



Gouwsberg Tuli Stoet

WERNER GOUWS
Posbus 186, Bronkhorstpruit 1020
082 853 4483 • werner@gouwsbergtulis.co.za
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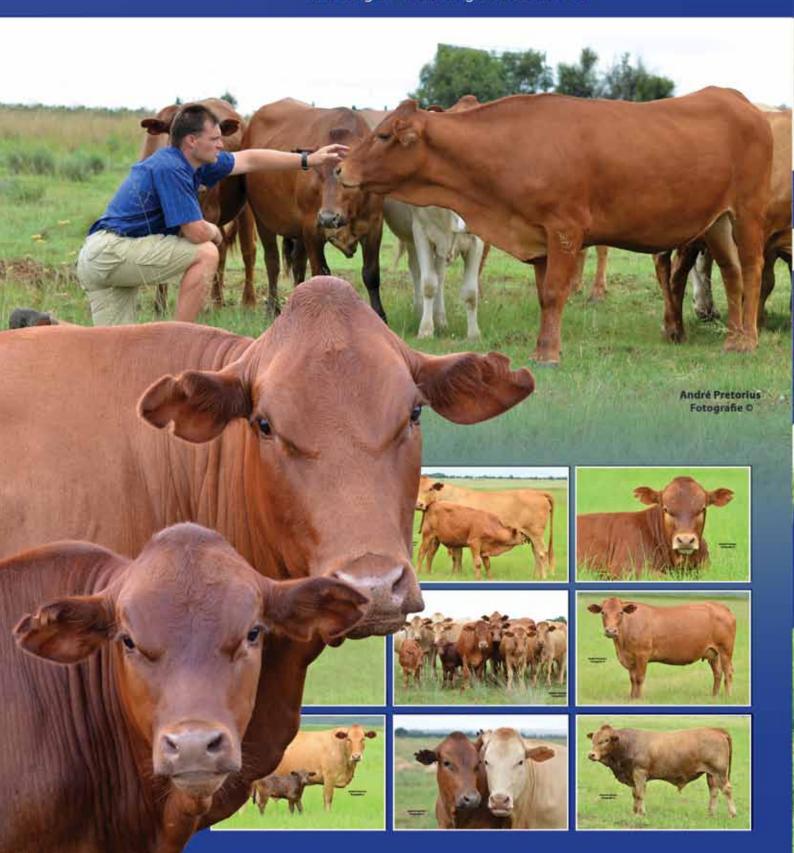






Figure 1

Veld adapted animals with great genomic values.

Bulls for sale on the farm

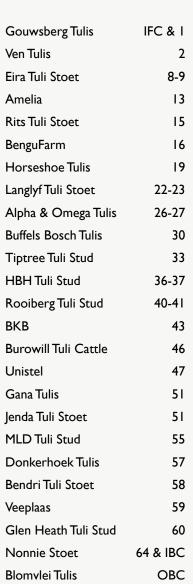


PW Michau: 082 788 2795 | **Barbara Michua:** 079 882 2582 P.O Box 663, Cradock, 5880



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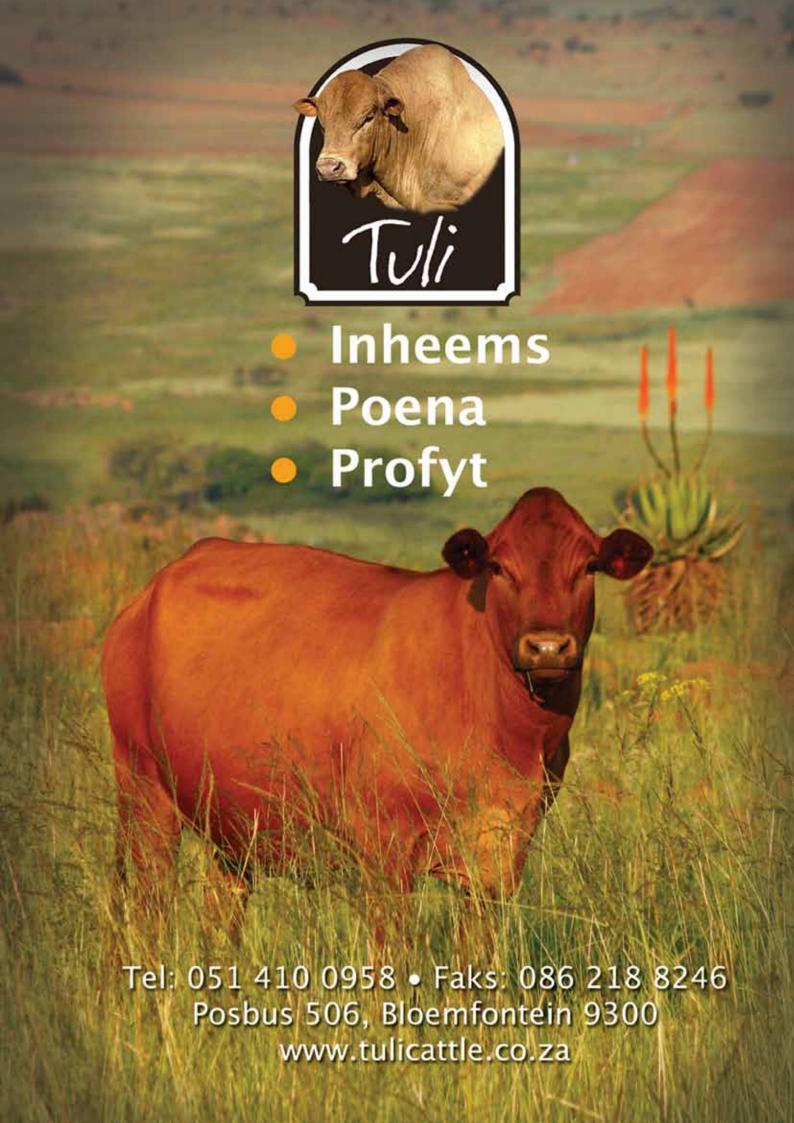
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Werner Gouws - President

BOODSKAP MESSAGE

Dit is met dankbaarheid dat ons terugkyk oor 'n besige, maar goeie jaar vir ons as Tuli Genootskap en Ras. Ek is trots om 'n Tuli teler te wees. Die unieke ras wat deur al die jare se beproewings homself deur en deur al bewys het.

Ek wil begin deur net 'n oomblik stil te staan by ons pragtige joernaal en al die harde werk van ons bemarkingsbeampte, Lizette Vermaak. Ek wil haar en al die rolspelers bedank vir hulle lojaliteit en bereidwilligheid met die ontwerp en redaktering van 'n pragtige vertoonvenster van ons ras. 'n Woord van dank aan die Sekretariaat en spesifiek ons sekretaresse, Liezel Grobler. Geen woorde kan haar deugde omskryf nie. Ook 'n woord van dank aan my mede-raadslede wat onbaatsigtig saamwerk om hierdie genootskap en die ras suksesvol te bestuur.

'n Spesiale vermelding en dank aan die Noordelike Tuli Klub wat van krag tot krag gaan met 'n suksesvolle veiling en 'n puik boeredag. Daar word ook verwys na ander suksesvolle veilings en boeredae soos gereël deur Jenda en Go West.

Ek glo almal sal met my saamstem as ek sê dat die Tulis vir my soos 'n familie voel. Die wyse waarop medetelers kan saamwerk en die sinergie tussen telers is iets wat mens hoog op prys stel.

It goes well with our breed. Membership has grown to 75 during the past year. Currently there are more than 9 000 registered animals on record at SA Studbook. Welcome to all our new members. I trust that you will also experience the companionship of fellow breeders as part of our close knitted Tuli family.

Seker een van die mees onbaatsugtigste werke is die van ons genootskap keurders. Sonder 'n gekla het die span dit reggekry om vanaf Februarie 2013, nie minder as 1 150 diere te inspekteer in vergeleke met die vorige jaar se getal van 860 diere. Die jaarlikse keurings opknappings kursus was ook 'n groot sukses. Dit is wonderlik om te sien hoeveel nuwe belangstellendes daar in ons geledere is. Dit is lekker om nuwe gesigte by die geleenthede te sien. Gelukwense aan ons 6 nuwe junior keurders wat die prakties en teoretiese toetse geslaag het. Dit maak my nog meer opgewonde oor die toekoms van ons pragtige ras.

Suid-Afrika word gekenmerk as die broodmandjie van Afrika. Met 'n positiewe bevolkingsgroei en 'n duidelike projeksie in afname in landbou produktiwiteit, is dit duidelik dat ons as beesvleisprodusente skouer aan die wiel moet sit om Suid-Afrika sowel as die res van Afrika vir die volgende 20 jaar te kan voorsien met voortreflike rooivleis.

Dit is ons as Tuli stoettelers se taak om die mark met uitsonderlike gehalte bulle en vroulike teeldiere te voorsien wat onder ekstensiewe veldtoestande 'n verskil in die komersiële boer se boerdery en sak sal maak.

Aardverwarming en natuurskommelings het weereens hierdie jaar vir ons laat besef dit is van kardinale belang om met doelgerigte teeldoelwitte die korrekte bees vir ons Afrika toestande te teel. Droogte in een deel en uiterste nat toestande in die ander, het tot gevolg gehad dat diere onder alle omstandighede tot die uiterste beproef word. Die goeie reën het kalmte en vertroue in die boerdery gemeenskap gebring en tesame daarmee ons dank aan die

Drie Enige God wat alles vir ons moontlik maak en aan wie ons die toekoms van ons ras opdra.

Allow me a word towards performance testing. Breeders will have to take cognisance of this very important aspect as it will be compulsory in future and clearly stipulates the way forward towards maintaining the Tuli breed as the most furtile indiginious breed.

Also a word of welcome to our Zambian Breeders in joining the Tuli family in South Africa, as they have decided to proceed with studbook.

Ons Namibiese telers is wel bekend aan almal in Suid-Afrika. Nou met die grens tussen die twee lande weer oopgestel, sien ons uit na goeie samewerking en om besigheidsbande te versterk.

To conclude we thank everybody that contributed in making the past year a success. We urge everybody to uphold our slogan Tuli for Indigenous-Polled Profit that makes it an intelligent choice.

A clever farmer once said" If times are tough, hang on to the cow's tail as she will pull you through"



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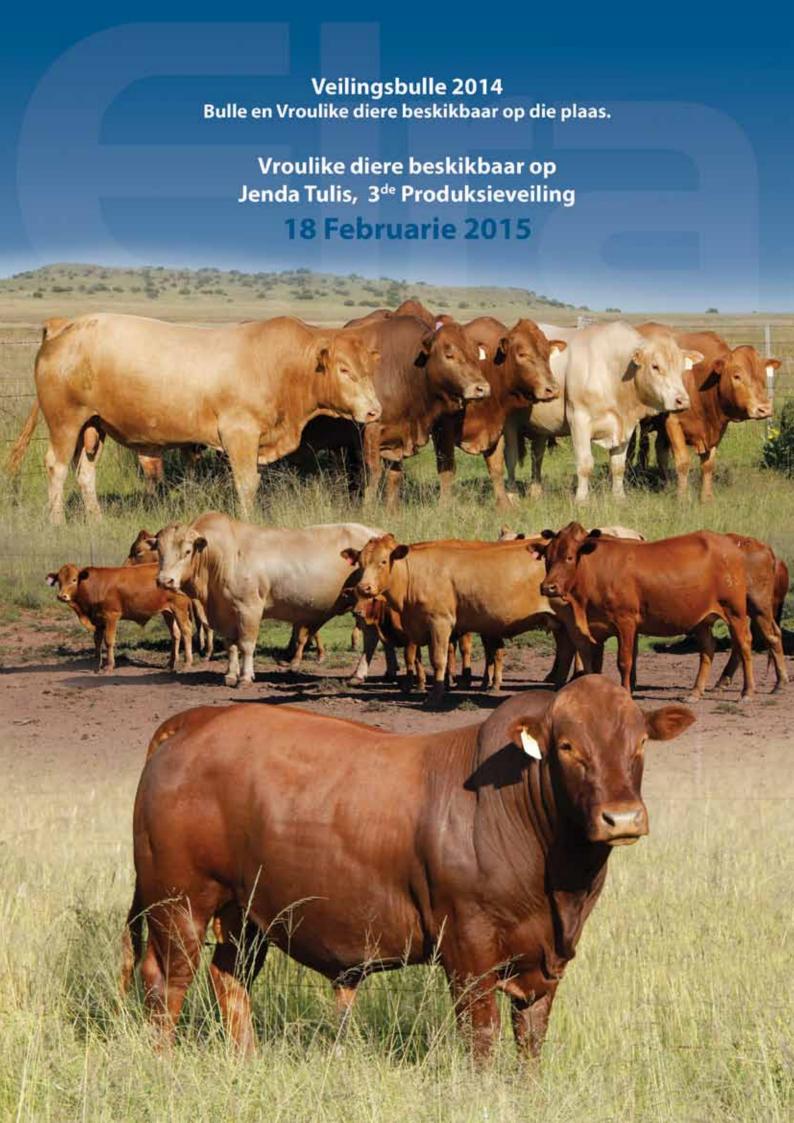
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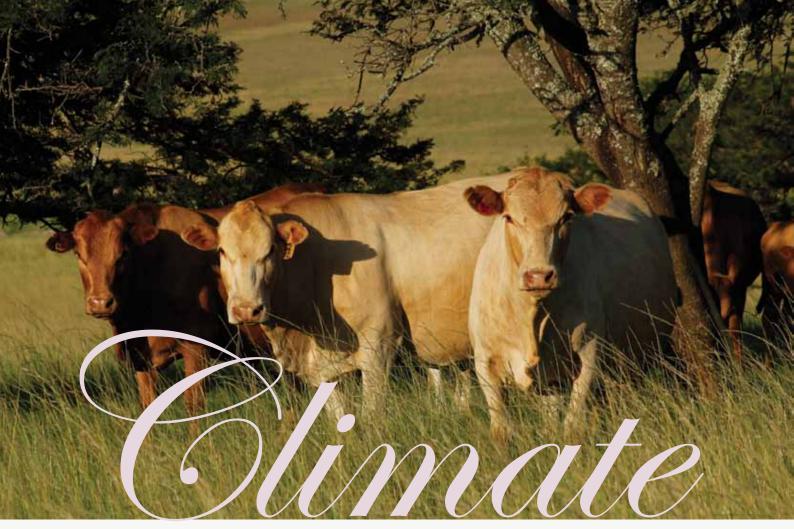
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ElfaTuli Stoet

Mnr A.J. van Rijswijk • Posbus 251 • Burgersdorp • 9744 Sel 083 410 7753 | Huis 071 658 2832 | E-pos: ajvanrijswijk@yahoo.com







smart animal agriculture in Southern Africa

Farming with indigenous breeds of cattle in sustainable veld – livestock systems

KEITH A RAMSAY

Scientific Manager: Animal Production

Department of Agriculture, Forestry and Fisheries

ANIMAL PRODUCTION IN A CHANGING ENVIRONMENT

A large part of Southern Africa is prone to seasonal dry periods and periodic droughts – and is only really suitable for some form of animal production off natural vegetation that also varies in quality and quantity. Climatic factors such as temperature and humidity also make the region an ideal breeding ground for a range of animal diseases and parasites and this is being aggravated by gradual climatic and vegetation changes that include rising temperatures, less rainfall and a move from a grassland to a savannah - woodland biome in many areas.

Despite this, livestock and more than often, beef cattle production is one of the most economically important (if not the most important) activities in the region and Southern Africa is in the fortunate position of still having a number of breeds and species that are capable of producing under these conditions. In fact, the most successful and sustainable cattle farming systems in the region include those that use indigenous and locally developed breeds such as the Nguni, the Tuli and the Bonsmara (locally developed).

In recent years, rising costs of stock remedies and feeds – as well as a growing awareness of the vulnerability of the natural resources still available for extensive livestock production has focussed attention on farming systems that take these factors into consideration and use animals that are not only able to reproduce and produce under changing conditions but are also less likely to harm the environment.

Farming with adapted breeds in sustainable systems is often referred to as climate smart animal agriculture

By definition, climate smart animal agriculture refers to farming systems that are based on sound animal and veld husbandry principles that take current and projected climatic and vegetation conditions into consideration to ensure long term sustainability. This includes farming with indigenous, locally developed and locally adapted breeds and species capable of surviving and producing under conditions such as higher temperatures, less rainfall, an increase in animal diseases and parasites and changes in the natural vegetation

THE VALUE OF INDIGENOUS AND LOCALLY DEVELOPED BREEDS

South Africa has a variety of indigenous breeds of farm animals that originated in Eastern and Northern Africa and moved Southwards with migrating tribes to enter South Africa almost two thousand years ago.

On the way, they travelled through areas rife with animal diseases and parasites adapting to, and settling in, a variety of biomes – most of which would normally be seen as unsuitable for extensive livestock production.

Some of these breeds were used to develop hardy composites such as the Bonsmara and the Dorper sheep and some were subjected to in herd selection to establish breeds such as the Mashona, the Tuli, the Damara sheep and the SA Boer Goat. A common trait in all these breeds is fertility through adaptability.

THE IMPORTANCE OF FERTILITY

Irrespective of the breed and species, fertility is the most important factor in any sustainable and economically efficient livestock farming system. Any factor with a potential negative impact on fertility should be seen as a stressor and must be managed.

The more adapted the animal is, the less stressed it will be and it will use its energy and body resources to eat and reproduce.



A calf per cow per year is the first step. The cow must be able to wean this calf and re-conceive. Calf losses from birth to weaning will effectively increase the load on the resources, as more cows will be needed to produce the required number of weaners to remain economically viable.

Work done by Smith (1993) at Matopos research station in Zimbabwe (Table I) shows how the number of cows and bulls needed to produce 100 weaners increases as the weaning percentage goes down. This highlights the importance of fertility and the ability of cows to calf, produce a healthy weaner and reconceive.

TABLE 1. - COWS AND BULLS NEEDED TO PRODUCE 100 WEANERS AT DIFFERING WEANING RATES (%) (Smith, 1993)

	Weaning rate (%)					
	40	50	60	70	80	90
Cows	250	200	167	143	125	111
Bulls (1 per 25 cows)	10	8	7	6	5	5

Functionally efficient heifers and cows are those capable of high weaning rates. In order to understand this more clearly and to appreciate the value of adapted animals it is useful to have a look at the stress load on a grazing animal under normal grassland conditions and to see how this is counteracted through a combination of traits that only nature could have put together.

UNDERSTANDING THE DYNAMICS OF ADAPTATION

Fig. I shows the daily stress load on a grazing cow and Fig.2 lists the traits that are used to offset this to enable the animal to focus on eating and breeding.

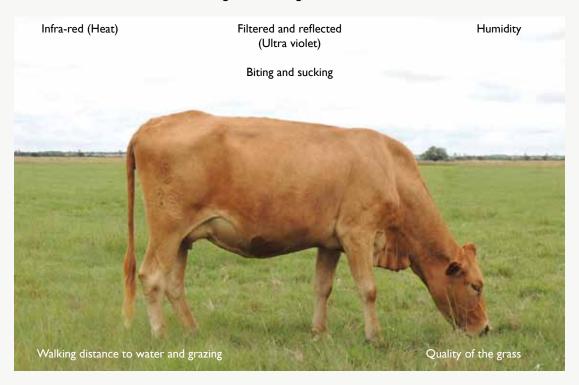


FIG.1.- THE DAILY STRESS LOAD ON A GRAZING COW

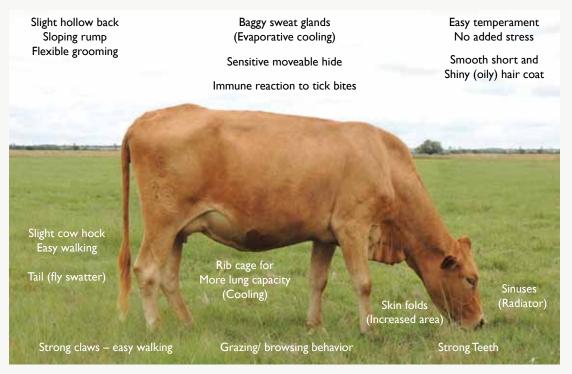
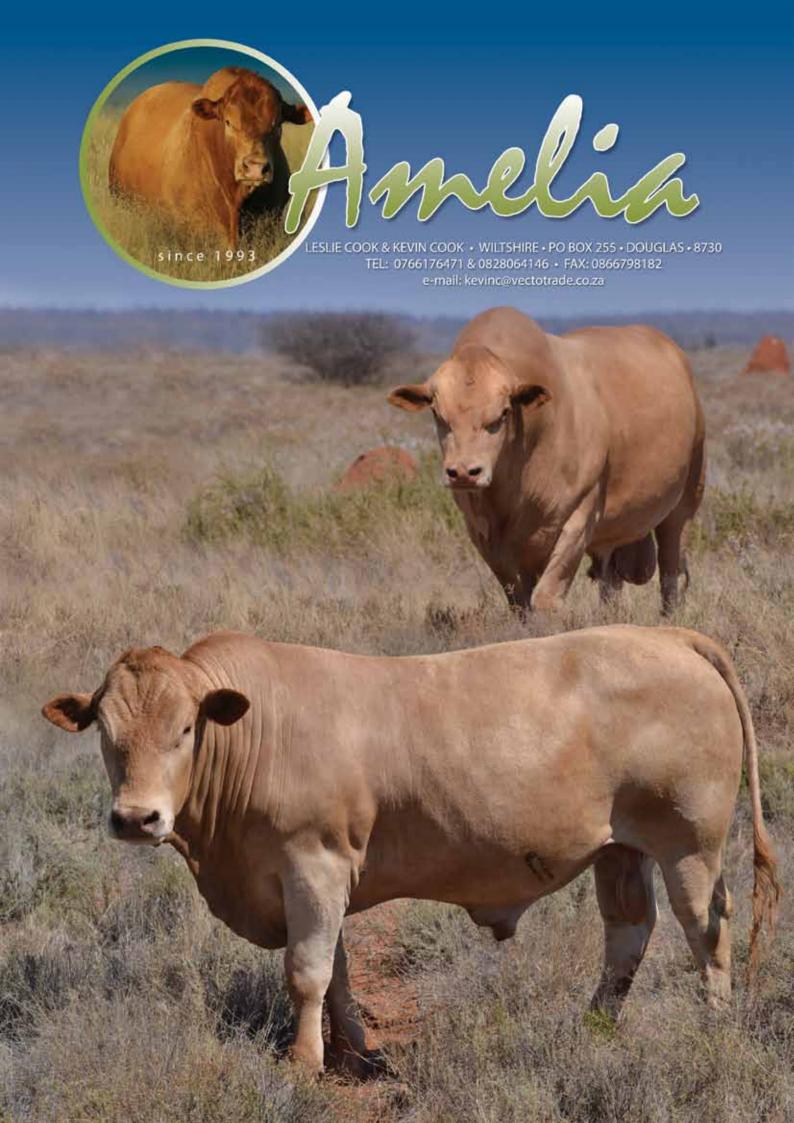


FIG.2. - FUNCTIONAL TRAITS USED TO OFFSET THE STRESS LOAD



A functionally efficient animal must be able to get to its food (natural veld), eat sufficient food to maintain normal body functions, reproduce and produce saleable progeny on a regular basis.

Essentially, this includes:

- The ability to walk long distances
- The ability to graze (and browse)
- The ability to offset any stress factors that may influence intake and digestion. This would include biting and sucking insects and heat stress

THE ABILITY TO WALK FAR ENOUGH TO GET SUFFICIENT FOOD.

Bonsma (1953) compared the grazing behaviour of Hereford cross Afrikaner and pure Afrikaner cattle in the mixed bushveld and observed that the Afrikaner cattle grazed more quietly and were less selective than the crosses.

Under favourable conditions, both groups walked about 4 km per day between the watering point and the grazing but the Afrikaner cattle were capable of walking up to a total 25 km a day in adverse (limited grazing) conditions. The crosses seldom walked more than the 4km.

European breeds under similar conditions would walk even less - and would tend to stay as near to the watering point as possible. This also results in selective overgrazing.

Sanga cattle (Mashona, Nguni and Tuli) also manage rocky hilly areas more effectively and graze higher up slopes – getting more food in the process.



In addition, as non - selective grazers, they eat everything and end up with more bulk in the rumen. Nutritional shortfalls are often supplemented by browsing selectively from trees and shrubs that have a higher level of essential nutrients.

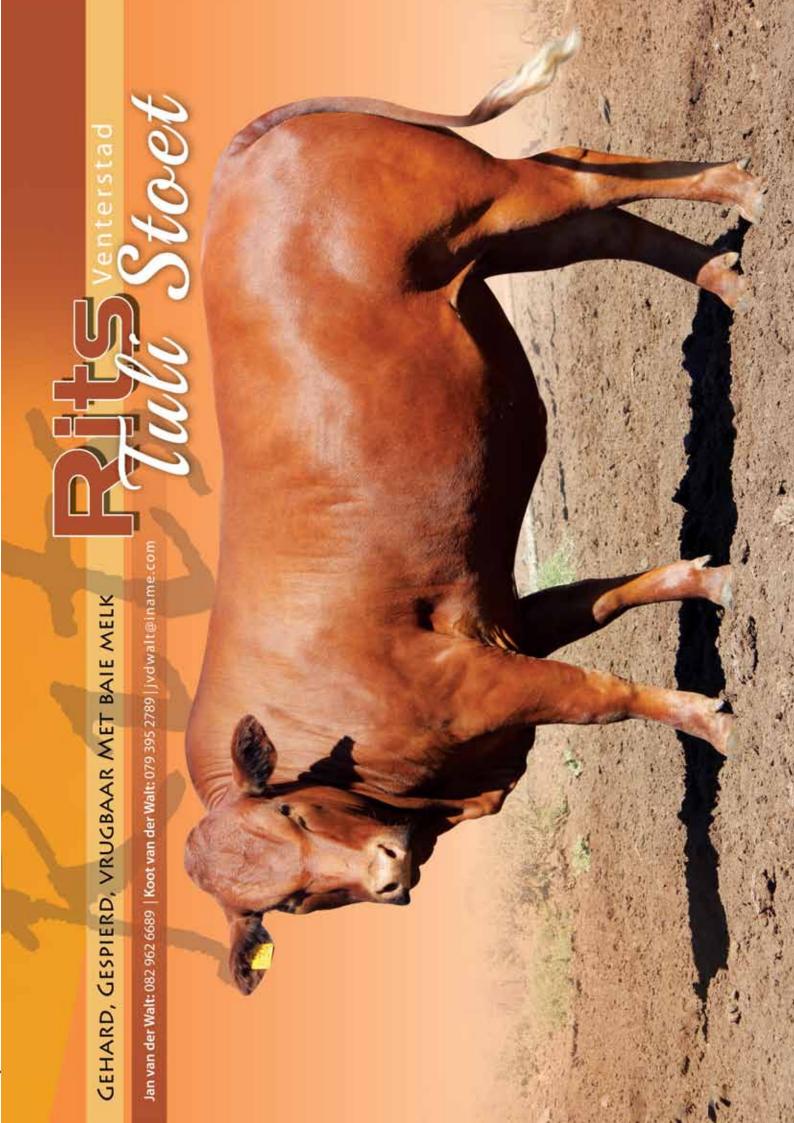
STRONG TEETH THAT DO NOT WEAR DOWN PREMATURELY

In addition to the ability to walk and graze, animals need to be able to "cut" enough grass and browse to meet their daily intake requirements for maintenance and for reproduction. This has an impact on their productive lives and they have to be replaced more frequently as a result.

Work done by Steenkamp (1969) showed that the hardness of tooth enamel of native cattle tended to increase with advance in age rather than decrease, as was the case with exotic cattle.

A survey of all cows older than 14 years in the Bartlow Combine Nguni herd showed that all still had their full set of teeth and that these animals still performed (fertility, weaning) better than the average for the herd.

This also highlights the importance of longevity – a trait that is obviously linked to adaptability and fertility.











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My pa het my altyd gewaarsku teen die 'boekwerk' van stoetboerdery. Met BenguFarm™ BEEF is hierdie frustrerende "boekwerk' egter omskep in 'n magtige bestuursprogram. Ek is seker dat as ek my pa kon wys hoe maklik kuddebestuur nou is, hy sou saamstem dat die BenguFarm™ BEEF sagteware seker die handigste stuk gereedskap op enige beesplaas is - stoet en kommersieël. 🤊 🤊

> Mnr Gerrit van Zyl, Hanzyl Bonsmaras, Dewetsdorp NASIONALE WENNER: LNR-ABSA VLEISBEESKUDDE VAN DIE JAAR 2009 & 2011 & VOERMOL NATIONAL BEEF CATTLE FARMER OF THE YEAR 2012

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OFFSETTING THE STRESS OF BITING AND SUCKING INSECTS

Animals that evolved in biomes with a problem with ticks and flies have well developed pilo motor nervous systems. The hide, while often thin, is very sensitive and can feel irritations more effectively than breeds from temperate zones where flies and other biting insects are less of a problem.

Insect contact causes well-developed paniculis muscles to 'shake' the hide and unsettle the insect.

Bonsma illustrated this in work done in the 1940's where carcasses of Zulu (Nguni) cattle were compared to crossbred cattle (Fig.3).

In the photographs below, the paniculis muscles are clearly visible in the Nguni carcasses – and almost non-existent in the crossbreed carcasses.

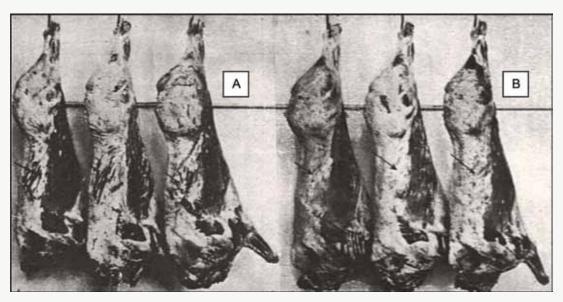


Fig. 3 A comparison of carcasses of adapted Zulu (Nguni) cattle (A) and less adapted crossbred animals (B). The paniculis development can be clearly seen in (A). This development is virtually non-existent in (B) (Bonsma, 1949)

In addition to a motile hide, cattle breeds should have a slightly longer tail with a loose switch as an effective fly swatter. The tails of breeds that did not originate from areas (sub-tropical to tropical zones) where flies and biting insects are a problem tend to be shorter and less effective.

A smooth (slick) short haired coat also offers a lot less place for ticks to attach themselves and breeds such as the Tuli, Nguni, Mashona and Afrikaner also have a degree of tolerance/ resistance that further reduces tick challenge.

TICK TOLERANCE

Breeds cattle that have adapted over centuries to conditions in areas with high tick infestation have an immune reaction to a tick bite. While this still needs to be quantified, the bite area shows an immune reaction that irritates the tick – causing it to drop off before its cycle is completed.

In economic terms, this reduces the need to dip such cattle on a more regular basis – resulting in significant savings on tick remedies.

Work done at the Animal Improvement Institute farm, Loskop South clearly showed what effect tick infestation had on weaning weight. The potential cost saving should be added to a projected hide value. A premium is paid for hides with minimal tick damage as these are used for car upholstery.

TABLE 2. - TICK INFESTATION AND THE EFFECT ON WEANING WEIGHT (SCHOLTZ ET AL, 1991)

	Hereford	Bonsmara	Nguni
Number of one-host ticks	3137	2030	431
Number of multi-host ticks	164	164	82
Difference in weaning weight between dipped and not dipped	29.5kg	17.6kg	4.4kg

DISLODGING AND DISTURBING BITING AND SUCKING INSECTS THROUGH GROOMING

Sanga cattle able to groom very effectively to dislodge ticks and other sucking insects by either scratching the affected parts of the body with the hind claws or even chewing certain areas such as the scrotum in bulls and the tip of the tail.



Breeding for too straight backs and straighter rumps would reduce this ability and also influence calving ability.

HEAT TOLERANCE

Heat tolerance - or the ability to keep cool in hot climates includes the following:

- · Less body area exposure to the sun
- · Evaporative cooling through respiration
- Evaporative cooling through sweating

Heat tolerant animals have slightly different skeletal structures so that less area is exposed to direct heat rays. Animals originating from temperate to cold climates need to get as much direct exposure as possible and tend to be broader when seen from above (Fig. 4).

This adaptation influences the angle of the rib cage which in turn also influences the ability to cool the blood through evaporative cooling (larger lung capacity). This allows for an exchange of heat without excessive panting.

Hot climate animals are therefore classified as respiratory types in comparison to higher altitude temperate to cold climate animals that need to retain energy. These are referred to as metabolic or digestive types.

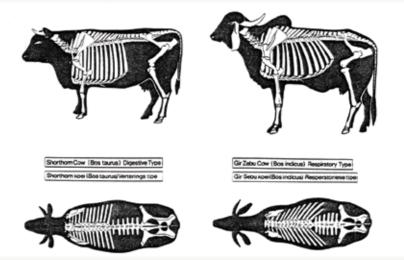


FIG.4. - METABOLIC TYPE VS. RESPIRATOTY TYPE CATTLE (Bonsma, 1982)