



LOGIX

EDITION 02

LOGIX
NEWSLETTER

AUGUST 2018

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PREFACE

Dr Helena Theron

Shepherds in medieval times in Lincolnshire used the accompanying rhyme to count their sheep. After reaching the end of the rhyme, they would put a pebble in their pocket or make a mark somewhere, and then start over again. Should you for example have 80 sheep, you would only have 4 pebbles or marks, making it easier to know how many sheep you have. The system is very efficient as 4 small items represent 80 big ones (Alex Bellos in 'Alex's Adventures in Numberland')

Today, hundreds of years later, numbers and animal breeding still go hand in hand. Breeders record not only numbers, but also pedigrees and measurements. Some Breed Societies recording with SA Stud Book have pedigree records going back to the 1800's. Using modern technology, pedigrees and measurements are used to describe the breeding ability of animals. This system is also efficient, as it makes it much easier to select more efficient animals to produce the next generation. The future is in the inclusion of information locked up in the DNA of the animal, a road on which SA Stud Book is leading in South Africa. Animal breeding has reached the era of micro-precision - breeding animals that are tailor-made for the environment in which they are required to produce.

To all our passionate animal breeders - enjoy this issue!



Counting sheep in medieval times:

Yan, Tan, Tethera, Pethera,
Pimp, Sether, Lether,
Hovera, Covera, Dik, Yan-a-Dik,
Tan-a-Dik, Tethera-a-Dik,
Pethera-a-Dik, Bumfit,
Yan-a-Bumfit, Tan-a-Bumfit,
Tethera-a-Bumfit,
Pethera-a-Bumfit
Figgit



ABOVE The first Stud Books, dating back to 1903.

TRANSVAAL.			
HORSES:—		Pages.	
Clydesdale		137 to 138	
CATTLE:—			
Friesland		139 — 142	
Jersey		143 — 149	
Ayrshire		150 — 155	
Shorthorn		155 — 160	
Lincoln Red		160 — 167	
Hereford		168 — 177	
Red Polled Suffolk		178 — 185	
CATTLE.—Continued.		Pages.	
Aberdeen Angus		186 — 190	
Sussex		191 — 197	
SHEEP:—			
Merino		198 — 199	
Shropshire Down		199 — 203	
Suffolk Down		204 — 209	
PIGS:—			
Large Black		210 — 226	

ABOVE The first breeds from the old Transvaal that was registered with SA Stud Book in 1903. Most of these breeds are still with us, but some have since disappeared



FIND AN ANIMAL ON LOGIX

Herman Labuschagne

Should you require any information regarding an individual animal, it can be found under the Enquiries tab on the main menu. The Animal Information option is available per species.



This feature allows the user to find information of a specific animal. First the user needs to find the animal using the following screen:

Breed code

Computer number or

BRD SEX HDM YEAR SEQ
Animal I.D. number or

Prefix

Name or

Alternative number or

Laboratory reference (DNA/bloodtyping) number

_ = any character, % = any series of characters

The breed code will always default to the breeds the user has access to. If the user owns more than one breed, select the breed first. To find data on the animal, only one of the following is required: computer number or ID or prefix and name.

COMPUTER NUMBER

Fill the 10 character computer number, if available, in the box and click the submit button. If the computer number has leading zeros, it may be omitted.

ID

The ID consists of the breed code (3 characters), sex (M = male, F = female), HDM (herd characters) (4 characters), year of birth (2 characters) and sequence number (4 characters). Any leading zeros may be omitted, eg. 0001 are filled in as 1.

PREFIX & NAME

The name as well as the prefix must be entered. Click on the submit button. The computer number and ID must be left blank. The correct spelling of the prefix and name is very important as the spelling should be exactly the same as recorded on Logix. If the user is unsure of the spelling, the _ character can be used to represent any character or the % character to represent any sequence of characters.

ALTERNATIVE NUMBER

This could be a microchip number or in the case of imported animals, the ID number in the country of origin.

LAB REFERENCE NUMBER

(DNA/Genomics) - Laboratory number as assigned to the animal.



When searching horses on Logix, the Passport number search option can be used in stead of the ID option. This allows people who need to check passports when moving horses, to easily find such animals.

When searching dogs, the search on ID does not apply, but the other options are the same as the other species. The name and spelling are also important.

NAVIGATION

When the animal is recalled, all basic information is shown and additional options are displayed on the screen, such as Progeny, Pedigree, Photo, Production, Reproduction Card, DNA, Breed Fractions, Alternative Numbers, Classification and the 'QR code'.

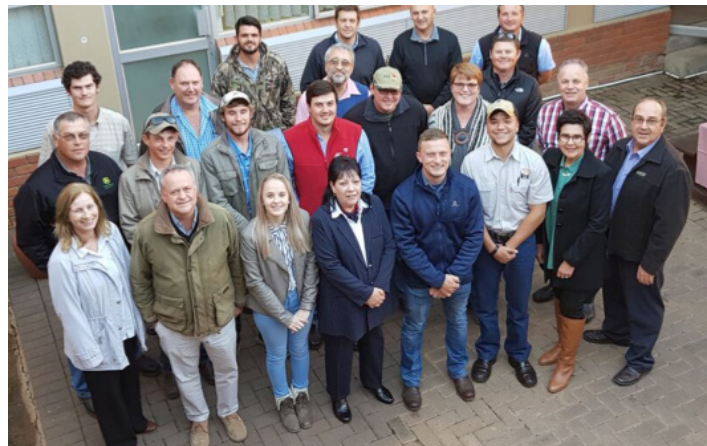
Click on the required tab to display the relevant information underneath the basic information screen for easy reference. Scroll down with the computer's mouse. The following information can be viewed under the navigation bars:

- Progeny - show all recorded progeny, matings and embryo flushings
- Pedigree - display 3, 4 or 5 generation pedigrees. These reports can also be printed.
- Photo - displays a picture of the animal, if available
- Production / Performance - displays all recorded measurements and breeding values as well as a graph for easy reference
- Reproduction Card - Display all reproduction data of the cow as well as intercalving period (ICP) and age of first calf (AFC)
- DNA - displays all DNA, horn results, genetic diseases or genomic results, as well as the relevant laboratory information
- Breed fractions - show the composition of the animal in breed fractions
- Alternate numbers - Include numbers like microchip numbers
- Classification - Display recorded classification results.
- Next - returns to the first screen to search for another animal
- Championship - displays recorded horse show results
- Colour Description - shows the identification diagram as entered with the birth notification in horses
- Passport ID - Display the identification diagram as completed by a veterinarian if a passport has been issued.
- Genetic profile - displays all the animal's measurements and genetic values in a table format for sheep.

If the animal information needs to be printed, the user needs to zoom in the screen so as to fit on one page (Ctrl - reduces screen size and CTRL + increases screen size). As this screen is not regarded as a report, the screen contents is printed according to the specific setup on the particular computer. It may be better to print a three or five generation report under the reports tab if the information needs to be printed.

In the next newsletter, we will have a look at available reports on Logix.

STUD BOOK PEOPLE



ABOVE LEFT

Breeders at the 'Back to Basics' course for sheep held at Riversdale. There were also courses for beef and dairy cattle.

ABOVE RIGHT

Participants at the Bloemfontein beef cattle BLUP course, May 2018

LEFT

According to Ruann Kruger, SA Stud Book Technical Adviser, dairy farmers in the Eastern Cape now use milk-recording data more than ever since milk prices have fallen and feed prices have risen. All available information is used to milk as productively as possible.



ABOVE

Finalists in Vleissentraal / SA Stud Book's Elite Bull Growth Test at the Bloem Show are waiting for the results.

RIGHT

Angus Sale, Western Cape.

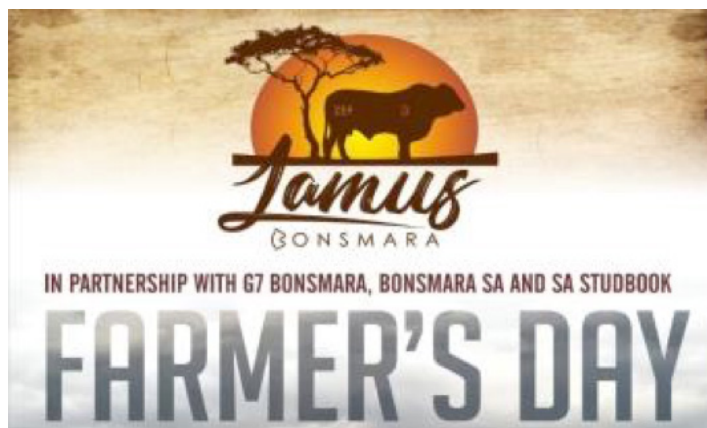
LEFT BELOW

Poena van Niekerk and Andrew Masterson at the Royal skou.

RIGHT BELOW

Leon Thom's Production Sale at Mount Magalies.





LAMUS BONSMARA FARMER'S DAY

The North West Elite Regional herd winner, Christopher Melamu, held a very successful Farmers' Day for emerging farmers on the 14th June 2018. The day was very well supported and there are plans to do this again next year. There were three speakers who spoke about Brucellosis, Herd Management and Bull Selection. There was also a practical demonstration by senior Bonsmara classifiers on heifers from the Lamus Bonsmara herd.



STUD BOOK'S PRETORIA OFFICE

The Logix Genetic Evaluations for the estimation of breeding values of dairy cattle, beef cattle and small stock are managed from SA Stud Book's Pretoria Office. The assessment of the Logix Milk Production Reports is also done here. SA Stud Book staff are also actively involved in undergraduate and postgraduate study guidance of students at the University of Pretoria. Dr Japie van der Westhuizen was also stationed here before he was appointed as General Manager of Stud Book. Dr Bobbie van der Westhuizen has now been promoted to Head of the Department.



BACK FROM LEFT TO RIGHT

Schalk Greyling, Japie van der Westhuizen and Bobbie van der Westhuizen. Front left to right: Helena Theron, Suretha Francis and Donne Kruger. Insert: Bernice Mostert.



ABOVE

Offices at the University of Pretoria's Experimental Farm in Hatfield, Pretoria.



GENOMIC TESTING

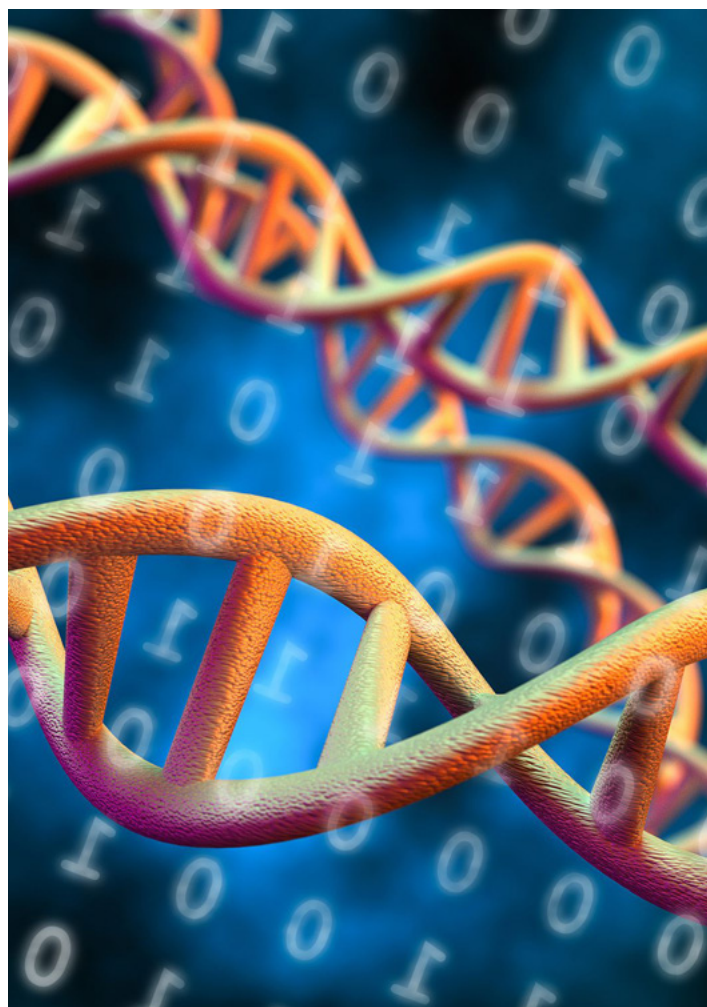
WHAT IS GENOMICS?

It is the determination of about 50 000 SNP markers on the DNA of animals. It is the latest technology and is used to 'see' which genes are on the animals' DNA. Animals can therefore be more accurately selected at a very young age.

WHAT IS THE BENEFIT TO GENOMICALLY TEST MY ANIMALS?

- Indisputable proof of the identity of the animal, now and in the future.
- 100% accurate parentage and progeny determination with more than 50 000 markers, also solves parentage in cases of related multiple sires (brothers or father-son combinations).
- More accurate selection of young unmeasured bulls for breeds already receiving GEBVs (genomic breeding values) (Bonsmara, Beefmaster and Drakensberger in beef cattle and Jersey, Holstein and Ayrshire in dairy cattle). Other breeds already involved in the BGP program will soon receive GEBVs. It is especially beneficial for traits measured late in an animal's life or measured on daughters, for example carcass traits, milk, cow reproduction and feed conversion of beef cattle and production traits in dairy cattle.

If the sample is tested by a reputable laboratory, various other traits are included in the test, for example colour genes (black, red, wild, Charolais), Polled / Horned (various alleles), and other lethal, semi-lethal, desirable and unwanted genes (for examples see Weatherbysscientific.com for a full list). They also test for carrier status of Double Muscling Genes (Myostatin) and for A2 Milk at extra cost.



WHAT DOES IT COST AND HOW LONG DOES IT TAKE?

Weatherbys Beef: R777 (excluding VAT) per sample, including parentage, colour, polled and GEBVs (if available for the breed). Myostatin (double muscling): R80 + VAT extra. It takes about 3-4 weeks. Weatherbys Dairy: R850 (excluding VAT) per sample, including parentage, colour, polled and GEBVs. A2 milk is R148 + VAT extra.



WHAT IS GEBVs AND WHAT DOES A BREED NEED TO RECEIVE IT?

DNA marker information (SNPs) is included with regular pedigree and performance information used to estimate breeding values (EBVs), to estimate genomically enhanced breeding values (GEBVs). SNP information is an extra source of information for the estimation of genetic potential of a breeding animal. The breeds that have been participating in the BGP program (state funding) will be first to receive GEBVs. In order to find the connection between traits and SNPs, a breed needs to genomically test animals with accurate breeding values, like older bulls and cows. Imported animals' SNP profiles are used according to the South African population, which will immediately improve the accuracy of breeding values of foreign sires.

WILL IT STILL BE NECESSARY TO MEASURE ANIMALS IN FUTURE?

It is a misconception that genomic testing will replace measurement of important traits. Animals will still have to be measured. Continuous selection changes gene frequencies, so the connection between DNA and measurements needs to be constantly determined. The latest technological developments also make use of the so-called "single step" to calculate genomic breeding values. The genome information is also used to determine the actual relationships between animals in the BLUP genetic analyses, and not the theoretical relationships as is currently used.

HOW DO I TAKE A HAIR SAMPLE?

DNA is extracted from follicles of tail hair roots in a lab. Pull about 40-60 hairs from the end of the tail with a pair of pliers. Place each animal's hair in a separate paper envelope (not plastic) and clearly mark it with the animal's ID or computer number, as well as the owner's details.

Please send to: For Attention: **Elsa van den Berg, SA Stud Book, PO Box 270, Bloemfontein, 9300.**

Breeders are strongly advised to save hair samples from breeding bulls and cows, for possible future reference. The hair can be stored in envelopes, or sent to Elsa for placement in the Logix Biobank.





SELECTION OF RAMS

Schalk Greyling

There is some disagreement between two thoughts in the selection of rams for a flock:

METHOD 1

'Figures are everything. The ram with the best breeding values is the right one !!'

METHOD 2

'I just look at him, then I know! The best-looking ram is the right one!', (hand-eye method).

What weight should each of the above-mentioned methods carry? The answer is surprising, both methods should be considered! Each method should carry 100% weight.

The principle is very simple. In order to breed purposefully and to succeed, the breeder should define a specific breeding objective for his flock. This can be general or specific.

For growth traits, breeding values are available for pre-wean and weaning weights, both for direct growth or for the maternal ability of the ewe, as well as for post-wean growth.

Fertility traits that are measurable and heritable, include Number of Lambs Weaned, Total Weight Weaned, Age of First Lamb and Interlambling Period.

For wool sheep, breeding value for traits such as Clean Fleece Weight, Fibre Diameter, Staple Length, Conformation Score and Wool Score are also important.

With the breeding objective determined for the herd, and with the knowledge of the genetic level of the herd itself for these traits, the identification of a potential ram can begin. The aim will therefore be to improve the herd for the selected traits without affecting other traits adversely. With the preliminary selection completed on breeding values and breeding policy, the next phase begins. The selected rams must now be evaluated phenotypically. Any rams with undesirable conformation traits should not be considered at all, regardless of the animal's breeding values. It is important to remember that the ram does most work on its hind legs. It is therefore important that the ram is able to move well and that its hind legs are not too upright, as it will put too much pressure on the animal's heels, especially

during mating. Swollen heels can be an indication of this problem. Resilient joints are also important.

Another important point is scrotum size and mobility. It is important that the ram produces enough semen and that temperature regulation of the testes is possible. It usually goes together with the masculinity of the ram.

A further important point, but more difficult to determine, is the mating ability of the ram. The ideal would be if he is able to impregnate the ewe with one mating, and not to exhaust himself with many, but unsuccessful matings. He has to do his job as quickly and efficiently as possible.

It is also very important that rams be tested for fertility before mating. Infertile rams can cause major financial losses, especially if it is discovered too late.

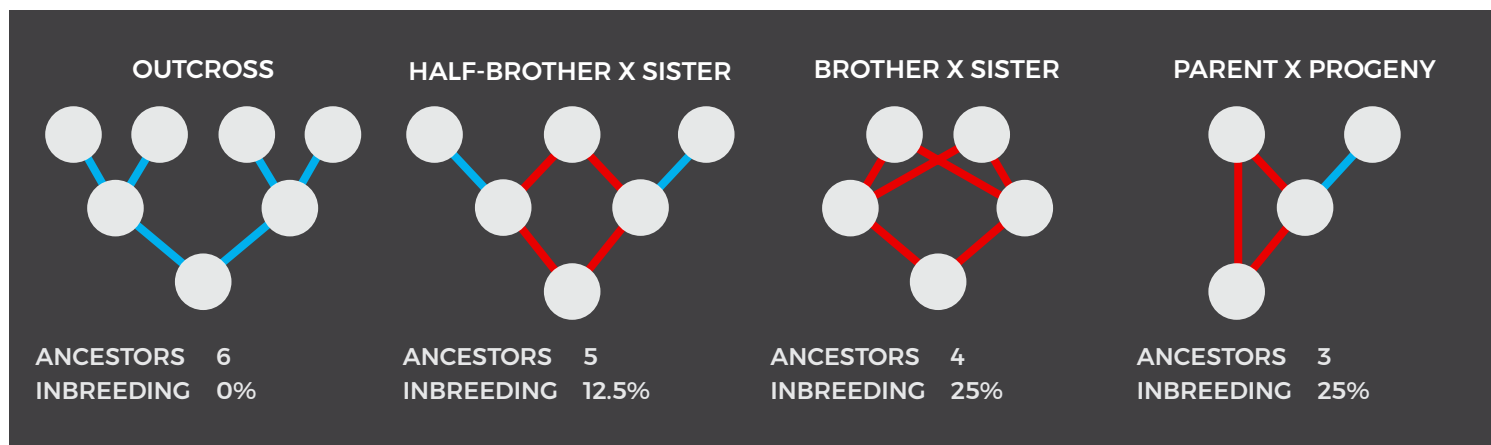
In summary, a ram with the best genetics but unable to do his primary job, is as undesirable as the most good-looking ram which cannot improve the genetic level of the flock according to the breeding objective.

Breed with genetically superior rams, which can mate with the ewe herd in a short period of time. The best way to improve profits, is with rams that improve the next generation.



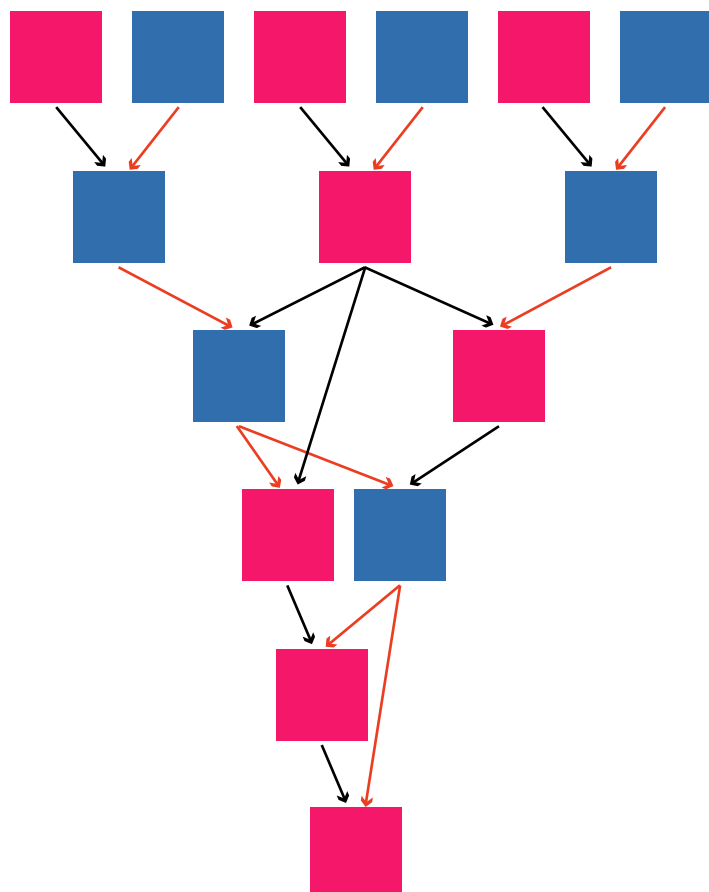
INBREEDING AND LINE BREEDING

Dr Helena Theron



INBREEDING

- Inbreeding is the mating of related animals, for example brother on sister, parent on child, cousin on cousin, etc.
- It is used to concentrate desirable genes in a population, or to increase uniformity in the offspring.
- However, it can also cause a gradual decrease in productivity, fertility and survivability, a phenomenon known as inbreeding depression.
- As a rule of thumb, inbreeding should be kept under 6.25%, although highly inbred animals sometimes do not show inbreeding depression. (The theoretical maximum inbreeding is 50%).
- High levels of inbreeding in a breed can lead to a situation where there are too few unrelated parents in a breed - thus reducing genetic diversity and causing the breed to disappear.
- It is generally not recommended.



LINE BREEDING

- Line breeding is also inbreeding, but at a slower rate form to avoid the disadvantages of inbreeding.
- Start with an outstanding individual that has outstanding traits or features that needs to be fixated in the breed.
- Keep on selecting for the trait(s) in the offspring, while at the same time selecting against any signs of infertility or weakness.
- Only mate distant family members with one another (ie slow inbreeding or low levels of inbreeding).
- It is advantageous for a breed to consist of several lines, which are only minimally mated with each other.
- Try to maintain genetic diversity in the breed by using only male animals that will limit the inbreeding.
- Use many different males as sires to increase genetic diversity.



LEFT

Examples of a pedigree on SABeefBulls.com. A 5-generation pedigree of a highly inbred animal (42%) to 1 ancestor, who is mated to her own son and offspring are mated to each other. There are only 14 ancestors in her 5-generation pedigree, compared to 30 ancestors of a 5-generation pedigree with no inbreeding, leading to a loss of genetic diversity. The risk that unwanted hidden genes will appear, or that essential genes disappear is very high.

DAIRY CATTLE BREEDING FOREIGN GEBVs FOR SOUTH AFRICAN CATTLE?

Dr Bernice Mostert



Economically important traits, such as production, milk quality, udder health, fertility, longevity and conformation traits are affected by a variety of genes. Each gene makes a small contribution to the expression of the trait so that the cumulative effect of all these genes determines the performance of the animal for the traits. However, the expression of these traits are also influenced by the environment, some more than others. It may even happen that these genes are turned on and off by environmental factors - especially in traits with low heritabilities, such as fertility and longevity. That's why there are genotype x environmental interactions, which means that an animal that performs well in one environment does not necessarily perform well in another environment, due to different genetic complements that may be involved in the expression of the traits in different environments.

Genomically enriched breeding values (GEBVs) obtained from other countries' genomic analyses are a blend of the animal's DNA information obtained by genotyping using commercial SNP chips, genetic parameters and genetic averages of the population in which this DNA information is included. DNA information does not replace measurements in genomic analyses, but is used as an additional source of information to improve the reliability of estimation. Measurements are still needed to interpret the DNA code within the genetic variation and gene frequencies existing in the population. Different gene-frequencies and genetic variations are involved, because populations are over generations exposed to different breeding goals, selection intensities, mutations and migrations of genes, as well as natural selection.



The relevance of GEBVs from other countries' genomic analyses in the South African population is therefore based on the following assumptions:

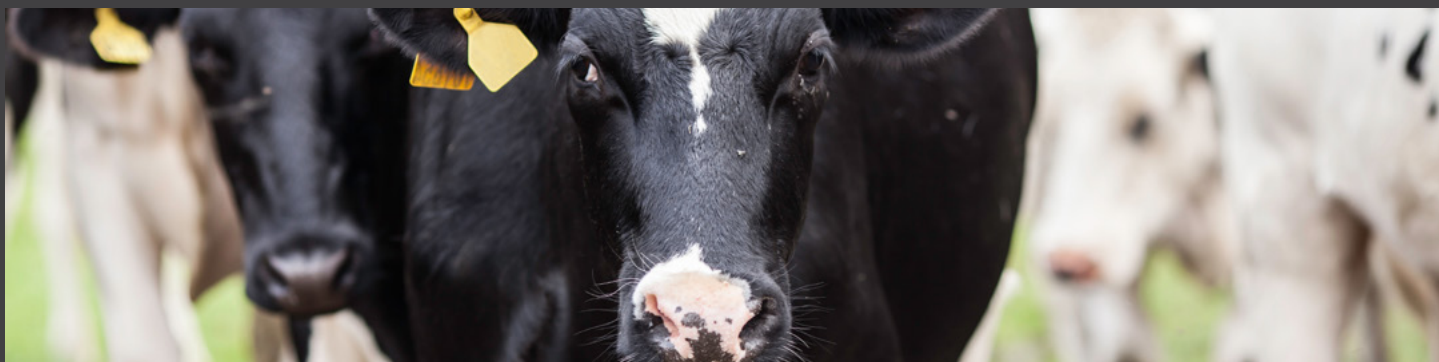
1. The South African population is exposed to the same breeding objectives, selection intensities, mutations, migration and natural selection as the foreign population.
2. The rate of genetic change between the South African and foreign populations is the same.
3. There is no genotype x environmental interactions between populations, and genetic rankings are therefore exactly the same.
4. Genetic correlations between populations for different traits are 100%.

NONE OF THESE ASSUMPTIONS ARE CORRECT.

GEBVs from other countries' genomic analyses are not a true indication of the animal's genetic potential as expressed in the South African environment and South African population. For highly heritable traits, such as production and certain conformation traits (eg udder indexes), good similarities will be obtained, but for the lower heritable traits (fertility and longevity) this will not work.

Although there are many diverse environmental conditions and production systems within the South African environment, breeders must remember that we are still working within our own population, with genetic parameters and variation of our own population and with much stronger genetic linkage between environmental and production- systems than will ever exist between South Africa and overseas populations.

The biggest loss for our South African populations with participation of our breeders in foreign genomic analyses, is that our animal's genomic profiles contribute towards foreign genomic databases with no investment towards our own populations. Do these foreign genomic services therefore really bear our South African populations' interests at heart? After all, we have to breed animals adapted to the South African environment, to South African production systems and market requirements and to meet our own breed standards. Breeding is never a short-term commodity.



PREGNANCY TESTING

Breeders can now determine pregnancy on the farm as soon as 28 days after possible conception by using the 'IDEXX Rapid Visual Pregnancy Test Kit'. This test kit identifies early pregnancy-related proteins (early PAGs) in whole blood (EDTA), plasma (EDTA) or serum of cattle 28 days after insemination, without transferring results from a previous pregnancy 60 days after calving. It can be used on cattle, goats, sheep and water buffalo. The test can also be done on milk samples, but only in a laboratory.

It is, however, a very easy test to run on blood samples on the farm. It takes about 30 minutes and 4 easy steps to determine if the animal is pregnant or not and should therefore be re-inseminated.

The cost of the kit is R5000-00 and can be used for a maximum of 180 tests. It costs about R40 / animal, depending on how many tests are performed at a time. Please contact the Stud Book Technical Advisor in your area with any queries.

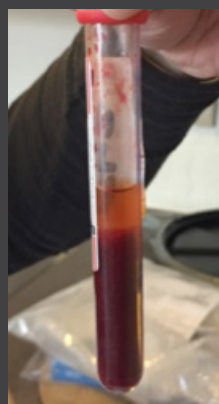


ABOVE

Breeders using the test kit at C Nel Boerdery on the 24th of June 2018. (Photo: Thalia Brameld)

BELOW FROM LEFT OT RIGHT

Blood sample is taken; Middle: A tube with blood; Right: IDEXX Rapid Visual Pregnancy Test Kit. (Photo's: Chanelle Steenekamp)



SMALL STOCK GENETIC REPORTS COUNTS FOR NUMBER OF LAMBS WEANED & WEANING WEIGHTS

Dr Bernice Mostert

Direct and Maternal Weaning Weight Breeding Values are estimated from the weaning weights of the lambs, as a trait of the lamb itself, while the number of lambs is also estimated from weaning information, but as a trait of the ewes in the herd and breed. The number of records indicated in the Genetic Trends Table of the Logix Genetic Reports, therefore, is the number of lambs weaned in the herd for Weaning Weight Breeding Values, and the number of ewes that weaned lambs for Number of Lambs Weaned.



NAMPO SHOW

Some of the breeds that were exhibited at the Nampo Show



ABOVE Friesian Horse



MIDDLE Horned and Polled Merinos



ABOVE RIGHT Indigenous sheep breeds:
Meatmaster above and Van Rooy below



ABOVE Boran Cattle



FAR LEFT Boer goat lamb

MIDDLE Van Rooy ewe

ABOVE SA Mutton Merino lamb

A2-CASEIN MILK

Dr Bernice Mostert

Many people suffer from milk intolerance due to the expression of the A1 beta-casein protein, which can cause digestive problems, including abdominal pain. A2 milk contains a different protein to conventional A1 milk, which can reduce milk intolerance; however, it is important to know that A2 milk will not cure lactose intolerance. Beta-Casein represents 25-30% of cow's total milk protein. Several variants are involved in the expression of milk protein, eg. A1, A2, B etc. A2 milk (milk with beta-casein protein expressed by the A2 gene variant) is therefore a natural product obtained from cows that produce only A2 beta-casein protein in their milk.

The genetic variants for the casein complex of cows' milk are situated on chromosome 6 of the bovine genome. All animals have 2 copies of a gene, one received from the sire and one from the dam of the animal. Genotypes for the Beta-Casein complex for the A1 and A2 variants can therefore encompass the following:

HOMOZYGOTIC A1/A1

HETEROZYGOTIC A1/A2

HOMOZYGOTIC A2/A2

These variants are co-dominant, meaning that they are expressed as additive effects, therefore A1/A1 genotypes will only produce A1 milk, A1/A2 will produce A1 and A2 milk in equal quantities and A2/A2 genotypes will only express A2 milk.

Increasing the frequency of the A2 variant in SA dairy populations will therefore have clear benefits to improve milk intolerance in the South African population. However, this will entail the determination of the frequency of the A2-gene in the current SA dairy populations, the identification of A2/A2 animals as parents of the next generation and construction of breeding plans to increase the frequency of the gene in following generations without compromising other economically important traits and adversely affecting the genetic diversity of the breed.



Commercial genomic tests are available for the identification of the A2-variant through SA Stud Book's Genomic Selection Service. This will entail the following:

- Biological samples (hair roots, blood, semen or cartilage) to be sent to SA Stud Book's Genomic Selection Services, in Bloemfontein.
- The samples are then sent to the Weatherbys laboratory in Ireland for DNA extraction and genotyping, using the IDB-V3 SNP-chip.
- Genomic profiles of animals will be preserved in a genomic database for the breed by SA Stud Book.
- Genomic information of the genotyped animals will be shared with the Breed Society and/or breeder.

These genotypes will automatically also be included in the Reference Population of the SA dairy breeds to interpret the genetic code of the animals in the South African environment for the establishment of Genomic Selection, which will have a significant influence on the accuracy of selection of young animals and therefore rate of genetic improvement of the breed.

Costs involved for genotyping of animals via SA Stud Book's Genomic Selection Service (dependent on the exchange rate): R850 (excluding VAT)/animal.

TESTING FOR BETA-CASEIN COMPLEX (ADDITIONAL):

R148 (excl VAT) per animal tested if all animals in the batch are tested or R205 (excl VAT) per animal if only certain animals within a batch are tested for the Beta-Casein Complex.



LOGIX MILK GENETIC REPORTS SIRE COUNTRY OF ORIGIN

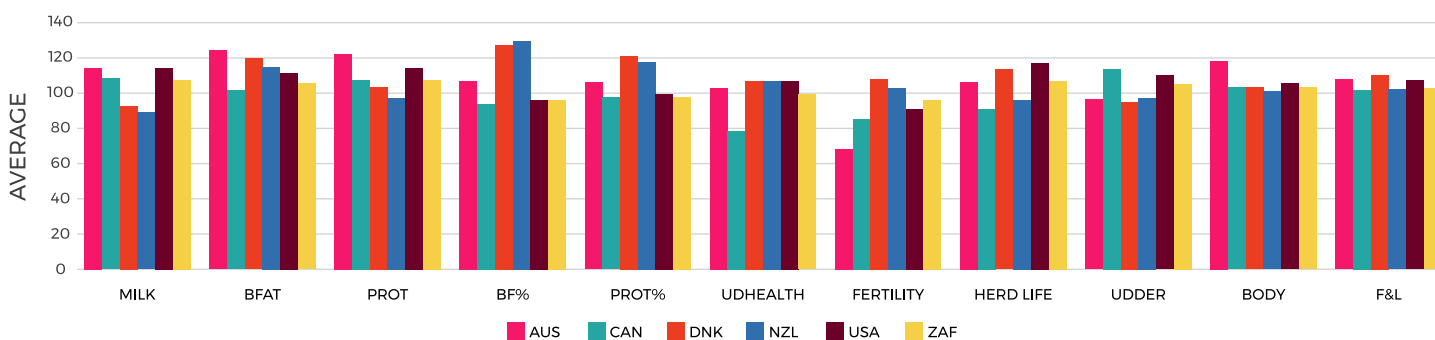
Dr Bernice Mostert

To assist breeders with the evaluation of bulls used in their herds, the following information is included in the Logix Milk Genetic Reports. The number of bulls per country of birth used in the herd, as well as the number of daughters per country of the sire. The genetic levels of these bulls are indicated for all the different traits and selection indices available for the particular breed:

NUMBER OF BULLS AND DAUGHTERS PER ORIGIN OF SIRE

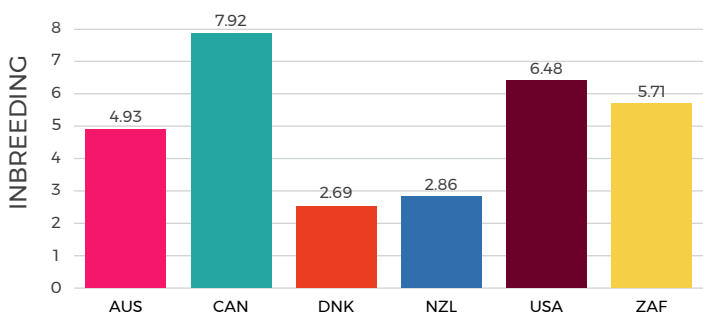
ORIGIN	NUMBER OF BULLS	NUMBER OF DAUGHTERS
AUS	2	30
CAN	2	2
DNK	3	3
NZL	1	1
USA	38	95
ZAF	47	389

AVERAGE GENETIC LEVEL PER COUNTRY OF SIRE



The average inbreeding caused by the bulls in the herd is also indicated by the country of birth of the bulls. For this particular herd, the South African bulls are most related to the herd, which resulted in the highest inbreeding, while the Danish bulls share the least common ancestors with the herd, and therefore caused the lowest inbreeding. Logix Genetic Reports contain a lot of proactive and reactive information that help breeders to make informed selection decisions.

AVERAGE INBREEDING PER ORIGIN OF SIRE



All the traits and indices have been standardized, which allows the breeder to compare traits. In the above example, it can therefore be seen that American and South African bulls used in this herd have the highest genetic levels for milk production, the Danish and Australian bulls have the highest solids percentages, the Canadian bulls have the lowest levels for udder health, the Danish bulls have the best fertility level and the Danish and American bulls have the best longevity. Furthermore, the Canadian bulls used in this herd breed the best udders, the Australian bulls are strong on conformation traits and that there is little difference between how the bulls breed for hooves and legs. Also note that the South African bulls have good genetic levels for fertility and longevity, as one would expect for animals bred in the area in which they should be adapted.



Anzak Bonsmaras (Photo Japie van der Westhuizen)

BREEDING VALUES FOR WEANING WEIGHT & MILK

Dr Helena Theron

Calves and lambs are weighed at weaning, and receive two breeding values - one for weaning weight (wean direct) and one for milk (wean maternal). What is the difference?

WEANING WEIGHT (WEAN-DIRECT)

- Calf/Lamb's own genetic ability for growth.
- His mother's milk and general mothering ability, however, also plays a role in his final weaning weight – he will be lighter / heavier than his genes predict if his mother has less / more milk.
- His weaning weight is thus dependent on his own genes for growth and the environment that his mother creates.
- It is accurately measured as soon as a calf/lamb has a weaning weight (first generation).
- Accurate early in an animal's life

MILK (WEAN-MATERNAL)

- Mother's genetic ability to feed and care for her calf/lamb.
- She therefore has the ability to change her calf/lamb's weight to be heavier/lighter than expected, due to her genetic ability.
- Can only be measured in a cow/ewe's progeny.
- A bull/ram's Milk breeding values are only measured once his daughters' progeny is weighed (second generation).
- Accurate late in the life of an animal - except if the animal has been genomically tested and the breed receives GEBVs.

INTERNET LINKS

May 4 2018: Appointment of dr Van Der Westhuizen (Afrikaans), <https://agriorbit.com/van-der-westhuizen-permanent-aan-die-stuur-van-sa-stamboek/>

May 7 2018: Suffolk rams in growth tests (Afrikaans) (Siebert Vermeulen) <https://agriorbit.com/suffolk-ramme-getoets/>

May 8 2018: Elite Awards (Afrikaans), <https://agriorbit.com/landbousterre-skitter-by-elite2018-toekennings/>

28 May 2018: Production recording in dairy cattle, Afrikaans (Schalk Greyling) <https://agriorbit.com/n-ontplofing-in-sojaproduksie/>

June 6 2018: SA Stamboek president kuier op Grootplaas (Mr Freddie Wasserfall) <https://agriorbit.com/sa-stamboek-president-kuier-op-grootplaas/>

June 26 2018: Claw selection in beef cattle - Afrikaans (Dr Helena Theron) <https://agriorbit.com/kry-die-klouprobleem-by-die-oor/>



CONTRIBUTIONS TOWARD THE SETTLEMENT

Breeders and participants at Stud Book have heeded the call following the unanimous decision of the 2017 Annual General Meeting for voluntary contributions towards the obligation of Stud Book in terms of the Settlement Agreement with the ARC. Breeders were asked to once-off donate an amount towards this cause. The guideline is R500 per herd. If more breeders see their way open to donate, payments can still be made. Please indicate your herd number and use the words SKIKKING/SETTLEMENT as reference.

Stud Book would like to acknowledge the persons that generously donated. Special mention is also made of the South Devon and Bonsmara Breeders' Societies that have given undertakings way beyond the original call. Hereby is a list of contributors. THANK YOU VERY MUCH!

Aarfontein Bonsmaras	EM Schroeder	Lee & Son	PJ Human - Goedgeleë Bdy
AC Lombard & Seun	FDT Donasie	Liku Stoetery	PJ Moller
AE Coetzee	Franzel Bonsmaras	LJB Rossouw	Pretorius C & Seun
AHD Budler	Freancke Romagnola	LJC Boerdery	R&L Venter Bonsmara Stoet
Bartlett T Mr & Mrs	GC Stanford	Maarten Bdy Trust	RG Selenati
Becker Bonsmaras	Germar Bonsmaras	Maluti Angus	Riverglen Stoet
Becker Bonsmaras	GJ Claassen	Maluti Angus	Riverglen Stoet
BJM Rossouw	GK Hart	Mantobazana Romagnola	Rooigras BP Stoet
Blaine	H&E Beyers Trust	Marais Bonsmaras	Rooyberg Boerdery
Bogermie Boerdery	Hagesdam Borane	MD Burger	RT Clark
Bonsmara Genepoel	Halls Hill Farms	MD Serapelwane	Saunders Bonsmaras
Boogertman vd Loo	Harrisdale Meatmaster	Me E Esterhuizen	Sernick Bonsmara Stoet
Boons Boerdery CC	Hencor Boerdery	Meander Stoetery	SG Lubbe
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CF Schlotfeldt	Jazer Cattle CC	Moorcroft SL & Sons	Toorberg Boerdery
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Dr R de la Rey	Krimml Stoet	Ottershaw Farms	
DT van Rensburg	Lamus Bonsmaras	Paul Mare Bosnmara Stoet	10 Unknown donators
EJL van der Merwe	Le Fre Bonsmaras	PD Roets	

THANK YOU



ADDRESS

SA Stud Book, Henry str 18,
Bloemfontein, Vrystaat

POSTAL ADDRESS

PO Box 270,
Bloemfontein, 9300

OFFICE

051 410 0900

SOCIAL MEDIA

📍 @SASTudbook
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