

NGUNI

BREEDING VALUE REPORT

September 2026



INALA NGUNI STUD

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NGUNI Cattle Breeders' Society
Beestelersgenootskap



LOGIX



EBVs, EBVi's and GEBVs

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

EBV (Breeding Value): Genetic potential relative to the average of the animals born in the base year (1990), expressed in the unit of measurement.

GEBV (Genomic Breeding Value) Interpreted like the EBVi. (GEBV = EBV + Genomic information)

LOGIX Selection values combine different breeding values in a logical way. For example, Heifer Fertility (how early a heifer starts calving), Cow Fertility (how regular she calves) and Longevity (retention within the family) are combined to form the Fertility Value.

Selection Values

LOGIX Cow Value



Selecting for:

- fertile,
- low maintenance,
- easy calving cows
- with heavy weaners

LOGIX Growth Value



Select for efficient growers on veld and in feedlot, as measured in Phase C and D Growth Tests.

LOGIX Production Value



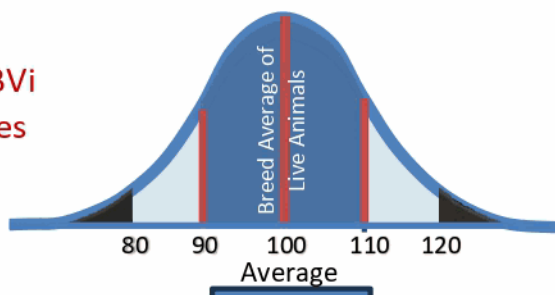
80% LOGIX Cow Value +
20% LOGIX Growth Value

LOGIX Carcass Value

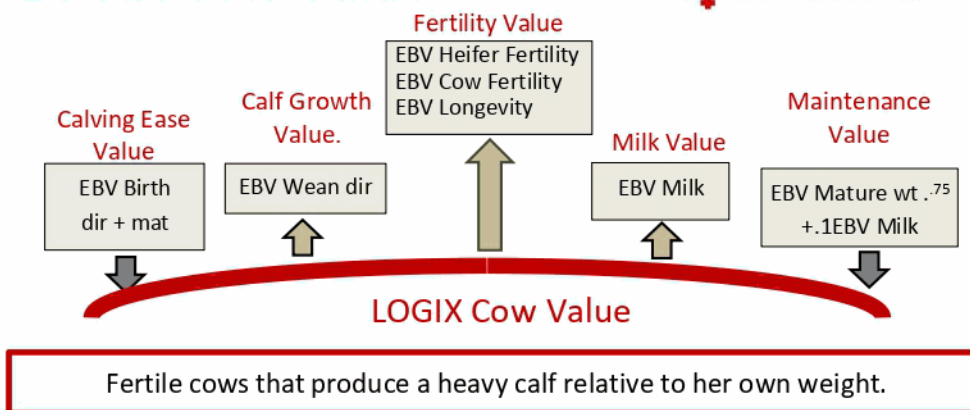


Select for more meat on the carcass as measured from end weight in Phase C and D Growth Tests and RTU scanning.

Interpretation of EBVi and Selection Values



LOGIX Cow Value



How to use the Cow Value

Selection values should be compatible with your selection goal.

AVERAGE ANIMALS

(NO GROWTH EXTREMES)

- Selection Values 90 to 110
 - Cow Value and Fertility Value average to high
- A safe choice, as animals are profitable in most environments.

GROWERS

(GOOD ENVIRONMENT)

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

LOW- MAINTENANCE ANIMALS

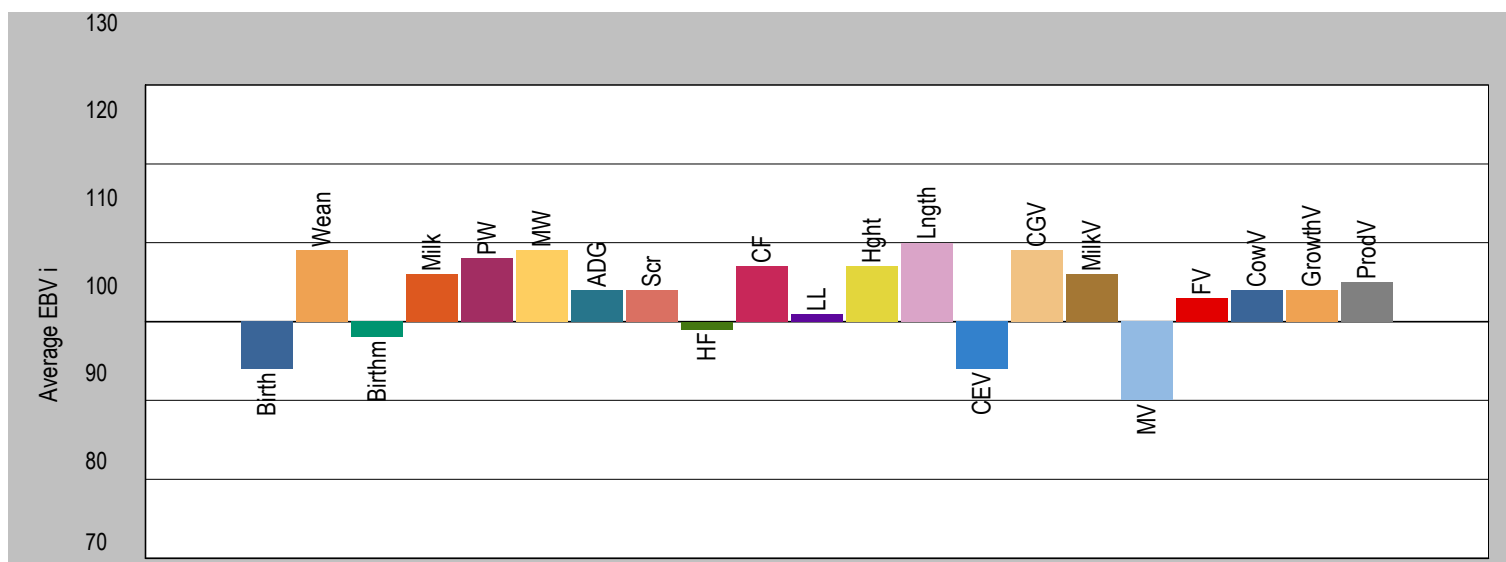
(HARSH ENVIRONMENT)

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

Examples

Type of Animal	Cow Value	Calving Ease V	Weaner Calf V	Milk Value	Maint. Value	Fertility Value
Average	Med-High	Avg	Avg	Avg	Avg	Med-High
Grower	Med-High		High			Med-High
Low Maintenance	Med-High				High	Med-High

Herd and Breed Averages



Breeding Values:

Birth:	Birth weight	Scr:	Scrotal circumf.
Wean:	Weaning weight	HF:	Heifer Fertility
Birthm:	Birth maternal	CF:	Cow Fertility
Milk:	Milk	LL:	Longevity
PW:	Post-wean weight	Hght:	Height
MW:	Mature weight	Lnght:	Length
ADG:	Average Daily Gain		

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	EBVIndex	EBV Breed
Prewean Growth	Birth Weight	0.41	94	0.12
	Wean Weight	5.7	109	2.6
	Birth Mat.	0.12	98	0.05
	Milk (Wn.Mat.)	2.4	106	1.0
Postwean Growth	Postwean Wt	7.7	108	3.7
	Mature Weight	13	109	5
	ADG	21	104	12
Fertility	Scrotal Circumf.	5.4	104	3.8
	Heifer Fertility	-5.2	99	-6.2
	Cow Fertility	-4.5	107	-2.9
	Longevity	23.6	101	23.2
Frame	Height	5	107	2
	Length	13	110	5

Selection Value	Ave. Herd
Calving Ease	94
Calf Growth	109
Milk	106
Maintenance	90
Fertility	103
Cow Value	104
Growth Value	104
Production Value	105

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

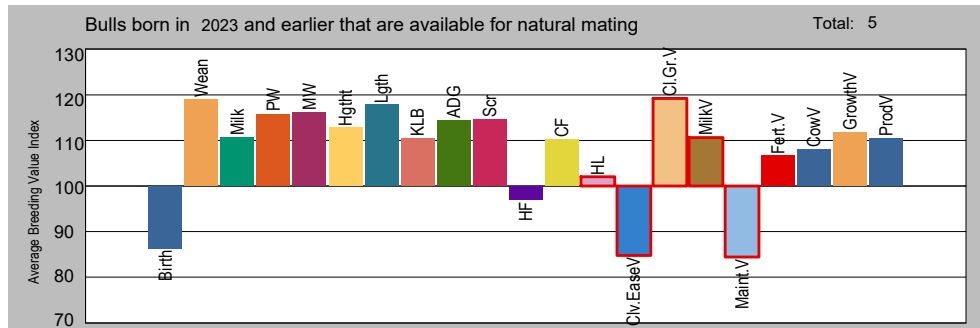
What does a sub-selection value above breed average (100) mean?:

Calving ease:	Smaller calf at birth - easier calving
Calf growth:	Heavier calves at wean due to growth potential of the calf
Milk:	Cows with more milk and better mothering ability
Maintenance:	Animals with low maintenance requirements (lower mature weight).
Fertility:	Cows/daughters that calve

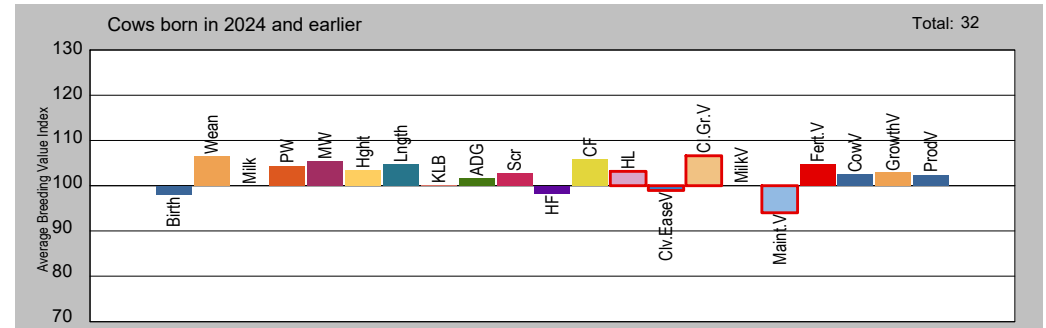
Genetic Windows

Animals available for breeding

Bulls on the farm

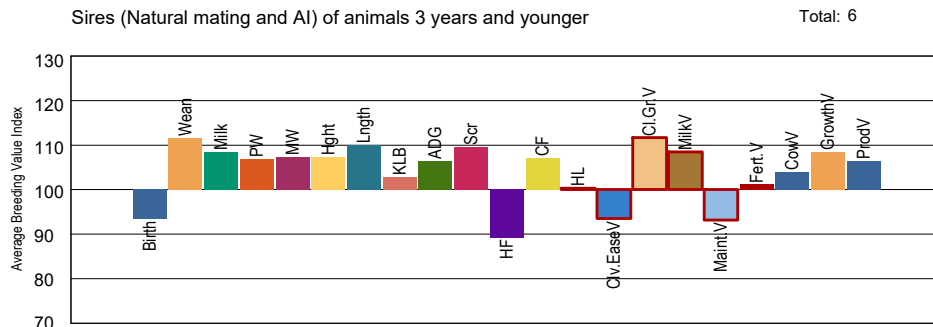


Cow Herd

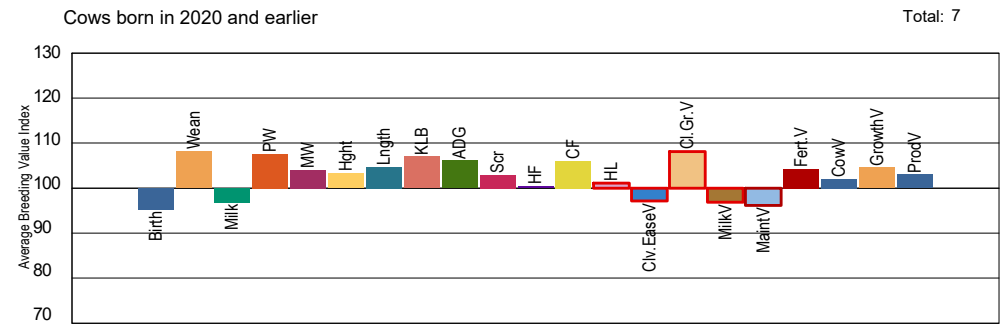


Results of previous selection decisions

Sires of young animals

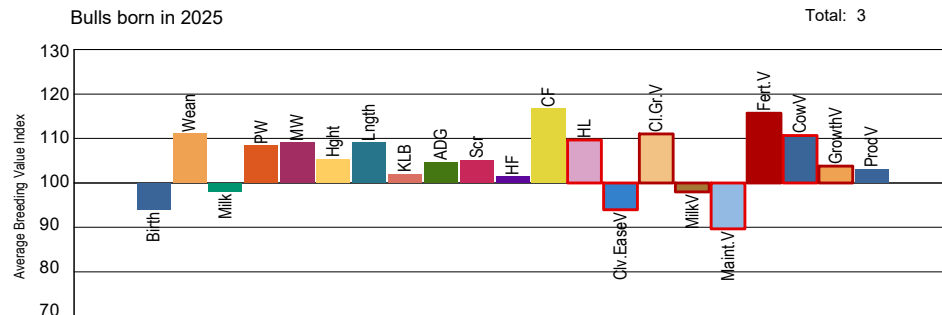


Cows older than 6 years

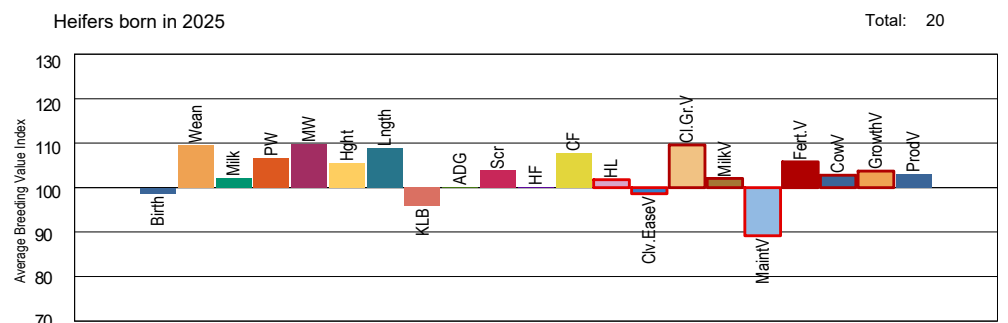


Selection possibilities

Bull calves



Heifer calves

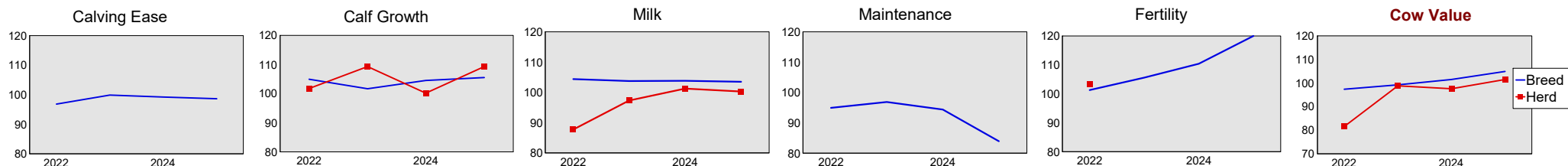


Summary of Cow Herd

			Selection Values (SV)								Calf Weight		Dam		Growth & Efficiency				Fertiity				Frame		
Birth Year	No. Cows	Average Cow Value	Calving Ease	Calf Grwth	Milk	Maint.	Fertility	Cow Value	Growth Value	Prod Value	Birth Weight	Wean Weight	Birth Mat.	Milk (Wn.Mat)	Postwn Weight	Mature Weight	ADG	Kleiber	Scrotal Circumf.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	
Cows in Breed Average:			100	100	100	101	100	100	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	99	99
2008	1	★★★☆☆	64	134	129	78	73	88	113	101	59	134	89	129	128	123	128	125	110	81	74	89	123	122	
2014	1			97	113		83		93			97		113								84			
2016	1	★★★★★	87	123	90	88	119	116	119	118	86	123	103	90	120	111	110	109	115	109	117	113	112	112	
2017	5	★★★★	110	99	120	101	85	91	95	87	108	99	105	120	91	98	89	90	92	88	99	84	86	88	
2018	4			99	117		81		92			99		117								80			
2019	2	★★★☆☆	120	100	84	112	94	86	92	89	118	100	102	84	103	92	96	102	91	102	93	99	93	92	
2020	3	★★★★★	100	102	100	98	114	111	107	109	99	102	102	100	104	101	107	108	104	108	120	101	103	106	
2021	7	★★★★☆	102	99	111	96	100	104	100	102	103	99	95	111	101	102	101	101	100	99	103	102	103	104	
2022	1	★★★★	101	107	60	100	107	90	94	91	98	107	108	60	106	100	101	106	98	105	104	105	97	99	
2023	10	★★★★☆	102	110	100	88	107	102	102	102	101	110	101	100	106	112	99	94	108	102	108	102	105	108	
2024	9	★★★★☆	95	106	102	97	103	104	104	105	94	106	104	102	102	102	101	100	99	91	105	105	103	102	
2025	20	★★★★☆	99	110	102	89	106	103	104	103	99	110	98	102	107	110	100	96	104	100	108	102	105	109	
2026	11	★★★★☆	83	114	114	87	105	107	111	109	85	114	91	114	113	112	110	105	104	99	105	104	112	117	
Cows in Herd Average:			97	108	103	94	98	100	102	101	95	108	100	103	107	106	104	103	102	99	103	98	104	105	

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.



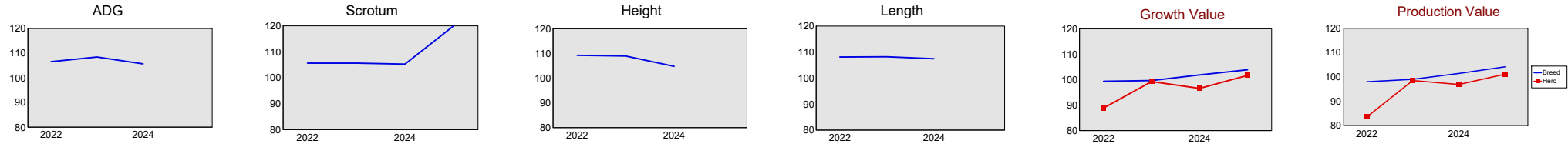
Herd

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance						Fertility						Cow Value
	Birth Weight		Calv. Ease	Dir	Weaning Weight	Calf Growth	Milk (Wn.Mat.)	Milk	Postwean Weight	Mature Weight	Maintenance	Heifer Fert.	Cow Fert.	Longevity	Fertility								
	Number	EBV			Number		EBV		Number			EBV		Number		EBV	Number	EBV	Number	EBV	Number	EBV	
2022					22	3.3	102	22	-1.85	88			5	-4.6			15	13.1	103	82			
2023					39	5.9	109	39	0.39	97										99			
2024					16	2.7	100	16	1.29	101										98			
2025					28	5.9	109	28	1.07	100										102			

Breed

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance					Fertility						Cow Value	
	Birth Weight		Mat EBV	Calv. Ease	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Postwean Weight		Mature Weight		Mainte-nance	Heifer Fert.		Cow Fert.		Longevity		Ferti-lity		
	Number	Dir EBV			Number	EBV		Number	EBV	Number	EBV	Number	EBV		Number	EBV	Number	EBV	Number	EBV			Number
2016	2062	0.06	-0.03	101	1340	2.9	101	1339	0.64	98	355	6.3	223	5	97	1339	-2.4	868	-1.9	10845	12.2	90	87
2017	1692	0.05	0.03	100	1223	3.5	102	1223	1.02	100	536	7.3	266	7	95	1431	-2.1	859	-1.9	8766	13.2	91	90
2018	1623	0.00	0.02	101	961	4.1	104	961	1.83	104	525	6.9	260	8	95	1317	-2.9	764	-2.0	7360	13.8	93	93
2019	1476	0.03	0.01	100	1204	3.3	102	1202	1.73	103	501	6.3	314	7	96	1273	-3.5	775	-2.6	6887	14.6	94	94
2020	1577	0.05	0.01	101	1147	3.7	103	1147	1.93	104	561	5.4	352	6	98	1269	-4.3	672	-2.5	6779	15.4	96	95
2021	1538	0.08	0.06	99	1397	3.4	102	1397	2.14	105	770	4.9	292	5	99	1218	-5.0	585	-2.9	6379	16.8	98	96
2022	1327	0.25	0.06	97	1681	4.4	105	1681	2.02	104	780	6.7	261	10	95	962	-4.7	240	-4.2	2616	17.4	101	97
2023	1221	0.08	0.12	100	1478	3.2	102	1478	1.87	104	509	6.2	62	12	97	379	-5.9	45	-5.3			106	99
2024	1380	0.08	0.12	99	1392	4.2	105	1392	1.90	104	510	7.3	1	-6	94	128	-6.5					110	102
2025	1033	0.14	0.10	99	1054	4.6	106	1052	1.82	103	173	12.0			84	7	-42.1					133	105
2026	191	0.05	0.02	102	23	7.6	114	23	3.11	109													109

Genetic Trends for Growth Test Traits



Herd

Birth Year	Growth						Frame						Selection Values	
	ADG			Scrotal Circumf.			Height			Length			Growth Value	Prod Value
	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi		
2022													89	84
2023													99	99
2024													97	97
2025													102	101

Breed

Birth Year	Growth						Frame						Selection Values	
	ADG			Scrotal Circumf.			Height			Length			Growth Value	Prod Value
	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi		
2016	61	31	109	66	6.6	107	61	10	115	61	15	114	92	89
2017	53	27	107	52	7.3	109	52	7	110	52	15	113	94	92
2018	78	28	107	78	7.5	110	78	6	108	78	10	107	98	95
2019	66	30	108	66	4.7	103	66	7	111	66	12	109	96	95
2020	78	21	104	77	3.9	100	78	4	105	78	8	103	98	96
2021	84	11	100	83	3.6	99	84	3	101	84	7	102	99	97
2022	171	26	107	95	5.9	106	162	7	109	162	11	108	99	98
2023	65	30	108	64	5.9	106	65	6	109	65	11	108	100	99
2024	64	24	106	63	5.8	105	64	4	105	64	11	107	102	101
2025				21	13.2	125							104	104

Sires

Bull			Selection Values								Calf		Dam		Growth			Fertility				Frame		Measured Progeny				
ID	Index EBV Acc	Sire ID	Calv. Ease Value	Calf Grwth Value	Milk Value	Maint. Value	Fertility Value	Cow Value	Growth Value	Prod Value	Birth Dir	Wean Dir	Birth Mat.	Wean Mat.	Post wn wt	Mature weight	ADG	Scrotal Circ.	Heifer Fertility	Cow Fertility	Long- evity	Height	Length	Birth wt	Wean wt	Dgt/Calvs.	Grwth Test	
																												Dam ID
BN 160309		KVN 090020	121	81	116	108	114		98		127	81	99	116	88	92	91	98	108	111	109	93	94	1	68	20	29	
BN 160309			61	73	73	42	48		62		-1.19	-4.2	0.07	4.7	-2.2	-2	-8	3.0	-12.9	-5.5	28.1	-2	0					
											61	73	60	73	42	42	19	21	44	33	68	22	21					
DH 110016		RT 050008	93	117	105	94	94	98	113	106	94	117	95	105	111	104	112	109	80	104	95	115	114			2	6	
DH110016		RT 070080	41	60	54	21	50	37	50	44	0.42	8.7	0.21	2.1	9.2	9	39	7.4	10.3	-3.9	20.5	10	16					
											41	60	41	54	38	21	19	22	52	29	68	22	21					
EX 170244		EX 120209	113	93	122	88	116	113	98	105	118	93	73	122	109	109	96	110	105	118	106	94	97	2	45	7	13	1
PLATINUM DONKIE		EX 070508	63	86	74	59	63	55	73	64	-0.75	0.1	0.83	6.2	8.5	13	3	7.6	-10.3	-7.2	26.5	-1	3					
											64	86	60	74	74	59	44	43	69	45	76	50	48					
FF 130104		FF 050023	100	112	64	93	84	69	82	74	99	112	105	64	113	108	119	108	96	88	84	103	107			12	13	18
FF 13-104 MFELANE		GF 070097	51	84	76	53	65	54	72	63	0.18	6.9	-0.10	-7.4	10.2	12	53	6.7	-3.2	-0.2	14.7	4	11					
											51	84	51	76	60	53	63	72	70	46	80	73	70					
GJR 010055		GJR 980010	69	142	116	68	37	48	84	65	50	142	114	116	131	139	134	100	79	36	62	131	120	69	60	3	5	15
GJR200155		LEB 940542	90	90	66	28	69	52	71	62	2.61	17.4	-0.33	4.8	19.4	40	88	3.7	10.8	12.2	2.9	18	20					
											93	90	76	66	73	28	77	83	76	45	86	85	82					
LEB 170603		T 100315	106	79	115	122	99	104	100	102	101	79	121	115	78	77	79	82	101	104	92	88	79	99	129	10	19	7
LEB 170603		LEB 130402	90	91	74	47	59	54	73	64	0.06	-4.9	-0.54	4.4	-7.4	-16	-34	-3.2	-7.1	-3.9	19.0	-4	-11					
											93	91	74	74	78	47	62	69	69	38	71	70	68					
NRF 180017		FF 080166	110	117	97	80	116	110	104	107	108	117	102	97	110	123	101	117	105	121	105	108	115			60		
NRF 180017		NRF 080185	74	70	62	43	52	45	60	52	-0.28	8.7	-0.02	0.3	8.6	25	13	10.1	-10.0	-7.7	25.6	6	16					
											76	70	61	62	45	43	44	47	54	38	65	49	48					
Q 150104		Q 120039	92	120	123	75	80	86	95	89	95	120	87	123	123	127	121	114	70	89	92	129	128	12	124	15	29	1
Q 150104		MVN 090116	74	92	78	56	66	57	77	67	0.38	9.7	0.43	6.3	15.2	30	58	9.2	18.7	-0.4	19.0	17	26					
											78	92	56	78	80	56	34	35	77	43	78	41	39					
Q 160029		Q 070062	63	132	117	65	117	116	106	111	56	132	86	117	129	144	114	111	100	126	103	108	126	52	141	12	19	
Q 160029		Q 090037	88	93	77	54	65	57	77	67	2.30	13.9	0.44	5.0	18.1	45	44	7.8	-6.3	-9.0	24.8	6	25					
											91	93	73	77	81	54	37	45	73	44	79	43	41					
Q 210013		Q 160029	68	125	116	82	116	120	123	122	71	125	88	116	122	119	115	107	101	114	114	116	127	1	10			
Q 210013		Q 120101	59	79	58	42	46	44	61	52	1.54	11.5	0.40	4.8	14.9	22	46	6.4	-7.5	-6.1	30.5	10	25					
											62	79	44	58	68	42	23	27	49	30	58	26	25					
T 060253		T 980148	115	75	124	106	68	70	69	68	113	75	108	124	78	94	92	84	58	87	80	85	85	8	2	1	4	
T06253		LEB 010515	69	67	60	34	76	50	63	56	-0.51	-6.2	-0.17	6.7	-7.2	-1	-7	-2.5	29.1	0.2	12.2	-6	-6					
											73	67	48	60	35	34	31	34	81	58	89	35	34					

Sires

Bull			Selection Values									Calf		Dam		Growth			Fertility				Frame		Measured Progeny			
ID	Index EBV Acc	Sire ID Name	Sire ID Dam ID	Calv.	Calf	Milk	Maint.	Fertility	Cow	Growth	Prod	Birth	Wean	Birth	Wean	Post wn	Mature	ADG	Scrotal	Heifer	Cow	Long-	Height	Length	Birth	Wean	Dgt/Calvs.	Grwth
				Ease Value	Grwth Value	Value	Value	Value	Value	Value	Value	Dir	Dir	Mat.	Mat.	wt	weight	ADG	Circ.	Fertility	Fertility	evity			wt	wt		Test
T	180165	T 090143 T 090281		122	103	114	106	88	98	109	104	125	103	98	114	106	94	109	109	74	98	95	108	105	6	50	3	3
T	180165			63	85	53	40	57	47	65	56	-1.14	3.8	0.11	4.2	7.0	-1	31	7.1	15.4	-2.5	20.3	6	9				
												69	85	36	53	60	40	20	28	63	37	70	23	22				
TT	110017	LEB 060177 LEB 080440		76	127	115	81	89	96	111	104	77	127	98	115	115	119	119	137	87	102	84	112	123	3	56	5	7
TT	11 0017 - WILLIAM			66	68	57	21	58	42	57	50	1.26	12.1	0.10	4.6	11.2	22	53	17.8	4.2	-3.4	14.4	8	22				
												67	68	58	57	50	21	29	31	62	35	77	32	31				
TT	140035	TT 110008 BN 080739		79	119	94	88	99	96	104	100	78	119	108	94	110	112	116	105	67	104	112	112	111				
TT	14 0035			36	58	34	17	43	31	44	38	1.24	9.3	-0.16	-0.3	9.0	16	46	5.6	21.5	-3.9	29.7	8	13				
												37	58	29	34	24	17	25	24	46	26	57	29	28				
TV	150548	CSF 100082 SW 100021		87	101	92	97	116	108	102	104	86	101	106	92	100	101	104	99	103	127	99	103	104				
TV	150548			63	69	56	28	49	41	55	48	0.83	3.0	-0.13	-0.8	3.8	6	20	3.3	-8.9	-9.1	22.8	3	8				
												69	69	33	56	54	28	10	11	53	27	67	12	11				

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	
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	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length
Q 210013 91577742 Q 210013	1	Q 160029 Q 120101		68	125	116	82	116	120	123	122	71	88	119	125	116	123	122	115	107	101	114	114	116	127
				59	79	58	42	46	44	61	52	1.54	0.40	22	11.5	4.8	69	14.9	46	6.4	-7.5	-6.1	30.5	10	25
Q 220014 93311587 Q 220014		EX 170244 Q 110089		73	121	120	71	123	121	108	115	77	87	134	121	120	115	124	125	123	108	125	111	122	127
				48	72	56	41	43	41	57	49	1.27	0.42	36	10.1	5.7	52	15.8	67	12.7	-13.0	-8.8	29.2	13	25
NGU 230020 96542782 NGU 230020	1	TT 110017 BN 200620		92	110	110	92	101	102	108	105	91	103	106	110	110	113	104	108	117	92	105	99	103	109
				38	45	37	16	34	27	36	32	0.57	-0.03	10	6.3	3.3	47	5.8	29	10.3	0.3	-4.2	22.7	4	12
NGU 230039 96539523 NGU 230039	1	NRF 180017 EA 110003		91	124	92	84	103	99	106	103	91	98	117	123	92	103	115	108	112	106	111	89	105	110
				40	62	42	22	32	31	44	38	0.55	0.12	21	10.9	-0.9	25	11.4	29	8.5	-11.3	-5.5	17.2	5	13
NGU 230042 96539556 NGU 230042		T 180165 Q 210079		100	116	115	93	90	98	114	107	102	91	105	116	115	123	114	116	114	78	96	97	118	116
				40	71	42	28	37	34	50	42	0.03	0.31	9	8.2	4.6	68	10.6	48	9.2	12.2	-2.0	21.8	11	17
NGU 240008 97029813 NGU 240008		TT 140035 BN 210648		88	113	102	86	103	99	101	100	88	101	113	113	102	104	109	116	108	85	103	110	114	114
				25	63	36	14	29	27	41	34	0.70	0.04	17	7.1	1.4	28	8.4	47	6.7	6.3	-3.7	28.6	9	15
NGU 250009 98527021 NGU 250009	1	TT 140035 BN 210663		95	105	95	93	115	108	104	106	93	109	105	105	95	97	101	107	101	101	118	108	103	103
				26	61	34	13	29	26	40	33	0.47	-0.21	10	4.5	-0.1	12	4.4	27	4.2	-7.2	-7.1	27.4	4	8
NGU 250022 98800311 NGU 250022		Q 210013 BN 210654		88	110	120	87	116	118	115	117	91	86	111	110	120	119	112	109	107	102	113	113	109	116
				35	64	43	24	31	31	45	38	0.58	0.43	14	6.1	5.7	59	9.5	31	6.3	-7.8	-6.0	30.3	6	17
NGU 250031 98844129 NGU 250031		NRF 180017 LRC 160087		99	118	79	89	116	106	107	107	98	102	111	118	79	91	112	98	107	101	119	108	104	108
				44	62	45	26	37	33	47	40	0.23	-0.02	15	8.8	-3.9	-2	9.5	7	6.6	-7.3	-7.3	27.6	4	11
NGU 260007 6020375249 NGU 260007		Q 210013 NGU 220024		84	116	88	90	111	105	108	107	85	98	109	116	88	98	114	108	103	103	109	109	107	113
				35	48	41	26	32	29	39	34	0.87	0.11	13	8.3	-1.7	14	10.9	30	4.7	-8.9	-5.0	28.2	5	15
NGU 260012 6020464696 NGU 260012		Q 210013 NGU 170002		79	114	124	86	99	105	111	108	82	86	112	114	124	124	114	111	104	97	102	97	116	121
				30	45	41	21	25	25	35	30	1.00	0.45	16	7.6	6.5	71	10.8	37	5.3	-4.0	-3.4	21.5	10	21
NGU 260013 6020464704 NGU 260013		Q 210013 NGU 210003		80	113	121	86	101	105	110	108	83	88	112	113	121	121	113	111	103	98	102	101	115	120
				30	45	41	21	24	25	35	30	0.94	0.39	16	7.2	5.8	64	10.1	36	5.1	-4.2	-3.3	23.9	10	20

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	
Index EBV Acc	% Inbreeding	Sire ID Dam ID	Calv. Ease V	Calf Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	
NGU 260015	Q 210013		85	110	111	89	104	104	107	105	87	94	109	110	111	112	109	106	100	99	101	107	112	116	
6020571250	NGU 190039		30	42	36	21	24	24	33	28	0.79	0.23	13	6.1	3.5	44	8.0	26	3.8	-5.1	-3.1	26.9	8	17	
NGU 260015											31	22	21	42	36	33	34	11	13	25	15	33	13	13	
NGU 260016	Q 210013		86	109	108	90	99	98	103	100	87	95	108	109	108	110	107	105	99	99	101	97	111	115	
6020571243	NGU 180002		30	42	36	21	25	24	33	28	0.75	0.19	13	5.8	2.9	39	7.5	23	3.4	-5.3	-3.1	21.4	7	17	
NGU 260016											31	22	21	42	36	33	34	11	13	25	15	34	13	13	
NGU 260019	Q 210013	2	77	117	120	87	102	108	116	113	81	88	111	117	120	124	114	110	106	93	103	105	114	119	
6020571284	Q 210079		38	54	43	27	31	30	42	36	1.09	0.38	15	8.8	5.6	71	10.8	35	6.0	-0.5	-3.6	25.7	9	19	
NGU 260019											39	30	27	54	43	41	46	12	13	32	20	40	16	15	
NGU 260021	Q 210013		85	114	98	89	108	104	107	105	86	97	110	114	98	104	112	108	101	98	106	109	108	114	
6020822323	DUN 210031		34	45	36	25	32	27	37	32	0.81	0.14	14	7.4	0.6	27	9.8	31	4.2	-4.8	-4.3	28.1	6	15	
NGU 260021											35	26	25	45	36	35	38	19	22	35	22	40	22	21	
NGU 260024	Q 210013	1	87	115	107	85	109	108	109	108	89	95	115	115	107	110	112	107	105	101	109	106	112	118	
6020875271	NGU 230008		35	43	35	23	27	25	34	30	0.69	0.19	18	8.0	2.7	41	9.6	26	5.8	-7.0	-5.0	26.3	8	19	
NGU 260024											37	26	23	43	35	34	36	15	17	28	17	36	18	17	

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	
Index EBV Acc	% Inbreeding	Sire ID Dam ID	Calv. Ease V	Calf Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length
ID Number Name																								
GJR 080018 66350646 GJR200818	3	GJR 010055 SL 980021	64 70	134 64	129 68	78 15	73 52	88 41	113 54	101 48	59 2.14 73	89 0.37 52	123 26 15	134 14.6 64	129 7.7 68	136 98 49	128 17.8 44	128 73 41	110 7.6 45	81 9.6 60	74 3.1 31	89 17.5 66	123 14 46	122 22 45
LRC 160076 84464007 LRC 160076		DH 110016 LRC 140022	87 33	123 58	90 67	88 20	119 48	116 38	119 50	118 44	86 0.81 33	103 -0.04 31	111 15 20	123 10.9 58	90 -1.4 67	104 27 48	120 13.7 27	110 34 20	115 9.5 22	109 -13.4 55	117 -6.8 31	113 30.0 58	112 8 23	112 14 22
RV 170025 85600898 RV 170025		T 060253 RV 100001	110 44	89 61	96 71	101 23	100 51	91 41	86 54	87 48	108 -0.28 46	105 -0.09 34	98 3 23	89 -1.1 61	96 0.1 71	89 -7 52	91 -0.9 24	89 -13 19	92 0.6 21	88 4.0 55	99 -2.7 37	107 26.9 62	86 -5 21	88 -4 20
LRC 190030 89419931 LRC 190030		FF 130104 RY 080048	120 44	104 63	62 64	112 32	95 50	86 41	94 54	89 48	118 -0.78 45	102 -0.01 36	92 -3 32	104 4.0 63	62 -7.9 64	73 -42 53	103 5.0 34	96 3 30	91 0.5 35	102 -7.6 58	93 -1.2 33	97 21.7 58	93 -2 36	92 -1 34
BN 200620 90978099 BN 200620		BN 160309 BN 170448	107 37	94 64	104 48	108 26	109 38	109 34	104 48	106 41	105 -0.13 37	107 -0.15 35	93 -1 26	94 0.4 64	104 2.0 48	101 21 46	93 0.5 25	96 4 14	97 2.8 16	97 -3.6 35	109 -4.9 29	109 28.3 49	94 -1 16	95 1 15
DUN 200002 90339169 DUN 200002		FF 130104 RV 090011	104 42	113 58	87 63	87 32	105 49	96 40	98 52	97 46	103 -0.02 43	101 0.03 36	113 17 32	113 7.3 58	87 -2.1 63	93 3 51	117 12.1 36	123 62 37	118 10.8 41	100 -6.2 55	115 -6.4 35	92 19.0 58	112 8 42	120 20 40
DUN 200046 91122085 DUN 200046		TV 150548 LRC 180022	88 32	100 44	110 47	99 15	129 40	128 29	118 38	123 34	88 0.71 35	99 0.07 18	98 3 15	100 2.6 44	110 3.4 47	109 38 35	101 4.1 28	101 14 5	97 2.7 6	126 -28.2 48	135 -11.0 25	101 24.0 46	103 4 6	104 8 6
BN 210648 91710640 BN 210648		BN 160309 BN 140044	100 38	103 67	110 64	90 23	107 38	105 37	102 52	103 44	101 0.07 38	94 0.21 36	108 12 23	103 3.8 67	110 3.3 64	106 32 51	106 6.7 26	106 26 19	103 4.9 22	104 -9.6 36	102 -3.4 29	108 27.6 50	107 6 22	108 11 21
BN 210654 91812677 BN 210654		BN 160309 CSN100011N	108 37	94 66	124 65	95 22	112 41	114 37	106 52	109 44	111 -0.40 37	86 0.46 38	101 6 22	94 0.4 66	124 6.6 65	114 50 51	100 3.9 23	101 15 15	106 6.1 17	102 -8.1 46	113 -5.8 26	106 26.5 52	101 2 18	105 8 17
BN 210660 91977074 BN 210660		BN 160309 BN 130426	113 36	88 65	107 57	106 21	116 41	114 36	102 50	107 43	112 -0.47 36	101 0.02 35	94 -1 21	88 -1.4 65	107 2.6 57	99 16 48	92 -0.4 22	92 -6 11	88 -0.6 13	110 -14.6 47	110 -5.2 26	113 30.3 51	92 -2 13	94 0 13
DUN 210031 92370485 DUN 210031		FF 130104 MAK 090350	103 30	102 45	80 42	97 27	100 46	89 33	91 42	89 38	101 0.09 30	106 -0.12 29	102 6 27	102 3.2 45	80 -3.6 42	83 -18 38	102 4.6 31	102 15 32	96 2.1 36	95 -2.1 50	98 -2.4 31	105 25.8 56	100 2 37	101 5 35
Q 210079 92296862 Q 210079		Q 150104 WT 070025	87 48	110 74	123 65	94 37	88 46	97 43	110 59	104 51	90 0.64 49	89 0.35 43	103 8 37	110 6.0 74	123 6.3 65	125 73 59	106 6.7 64	105 23 20	105 5.7 20	85 6.5 46	92 -1.0 34	96 20.9 57	113 8 23	110 13 22

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	
Index EBV Acc		Calv. Ease V	Calf Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value		Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length
ID	Sire ID																							
Number	Dam ID																							
Name	% Inbreeding																							
NGU 220024	FF 130104	101	107	60	100	107	90	94	91		98	108	100	107	60	71	106	101	98	105	104	105	97	99
95246377	LRC 160087	35	55	59	31	45	37	48	42		0.20	-0.18	4	5.1	-8.3	-45	6.8	14	3.1	-10.3	-3.8	26.0	0	4
NGU 220024											35	34	31	55	59	48	32	33	37	53	28	54	38	36
NGU 230005	NRF 180017	106	106	101	88	104	99	97	97		105	101	111	106	101	100	102	99	105	100	105	102	108	110
95326278	NGU 190039	37	39	38	22	28	25	33	29		-0.12	0.02	15	4.7	1.2	18	4.9	9	5.6	-6.4	-3.9	24.2	6	13
NGU 230005											38	30	22	39	38	33	23	22	24	27	19	38	25	24
NGU 230008	NRF 180017	107	105	98	89	102	96	95	94		106	103	110	105	98	97	101	98	104	100	104	98	107	109
95324737	NGU 180002	37	39	38	22	29	25	34	30		-0.16	-0.02	14	4.4	0.7	13	4.4	7	5.3	-6.6	-3.9	22.1	5	12
NGU 230008											38	30	22	39	38	33	23	22	24	27	19	42	25	24
NGU 230014	NRF 180017	112	100	98	90	110	101	93	96		110	105	109	100	98	93	97	94	103	97	109	109	96	100
95336996	RV 170025	42	61	47	24	37	33	46	40		-0.38	-0.08	13	2.6	0.4	3	2.4	-3	5.0	-3.6	-5.1	28.2	0	5
NGU 230014											44	35	24	61	47	44	26	23	25	38	26	48	26	25
NGU 230024	NRF 180017	120	90	93	98	100	90	85	86		116	111	100	90	93	86	88	81	91	103	102	95	94	94
96539382	NGU 210002	37	59	38	22	28	28	41	34		-0.67	-0.27	5	-0.8	-0.6	-13	-2.3	-29	0.5	-9.1	-3.4	20.5	-1	1
NGU 230024											38	30	22	59	38	40	23	22	24	27	19	38	25	24
NGU 230026	NRF 180017	113	98	85	98	116	104	97	100		110	108	101	98	85	84	96	82	95	104	117	108	92	94
96539408	LRC 160087	44	62	45	26	37	33	47	40		-0.38	-0.18	5	1.8	-2.6	-16	1.5	-27	2.0	-9.5	-6.9	27.6	-2	0
NGU 230026											45	38	26	62	45	44	26	24	26	39	25	46	27	26
NGU 230027	NRF 180017	115	94	93	92	119	106	93	99		111	113	106	94	93	86	89	86	116	126	113	107	85	91
96539416	GJR 110022	46	62	46	25	36	33	47	40		-0.43	-0.33	11	0.6	-0.6	-12	-1.6	-20	9.8	-27.7	-5.8	27.0	-5	-1
NGU 230027											48	38	25	62	46	44	31	30	33	39	23	47	34	33
NGU 230029	NRF 180017	81	133	116	77	101	108	119	114		85	83	125	133	116	125	127	122	123	94	109	94	126	131
96539432	NGU 170004	37	61	44	22	29	30	43	36		0.84	0.55	28	14.3	4.8	73	17.5	61	12.5	-1.3	-5.0	20.2	15	29
NGU 230029											38	30	22	61	44	42	23	22	24	27	19	40	25	24
NGU 230038	NRF 180017	101	117	94	86	118	113	111	112		99	104	114	117	94	101	112	100	112	107	118	110	106	109
96539515	LRC 160076	41	63	46	23	36	33	46	40		0.15	-0.06	17	8.4	-0.3	21	9.6	11	8.2	-12.3	-7.1	28.5	5	12
NGU 230038											42	34	23	63	46	44	26	23	26	39	24	45	26	25
NGU 230043	NRF 180017	74	137	109	77	96	102	117	110		77	92	127	137	109	122	128	121	118	91	99	99	121	124
96539564	GJR 080018	51	64	46	22	37	33	47	40		1.28	0.27	29	15.6	3.2	67	17.7	58	10.8	1.5	-2.7	22.8	12	23
NGU 230043											53	40	22	64	46	44	30	29	32	40	24	48	33	32
NGU 230048	NRF 180017	92	121	111	83	101	103	110	107		94	90	117	121	111	116	116	109	113	97	107	95	116	119
96539614	NGU 170002	37	61	42	22	29	29	43	36		0.41	0.33	21	9.9	3.5	53	11.9	32	8.7	-3.7	-4.5	20.6	10	20
NGU 230048											38	30	22	61	42	42	23	22	24	27	19	40	25	24
NGU 240003	TT 140035	92	106	97	94	92		95			91	105	104	106	97	100	101	103	96	82	96	99	107	105
96806989	NGU 180006	17	33	27	8	24		26			0.59	-0.10	8	4.7	0.3	18	4.5	18	2.3	8.9	-1.9	22.8	5	9
NGU 240003											18	14	8	33	27	23	12	12	12	23	13	35	14	14

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	
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																								
Birth wt dir																								
Birth mat																								
Mature wt																								
Wean wt																								
Wean mat																								
Cow-Calf Ratio (Wean)																								
Postwean wt																								
ADG																								
Scrotal Circ.																								
Heifer Fertility																								
Cow Fertility																								
Longevity																								
Height																								
Length																								
NGU 240004	LEB 170603																							
96808068	BN 210655	113	84	112	115	105	107	100	103	110	106	86	84	112	103	86	84	86	103	103	103	92	86	
NGU 240004		50	68	48	27	37	35	50	42	-0.40	-0.12	-8	-3.2	3.7	25	-3.4	-25	-1.6	-8.6	-3.7	25.0	-2	-5	
										52	43	27	68	48	48	42	33	37	42	23	46	37	36	
NGU 240005	LEB 170603																							
96808076	BN 210660	111	82	111	117	108	110	101	105	108	112	84	82	111	102	83	83	83	106	107	104	88	84	
NGU 240005		48	67	47	26	37	34	49	42	-0.27	-0.28	-10	-3.9	3.7	23	-4.7	-25	-2.6	-11.1	-4.5	25.1	-4	-7	
										50	41	26	67	47	47	40	31	35	42	23	45	35	34	
NGU 240007	LEB 170603																							
97030878	BN 210654	105	89	119	110	106	111	105	108	104	102	90	89	119	112	92	92	95	101	109	100	96	94	
NGU 240007		48	68	49	26	36	35	50	42	-0.08	-0.01	-4	-1.1	5.3	44	-0.5	-6	2.0	-7.0	-5.0	23.4	0	0	
										50	41	26	68	49	48	40	32	35	41	23	45	36	35	
NGU 240009	TT 140035																							
97029821	NGU 170003	73	127	108	84	91	96	112	104	75	91	116	127	108	119	121	124	113	78	99	97	124	124	
NGU 240009		17	53	37	8	24	23	35	29	1.35	0.30	20	12.2	2.9	60	14.4	65	8.7	11.9	-2.5	21.7	14	24	
										18	14	8	53	37	33	12	12	12	23	13	36	14	14	
NGU 240012	TT 140035																							
97148019	NRF 180018	92	111	87	90	109	100	101	100	90	112	109	111	87	93	103	104	100	91	110	111	99	102	
NGU 240012		42	46	42	26	36	30	39	34	0.64	-0.28	13	6.5	-2.1	3	5.5	20	3.9	1.3	-5.3	29.1	1	7	
										43	35	26	46	42	38	26	25	26	39	24	44	28	27	
NGU 240014	TT 140035																							
97481568	RV 170025	88	113	93	92	101	96	103	100	87	104	106	113	93	100	107	105	100	76	103	112	101	102	
NGU 240014		28	63	39	14	34	29	43	36	0.75	-0.06	11	7.1	-0.7	19	7.5	22	3.8	13.7	-3.5	29.6	3	6	
										29	22	14	63	39	39	17	15	16	36	23	43	18	17	
NGU 240017	TT 140035																							
97633739	NGU 210010	87	111	102	93	95	95	103	99	87	101	105	111	102	107	106	106	99	80	97	106	109	108	
NGU240017		17	60	31	8	23	23	37	30	0.78	0.02	10	6.4	1.5	34	6.9	25	3.3	10.2	-2.2	26.3	7	11	
										18	14	8	60	31	33	12	12	12	23	13	34	14	14	
NGU 240020	NRF 180017																							
98063738	LRC 160076	92	128	91	82	119	116	118	117	92	101	120	128	91	105	121	109	119	106	120	111	113	117	
NGU 240020		41	60	46	23	36	32	45	38	0.51	0.04	23	12.6	-1.1	29	14.3	33	11.0	-10.8	-7.4	29.1	9	18	
										42	34	23	60	46	43	26	23	26	39	24	45	26	25	
NGU 250001	NRF 180017																							
98212913	GJR 120021	121	87	92	98	103	91	82	85	120	100	100	87	92	82	90	82	92	102	103	100	89	89	
NGU 250001		45	60	46	23	33	31	45	38	-0.87	0.05	5	-1.8	-0.9	-21	-1.5	-28	0.6	-8.1	-3.5	23.4	-3	-4	
										46	38	23	60	46	43	28	29	32	33	22	45	33	32	
NGU 250002	NRF 180017																							
98212905	DUN 200046	91	119	100	85	125	122	118	121	92	98	115	119	100	108	114	108	113	114	129	106	112	116	
NGU 250002		40	58	39	23	33	30	43	36	0.54	0.11	19	9.4	1.1	35	10.7	30	8.6	-17.5	-9.7	26.4	8	17	
										42	32	23	58	39	40	26	22	24	36	23	41	25	24	
NGU 250004	NRF 180017																							
98393713	LRC 190030	113	114	78	92	107	99	103	100	111	101	107	114	78	89	108	98	104	103	107	104	100	103	
NGU 250004		42	61	45	27	36	33	46	40	-0.44	0.01	11	7.4	-4.0	-6	8.0	7	5.2	-8.6	-4.5	25.5	2	7	
										44	35	27	61	45	44	28	26	29	39	24	45	30	28	
NGU 250007	NRF 180017																							
98527039	NGU 170005	113	101	86	97	100	92	93	92	110	110	101	101	86	88	96	82	92	102	103	95	95	95	
NGU 250007		37	61	44	22	29	30	43	36	-0.35	-0.23	6	3.1	-2.2	-8	1.9	-27	0.8	-8.2	-3.6	20.7	-1	1	
										38	30	22	61	44	42	23	22	24	27	19	40	25	24	

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		
Index EBV Acc	% Inbreeding	Sire ID Dam ID	Calv. Ease V	Calf Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	
ID Number Name																									
NGU 250011 98586688 NGU 250011	3	TT 140035 BN 200620	93 22	106 42	99 28	95 5	104 26	101 20	104 30	102 25	91 0.55 23	107 -0.16 18	103 7 5	106 4.9 42	99 0.9 28	103 24 25	102 4.7 7			82 8.9 27	106 -4.4 13	110 28.7 38			
NGU 250014 98669914 NGU 250014		Q 210013 NGU 170004	80 30	110 62	134 43	88 21	100 26	109 28	114 42	112 35	84 0.92 31	83 0.53 22	109 13 21	110 6.1 62	134 8.9 43	131 85 42	112 9.7 34	108 29 11		101 4.2 13	97 -3.6 25	102 -3.5 15	99 22.6 37	113 8 13	118 18 13
NGU 250025 98800345 NGU 250025	1	Q 210013 NRF 180018	102 48	94 69	104 48	96 32	118 36	110 36	99 51	104 44	99 0.15 50	108 -0.17 39	101 6 32	94 0.3 69	104 1.9 48	97 11 50	93 0.1 41	85 -21 23		87 -1.2 26	112 -16.3 40	112 -5.8 24	112 29.8 45	86 -5 27	93 0 26
NGU 250026 98800352 NGU 250026		NRF 180017 NGU 210001	96 37	121 61	92 42	87 22	99 28	96 29	106 43	101 36	96 0.30 38	99 0.08 30	113 17 22	121 9.9 61	92 -0.9 42	103 24 42	113 10.5 23	102 17 22		108 6.7 24	99 -5.0 27	106 -4.2 19	93 19.5 38	110 7 25	113 15 24
NGU 250028 98800360 NGU 250028		NRF 180017 BN 210648	104 41	111 64	103 45	85 24	111 33	107 32	104 46	105 39	104 -0.08 42	98 0.11 35	115 18 24	111 6.5 64	103 1.7 45	104 26 44	108 8.0 26	103 18 23		109 7.4 26	104 -9.5 32	112 -5.6 24	106 26.5 42	107 6 27	111 13 26
NGU 250030 98800386 NGU 250030		NRF 180017 NGU 140030	97 37	117 62	102 44	86 22	101 27	100 29	106 43	103 36	98 0.24 38	96 0.17 30	114 17 22	117 8.6 62	102 1.5 44	108 36 43	112 9.6 23	103 18 22		108 6.8 24	98 -4.8 27	106 -4.3 19	95 20.6 36	111 7 25	114 15 24
NGU 250032 98844145 NGU 250032	2	NRF 180017 NGU 220015	110 34	109 64	78 41	94 14	106 29	95 28	97 43	95 36	108 -0.25 35	108 -0.16 26	106 10 14	109 5.6 64	78 -4.1 41	85 -14 40	105 6.1 18	94 -2 18		100 3.7 24	105 -10.7 34	107 -4.5 12	100 23.0 41	96 0 26	99 4 24
NGU 250039 98952740 NGU 250039		NRF 180017 NGU 210003	100 37	110 61	110 42	85 22	102 28	101 29	102 43	101 36	101 0.07 38	95 0.19 30	114 18 22	110 6.2 61	110 3.4 42	109 39 42	107 7.4 23	105 22 22		109 7.3 24	98 -4.8 27	106 -4.3 19	98 22.0 38	112 8 25	115 17 24
NGU 250040 98952757 NGU 250040		NRF 180017 NGU 170003	104 37	104 62	116 45	86 22	99 29	98 30	97 44	97 37	104 -0.08 38	95 0.19 30	113 16 22	104 4.2 62	116 4.7 45	110 40 43	103 5.4 23	103 17 22		108 6.7 24	99 -5.2 27	106 -4.2 19	92 19.1 40	111 7 25	113 15 24
NGU 250041 99001307 NGU 250041	1	NRF 180017 Q 210079	98 44	113 49	110 45	86 28	103 35	104 31	107 41	105 36	99 0.18 45	96 0.17 37	113 17 28	113 7.4 49	110 3.3 45	112 44 41	108 7.6 39	103 18 23		111 7.9 25	95 -1.8 36	106 -4.4 25	101 23.7 44	110 7 26	113 15 26
NGU 250043 99081390 NGU 250043		NRF 180017 NGU 180004	101 37	109 38	110 37	86 22	99 29	98 25	100 33	99 29	102 0.03 38	96 0.18 30	113 17 22	109 5.8 38	110 3.4 37	109 37 32	106 6.9 23	102 17 22		107 6.6 24	99 -5.6 27	105 -4.1 19	93 19.3 40	110 7 25	113 15 24
NGU 250044 99112724 NGU 250044	1	NRF 180017 DUN 210031	106 40	109 42	89 37	88 25	108 35	99 28	97 37	98 32	104 -0.10 41	104 -0.07 34	112 16 25	109 6.0 42	89 -1.7 37	92 1 35	106 6.6 27	101 14 26		106 6.1 29	100 -6.1 37	109 -5.1 24	105 25.9 44	104 4 30	108 11 29

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	
Index EBV Acc	% Inbreeding	Sire ID Dam ID	Calv. Ease V	Calf Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length	
ID Number Name																									
NGU 250047 99384646 NGU 250047	1	NRF 180017 RV 170025	106 42	108 58	95 47	89 24	109 37	103 33	101 45	101 39	105 -0.13 44	102 -0.01 35	110 14 24	108 5.5 58	95 -0.1 47	97 12 43	104 5.7 26	95 0 23	104 5.3 25	95 -2.4 38	110 -5.3 26	108 27.6 46	97 1 26	101 6 25	
NGU 250050 99703969 NGU 250050	2	Q 210013 LRC 160076	77 34	124 49	103 44	85 22	120 33	120 29	122 39	122 34	79 1.18 35	95 0.18 26	115 19 22	124 11.2 49	103 1.7 44	114 48 38	121 14.3 37	113 40 11	111 8.0 14	105 -10.4 37	115 -6.5 19	117 32.3 42	114 9 14	120 20 13	
NGU 250053 99802217 NGU 250053		Q 210013 NGU 180001	76 30	116 44	131 40	84 21	101 25	110 25	116 35	113 30	80 1.11 31	82 0.56 22	114 17 21	116 8.4 44	131 8.1 40	130 85 35	117 12.2 34	114 43 11	106 6.1 13	96 -3.3 25	103 -3.5 15	100 23.4 36	118 11 13	123 23 13	
NGU 250054 99901555 NGU 250054		Q 210013 NGU 180007	85 30	110 43	110 36	91 21	101 26	101 24	107 34	104 29	87 0.78 31	94 0.22 22	107 11 21	110 6.1 43	110 3.4 36	112 45 33	108 8.0 34	103 18 11	97 2.8 13	99 -5.2 25	101 -3.1 15	101 23.5 37	109 7 13	113 15 13	
NGU 260002 99901571 NGU 260002		Q 210013 NGU 180005	81 30	113 44	120 39	87 21	102 25	106 25	111 34	109 30	84 0.94 31	88 0.39 22	111 15 21	113 7.2 44	120 5.7 39	121 64 35	112 10.0 34	110 33 11	103 4.8 13	98 -4.3 25	102 -3.3 15	103 24.6 36	115 9 13	119 20 13	
NGU 260003 6020029390 NGU 260003		Q 210013 BN 210655	93 38	108 51	112 42	90 25	115 32	115 29	112 40	114 34	95 0.39 39	89 0.36 32	108 12 25	108 5.5 51	112 3.8 42	112 45 39	109 8.2 38	104 20 16	100 3.8 18	103 -8.5 34	108 -4.9 21	117 32.3 41	108 6 18	112 14 18	
NGU 260005 6020220858 NGU 260005		Q 210013 NGU 170004	75 30	117 46	132 43	84 21	99 25	108 26	116 36	113 31	80 1.13 31	81 0.59 22	114 17 21	117 8.5 46	132 8.5 43	132 88 37	117 12.5 34	114 42 11	106 6.0 13	96 -3.1 25	103 -3.6 15	96 21.0 35	118 11 13	123 22 13	
NGU 260006 6020279052 NGU 260006		Q 210013 NGU 180006	86 30	109 42	108 36	91 21	99 25	99 24	104 33	101 28	87 0.74 31	95 0.18 22	107 11 21	109 5.8 42	108 2.9 36	110 40 33	107 7.5 34	103 18 11	97 2.7 13	99 -5.6 25	101 -3.1 15	98 22.0 34	109 6 13	113 15 13	
NGU 260010 6020427990 NGU 260010		Q 210013 BN 210648	84 35	114 51	113 43	86 24	111 30	112 29	112 40	113 34	86 0.80 36	91 0.31 28	113 17 24	114 7.7 51	113 4.1 43	115 51 39	114 10.8 36	111 36 15	105 5.6 17	103 -8.5 30	108 -4.8 21	111 29.0 38	112 8 17	117 18 16	
NGU 260011 6020432321 NGU 260011		Q 210013 BN 200620	88 35	110 51	110 38	92 25	113 30	113 28	113 39	114 34	88 0.70 36	97 0.13 28	106 10 25	110 6.0 51	110 3.4 38	113 46 38	108 7.7 36	106 25 13	102 4.6 15	99 -5.5 30	111 -5.5 21	112 29.4 38	105 5 15	111 13 15	
NGU 260014 6020571235 NGU 260014		Q 210013 NGU 170001	74 30	117 46	134 43	82 21	98 25	108 26	115 36	112 31	79 1.16 31	80 0.62 22	116 20 21	117 8.8 46	134 8.9 43	132 89 37	118 12.9 34	119 53 11	109 7.4 13	96 -2.9 25	103 -3.6 15	95 20.7 36	121 13 13	127 26 13	
NGU 260017 6020571268 NGU 260017		Q 210013 GJR 080018	63 46	130 51	123 45	80 22	95 35	104 30	118 41	111 36	65 1.84 48	88 0.39 34	121 24 22	130 13.0 51	123 6.3 45	130 83 39	125 16.3 40	122 60 24	108 7.0 26	91 1.1 39	94 -1.5 22	102 24.0 44	120 12 26	125 24 26	

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Animal			Selection Values									Birth		Wean				Growth		Fertility				Frame	
Index EBV Acc	ID Number Name	% Inbreeding	Sire ID Dam ID	Calv. Ease V	Calv Growth V	Milk V	Maint. V	Fertility V	Cow Value	Growth Value	Prod. Value	Birth wt dir	Birth mat	Mature wt	Wean wt	Wean mat	Cow-Calf Ratio (Wean)	Postwean wt	ADG	Scrotal Circ.	Heifer Fertility	Cow Fertility	Longevity	Height	Length
	NGU 260018 6020571276 NGU 260018		Q 210013 NGU 170005	92 30	105 46	96 43	95 21	98 25	93 26	99 36	96 31	91 0.55 31	103 -0.02 22	103 7 21	105 4.4 46	96 0.1 43	99 16 37	102 4.9 34	95 1 11	91 0.5 13	101 -6.7 25	100 -2.8 15	96 21.0 36	103 3 13	106 10 13
	NGU 260020 6020701790 NGU 260020		Q 210013 DUN 200002	86 36	119 49	102 43	84 26	111 34	108 30	110 40	110 35	87 0.76 38	94 0.22 28	116 19 26	119 9.4 49	102 1.4 43	108 36 39	119 13.5 38	119 54 21	113 8.6 24	101 -6.8 37	115 -6.3 23	103 24.8 41	114 9 24	124 23 23
	NGU 260023 6020875073 NGU 260023	1	Q 210013 NGU 230014	90 36	113 49	107 37	86 24	113 29	110 27	108 38	109 32	91 0.58 38	96 0.16 28	114 18 24	113 7.0 49	107 2.6 37	108 37 37	110 8.7 36	104 22 15	105 5.7 18	99 -5.5 31	112 -5.6 19	111 29.4 38	106 5 18	114 15 17

Selection List on Cow Value

Bulls 2 years and older

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	Calving Ease Value Acc	Calf Growth Value Acc	Milk Value Acc	Maint. Value Acc	Fertility Value Acc	Cow Value Acc	Growth Value Acc	Prod Value Acc	
					★★★★★								
1	Q 210013	Q 210013	Q 160029	Q 120101	0.8	68 59	125 79	116 58	82 42	116 46	120 44	123 61	122 52
2	Q 220014	Q 220014	EX 170244	Q 110089	0.2	73 48	121 72	120 56	71 41	123 43	121 41	108 57	115 49
					★★★★								
1	NGU 230020	NGU 230020	TT 110017	BN 200620	0.7	92 38	110 45	110 37	92 16	101 34	102 27	108 36	105 32
					★★★☆☆								
1	NGU 230039	NGU 230039	NRF 180017	EA 110003	0.9	91 40	124 62	92 42	84 22	103 32	99 31	106 44	103 38
2	NGU 230042	NGU 230042	T 180165	Q 210079	0.3	100 40	116 71	115 42	93 28	90 37	98 34	114 50	107 42
3	NGU 240008	NGU 240008	TT 140035	BN 210648	0.0	88 25	113 63	102 36	86 14	103 29	99 27	101 41	100 34

Selection List on Cow Value

Cows 2 years and older

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	Calving Ease Value Acc	Calf Growth Value Acc	Milk Value Acc	Maint. Value Acc	Fertility Value Acc	Cow Value Acc	Growth Value Acc	Prod Value Acc	
					★★★★★								
1	DUN 200046	DUN 200046	TV 150548	LRC 180022	0.0	88 32	100 44	110 47	99 15	129 40	128 29	118 38	123 34
					★★★★☆								
1	BN 210654	BN 210654	BN 160309	CSN100011N	0.0	108 37	94 66	124 65	95 22	112 41	114 37	106 52	109 44
2	BN 210660	BN 210660	BN 160309	BN 130426	0.0	113 36	88 65	107 57	106 21	116 41	114 36	102 50	107 43
3	LRC 160076	LRC 160076	DH 110016	LRC 140022	0.1	87 33	123 58	90 67	88 20	119 48	116 38	119 50	118 44
4	NGU 230038	NGU 230038	NRF 180017	LRC 160076	0.8	101 41	117 63	94 46	86 23	118 36	113 33	111 46	112 40
5	NGU 240005	NGU 240005	LEB 170603	BN 210660	0.0	111 48	82 67	111 47	117 26	108 37	110 34	101 49	105 42
6	NGU 240007	NGU 240007	LEB 170603	BN 210654	0.0	105 48	89 68	119 49	110 26	106 36	111 35	105 50	108 42
7	NGU 240020	NGU 240020	NRF 180017	LRC 160076	0.8	92 41	128 60	91 46	82 23	119 36	116 32	118 45	117 38
					★★★★								
1	BN 200620	BN 200620	BN 160309	BN 170448	0.1	107 37	94 64	104 48	108 26	109 38	109 34	104 48	106 41
2	BN 210648	BN 210648	BN 160309	BN 140044	0.1	100 38	103 67	110 64	90 23	107 38	105 37	102 52	103 44
3	NGU 230014	NGU 230014	NRF 180017	RV 170025	1.2	112 42	100 61	98 47	90 24	110 37	101 33	93 46	96 40
4	NGU 230026	NGU 230026	NRF 180017	LRC 160087	0.0	113 44	98 62	85 45	98 26	116 37	104 33	97 47	100 40
5	NGU 230027	NGU 230027	NRF 180017	GJR 110022	0.6	115 46	94 62	93 46	92 25	119 36	106 33	93 47	99 40
6	NGU 230029	NGU 230029	NRF 180017	NGU 170004	0.0	81 37	133 61	116 44	77 22	101 29	108 30	119 43	114 36
7	NGU 230043	NGU 230043	NRF 180017	GJR 080018	1.0	74 51	137 64	109 46	77 22	96 37	102 33	117 47	110 40
8	NGU 230048	NGU 230048	NRF 180017	NGU 170002	0.0	92 37	121 61	111 42	83 22	101 29	103 29	110 43	107 36
9	NGU 240004	NGU 240004	LEB 170603	BN 210655	0.0	113 50	84 68	112 48	115 27	105 37	107 35	100 50	103 42
10	NGU 240012	NGU 240012	TT 140035	NRF 180018	0.0	92 42	111 46	87 42	90 26	109 36	100 30	101 39	100 34
					★★★★								
1	DUN 200002	DUN 200002	FF 130104	RV 090011	0.0	104 42	113 58	87 63	87 32	105 49	96 40	98 52	97 46
2	NGU 220024	NGU 220024	FF 130104	LRC 160087	0.1	101 35	107 55	60 59	100 31	107 45	90 37	94 48	91 42
3	NGU 230005	NGU 230005	NRF 180017	NGU 190039	0.0	106 37	106 39	101 38	88 22	104 28	99 25	97 33	97 29

Selection List on Cow Value

Cows 2 years and older

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	Calving Ease Value Acc	Calf Growth Value Acc	Milk Value Acc	Maint. Value Acc	Fertility Value Acc	Cow Value Acc	Growth Value Acc	Prod Value Acc	
					★★★★☆								
4	NGU 230008	NGU 230008	NRF 180017	NGU 180002	0.0	107 37	105 39	98 38	89 22	102 29	96 25	95 34	94 30
5	NGU 230024	NGU 230024	NRF 180017	NGU 210002	0.0	120 37	90 59	93 38	98 22	100 28	90 28	85 41	86 34
6	NGU 240009	NGU 240009	TT 140035	NGU 170003	0.0	73 17	127 53	108 37	84 8	91 24	96 23	112 35	104 29
7	NGU 240014	NGU 240014	TT 140035	RV 170025	0.0	88 28	113 63	93 39	92 14	101 34	96 29	103 43	100 36
8	NGU 240017	NGU240017	TT 140035	NGU 210010	0.0	87 17	111 60	102 31	93 8	95 23	95 23	103 37	99 30
9	Q 210079	Q 210079	Q 150104	WT 070025	0.2	87 48	110 74	123 65	94 37	88 46	97 43	110 59	104 51
10	RV 170025	RV 170025	T 060253	RV 100001	0.2	110 44	89 61	96 71	101 23	100 51	91 41	86 54	87 48
					★★★								
1	DUN 210031	DUN 210031	FF 130104	MAK 090350	0.0	103 30	102 45	80 42	97 27	100 46	89 33	91 42	89 38
2	GJR 080018	GJR200818	GJR 010055	SL 980021	3.2	64 70	134 64	129 68	78 15	73 52	88 41	113 54	101 48
3	LRC 190030	LRC 190030	FF 130104	RY 080048	0.2	120 44	104 63	62 64	112 32	95 50	86 41	94 54	89 48

Selection List on Cow Value

Bull Calves younger than 2 years

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	Calving Ease Value Acc	Calf Growth Value Acc	Milk Value Acc	Maint. Value Acc	Fertility Value Acc	Cow Value Acc	Growth Value Acc	Prod Value Acc	
					★★★★☆								
1	NGU 250022	NGU 250022	Q 210013	BN 210654	0.0	88 35	110 64	120 43	87 24	116 31	118 31	115 45	117 38
						★★★★							
1	NGU 250009	NGU 250009	TT 140035	BN 210663	0.8	95 26	105 61	95 34	93 13	115 29	108 26	104 40	106 33
2	NGU 250031	NGU 250031	NRF 180017	LRC 160087	0.0	99 44	118 62	79 45	89 26	116 37	106 33	107 47	107 40
3	NGU 260007	NGU 260007	Q 210013	NGU 220024	0.4	84 35	116 48	88 41	90 26	111 32	105 29	108 39	107 34
4	NGU 260012	NGU 260012	Q 210013	NGU 170002	0.0	79 30	114 45	124 41	86 21	99 25	105 25	111 35	108 30
5	NGU 260013	NGU 260013	Q 210013	NGU 210003	0.0	80 30	113 45	121 41	86 21	101 24	105 25	110 35	108 30
6	NGU 260015	NGU 260015	Q 210013	NGU 190039	0.0	85 30	110 42	111 36	89 21	104 24	104 24	107 33	105 28
7	NGU 260019	NGU 260019	Q 210013	Q 210079	1.9	77 38	117 54	120 43	87 27	102 31	108 30	116 42	113 36
8	NGU 260021	NGU 260021	Q 210013	DUN 210031	0.3	85 34	114 45	98 36	89 25	108 32	104 27	107 37	105 32
9	NGU 260024	NGU 260024	Q 210013	NGU 230008	0.7	87 35	115 43	107 35	85 23	109 27	108 25	109 34	108 30
						★★★★☆							
1	NGU 260016	NGU 260016	Q 210013	NGU 180002	0.0	86 30	109 42	108 36	90 21	99 25	98 24	103 33	100 28

Selection List on Cow Value

Heifers younger than 2 years

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	Calving Ease Value Acc	Calf Growth Value Acc	Milk Value Acc	Maint. Value Acc	Fertility Value Acc	Cow Value Acc	Growth Value Acc	Prod Value Acc	
					★★★★★								
1	NGU 250002	NGU 250002	NRF 180017	DUN 200046	0.1	91 40	119 58	100 39	85 23	125 33	122 30	118 43	121 36
2	NGU 250050	NGU 250050	Q 210013	LRC 160076	1.6	77 34	124 49	103 44	85 22	120 33	120 29	122 39	122 34
					★★★★☆								
1	NGU 250025	NGU 250025	Q 210013	NRF 180018	1.1	102 48	94 69	104 48	96 32	118 36	110 36	99 51	104 44
2	NGU 250053	NGU 250053	Q 210013	NGU 180001	0.0	76 30	116 44	131 40	84 21	101 25	110 25	116 35	113 30
3	NGU 260003	NGU 260003	Q 210013	BN 210655	0.0	93 38	108 51	112 42	90 25	115 32	115 29	112 40	114 34
4	NGU 260010	NGU 260010	Q 210013	BN 210648	0.0	84 35	114 51	113 43	86 24	111 30	112 29	112 40	113 34
5	NGU 260011	NGU 260011	Q 210013	BN 200620	0.1	88 35	110 51	110 38	92 25	113 30	113 28	113 39	114 34
6	NGU 260023	NGU 260023	Q 210013	NGU 230014	0.9	90 36	113 49	107 37	86 24	113 29	110 27	108 38	109 32
					★★★★								
1	NGU 250011	NGU 250011	TT 140035	BN 200620	3.3	93 22	106 42	99 28	95 5	104 26	101 20	104 30	102 25
2	NGU 250014	NGU 250014	Q 210013	NGU 170004	0.0	80 30	110 62	134 43	88 21	100 26	109 28	114 42	112 35
3	NGU 250028	NGU 250028	NRF 180017	BN 210648	0.2	104 41	111 64	103 45	85 24	111 33	107 32	104 46	105 39
4	NGU 250030	NGU 250030	NRF 180017	NGU 140030	0.0	97 37	117 62	102 44	86 22	101 27	100 29	106 43	103 36
5	NGU 250039	NGU 250039	NRF 180017	NGU 210003	0.0	100 37	110 61	110 42	85 22	102 28	101 29	102 43	101 36
6	NGU 250041	NGU 250041	NRF 180017	Q 210079	1.0	98 44	113 49	110 45	86 28	103 35	104 31	107 41	105 36
7	NGU 250047	NGU 250047	NRF 180017	RV 170025	1.2	106 42	108 58	95 47	89 24	109 37	103 33	101 45	101 39
8	NGU 250054	NGU 250054	Q 210013	NGU 180007	0.0	85 30	110 43	110 36	91 21	101 26	101 24	107 34	104 29
9	NGU 260002	NGU 260002	Q 210013	NGU 180005	0.0	81 30	113 44	120 39	87 21	102 25	106 25	111 34	109 30
10	NGU 260005	NGU 260005	Q 210013	NGU 170004	0.0	75 30	117 46	132 43	84 21	99 25	108 26	116 36	113 31
11	NGU 260014	NGU 260014	Q 210013	NGU 170001	0.0	74 30	117 46	134 43	82 21	98 25	108 26	115 36	112 31
12	NGU 260017	NGU 260017	Q 210013	GJR 080018	0.1	63 46	130 51	123 45	80 22	95 35	104 30	118 41	111 36
13	NGU 260020	NGU 260020	Q 210013	DUN 200002	0.3	86 36	119 49	102 43	84 26	111 34	108 30	110 40	110 35
					★★★☆☆								
1	NGU 250001	NGU 250001	NRF 180017	GJR 120021	0.2	121 45	87 60	92 46	98 23	103 33	91 31	82 45	85 38
2	NGU 250004	NGU 250004	NRF 180017	LRC 190030	1.3	113 42	114 61	78 45	92 27	107 36	99 33	103 46	100 40

Selection List on Cow Value

Heifers younger than 2 years

ID Sorted on ID	Name	Sire ID	Dam ID	% Inbreeding	Calving Ease Value Acc	Calf Growth Value Acc	Milk Value Acc	Maint. Value Acc	Fertility Value Acc	Cow Value Acc	Growth Value Acc	Prod Value Acc	
					★★★★☆								
3	NGU 250007	NGU 250007	NRF 180017	NGU 170005	0.0	113 37	101 61	86 44	97 22	100 29	92 30	93 43	92 36
4	NGU 250026	NGU 250026	NRF 180017	NGU 210001	0.0	96 37	121 61	92 42	87 22	99 28	96 29	106 43	101 36
5	NGU 250032	NGU 250032	NRF 180017	NGU 220015	1.8	110 34	109 64	78 41	94 14	106 29	95 28	97 43	95 36
6	NGU 250040	NGU 250040	NRF 180017	NGU 170003	0.0	104 37	104 62	116 45	86 22	99 29	98 30	97 44	97 37
7	NGU 250043	NGU 250043	NRF 180017	NGU 180004	0.0	101 37	109 38	110 37	86 22	99 29	98 25	100 33	99 29
8	NGU 250044	NGU 250044	NRF 180017	DUN 210031	1.2	106 40	109 42	89 37	88 25	108 35	99 28	97 37	98 32
9	NGU 260006	NGU 260006	Q 210013	NGU 180006	0.0	86 30	109 42	108 36	91 21	99 25	99 24	104 33	101 28
10	NGU 260018	NGU 260018	Q 210013	NGU 170005	0.0	92 30	105 46	96 43	95 21	98 25	93 26	99 36	96 31

	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

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.

