YEARLING BREEDING IS ESSENTIAL

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What is the most important trait that makes the Nguni stand out relative to all other breeds currently available in South Africa? Surely it must be practical fertility, as determined by inherent body condition and hormonal balance. If this is the case, why do not Nguni breeders reinforce this trait via selection and demonstrate that Ngunis can calve at two years of age and reconceive for a second calf at three years of age, and continue calving until their teeth wear out at an old age? There is no other breed in South Africa, including those subjected to performance testing, that can achieve anything close to this, on veld with limited rumen supplementation.

The most common excuse for not practising yearling breeding is that in order to achieve a large percentage conceiving and reconceiving, would require a high level of management and nutrition. Are Nguni breeders not aware of the fact that in the history of the breed, heifers were exposed to the bull from an early age allowing breeding and conception to occur at the onset of sexual maturity at an early age? It is in the genotype of the Nguni to conceive early and maintain high fertility up to an advanced age. Breeders need to apply common sense management practices in order to allow yearling breeding in greater numbers whilst identifying the individuals capable of calving at two years of age and reconceiving for their second calf at three years of age. These females are the nucleus for genetic improvement. The remaining females do not need to be culled and can return to the main herd. However, it must be understood that genetic change is affected to a much greater degree via the bull. Therefore, the bull selection is of paramount importance.

Heritability of fertility

The academics and textbooks tell us that the heritability of fertility is very low. One hears the term that fertility is 10% breeding and 90% feeding. How can such an important survival trait be so lowly heritable? Have the academics got it wrong?

Ask any breeder, and he will tell you that certain families are far more fertile than others. The main determinants of fertility are hormonal balance and body condition. Is there any doubt that hormonal balance is highly heritable? Body condition at calving largely determines whether a cow will reconceive shortly after calving. Body condition at calving is influenced by inherent fatness (genotype) and nutrition (veld type; supplementation; time of calving relative to rains / green grass). Is there any doubt that inherent body condition, as determined by frame size, climatic adaptation, parasite and disease

resistance, as well as individual appetite, is highly heritable? Therefore, there can be no doubt that practical fertility (hormonal balance and inherent body condition), as opposed to academic fertility (hormonal balance and feed), is VERY highly heritable.

Calving on green grass

The easiest and cheapest way to increase fertility is to calve on green grass. This contrasts with conventional wisdom, which is to calve at least six weeks to two months before the onset of the rains. In most seasonal rainfall areas on the veld, the period from calving to first heat decreases about three-quarters of a day for every day calving occurs closer to mid rains (December / January on the eastern Highveld, and February / March in the Kalahari). If calving occurs at the suggested time, the average cow will start cycling 40 days after calving (variation of 20 to 60 days). This means that the breeding season only needs to be 42 days long, resulting in the vast majority of cows calving within the first 21 days. Another advantage of calving on green grass is that the breeding weight/body condition of yearling heifers will be much higher, resulting in an improved yearling conception rate.

Identifying the genetically most fertile individuals

FEMALES

All heifers should be bred as yearlings (14 / 15 months). Those that calve at two years of age and reconceive for their second calf at three are the most fertile. Those that do not are less fertile but can remain in the herd in order to produce. The two plus three calving cows form the nucleus from which bulls entering the herd are selected.

BULLS

Bulls to be used for herd improvement must be selected from two plus three cows. The most important selection criterion, other than the obvious ones, is twelve Month Maturity. This is reflected in the fullness of the package (fleshing) as assessed visually or by measurement (12-month weight / predicted mature weight). Further to these, it is essential to identify the most prolific breeder at the yearling stage by breeding selected bulls (multi-siring) to yearling heifers. These assessments will result in the identification of the bulls with highest practical fertility.

Breeding and managing for high fertility

FERTILITY CAN BE INCREASED BY:

- Calving on green grass.
- Effective rumen supplementation.
- Preferential grazing for pregnant yearling heifers.
- Select bulls from two plus three cows and multi-sire to determine the most fertile yearling bull/s.
- Breed the most fertile bulls as determined above to all cows (AI) for one year, after which (2 ½ years of age) they become obsolete to this particular herd.

The superior selected Nguni

Stocking rate is the most important determinant of profit. Fertility is the most important trait determining profit. The common denominator influencing fertility and limiting an increase in stocking rate via non-selective grazing and high animal impact is INHERENT body condition. Yearling breeding, and in particular two-year reconception, is what differentiates superior cattle from good cattle.

Rather than allowing heifers to produce their first calf at 39 months, with an ICP of 790 days between the first two calves (“scientifically” selected breed), the Nguni Society should take the lead by elevating two plus three cows to a superior category. This will highlight the “unfair” advantage of the Nguni, as well as encourage Nguni breeders to select for fertility.

Nguni breeders are custodians of a genotype with unique attributes. They need to highlight and enhance these attributes and challenge the so-called “improved” breeds to a contest where the outcome is measured against a goal of maximum sustainable profit per hectare. ■