

Boerboel Genetic Evaluation

SA Stud Book
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PORT ELIZABETH
6059



Kennel Number: 707724



Estimated Breeding Values (EBVs)

Litter size and conformation traits are influenced by many genes, with every gene making a small contribution to the expression of the trait. These traits are, however, also influenced by physiological and physical environmental factors, for example the age and sex of the animal, the feeding and management the animal received and year x season effects. It is therefore not possible to know what the animal's genetic potential for the trait is by merely using the measurement.

With BLUP (*Best Linear Unbiased Prediction*) methodology an animal's genetic potential is predicted by making use of the genetic parameters (heritabilities and genetic correlations) of the breed, pedigree information, as well as the measurements of the animal as deviation from the average of the animals that were measured with the animal. Adjustments are made for differences in sex, age, classifier, management and year x season effects to ensure that fair comparisons are made amongst the animals. These predictions are called **EBVs (Estimated Breeding Values)** which indicates the animal's genetic potential for the specific trait and predicts the type of progeny that the animal will breed.

Pedigree information determines the genetic level at which the animal enters the genetic evaluation, it links the information of all relatives together and it is used to determine the genetic ranking of the breed. For young animals that were not yet measured, mid-parent EBVs are estimated, which are the average of the EBVs of the sire and dam. These breeding values are still inaccurate and can change a lot when more information (measurements) is included in subsequent genetic evaluations.

Breeding values therefore enables a breeder to compare his/her animals genetically to one another, as well as to all other animals of the breed. This Report gives a summary of the genetic levels of the active males and females of the relevant breeder in comparison to that of the breed for linearly classified traits and litter size. The genetic change that occurred over time can also easily be seen.

Breeding Value Indices (EBVi)

For easy interpretation, EBVs are standardised and expressed relative to the average (100) of the active animals of the breed, using 12 as standard deviation (SD). This means that an EBV of 100 is equal to the active average of the breed, and more or less 50% of the animals will have EBVi's of between 90 and 110, which indicates an average animal. Only 0.5% of the EBVi's will be lower than 64 and 0.5% will be higher than 136. Higher EBVi's indicate better genetic potential for the trait.

Accuracy

EBVs are published with an **accuracy value (%)**, which indicates how much info was available for the estimation of the EBV and with how much trust it can therefore be applied. Factors that influence the accuracy include heritability, completeness and correctness of pedigree information, number of own and measured relatives and the size of the group in which the animal was measured. When an accuracy of 85% and more is reached, the EBV should not change significantly with the inclusion of more information in subsequent genetic evaluations.

Kennel and Breed Averages: The different traits' averages of the breeder's active animals are compared to those of the breed in the Kennel and Breed Average Graphs and Tables. The breeder can therefore easily see for which traits the animals are above or below the average of the breed.

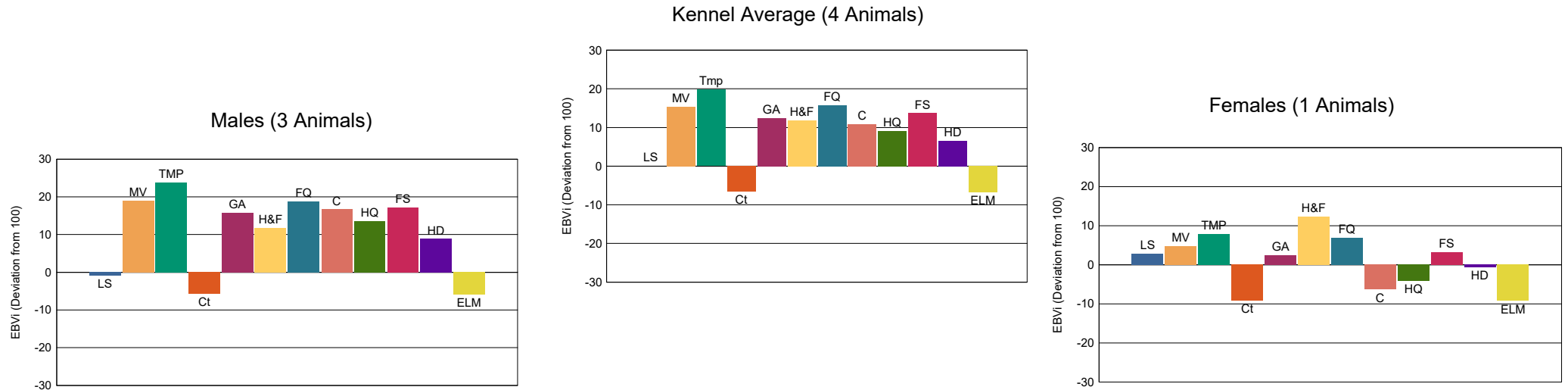
Genetic Trends: The Genetic Trends indicate the genetic change that occurred over time in the animals bred by the breeder compared to that of the breed. These are calculated as the average of the breeding values of all measured animals bred by the breeder, per year of birth.

Inbreeding: Inbreeding is the mating of related animals and is widely viewed as being harmful. The danger of inbreeding lies there in that it can gradually decrease fertility and survivability – a phenomenon known as inbreeding depression. It can cause lower conception rates, more abortions, more stillborn and weak offspring and a higher susceptibility to diseases. Indications in dogs include a low litter size as well as problems relative to fertility, such as invisible heat, behavioural problems when mating and low sperm quality. Overall, reduced litter size most likely reflects inbreeding depression in several traits, both physiological and behavioural, as well as a high frequency of non-viable embryos due to lethal alleles. Generally, the effects of inbreeding can become noticeable at a value of 6.25%, therefore it is generally recommended that individuals should have inbreeding coefficients of less than 6.25%. Breeders should therefore avoid matings causing inbreeding of more than 6.25% in the progeny. The theoretical maximum inbreeding coefficient is 50%. However, it should be noted that not all inbred animals show signs of inbreeding depression.

The data used in this evaluation was obtained from LOGIX from linear classifications that were done by the Breeder Society. All possible attempts have been made to present the information correctly. SA Stud Book does not accept responsibility for the use and interpretation of the information presented on animals in this publication.

Genetic Levels

Kennel Average relative to Breed Average, where Breed Average is indicated as 0



Average Breeding Value Indices (EBVi) where Breed Average = 100

Trait	All Animals	Males	Females
Litter size (LS)	100	99	103
Movement (Mv)	115	119	105
Temperament (Tmp)	120	124	108
Coat (Ct)	93	94	91
General Appearance	113	116	103
Head & Face (H&F)	112	112	112
Front Quarter (FQ)	116	119	107
Centre (C)	111	117	94
Hind Quarter (HQ)	109	114	96
Final Score (FS)	114	117	103
Hip Health (HH)	107	109	99
Elbow Health (ELM)	93	94	91

Inbreeding

Notes

Inbreeding primarily leads to decreased fertility, low survivability of pups and low disease resistance.

Inbreeding coefficients are calculated for all animals of the breed and indicates the probability that two genes of a pair are the same due to a common ancestor in the pedigree of the animal.

The adverse effects of inbreeding can be observed from 6.25% onwards.

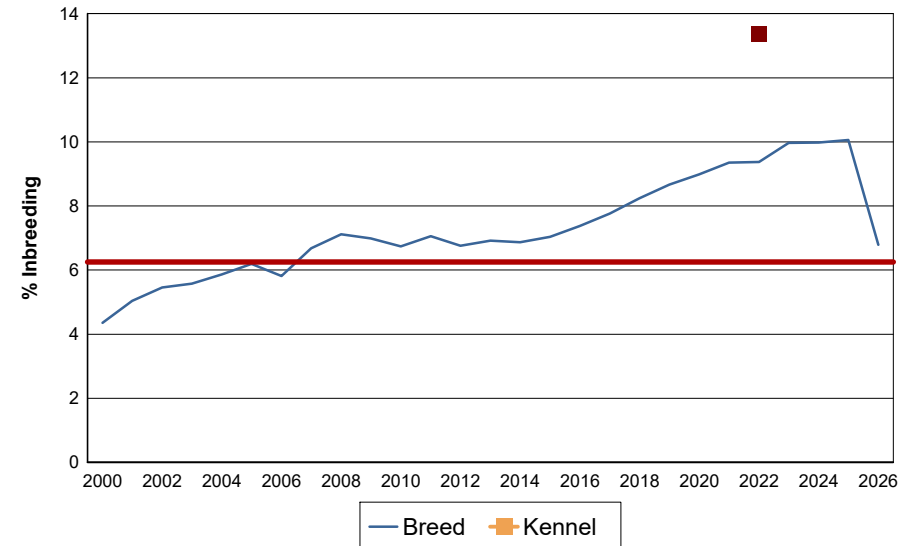
It is therefore highly recommended to record pedigree information as accurately. Inbreeding is dependent on pedigree information. Conventional methods for the calculation of inbreeding coefficients usually assume that unknown parents are unrelated, which is usually far from the truth. Inbreeding coefficients are therefore conservative indicators of the level of inbreeding.

Incomplete or incorrect pedigree information can be reported to SA Stud Book via the Breed Society.

Inbreeding Levels for Specific Matings

Progeny with Parents :	25%
Full Brother x Full Sister :	25%
Half Brother x Half Sister :	12.5%
One Common Grandparent :	6.25%
One Common Great-Grandparent :	3.125%

Rate of Inbreeding



Inbreeding Levels

	All Animals		Males		Females		Sires		Dams	
	Kennel	Breed	Kennel	Breed	Kennel	Breed	Kennel	Breed	Kennel	Breed
Number	4	49007	3	25141	1	23857	3	3371	3	6287
Average Inbreeding	12.83	8.49	12.76	8.46	13.02	8.53	9.22	8.01	10.44	8.00
Number inbred	4	48727	3	24990	1	23728	3	24990	3	23728
Number >6.25% Inbr.	4	30600	3	15537	1	15058	3	15537	2	15058

Estimated Breeding Value Indices (EBVi's)

Males

Inbreeding >6.25% is high

< 80

>= 100

>= 120

Animal Information		Inbreed	Health		Fertility	General			Appearance						Progeny :		Appraisal	Health		Progeny with litters
Name	Sire	%	Hips	Elbows	Litter Size	Move-	Tempe-	Coat	General	Head &	Front	Centre	Hind	Final	Progeny	Litters	Progeny	Hips	Elbows	litters
BYr	Dam		Acc.	Acc.	Acc.	ment	rament		Appear.	Face	Quarter		Quarter	Score			Kennels			
VAN DER KEMP KING KAI	MASTERMINDS KING KAIRO	11.56	114	96	97	126	132	96	123	112	125	128	122	124	6	1				
	JAMBAL KENYA		5	5	13	42	11	56	41	55	43	45	47	51						
KINGS OBEISANCE KODA	VAN DER KEMP KING KAI	13.37	107	93	100	115	120	94	113	112	116	111	109	114						
	VAN DER KEMP MEIDE		5	5	5	5	5	25	5	24	5	9	14	20						
KINGS OBEISANCE MAXIMUS	VAN DER KEMP KING KAI	13.37	107	93	100	115	120	94	113	112	116	111	109	114						
	VAN DER KEMP MEIDE		5	5	5	5	5	25	5	24	5	9	14	20						

Estimated Breeding Value Indices (EBVi's)

Females

Inbreeding >6.25% is high

< 80

>= 100

>= 120

Animal Information			Inbreed	Health		Fertility	General			Appearance						Progeny :		Appraisal	Health		Progeny with litters
Name	BYr	Sire Dam	%	Hips Acc.	Elbows Acc.	Litter Size Acc.	Move-ment	Tempe-rament	Coat	General Appear.	Head & Face	Front Quarter	Centre	Hind Quarter	Final Score	Progeny	Litters	Progeny Kennels	Hips	Elbows	
VAN DER KEMP MEIDE		LOTTER JACK	13.02	99	91	103	105	108	91	103	112	107	94	96	103	6	1				
	2019	LOTTER CASSIE		5	5	5	35	5	53	34	52	36	38	41	47						

Estimated Breeding Value Indices (EBVi's)

Sires

Inbreeding >6.25% is high

< 80

>= 100

>= 120

Sire Information			Inbreed	Health		Fertility	General			Appearance						Progeny :	Appraisal	Health		Progeny with litters
Name	BYr	Sire Dam	%	Hips Acc.	Elbows Acc.	Litter Size Acc.	Move- ment	Tempe- rament	Coat	General Appear.	Head & Face	Front Quarter	Centre	Hind Quarter	Final Score	Progeny Litters	Progeny Kennels	Hips	Elbows	
LOTTER JACK		LOTTER SUPER	7.38	102	99	110	105	105	92	97	100	101	87	95	96	7	1	3		1
	2017	LOTTER TESSA		5	5	15	49	23	65	49	64	50	53	55	60		2			1
MASTERMINDS KING KAIRO		SUID KAAP OSKAR	8.72	110	102	103	124	125	110	120	121	122	120	116	125	40	5	12		9
	2018	LOTTER TESSA II		5	5	9	58	29	74	57	73	59	61	64	69		11			3
VAN DER KEMP KING KAI		MASTERMINDS KING KAIRO	11.56	114	96	97	126	132	96	123	112	125	128	122	124	6	1			
	2021	JAMBAL KENYA		5	5	13	42	11	56	41	55	43	45	47	51					

Estimated Breeding Value Indices (EBVi's)

Dams

Inbreeding >6.25% is high

< 80

>= 100

>= 120

Animal Information			Inbreed	Health		Fertility	General			Appearance						Progeny :		Appraisal	Health		Progeny with litters
Name	BYr	Sire Dam	%	Hips Acc.	Elbows Acc.	Litter Size Acc.	Move- ment	Tempe- r ament	Coat	General Appear.	Head & Face	Front Quarter	Centre	Hind Quarter	Final Score	Progeny	Litters	Progeny Kennels	Hips	Elbows	
LOTTER CASSIE	2016	LOTTER BENJAMIN	5.99	97	82	95	111	116	87	109	114	114	106	102	110	19	3	5			1
		ANDERSON BBD TOKYO		5	5	36	50	27	66	49	65	51	53	55	60			3			1
JAMBAL KENYA	2018	ELEVATION COOPER	12.31	117	90	92	122	133	85	124	113	127	131	124	124	14	2	5			5
		MIDDELPOS BBD EMILY		9	27	48	60	38	73	59	72	61	62	65	69			5			1
VAN DER KEMP MEIDE	2019	LOTTER JACK	13.02	99	91	103	105	108	91	103	112	107	94	96	103	6	1				
		LOTTER CASSIE		5	5	5	35	5	53	34	52	36	38	41	47						

