



MEDIAVRYSTELLING

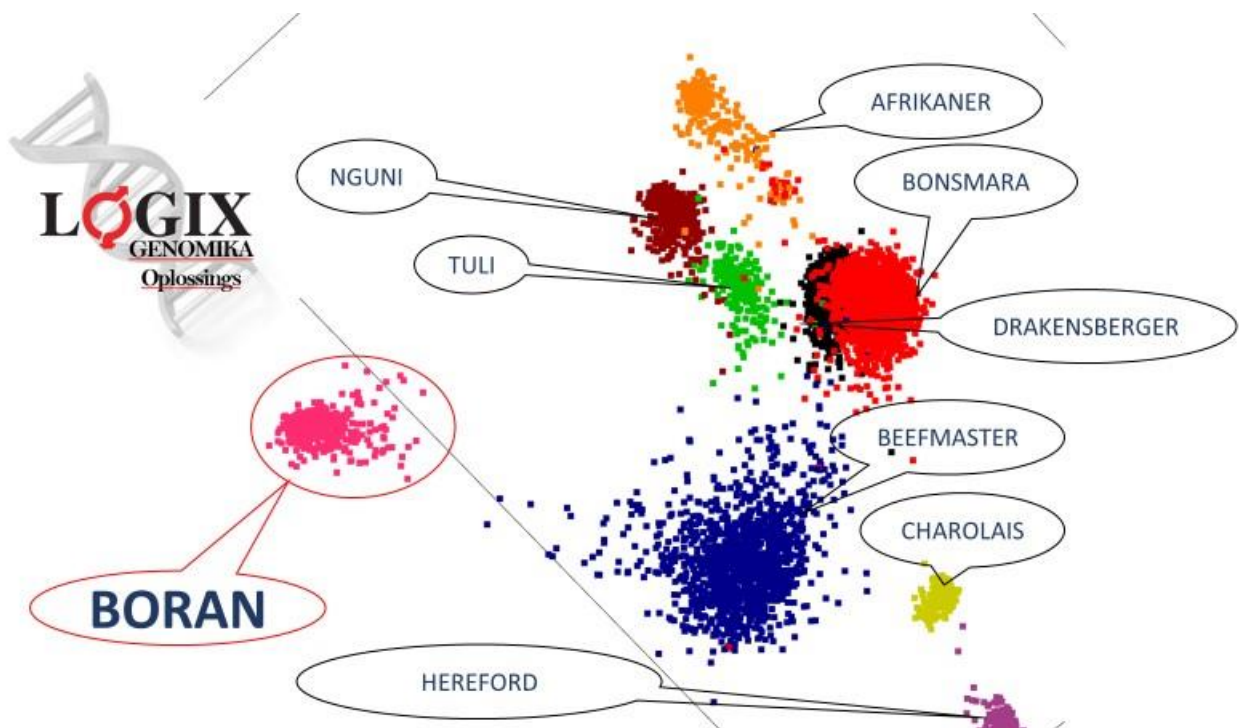
Boran Telersgenootskap van Suid-Afrika

Deur gebruik te maak van die nuutste telingstechnologie, bemagtig die Boran Telersgenootskap die Suid-Afrikaanse vleisbeestelers om optimaal te produseer.

Deelname aan die Beef Genomics Program (BGP) het byna 500 Boran beeste se genomiese profiele opgelewer. Dit verteenwoordig teeldiere van al die moontlike lyne en lande van oorsprong van die ras. Hierdie inligting, saam met die meer as 6 900 beskikbare vleisbees genomiese profiele van 9 rasse op die Logix aantekening-stelsel, stel Stamboek se navorsingspan in staat om die presiese genetiese afstande of verwantskappe tussen rasse sowel as die genetiese diversiteit binne elke ras te bepaal.

Alhoewel die Boran Telersgenootskap verantwoordelik is vir die genetiese verbetering van die ras, besef hy ook sy verantwoordelikheid om 'n positiewe bydrae te lewer tot die winsgewendheid van kommersiële vleisbeesproduksie. Nie alleen dra die ras by tot die daarstel van moederlyn-vroulike diere wat in Afrika-toestande ekonomies moet produseer nie, maar help die kennis oor genetiese afstande en diversiteit om die beste besluite te maak vir komposiete (saamgestelde) moederlyndiere en om deur kruisteling ander rasse aan te vul (bekend as komplementariteit) en om basterkrag ten volle te benut.

Een van die metodes wat tans opslae maak is die sogenaamde "Principle Component Analysis" (PCA) wat rasse of rasgroepe saam groepeer of wat duidelik die diversiteit uitwys tussen rasse. Stamboek stel deur navorsing en ontwikkeling die verskille (of enersheid) tot beskikking van die verskillende rasse. Die volgende drie dimensionele voorstelling wys duidelik op die diversiteit tussen vleisbeesrasse.



Uit die drie-dimensionele voorstelling is dit baie duidelik dat elke ras se individuele diere nouer verwant is aan mekaar as aan diere van ander rasse. Die diversiteit (verskeidenheid) binne elke ras is ook duidelik en weerspieël families en lyne binne 'n ras.

Die werklike onderskeiding of uniekheid van 'n ras word dus uitgedruk in die genetiese afstand (verwantskap) wat diere in die ras het met diere in ander rasse. Die resultate wat uit die deelname in die Beef Genomics Program bekend geword het, en SA Stamboek se ontledings bevestig die uniekheid van die Boran as Afrika Bos Indicus. Dit hou unieke geleenthede in vir beplande parings in kommersiële vleisbeeskuddes in 'n verskeidenheid omgewingstoestande en produksiestelsels. Tipies kan die genetiese afstand wat die ras onderskei van ander rasse tot verhoogde basterkrag (heterose) aanleiding gee. Bo en behalwe hierdie voordeel, dui die genetiese afstand ook op 'n unieke genetiese samestelling wat as aanvulling dien in beplande parings as basis van moederlyndiere met unieke groei, afronding en karkas-eienskappe waarvan die nageslag direk bemerkbaar is. Dit kan ook deel vorm van beplande terminale programme met 'n groter raam ras of groeikragtige bulle van mediumraam rasse. In beide gevalle sal basterkrag ook maksimaal benut word deur die genetiese afstande met sulke vaderlyne in ag te neem.

Vir meer inligting kan Christopher Havenga (christopherhavenga@icloud.com) of Yolanda Venter (yolandav@stemma.co.za) van die Boran Telersgenootskap of Bobbie van der Westhuizen (bobbie@studbook.co.za) van SA Stamboek gekontak word.

29 November 2018

Simeon Hurwitz (simeon@hurwitz.co.za)
President: Boran Telersgenootskap van Suid-Afrika



MEDIA RELEASE

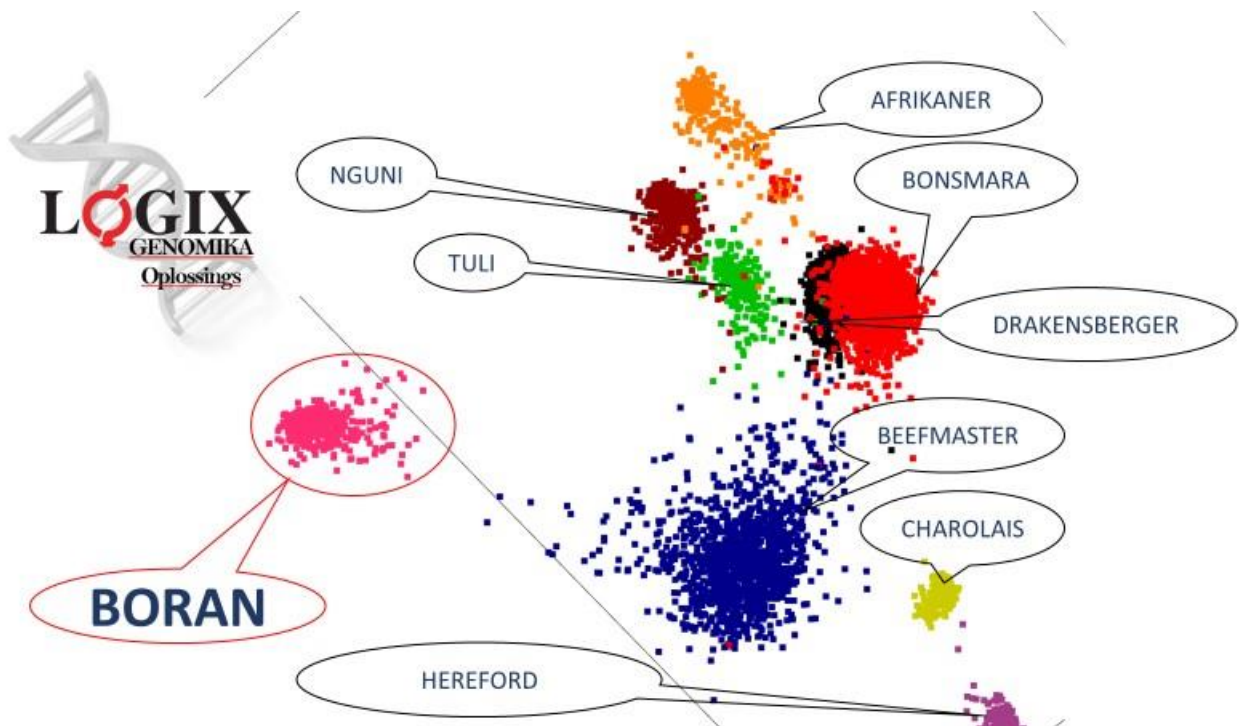
Boran Breeders' Association of South Africa

The Boran Breeders' Association is now using the latest breeding technologies to empower South African beef producers.

Participation of Boran breeders in the Beef Genomics Program (BGP) resulted in the genotyping of 500 Boran cattle. This gives an excellent insight into the genomic profile of the breed. Cattle with known genomic profiles represent all the possible lines and countries of origin of the breed. This information, combined with more than 6 900 available genotypes of cattle from nine other beef breeds on the Logix recording system, enable Stud Book's researchers to determine the genetic distances (relationships) among breeds, as well as the genetic diversity within each of them.

The Boran Breeders' Society fulfils its role in the genetic improvement of the breed, but also realises its importance to contribute positively to the profitability of commercial beef production. The most important role is to set the pace in establishing a sound dam line that will thrive and produce economically under African conditions. The added knowledge gained through genomic information now also lends itself to make use of the genetic distance and diversity to establish composite dam line animals and to use cross breeding in complementing other breeds while also benefitting maximally from hybrid vigour.

One of the methods that is currently the talk of the town is the, so called, "Principle Component Analysis" (PCA) that assist in grouping breeds. Breeds can either be grouped together or clear distinctions can be made in terms of the existing genetic diversity. Stud Book's research and development outputs in this regard are available to the different breeds. The following three-dimensional figure depicts the diversity among different beef cattle breeds.



It is clear from the three-dimensional depiction that individual animals within a breed will be closer related to each other, compared to their relatedness to cattle from other breeds. The diversity (variety) within each of the breeds is also very clear and reflects the different families or lines in each of them.

The true uniqueness or distinction of a breed is therefore expressed as the genetic distance (relationship) of animals in the breed in relation to those in other breeds. The results from the Beef Genomics Program and Stud Book's investigations immediately showed the obvious, namely that the Boran forms a unique genetic group as African Bos Indicus breed. This opens new possibilities for planned matings in commercial beef herds in a wide range of environmental conditions and production systems. The distinct genetic distance from other breeds also lends itself for higher hybrid vigour. Over and above this advantage, the distinctness points to a unique genetic composition that will serve to complement planned matings in forming dam lines with unique growth, finishing and carcass properties in marketable progeny. Alternatively, such dam lines can underpin well planned and executed terminal cross breeding programs using large framed or growthy medium framed bulls of other breeds. In all cases the genetic distance between such breeds should be considered to reap the biggest benefits from these sire lines through maximum heterosis.

For more information contact Christopher Havenga (christopherhavenga@icloud.com) or Yolanda Venter (yolandav@stemma.co.za) from the Boran Breeders' Association, or Bobbie van der Westhuizen (bobbie@studbook.co.za) from SA Stud Book.

29 November 2018

Simeon Hurwitz (simeon@hurwitz.co.za)
President: Boran Breeders' Association of South Africa