

Boer Goat Genetic Analysis

SA Stud Book

20 January 2025

G2 BOERBOK STOET

33 COETZER STREET

TARLTON

1749



FDM: 2141



CERTIFICATE
OF QUALITY

Valid up to
October 2029

General Information

This **Genetic Report** of your flock enables you to determine the genetic merit and potential of the animals in your herd relative to that of the breed. An animal's performance is determined by two factors, namely the environment and genetics. Good nutrition and management can improve performance, but an animal cannot perform better than its genetic potential. Superior performance due to the environment cannot be carried over to the next generation. It is therefore extremely important not to neglect genetic progress of your flock. Due to the interaction between environment and genetics, it is difficult to identify genetically superior animals on performance data. Estimated Breeding Values (EBVs) are therefore predicted for every animal to determine its genetic potential, as well as its worth as a parent for the next generation. Through the use of EBVs, animals can be compared fairly **within the breed**, therefore across herds, years and production systems. Results presented in this report allow the breeder to identify the underlying genetics of the animals.

Genetic parameters

Genetic parameters (heritability and genetic correlations) are estimated on a breed-basis and are required for the prediction of breeding values. The **heritability** refers to the portion of the variation of a trait in a population that is due to transferrable genetics (the rest of the variation can be attributed to the environment and non-transferrable genetics). Some traits are genetically correlated, which means that a change in one trait will lead to changes in other traits. The strength of this association amongst traits is referred to as a **genetic correlations** and can be desirable or undesirable.

Breeding Values

The prediction of EBVs makes use of performance recordings of the animal as well as those of its relatives, pedigree information and genetic parameters. The deviation of the animal's measurement relative to the average of its contemporary group, forms the basis for identifying the animal's genetic potential for the trait. A **contemporary group** is a group of animals that have been exposed to the same environmental and biological effects, including herd, year, sex and age effects. After adjusting for differences in these effects, animals can fairly be compared and the difference in performance that still persist are then assumed to be due to differences in the genetic merit of the animals.

The EBV predicted for an animal at birth and until it has been measured, is the average EBV of its parents, since the animal received half of its genes from each parent. This mid-parent value makes the assumption that the same half of the parents' genes are carried over to all their offspring. In reality, each offspring receives a random sample of each parent's genes,

therefore mid-parent EBVs are still of low accuracy, but it does indicate the genetic level that can be expected due its parental history. An animal's true genetic merit can be predicted more accurately as more information becomes available, eg. when the animal has been measured or when the number of relatives with measurements increases. Estimated breeding values therefore change over time as more information becomes available. EBVs of animals are published with an **accuracy (%)**, which indicates how much information was available for the estimation of breeding values and therefore the confidence with which a breeder can use it. Factors that influence the accuracy of an EBV are the heritability of the trait, the number of measured relatives, the size of the contemporary group, the precision with which the measurements were taken and the completeness of pedigree information. An EBV with an accuracy of 85% or more is less likely to change significantly with subsequent genetic analyses.

Interpretation of breeding values

EBVs are expressed around a **base year** (5 years ago), which means that the average breeding value of the base year is set as zero and all breeding values are expressed relative to this average. An animal with an EBV of +1kg for weaning weight is therefore genetically superior by 1kg compared to an average animal born in the base year. EBVs therefore express genetic merit of animals relative to each other. The true performance of an animal cannot be calculated from the EBV, but it enables the breeder to know which animals will make a better contribution to the next generation. For easier interpretation EBVs are also expressed as breeding value indices. For these indices the average value of the **active population** is set as 100 with a standard deviation of 12. An index of 76 therefore indicates that the animal is 2 standard deviations below the average and an index of 112 indicates that the animal is 1 standard deviation above the average of the active population for the specific trait. Please note that negative EBVs are favourable for Inter-Lambing Period and Age at First Lambing, therefore shorter inter-lambing periods and younger ages at first lambing indicates better fertility. However, breeding value indices are expressed in the same way for all traits, therefore higher indices indicates desirability for the traits and lower indices are undesirable. This makes it easy to identify superior animals for all traits.

The data used in this evaluation has been obtained from LOGIX, as supplied by breeders. Everything possible had been done to present the information correctly. SA Stud Book does not take any responsibility for the use and interpretation of the information from this publication.

Selection Indices

It is easy to select on a single trait, but that is not the best approach to follow. Selecting on only one trait can lead to the deterioration of performance in other traits due to genetic correlations. There are different traits that are important, some being more important than others. A selection index combines multiple traits, each with an economic weight to take the different levels of importance into account. EBVs for different traits cannot simply be added together, since the unit of measurement and range of the values differ and in some cases negative values are favoured. These factors are accounted for in the compilation of a selection index. An overall selection index includes EBVs of all the traits of economic importance, while other selection indices are more focused on specific breeding objectives. Selection indices are expressed around 100, with 100 being the average of the active population, with a standard deviation of 12. A selection index of 124 is therefore 2 standard deviations above the average and an index of 88 is one standard deviation below the average of the active animals of the population.

Two Indices are constructed for the Boer Goat breed, namely the Logix Merit Index and the Reproduction Index. These indices, their purpose and the contribution of the different traits to the indices are summarised as follows :

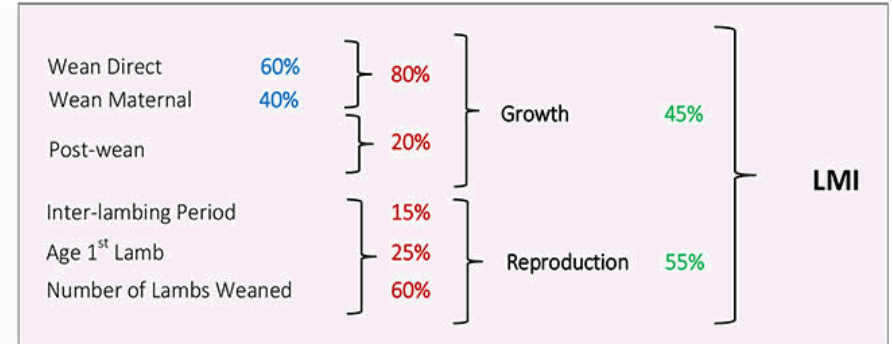
Logix Merit Index (LMI)

This index combines all the traits to select for a balanced, profitable animal that is fertile and delivers a desirable level of production. Selection based on the LMI will lead to breeding of balanced animals that will have the genetic potential to wean at a heavier weight (both due to its own potential and having dams that produce sufficient milk), lambs at an early age, lambs regularly and give multiple lambs. This value is especially important for sustainability, which requires the selection of good, productive replacement animals for the flock.

The LMI is constructed as follows :

$$LMI = (0.1375 * AFL) + (0.0825 * ILP) + (0.216 * Wean Dir) + (0.144 * Wean Mat) + (0.33 * N_Lambs_Weaned) + (0.09 * Post-Wean Dir)$$

Schematically the LMI can be explained as follows :



Reproduction Index (RI)

This index includes Weaning Maternal, Number of Lambs Weaned, Age at First Lambing and Inter-lambing Period. This is especially an important index to consider in the development of a dam line.

The RI is constructed as follows :

$$(0.2 * AFL) + (0.2 * ILP) + (0.3 * Wean Mat) + (0.3 * N_Lambs_Weaned)$$

Schematically it can be explained as follows :



It is always important to consider the traits that contribute to the index individually when selection of animals is based on indices. It sometimes happen that an animal receives a good index due to its exceptional genetic merit of a specific trait, while some of the other traits of the animal in the index might be at undesirable levels for the specific flock's breeding objective, but masked in the index due to the exceptionality of that trait. A sound procedure is to rank animals based on the relevant selection index and then eliminate animals from the list that do not conform towards the flock's breeding objectives when considering the individual traits. Make use of all the available information.

Active Genetic Levels

Genetic Averages : Breeding Values

Trait	Flock			Breed		
	All	Rams	Ewes	All	Rams	Ewes
Weaning Weight Direct	0.06	0.13	0.03	-0.23	-0.17	-0.26
Weaning Weight Maternal	-0.15	-0.16	-0.15	-0.09	-0.10	-0.08
Weaning Weight Combined	-0.12	-0.10	-0.13	-0.20	-0.19	-0.21
Post-wean Weight	0.37	0.50	0.29	-0.05	0.04	-0.10
Number Lambs Weaned	-0.44	-0.53	-0.39	-0.17	-0.26	-0.13
Total Weight Weaned	-0.35	-0.35	-0.35	-0.42	-0.43	-0.41
Age at First Lambing	1.53	1.00	1.85	0.50	0.60	0.46
Inter-lambing Period	-0.99	0.14	-1.66	-0.06	-0.04	-0.07
Selection Indices						
Logix Merit Index	99	99	99	99	99	99
Reproduction Index	99	98	100	100	100	100
Inbreeding						
Inbreeding (%)	4.50	5.46	3.92	4.85	5.29	4.66
Number of Animals						
Number of Animals	32	12	20	38208	11342	26785

** Averages of all active animals in the flock.

Breeding Value Indices

Trait	Flock **		
	All	Rams	Ewes
Weaning Weight Direct	101.2	101.8	100.8
Weaning Weight Maternal	98.2	98.0	98.3
Weaning Weight Comb	99.8	100.3	99.6
Post-wean Weight	100.8	101.7	100.2
Number Lambs Weaned	98.3	97.8	98.6
Total Weight Weaned	99.2	99.2	99.2
Age First Lambing	97.9	98.6	97.5
Interlambing Period	104.2	101.0	106.1
Selection Indices			
Logix Merit Index	99.2	99.0	99.4
Ewe Index	98.8	97.5	99.6
Growth Index	100.7	101.5	100.2
Inbreeding			
Inbreeding (%)	4.50	5.46	3.92
Number of Animals			
Number of Animals	32	12	20

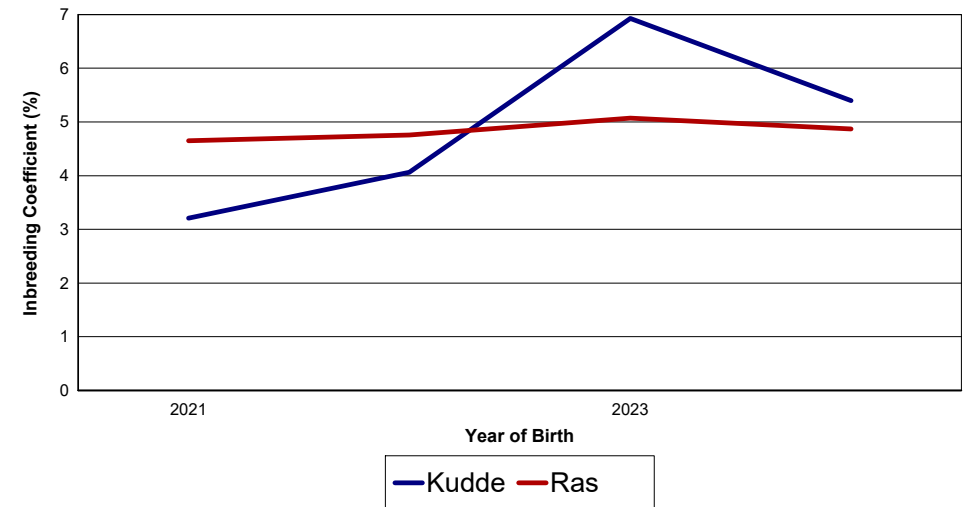
** Averages of all active animals in the flock.

Inbreeding

Inbreeding primarily leads to decreased fertility and low survivability of lambs. The effects of inbreeding can be observed from 6.25% onwards. It is therefore highly recommended to record pedigree information as accurately and completely as possible and to use a selection programme for selection of unrelated rams.

Incomplete or incorrect pedigree information can be reported to SA Stud Book. Inbreeding is dependent on pedigree information. Conventional methods for the Calculation of inbreeding coefficients usually assume that unknown parents are unrelated. However, this is usually far from the truth. An algorithm is used for the calculation of inbreeding, where the average inbreeding coefficient is assigned to unknown parents based on the generation in which they were born. This result is a more accurate reflection of inbreeding of the herd and breed.

Average Inbreeding per Year of Birth



Level and Rate of Inbreeding

Year of Birth	Level* (%)	Rate (% / year)
2021 - 2024	5.40	0.73
Recommended:	< 6.25	< 0.1 - 0.2

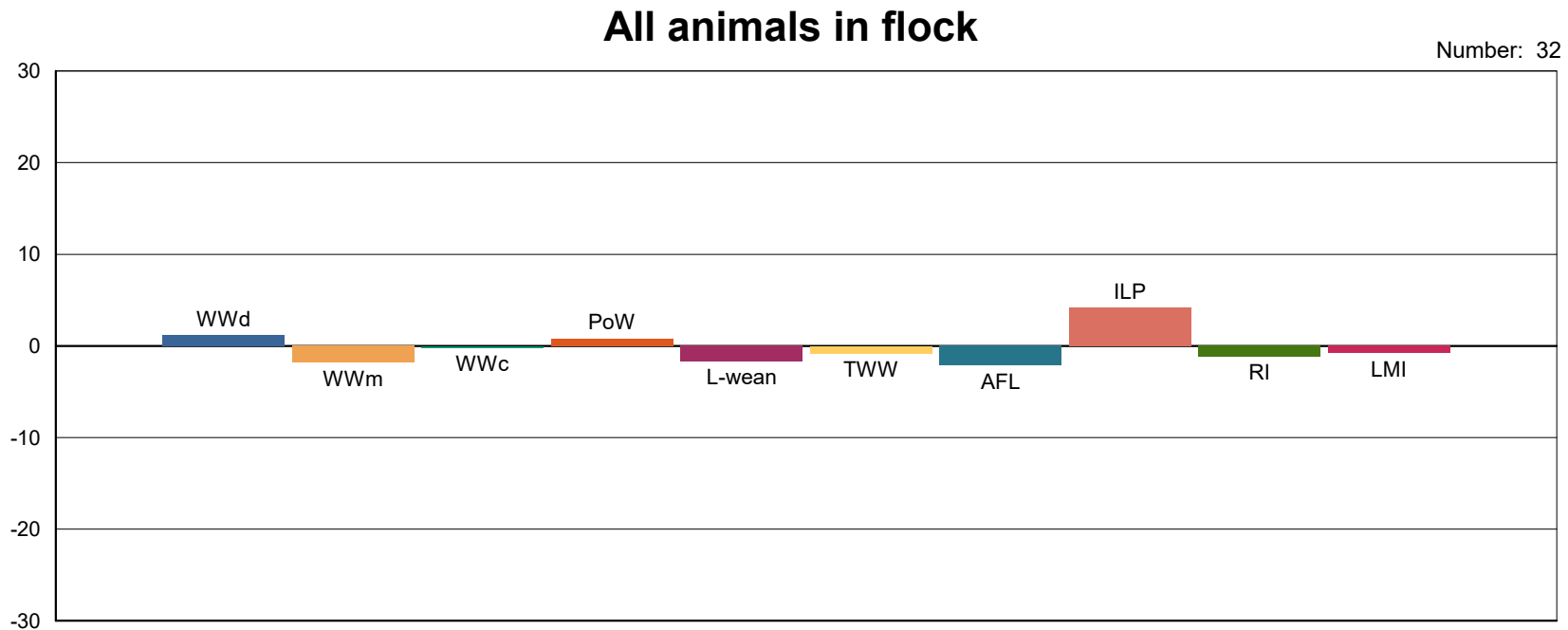
*Of the last year of birth

Pedigree Information

	Number	%
Known Sires	32	100
Known Dams	32	100

Note: Inbreeding can be under-estimated if pedigree information is incomplete or incorrect

Genetic Windows



WWd: Weaning Weight Direct
WWm: Weaning Weight Maternal
WWc: Weaning Weight Combined
PoW: Post-Wean Weight
L-wean: Number of Lambs Weaned
TWW: Total Weight Weaned
AFL: Age at First Lambing
ILP: Inter-lambing Period
RI: Reproduction Index
LMI: Logix Merit Index

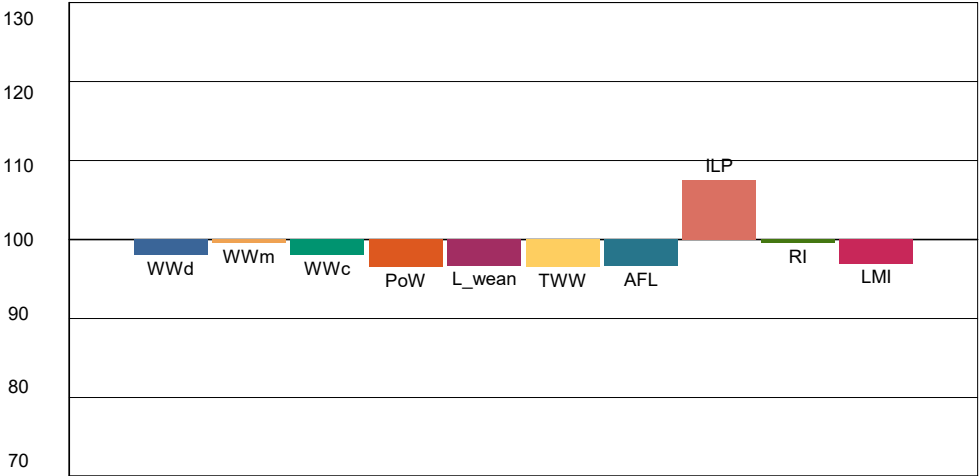
The genetic windows allow a quick overview of the genetic status of the flock compared to the breed. The values presented here are the average EBV indices of all the active animals of the flock, of the dams and sires of the active animals of the flock, as well as of the ewes and rams that are younger than 2-years old. An index of 100 is equal to the average of the active measured population. Due to the higher selection intensity on rams (selection is more strict since a much smaller percentage of young animals are retained in the flock), the expectation is for the average index of the sires to be higher than that of the dams.

Remember that the EBV index for AFL and ILP are presented in such a way that an index above 100 indicates animals that have a lower EBV for these traits.

Genetic Windows

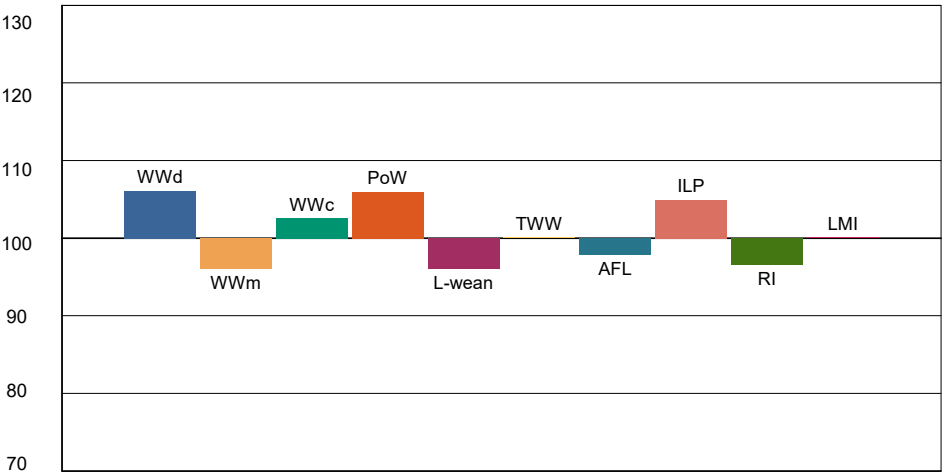
Dams

Number: 22



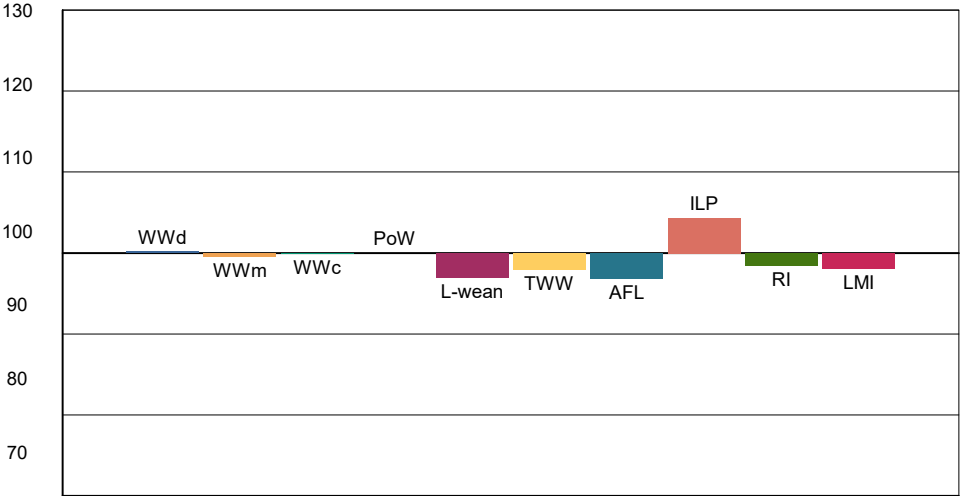
Sires

Number: 17



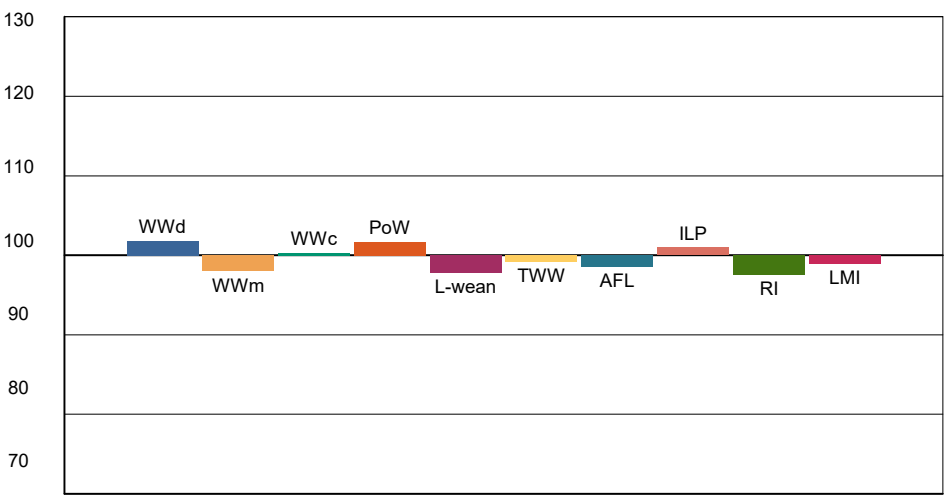
Young Ewes

Number: 7



Young Rams

Number: 12



Genetic Trends

Genetic trends are based on measured animals that were bred by the specific breeder.

Genetic Trends

Genetic trends are based on measured animals that were bred by the specific breeder.

For AFL and ILP flock genetic trends below breed averages are desirable.

Genetic Trends of Breed

Birth year	Weaning Weight EBV				Post-wean		Lambs Weaned		TWW		AFL		ILP		RI		LMI	
	Number	Dir	Mat	Comb	Number	EBV	Number	EBV	Number	EBV	Number	EBV	Number	EBV	Number	EBV	Number	EBV
2012	1431	-0.32	0.01	-0.15	108	0.20	470	-0.06	1431	99	1140	-1.78	663	0.10	1431	102	1431	100
2013	1336	-0.37	-0.01	-0.20	108	0.31	507	-0.10	1336	97	1072	-1.86	650	0.61	1336	101	1336	98
2014	1007	-0.35	-0.10	-0.28	58	-0.14	676	-0.19	1007	96	1063	-0.71	658	0.55	1007	98	1007	96
2015	1626	-0.18	0.03	-0.06	233	0.88	711	0.34	1626	101	1164	-1.37	706	0.17	1626	103	1626	101
2016	1804	-0.24	0.00	-0.12	239	0.54	796	-0.16	1804	99	1273	-0.97	874	-0.06	1804	102	1804	100
2017	2163	-0.30	-0.03	-0.17	313	0.91	824	0.19	2120	98	1371	-0.96	961	0.21	2120	101	2120	99
2018	2547	-0.28	0.06	-0.09	236	0.38	870	0.11	2519	99	1785	0.56	1212	-0.70	2519	102	2519	99
2019	2144	0.00	0.00	0.00	254	0.00	806	0.00	2138	100	2038	0.00	1296	0.00	2138	101	2138	101
2020	2459	-0.10	-0.01	-0.06	436	-0.76	725	0.29	2459	101	2609	0.53	1441	-0.11	2459	101	2459	100
2021	1738	-0.04	-0.13	-0.14	330	-0.19	610	0.14	1738	101	2633	0.94	1127	-0.15	1738	102	1738	102
2022	2514	-0.11	-0.07	-0.13	427	0.12	377	0.03	2514	101	1973	0.12	362	0.52	2514	102	2514	101
2023	2848	-0.19	-0.08	-0.18	460	0.10	39	-0.16	2844	99	513	1.04	2	1.62	2844	100	2844	99

Genetic Trends of Flock

Birth year	Weaning Weight EBV				Post-Wean		Lambs Weaned		TWW		AFL		ILP		RI		LMI	
	Number	Dir	Mat	Comb	Number	EBV	Number	EBV	Number	EBV	Number	EBV	Number	EBV	Number	EBV	Number	EBV

Breeding Value & Selection Index Percentiles

The percentiles indicate the ranking of the animals' EBVs and Selection Indices within the active population.

For example, if an animal's EBV for a specific trait falls between the maximum and 99% percentile of the trait, it means that this animal ranks in the top 1% of the active population, or this animal's genetic merit for the trait is better than 99% of that of the active population.

Should the EBV for a specific trait falls between the 5% and 10% percentile, it means that the animal ranks in the bottom 10% of the active population for the specific trait, or the animal's genetic merit is worse than 90% of the active population.

Note that the percentiles for Age at First Lambing and Inter-lambing Period EBVs work on the reverse scale.

All Active Animals

Trait	AVG	SA*	Min	Percentiles (%)															Max
				1	5	10	20	25	30	40	50	60	70	75	80	90	95	99	
Weaning Weight Direct	-0.23	0.72	-3.81	-1.85	-1.19	-0.92	-0.72	-0.69	-0.63	-0.47	-0.33	-0.19	0.00	0.11	0.26	0.67	1.09	2.02	5.65
Weaning Weight Maternal	-0.09	0.30	-2.15	-0.90	-0.58	-0.45	-0.29	-0.24	-0.19	-0.13	-0.07	-0.02	0.04	0.05	0.09	0.23	0.38	0.75	2.13
Weaning Weight Combined	-0.20	0.42	-2.48	-1.30	-0.84	-0.63	-0.45	-0.40	-0.36	-0.30	-0.25	-0.17	-0.07	-0.02	0.05	0.27	0.53	1.20	3.03
Post-Wean Weight	-0.05	1.12	-6.96	-2.62	-1.44	-1.10	-0.87	-0.79	-0.69	-0.46	-0.22	0.04	0.33	0.50	0.71	1.35	1.96	3.46	7.93
Number of Lambs Weaned	-0.17	1.52	-8.00	-4.30	-2.90	-2.20	-1.30	-1.10	-0.80	-0.30	0.10	0.40	0.80	0.90	0.90	1.10	1.90	3.80	8.90
Total Weight Weaned	-0.42	1.21	-6.47	-3.44	-2.40	-1.85	-1.25	-1.04	-0.85	-0.56	-0.34	-0.14	-0.02	0.08	0.22	0.73	1.46	3.68	7.71
Age at First Lambing	0.50	-6.75	67.98	18.78	11.00	8.00	4.82	3.70	2.73	1.36	0.15	-0.61	-1.73	-2.48	-3.34	-6.14	-9.49	-20.47	-74.89
Interlambing Period	-0.06	-3.59	23.56	9.66	5.89	4.24	2.51	1.91	1.42	0.58	-0.23	-0.81	-1.66	-2.10	-2.64	-4.26	-5.68	-9.08	-22.00
Reproduction Index	100	9	48	74	84	88	94	95	97	99	102	103	105	106	107	109	112	120	149
Logix Merit Index	99	8	62	79	86	89	93	95	96	98	100	101	102	102	103	106	111	124	144

*SD : Standard Deviation. An indicator of how far breeding values/selection indices are distributed around the average.

Breeding Value & Selection Index Percentiles

All Active Rams

Trait	AVG	SA*	Min	Percentiles (%)															Max
				1	5	10	20	25	30	40	50	60	70	75	80	90	95	99	
Weaning Weight Direct	-0.17	0.75	-3.81	-1.96	-1.16	-0.89	-0.69	-0.64	-0.56	-0.41	-0.28	-0.13	0.06	0.19	0.33	0.75	1.16	2.21	5.65
Weaning Weight Maternal	-0.10	0.27	-1.89	-0.83	-0.56	-0.44	-0.30	-0.25	-0.21	-0.14	-0.09	-0.03	0.02	0.04	0.08	0.20	0.32	0.59	1.20
Weaning Weight Combined	-0.19	0.41	-1.80	-1.21	-0.78	-0.60	-0.43	-0.38	-0.35	-0.30	-0.24	-0.17	-0.07	-0.01	0.06	0.27	0.52	1.16	3.03
Post-Wean Weight	0.04	1.13	-6.77	-2.49	-1.37	-1.04	-0.82	-0.70	-0.56	-0.36	-0.12	0.14	0.43	0.62	0.81	1.42	2.05	3.67	7.93
Number of Lambs Weaned	-0.26	1.49	-7.30	-4.20	-2.90	-2.20	-1.50	-1.20	-0.90	-0.40	-0.10	0.30	0.60	0.80	0.90	1.00	1.80	3.70	7.50
Total Weight Weaned	-0.43	1.24	-5.17	-3.28	-2.41	-1.90	-1.31	-1.09	-0.89	-0.60	-0.37	-0.16	-0.03	0.07	0.20	0.70	1.48	3.97	7.71
Age at First Lambing	0.60	-6.24	45.00	17.18	10.46	7.67	4.81	3.74	2.81	1.50	0.33	-0.49	-1.53	-2.25	-3.07	-5.65	-8.73	-19.44	-55.39
Interlambing Period	-0.03	-3.30	20.62	8.83	5.55	4.12	2.45	1.89	1.38	0.57	-0.22	-0.82	-1.65	-2.06	-2.55	-4.03	-5.26	-7.97	-12.85
Reproduction Index	100	9	48	75	84	88	93	95	96	99	101	103	105	106	106	109	111	119	133
Logix Merit Index	99	8	66	80	86	89	93	95	96	98	99	101	102	102	103	106	111	125	143

All Active Ewes

Trait	AVG	SA*	Min	Percentiles (%)															Max
				1	5	10	20	25	30	40	50	60	70	75	80	90	95	99	
Weaning Weight Direct	-0.26	0.70	-3.42	-1.82	-1.20	-0.93	-0.74	-0.69	-0.66	-0.51	-0.36	-0.21	-0.03	0.08	0.22	0.63	1.05	1.89	4.32
Weaning Weight Direct	-0.08	0.31	-2.15	-0.92	-0.59	-0.45	-0.29	-0.23	-0.19	-0.12	-0.06	-0.01	0.04	0.07	0.10	0.25	0.41	0.81	2.13
Weaning Weight Combined	-0.21	0.43	-2.48	-1.34	-0.86	-0.64	-0.46	-0.41	-0.36	-0.30	-0.25	-0.18	-0.08	-0.02	0.05	0.27	0.54	1.22	2.45
Post-Wean Weight	-0.10	1.11	-6.96	-2.70	-1.48	-1.14	-0.87	-0.83	-0.71	-0.51	-0.27	-0.01	0.28	0.45	0.65	1.29	1.91	3.33	7.45
Number of Lambs Weaned	-0.13	1.53	-8.00	-4.40	-2.90	-2.20	-1.30	-1.00	-0.70	-0.20	0.20	0.50	0.80	0.90	0.90	1.10	1.90	3.80	8.90
Total Weight Weaned	-0.41	1.20	-6.47	-3.51	-2.40	-1.82	-1.23	-1.02	-0.84	-0.54	-0.33	-0.13	-0.01	0.09	0.23	0.74	1.46	3.52	6.84
Age at First Lambing	0.46	-6.97	67.98	19.69	11.41	8.11	4.83	3.68	2.69	1.29	0.08	-0.67	-1.84	-2.58	-3.48	-6.35	-9.83	-20.90	-74.89
Interlambing Period	-0.07	-3.71	23.56	9.90	6.08	4.30	2.54	1.93	1.43	0.58	-0.24	-0.80	-1.66	-2.13	-2.68	-4.40	-5.91	-9.74	-22.00
Reproduction Index	100	9	48	74	84	89	94	96	97	100	102	104	105	106	107	109	113	121	149
Logix Merit Index	99	8	62	79	86	90	94	95	96	98	100	101	102	102	103	106	110	123	144

*SD : Standard Deviation. An indicator of how far breeding values/selection indices are distributed around the average.

Rams

Inbreeding in red is high

EBV - Estimated Breeding Value

Indices >=124
Above breed average
Indices <= 76

Acc: Accuracy of the breeding value
EBVs with an accuracy below 5% are not printed

Index: Expresses the EBV around 100 where 100 is set as the average EBV of active animals

Animal Information						Selection Indices		EBV - Weights				EBV - Fertility								
Animal ID Comp no.			Parents			% In-breeding	Logix Merit Index	Reproducti on	Wean Weight		Post-Wean		Number Weaned	TWW	AFL	ILP	Dam			
									Dir	Mat	Comb									
								Acc	Index	Acc	Index	Acc	Index	Acc	Index	EPI	Times Lambded			
Active Breed Average:						100	100	-0.23	-0.09	-0.20	-0.05	-0.17	-0.42	0.50	-0.06					
1890	23	0043	762	21	0603	7.82	88	84	0.42	-0.07	0.14	0.57	-3.80	-1.93	5.39	2.42	1			
9838	1866		1265	21	0029				32	105	29	100	104	17	102	16		80	27	90
2141	24	0001	1740	22	0281	4.67	95	94	-0.13	-0.27	-0.33	0.10	-1.10	-1.06	0.64	-0.01	1			
9932	1960		1740	22	0399				26	99	19	95	96	14	99	7		95	19	95
2141	24	0002	686	22	0017	4.26	99	97	0.10	-0.13	-0.08	0.25	-0.50	-0.33	-1.76	2.12	1			
9932	1978		1085	22	0445				16	102	13	99	101	8	100	5		98	12	99
2141	24	0003	686	22	0017	4.26	99	97	0.10	-0.13	-0.08	0.25	-0.50	-0.33	-1.76	2.12	1			
9932	1986		1085	22	0445				16	102	13	99	101	8	100	5		98	12	99
2141	24	0005	430	22	0132	9.53	102	99	0.66	-0.36	-0.02	1.05	-0.70	-0.11	2.87	-5.64	1			
9982	6463		1298	21	0253				24	107	19	93	102	14	105	10		97	19	101
2141	24	0007	430	22	0138	13.41	105	102	0.93	-0.19	0.28	1.72	-0.70	0.32	1.46	-5.69	1			
9982	6489		1298	22	0673				27	110	22	97	107	12	110	6		97	20	103
2141	24	0009	1890	22	0064	5.98	98	96	-0.07	-0.17	-0.21	0.69	-0.10	-0.30	4.03	0.93	2			
9982	6505		1890	22	0018				25	100	21	98	98	15	103	12		100	20	100
2141	24	0010	1890	22	0064	2.48	98	98	-0.31	-0.13	-0.28	0.03	-0.20	-0.56	0.03	1.77	3			
9991	11091		1890	21	0034				21	97	17	99	97	11	99	10		100	17	98
2141	24	0012	762	20	1100	2.87	103	103	-0.19	-0.05	-0.15	0.46	1.00	0.36	0.12	1.38	3			
9992	9937		1890	21	0032				29	99	23	101	99	20	101	13		106	23	104
2141	24	0013	762	20	1100	2.87	103	103	-0.19	-0.05	-0.15	0.46	1.00	0.36	0.12	1.38	3			
9992	9945		1890	21	0032				29	99	23	101	99	20	101	13		106	23	104
2141	24	0015	686	22	0017	4.06	100	99	0.18	-0.16	-0.07	0.23	-0.30	-0.16	-1.24	0.89	1			
1000	76470		1085	22	0491				16	102	13	98	101	8	100	5		99	12	100
2141	24	0017	1765	22	0124	3.36	98	97	0.01	-0.18	-0.18	0.24	-0.50	-0.47	2.05	0.00	1			
1002	72954		1765	22	0057				29	101	23	97	99	15	100	12		98	23	98
Ram Flock Average:						99	98	0.13	-0.16	-0.10	0.50	-0.53	-0.35	1.00	0.14					
Number of rams in the flock: 12																				

Ewes

Inbreeding in red is high

EBV - Estimated Breeding Value

Indices >=124
Above breed average
Indices <= 76

Acc: Accuracy of the breeding value
EBVs with an accuracy below 5% are not printed

Index: Expresses the EBV around 100 where 100 is set as the average EBV of active animals

Animal Information					Selection Indices		EBV - Weights				EBV - Fertility									
Animal Comp no.				% In- breeding	Logix Merit Index	Repro- duction Index	Wean Weight		Comb	Post-Wean		Number Weaned	TWW		AFL		ILP		Times EPI Lamberd	
							Dir	Mat		Acc	Index		Acc	Index	Acc	Index	Acc	Index	Acc	Index
							EBV	EBV	EBV			EBV								
Active Breed Average:					100	100	-0.23	-0.09	-0.20	-0.05	-0.17	-0.42	0.50	-0.06						
1890 21 0032 94064722	1888 19 0010 1890 19 0440	2.87		101	106	-0.69 5 93	0.04 5 104	-0.30 97	-0.87 5 92	0.90 5 106		-4.43 41 106	1.99 20 96	3						
1890 21 0034 94064748	1888 19 0010 1658 19 0250	2.87		101	107	-0.71 7 93	0.07 8 104	-0.29 97	-0.90 5 92	0.80 5 105	-0.16 6 100	-2.45 42 103	-0.20 22 102	3						
1298 21 0253 93281632	430 19 0008 1298 18 0004	3.89		105	100	1.11 37 112	-0.34 27 93	0.21 106	1.83 23 111	-0.60 9 97	0.41 27 104	0.19 39 100	-4.73 28 115	1						
1890 22 0014 94890274	762 20 1100 1890 16 0096	2.59		102	103	-0.19 29 99	-0.05 23 101	-0.15 99	0.46 20 101	1.00 13 106	0.36 23 104	9.19 46 88	-2.23 15 108	1						
1890 22 0018 94890316	762 20 1100 1658 19 0250	2.07		103	104	-0.22 30 98	-0.02 25 102	-0.13 100	0.43 21 101	0.90 13 106	0.30 24 103	5.57 48 93	-1.88 18 107	2						
1890 22 0057 94890498	959 20 0058 1765 20 0119	5.27		96	98	0.20 36 103	0.02 27 103	0.12 104	-0.12 16 98	-2.00 15 90	-0.98 28 95	3.60 30 95	-2.93 18 110	1						
1765 22 0057 94569605	19 0 82 8DJL 959 18 0060	2.34		97	107	-1.09 32 89	0.09 24 105	-0.46 94	-1.50 17 88	0.00 14 101	-1.00 25 95	-0.35 32 100	-3.37 19 111	1						
1740 22 0399 96425590	1740 21 0138 1740 21 0071	2.30		90	89	0.09 44 101	-0.40 32 91	-0.36 96	0.34 27 101	-2.40 14 87	-1.75 32 91	8.48 41 89	-4.62 24 115	1						
1085 22 0426 98653371	1298 19 0435 1085 20 0002	2.87		101	97	0.59 31 107	-0.24 25 96	0.05 103	0.91 19 105	-0.80 12 96	-0.14 24 101	-2.08 34 103	0.06 22 101	0						
1085 22 0445 97652093	1298 19 0435 1085 16 0309	2.24		100	96	0.36 25 104	-0.32 19 93	-0.14 99	0.74 12 103	-0.30 7 99	-0.14 19 100	-2.80 27 104	1.83 19 96	1						
1298 22 0469 98564453	1298 19 0308 1398 17 0002	2.35		99	102	-0.32 33 97	-0.28 25 95	-0.44 94	-0.07 16 98	0.10 10 101	-0.54 25 98	4.02 39 95	-5.14 24 116	1						
1085 22 0491 98653397	1298 19 0435 1085 21 0028	1.92		102	98	0.51 26 106	-0.38 20 92	-0.12 100	0.71 14 103	0.10 7 101	0.19 19 103	-1.74 32 102	-0.64 20 103	1						
1298 22 0673 98622285	1298 21 0338 1298 21 0109	8.83		104	97	1.10 25 112	-0.40 20 91	0.15 104	1.99 15 112	-0.60 8 97	0.34 19 103	3.70 34 95	-4.28 20 114	1						
762 23 0094 96528070	762 21 0143 762 16 0558	6.03		79	81	-0.68 56 93	0.06 42 104	-0.28 97	-1.08 16 91	-4.30 22 77	-3.20 43 82	11.85 37 84	2.94 23 93	0						
2141 24 0004 99826455	430 20 0138 1298 22 0469	7.07		103	107	0.06 28 101	-0.09 23 100	-0.06 101	0.42 12 101	-0.10 7 100	-0.09 21 101	1.72 33 98	-7.24 21 122	0						

Ewes

Inbreeding in red is high

EBV - Estimated Breeding Value

Indices >=124
Above breed average
Indices <= 76

Acc: Accuracy of the breeding value
EBVs with an accuracy below 5% are not printed

Index: Expresses the EBV around 100 where 100 is set as the average EBV of active animals

Animal Information					Selection Indices		EBV - Weights						EBV - Fertility								
Animal Comp no.				% In- breeding	Logix Merit Index	Repro- duction Index	Dir		Wean Weight		Comb	Post-Wean		Number Weaned	TWW		AFL		ILP	EPI	Times
							EBV	EBV	EBV	EBV		EBV	EBV		EBV	EBV	EBV	Lambded			
							Acc	Index	Acc	Index	Index	Acc	Index	Acc	Index	Acc	Index	Acc	Index	Phenotype	
Active Breed Average:					100	100	-0.23	-0.09	-0.20	-0.05	-0.17	-0.42	0.50	-0.06							
2141 24 0008 99826497	430 20 0138 1298 22 0673	10.04	106	105	0.76 26 108	-0.15 22 98	0.23 106	1.45 12 108	-0.40 6 99	0.37 20 104	1.56 32 98	-6.81 19 121	0								
2141 24 0011 99911109	1890 22 0064 1890 21 0034	2.48	98	98	-0.31 21 97	-0.13 17 99	-0.28 97	0.03 11 99	-0.20 10 100	-0.56 17 98	0.03 27 100	1.77 17 96	0								
2141 24 0014 99929952	762 20 1100 1890 21 0032	2.87	103	103	-0.19 29 99	-0.05 23 101	-0.15 99	0.46 20 101	1.00 13 106	0.36 23 104	0.12 39 100	1.38 18 97	0								
2141 24 0016 100076496	686 22 0017 1085 22 0491	4.06	100	99	0.18 16 102	-0.16 13 98	-0.07 101	0.23 8 100	-0.30 5 99	-0.16 12 100	-1.24 23 102	0.89 14 99	0								
2141 24 0018 100272947	1765 22 0124 1765 22 0057	3.36	98	97	0.01 29 101	-0.18 23 97	-0.18 99	0.24 15 100	-0.50 12 98	-0.47 23 98	2.05 26 97	0.00 16 101	0								
	Ewe flock average: Total ewes in flock: 20			99	100	0.03	-0.15	-0.13	0.29	-0.39	-0.35	1.85	-1.66								

Sires Used in Flock

*Inbreeding in red is high

EBV - Estimated Breeding Value

Indices >=124
Above breed average
Indices <= 76

Acc: Accuracy of the breeding value
EBVs with an accuracy below 5% are not printed

Index: Expresses the EBV around 100 where 100 is set as the average EBV of active animals

Animal Information					Parents & Progeny				Selection Indices		EBV - Weights				EBV - Fertility					
Animal ID Computer nr			% In-breeding	Sire ID Dam ID		1st Generation		2nd Generation		Logix Merit Index	Reprod Index	Weaning Weight		Post-Wean		Number Weaned	TWW	AFL	ILP	Dam
						Progeny Number	Progeny Number	Progeny Number	Progeny Number			Dir	Mat	Comb						
												EBV	EBV	EBV	EBV	EBV	EBV	EBV	EBV	Lambbed
					Active Breed Average:				100	100	-0.23	-0.09	-0.20	-0.05	-0.17	-0.42	0.50	-0.06		
1	430 19 0008 84225911	1.97	16 4 60 DL 430 16 0072	3	1	2	1		113	104	2.04 70 122	-0.62 51 85	0.40 109	3.24 44 120	0.10 15 101	1.48 50 110	2.46 74 97	-11.68 51 135	4	
2	1888 19 0010 94040862	2.87															-4.10 48 105	0.30 24 101		
3	1298 19 0308 91950683	2.10	16 4 60 DL 1298 11 0201						100	94	0.83 48 109	-0.61 37 85	-0.20 99	1.71 24 110	-0.80 13 96	-0.26 36 100	2.37 56 97	-4.35 36 114	2	
4	1298 19 0435 89814263	2.11	16 4 60 DL 1298 12 0383						99	87	1.15 48 113	-0.72 38 82	-0.15 99	1.96 24 112	-1.30 13 94	-0.35 36 99	-3.72 53 105	1.98 37 96	3	
5	IMPA 19 0828 91633214	9.06	17 0 19 3DJL 16 9 96 1DJL	4	1	1	1		102	108	-0.81 43 92	0.04 22 103	-0.37 96	-0.44 12 95	0.90 5 106	-0.23 25 100	-3.45 43 104	-0.20 18 102	1	
6	959 20 0058 89913032	7.88	959 17 0024 959 14 0100						97	96	0.73 58 108	0.05 43 104	0.42 109	0.57 18 102	-2.30 19 88	-0.60 43 98	5.62 53 93	-2.24 29 108	113 5	
7	430 20 0138 90635905	12.19	430 18 0050 430 15 0025						108	113	0.43 46 105	0.11 38 105	0.32 107	0.91 18 105	-0.30 10 99	0.35 35 103	-0.57 54 101	-9.33 33 128	5	
8	762 20 1100 90576828	15.36	762 18 0648 762 19 0390						105	100	0.30 57 104	-0.14 47 98	0.01 102	1.79 41 110	1.00 25 106	0.76 46 106	4.67 66 94	0.77 29 99	1	
9	1740 21 0138 91974402	3.39	16 4 60 DL 970 18 0018						104	95	1.14 60 112	-0.68 44 83	-0.11 100	2.14 24 113	0.20 13 102	0.58 43 105	7.05 65 91	-6.09 40 119	119 6	
10	762 21 0143 93602373	7.14	762 19 0382 762 18 0657	94	1				89	84	-0.10 91 99	-0.16 61 98	-0.21 98	0.20 24 100	-1.80 25 91	-1.35 64 93	6.50 48 91	6.72 31 82	3	
11	1298 21 0338 93289973	2.71	430 19 0008 1298 15 0013						104	101	0.87 39 110	-0.18 31 97	0.26 106	1.86 25 111	-0.40 13 99	0.46 30 104	6.18 47 92	-5.46 30 117	5	
12	762 21 0603 94842507	9.22	762 19 0382 762 19 0882						86	81	0.99 53 111	0.24 49 109	0.74 115	1.03 23 105	-5.60 26 70	-2.13 45 88	1.64 49 98	6.71 31 82	122 4	
13	686 22 0017 96176953	3.42	430 19 0153 686 18 0051						98	99	-0.15 20 99	0.06 16 104	-0.02 102	-0.25 10 97	-0.70 8 97	-0.52 16 98	-0.73 33 101	2.41 19 95	3	

Sires Used in Flock

*Inbreeding in red is high

EBV - Estimated Breeding Value

Indices >=124
Above breed average
Indices <= 76

Acc: Accuracy of the breeding value
EBVs with an accuracy below 5% are not printed

Index: Expresses the EBV around 100 where 100 is set as the average EBV of active animals

Animal Information		Parents & Progeny				Selection Indices		EBV - Weights				EBV - Fertility					
Animal ID Computer nr	% In-breedin g	Sire ID Dam ID	1st Generation		2nd Generation		Logix Merit Index	Reprod Index	Weaning Weight		Comb EBV Index	Post-Wean EBV Acc Index	Number Weaned EBV Acc Index	TWW EBV Acc Index	AFL EBV Acc Index	ILP EBV Acc Index	Dam EPI Times Lambded
			Progen y	Herds	Progeny Number Weaned	Progeny Number Herds			Dir EBV Acc Index	Mat EBV Acc Index							
		Active Breed Average:				100	100	-0.23	-0.09	-0.20	-0.05	-0.17	-0.42	0.50	-0.06		
14	1890 22 0064 95792909	5.32	762 20 0652 762 21 0347				94	89	0.08 41 101	-0.32 34 94	-0.28 97	0.95 21 105	-1.10 20 95	-0.89 33 96	2.50 35 97	3.74 25 91	2
15	1765 22 0124 94466851	6.00	762 17 0222 1765 20 0116				98	86	1.12 48 112	-0.45 38 90	0.11 104	1.98 23 112	-1.00 20 95	0.06 38 102	4.45 42 94	3.37 25 92	3
16	430 22 0132 96382213	2.85	1590 21 0030 430 20 0047				98	98	0.22 31 103	-0.37 27 92	-0.26 97	0.27 18 100	-0.80 18 96	-0.63 26 98	5.55 31 93	-6.54 24 120	4
17	430 22 0138 96303441	14.60	430 18 0050 430 18 0073				107	108	0.77 47 109	0.02 40 103	0.40 109	1.45 19 108	-0.70 10 97	0.37 36 104	-0.78 50 101	-7.10 35 122	4
18	1740 22 0281 95934253	3.07	1520 20 0346 1740 20 0191				99	99	-0.34 29 97	-0.13 20 99	-0.31 97	-0.14 9 97	0.10 5 101	-0.42 20 99	-7.20 34 109	4.60 19 88	2
		Sire Flock Average: Number of sires used in the flock: 18					100	97	0.54	-0.23	0.04	1.13	-0.85	-0.20	1.58	-1.24	

Ram Selection List: LMI

Animals sorted on LMI

Inbreeding in red is high

EBV - Estimated Breeding Value

Indices >=124
Above breed average
Indices <= 76

Acc: Accuracy of the breeding value
EBVs with an accuracy below 5% are not printed

Index: Expresses the EBV around 100 where 100 is set as the average EBV of active animals

Animal Information		Parents & Progeny			Selection Indices		EBV - Weights				EBV - Fertility					
Animal ID Computer nr	% In-breeding	Sire ID Dam ID	1st Generation	2nd Generation	Logix Merit Index	Repro- duction Index	Weaning Weight		Comb	Post-Wean	Number Weaned	TWW	AFL	ILP	Dam	
			Progeny Number Weaned Herds	Progeny Number Weaned Herds			Dir	Mat								
			EBV Acc Index	EBV Acc Index			EBV Index	EBV Acc Index	EBV Acc Index	EBV Acc Index	EBV Acc Index	EPI	Times Lamb			
Active Breed Average:					100	100	-0.23	-0.09	-0.20	-0.05	-0.17	-0.42	0.50	-0.06		
1	2141 24 0007 99826489	13.41	430 22 0138 298 22 0673		105	102	0.93 27 110	-0.19 22 97	0.28 107	1.72 12 110	-0.70 6 97	0.32 20 103	1.46 30 98	-5.69 20 118	1	
2	2141 24 0012 99929937	2.87	762 20 1100 890 21 0032		103	103	-0.19 29 99	-0.05 23 101	-0.15 99	0.46 20 101	1.00 13 106	0.36 23 104	0.12 39 100	1.38 18 97	3	
3	2141 24 0013 99929945	2.87	762 20 1100 890 21 0032		103	103	-0.19 29 99	-0.05 23 101	-0.15 99	0.46 20 101	1.00 13 106	0.36 23 104	0.12 39 100	1.38 18 97	3	
4	2141 24 0005 99826463	9.53	430 22 0132 298 21 0253		102	99	0.66 24 107	-0.36 19 93	-0.02 102	1.05 14 105	-0.70 10 97	-0.11 19 101	2.87 25 96	-5.64 19 118	1	
5	2141 24 0015 100076470	4.06	686 22 0017 085 22 0491		100	99	0.18 16 102	-0.16 13 98	-0.07 101	0.23 8 100	-0.30 5 99	-0.16 12 100	-1.24 23 102	0.89 14 99	1	
6	2141 24 0002 99321978	4.26	686 22 0017 085 22 0445		99	97	0.10 16 102	-0.13 13 99	-0.08 101	0.25 8 100	-0.50 5 98	-0.33 12 99	-1.76 21 102	2.12 14 95	1	
7	2141 24 0003 99321986	4.26	686 22 0017 085 22 0445		99	97	0.10 16 102	-0.13 13 99	-0.08 101	0.25 8 100	-0.50 5 98	-0.33 12 99	-1.76 21 102	2.12 14 95	1	
8	2141 24 0009 99826505	5.98	890 22 0064 890 22 0018		98	96	-0.07 25 100	-0.17 21 98	-0.21 98	0.69 15 103	-0.10 12 100	-0.30 20 100	4.03 30 95	0.93 15 99	2	
9	2141 24 0017 100272954	3.36	765 22 0124 765 22 0057		98	97	0.01 29 101	-0.18 23 97	-0.18 99	0.24 15 100	-0.50 12 98	-0.47 23 98	2.05 26 97	0.00 16 101	1	
10	2141 24 0010 99911091	2.48	890 22 0064 890 21 0034		98	98	-0.31 21 97	-0.13 17 99	-0.28 97	0.03 11 99	-0.20 10 100	-0.56 17 98	0.03 27 100	1.77 17 96	3	
11	2141 24 0001 99321960	4.67	740 22 0281 740 22 0399		95	94	-0.13 26 99	-0.27 19 95	-0.33 96	0.10 14 99	-1.10 7 95	-1.06 19 95	0.64 27 99	-0.01 15 101	1	
12	1890 23 0043 98381866	7.82	762 21 0603 265 21 0029		88	84	0.42 32 105	-0.07 29 100	0.14 104	0.57 17 102	-3.80 16 80	-1.93 27 90	5.39 32 93	2.42 20 95	1	

Ewe Selection List: LMI

Animals sorted on LMI

Inbreeding in red is high

EBV - Estimated Breeding Value

Indices >=124
Above breed average
Indices <= 76

Acc: Accuracy of the breeding value
EBVs with an accuracy below 5% are not printed

Index: Expresses the EBV around 100 where 100 is set as the average EBV of active animals

Animal Information			Parents	Selection Indices		EBV - Weights				EBV - Fertility					
Animal ID Computer nr	% In-breeding	Sire ID Dam ID	Logix Merit Index	Reproduction Index	Weaning Weight		Post-Wean		Number Weaned	TWW	AFL	ILP	EPI	Times Lambded	
					Dir EBV	Mat EBV	Comb EBV								Acc
Active Breed Average:				100	100	-0.23	-0.09	-0.20	-0.05	-0.17	-0.42	0.50	-0.06		
1	2141 24 0008 99826497	10.04	430 20 0138 1298 22 0673	106	105	0.76 26 108	-0.15 22 98	0.23 106	1.45 12 108	-0.40 6 99	0.37 20 104	1.56 32 98	-6.81 19 121	0	
2	1298 21 0253 93281632	3.89	430 19 0008 1298 18 0004	105	100	1.11 37 112	-0.34 27 93	0.21 106	1.83 23 111	-0.60 9 97	0.41 27 104	0.19 39 100	-4.73 28 115	1	
3	1298 22 0673 98622285	8.83	1298 21 0338 1298 21 0109	104	97	1.10 25 112	-0.40 20 91	0.15 104	1.99 15 112	-0.60 8 97	0.34 19 103	3.70 34 95	-4.28 20 114	1	
4	2141 24 0004 99826455	7.07	430 20 0138 1298 22 0469	103	107	0.06 28 101	-0.09 23 100	-0.06 101	0.42 12 101	-0.10 7 100	-0.09 21 101	1.72 33 98	-7.24 21 122	0	
5	2141 24 0014 99929952	2.87	762 20 1100 1890 21 0032	103	103	-0.19 29 99	-0.05 23 101	-0.15 99	0.46 20 101	1.00 13 106	0.36 23 104	0.12 39 100	1.38 18 97	0	
6	1890 22 0018 94890316	2.07	762 20 1100 1658 19 0250	103	104	-0.22 30 98	-0.02 25 102	-0.13 100	0.43 21 101	0.90 13 106	0.30 24 103	5.57 48 93	-1.88 18 107	2	
7	1085 22 0491 98653397	1.92	1298 19 0435 1085 21 0028	102	98	0.51 26 106	-0.38 20 92	-0.12 100	0.71 14 103	0.10 7 101	0.19 19 103	-1.74 32 102	-0.64 20 103	1	
8	1890 22 0014 94890274	2.59	762 20 1100 1890 16 0096	102	103	-0.19 29 99	-0.05 23 101	-0.15 99	0.46 20 101	1.00 13 106	0.36 23 104	9.19 46 88	-2.23 15 108	1	
9	1890 21 0034 94064748	2.87	1888 19 0010 1658 19 0250	101	107	-0.71 7 93	0.07 8 104	-0.29 97	-0.90 5 92	0.80 5 105	-0.16 6 100	-2.45 42 103	-0.20 22 102	3	
10	1890 21 0032 94064722	2.87	1888 19 0010 1890 19 0440	101	106	-0.69 5 93	0.04 5 104	-0.30 97	-0.87 5 92	0.90 5 106		-4.43 41 106	1.99 20 96	3	
11	1085 22 0426 98653371	2.87	1298 19 0435 1085 20 0002	101	97	0.59 31 107	-0.24 25 96	0.05 103	0.91 19 105	-0.80 12 96	-0.14 24 101	-2.08 34 103	0.06 22 101	0	
12	1085 22 0445 97652093	2.24	1298 19 0435 1085 16 0309	100	96	0.36 25 104	-0.32 19 93	-0.14 99	0.74 12 103	-0.30 7 99	-0.14 19 100	-2.80 27 104	1.83 19 96	1	
13	2141 24 0016 100076496	4.06	686 22 0017 1085 22 0491	100	99	0.18 16 102	-0.16 13 98	-0.07 101	0.23 8 100	-0.30 5 99	-0.16 12 100	-1.24 23 102	0.89 14 99	0	
14	1298 22 0469 98564453	2.35	1298 19 0308 1398 17 0002	99	102	-0.32 33 97	-0.28 25 95	-0.44 94	-0.07 16 98	0.10 10 101	-0.54 25 98	4.02 39 95	-5.14 24 116	1	
15	2141 24 0018 100272947	3.36	1765 22 0124 1765 22 0057	98	97	0.01 29 101	-0.18 23 97	-0.18 99	0.24 15 100	-0.50 12 98	-0.47 23 98	2.05 26 97	0.00 16 101	0	

Ewe Selection List: LMI

Animals sorted on LMI

Inbreeding in red is high

EBV - Estimated Breeding Value

Indices >=124
Above breed average
Indices <= 76

Acc: Accuracy of the breeding value
EBVs with an accuracy below 5% are not printed

Index: Expresses the EBV around 100 where 100 is set as the average EBV of active animals

Animal Information		Parents	Selection Indices		EBV - Weights						EBV - Fertility								
Animal ID Computer nr	% In-breeding	Sire ID Dam ID	Logix Merit Index	Reproduction Index	Weaning Weight				Post-Wean		Number Weaned	TWW		AFL		ILP		EPI	Times Lambded
					Dir	Mat		Comb											
					Acc	EBV	Index	Acc	EBV	Index	Comb	EBV	Index	Acc	EBV	Index	Acc	EBV	Index
Active Breed Average:			100	100	-0.23	-0.09		-0.20	-0.05		-0.17	-0.42		0.50		-0.06			
16	2141 24 0011 99911109	2.48	1890 22 0064 1890 21 0034	98	98	-0.31 21	-0.13 17 99		-0.28 97	0.03 11 99	-0.20 10 100	-0.56 17 98		0.03 27 100		1.77 17 96			0
17	1765 22 0057 94569605	2.34	19 0 82 8DJL 959 18 0060	97	107	-1.09 32	0.09 24 105		-0.46 94	-1.50 17 88	0.00 14 101	-1.00 25 95		-0.35 32 100		-3.37 19 111			1
18	1890 22 0057 94890498	5.27	959 20 0058 1765 20 0119	96	98	0.20 36	0.02 27 103		0.12 104	-0.12 16 98	-2.00 15 90	-0.98 28 95		3.60 30 95		-2.93 18 110			1
19	1740 22 0399 96425590	2.30	1740 21 0138 1740 21 0071	90	89	0.09 44	-0.40 32 91		-0.36 96	0.34 27 101	-2.40 14 87	-1.75 32 91		8.48 41 89		-4.62 24 115			1
20	762 23 0094 96528070	6.03	762 21 0143 762 16 0558	79	81	-0.68 56	0.06 42 104		-0.28 97	-1.08 16 91	-4.30 22 77	-3.20 43 82		11.85 37 84		2.94 23 93			0