	99	49	102	36	98	25	100	33	97	41	94	21	97	37
2	EWK 250021	EWK 250021	EWK 220005	EWK 170034	1.3				100	86	105	84	91	83	96	81	102	67	96	79	94	81	95	79

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.

