



# The status OF THE NGUNI RELATIVE

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**B**efore considering the status of the Nguni relative to other South African breeds and the appropriate breeding practices to advance its veld productivity, we need to consider some important principles:

- Cattle have a dual role. They have to efficiently convert grass to beef and at the same time improve the land on which they depend.
- Bearing that in mind, an appropriate goal would be “maximum sustainable (economic and ecologic) profit/ha”.
- **EVERYTHING** in cattle breeding and management revolves around body condition. Body condition affects breeding and management decisions and breeding and management decisions are affected by body condition.



# and future TO OTHER BREEDS

- Body condition is dependent on breeding (inherent body condition) and management.
- **Inherent body condition is determined by:**
  - (a) Frame Size. Smaller frame cattle have a higher Relative Intake (% body weight) resulting in more nutrients above maintenance for production and fat deposition.
  - (b) Climatic Adaptation.
  - (c) Parasite and Disease Resistance.
  - (d) Individual Appetite. Some animals graze longer and more voraciously.
- There is more energy (feed) required for 1 kg gain of fat meat than 1 kg lean meat. The corollary to this is that a fat animal has more energy reserves to draw from in times of paucity.
- When selecting for absolute growth (daily gain; weight per day of age) and Feed Conversion Efficiency (Phase C and D tests) the leaner individuals are favoured (less feed required/kg gain).
- The best that conventional performance testing can do is breed cattle that require improved nutrition to be “productive”. The difference in ICP between

the first two calves for the progeny of Gold Merit bulls versus Sub-Merit bulls is 19 days in favour of the “poorer” bulls (Bonsmara 2008). This reflects the poorer body condition of the genetically leaner genotype.

- Stocking rate is the most important determinant of profit/ha. Fertility is the most important profitability trait. Stocking rate is increased via non-selective grazing and high animal impact (ultrahigh density grazing) and fertility are largely determined by body condition. Profit is increased via a genotype with high inherent body condition.
- **Breeders have a choice: BREED or FEED** for body condition.

The human mind is an enigma. There is a big difference between PERCEPTION and REALITY. The perception, particularly in South Africa, is that the only way a breed or genotype can be improved is via “scientific breeding”. The focus is on performance testing along Phase C lines where bulls are subjected to a feedlot test measuring Feed Conversion Efficiency and absolute growth rate. The selection criteria being used are further enhanced in terms of accuracy by formulating EPD’s via BLUP-analysis. The reality is that inappropriate criteria (lean meat production) are being measured accurately resulting in a genotype requiring improved nutrition (countering genetic leanness) to be “productive”. This is akin to accelerating the speed of a car on the wrong road. You will reach an undesired endpoint very quickly. It makes a mockery of the slogan: “Man must measure”. Perceptions aside: What is the reality concerning the veld productivity of a “scientifically improved” breed relative to an “unimproved” breed? There are no better candidates to represent the “scientifically improved” and “unimproved” breeds than the Bonsmara and Nguni respectively. The following data is taken from the driest year in 14-year (1992 to 2005) comparison based on production per unit area and cow fertility at Omatjenne, Namibia.

	CONCEPTION (%)	WEANER Kg/ UNIT AREA
BONSMARA	63	4462
NGUNI	79	5565

Considering anecdotal evidence and the results from the few veld comparisons made there is absolutely no doubt that the so-called “unimproved” breeds are far superior to the “scientifically improved” breeds in terms of veld productivity.

Given the fact that the Nguni is more veld productive than the Bonsmara (“scientifically selected”): What selection criteria and breeding practices should be used to improve the veld productivity of the Nguni? To answer and address this question we need to be clear about what the traits are that constitute veld productivity.

**The attributes of a veld productive genotype are:**

- Grass conversion efficiency / Inherent body condition / High relative intake.
- The individual that has the fastest RELATIVE growth rate (growth relative to size) resulting from the highest RELATIVE grass intake (intake relative to size) will be the most efficient grass converter and this will be reflected in the fullest package (weight: frame size) and best body condition.
- Early sexual maturity as reflected in hormonal balance (early cessation of skeletal growth). “Pony-type” bulls reflect both early sexual and physiological (fat) maturity.
- Optimum milk resulting in a calf/cow weight of approximately 40% to 50% at 7 months.
- High meat:bone ratio of bulls. This is positively correlated to fast relative growth (maturity rate) and results in a high carcase dressing percentage.

■ **Easy-care attributes:**

- (a) Calving ease
- (b) Mothering ability
- (c) Temperament
- (d) Tick and parasite resistance

It is important to understand that natural selection favours inherent body condition whereas “scientific” selection favours the opposite. Hence the need for a better nutritional environment as well as other inputs in the form of dips, drenches, and antibiotics for the “improved” breeds to be “productive”. The big question that needs answering and addressing is:

## Do Nguni breeders want to enhance the natural attributes of the Nguni or do they want to breed a “Bonsmara”?



For those breeders who wisely choose to enhance the natural attributes of the Nguni all they need to do is “read” nature correctly (identify the most grass efficient individuals) and accelerate the process of natural selection.

**The following procedure needs to be followed:**

- Breed all heifers at the age of 14/15 months. Those that calve at 2 and reconceive for their second calf at three years of age become the nucleus for bull selection. Those that do not make the grade do not need to be culled.

It is essential to have a limited breeding/calving season. There is no need to have a breeding season longer than 42 days if calving coincides with the period of green grass.

- Select bulls from the most fertile cows. These are further selected for yearling maturity rate (12-month maturity from hip-height measurement; visually full package). The final selection group is mated with yearling heifers in a multi-sire situation to identify the most prolific breeders (percentage of calves).
- The best bull/s identified by the foregoing process should be bred via AI to all cows for one season. The process is repeated with newer generation bulls.

Although I have an Animal Science background this has been tempered by observing realities on the ground. I have come to realise that man is both the problem and the solution. When man deems his judgement to be superior to that of Nature, the result is a genotype and management practices out of sync with natural processes. When man is humble enough to realise that Nature is much smarter than him and devotes his energy to enhancing natural selection and other natural processes the outcome is harmony and unimagined productivity.

It is up to each breeder to decide which route they wish to take. The outcome will be either harmony with Nature or “scientific” confusion.

As I see it, the future of the naturally selected Nguni is in Composite breeding where its unique genetic make-up will be used to improve the breeds messed up by “science”. Maybe I should end by explaining the difference between “science” and science. In the words of Thomas Huxley, an eminent 20th century scientist:

**“Science is nothing but organised common sense”.**