

# PRODUCTION POTENTIAL OF NGUNI CROSSES

Marli Stegmann (marli@mafred.co.za)

The day we decided to combine a cattle enterprise with our game farming, the Nguni was a natural choice because of its adaptability to the African conditions. Little did we foresee the hidden meat production potential of the breed. Beef cattle farming eventually became the main enterprise on our farm.

Initially the focus was on purebred breeding and to gather the best genetic material. Due to severe drought conditions in the Mopaniveld area we were forced to look for better grazing and were very fortunate to get access to some of the best grazing in the country in the Bandelierkop area. We could expand the herd and experienced excellent growth and fertility, and productivity was increasing. The average cow weight also increased and now is approximately 400 kg, compared to the breed average of 367 kg. When cattle are adapted to their environment, reproductive capacity and frame size will be in harmony and will result in efficient production. In this way the environment determines the size of the animals that would produce the best in that particular environment. We prefer the small- to medium frame ecotypes like the Makatini and Swazi because we would like to benefit from the lower maintenance of lighter cows that wean heavier calves.

Beef cattle breeders should strive to improve the production efficiency of their herds. Generally speaking any system that can produce more live weight for slaughter purposes from lighter cows will be more efficient than a system that produces heavy calves from heavier cows.

As a dam line the Nguni is the most ideal breed for crossbreeding. On average cattle eat 2 - 3 % of their body weight per day. It is therefore important to keep your "factory" as small as possible in order to keep as many as possible producing animals per ha. The official carrying capacity in our area is 7 ha per LSU. If a LSU of 600 kg weaning a calf of 270 kg is used, 14 ha can carry 1200 kg and will wean 2 x 270 kg = 540 kg. If our Nguni cows weigh 400 kg and each wean a crossbred calf of 229 kg, 14 ha can carry 3 x 400 kg = 1200 kg and will produce 3 x 220 = 660 kg, instead of 2 x 270 = 540 kg.

We use Simentaler bulls in a terminal crossbreeding program. Table 1 shows a few examples of cow- and calf weights at between 5 and 6 months, which are approximately 40 days before weaning.

**Table 1: Cow and calf weights at 5 – 6 months calf age**

Cow number	Calf birthdate	Calf Age (m)	Date weighed	Cow weight (kg)	Calf weight (kg)	Calf / Cow (%)
1	2010/11/09	5	2011/04/11	395	181	46
2	2010/10/17	6	2011/04/11	457	180	39
3	2010/10/29	5.5	2011/04/11	484	194	40
4	2011/10/25	5.5	2011/04/11	475	212	44
5	2011/10/20	5.5	2011/04/11	416	181	43
6	2011/11/26	4.5	2011/04/11	386	153	40
7	2011/10/27	5.5	2011/04/11	436	178	41
8	2011/10/18	6	2011/04/11	427	176	41
9	2010/09/27	6.6	2011/04/11	437	233	53
<b>(9)</b>	<b>Average</b>	<b>5.5</b>		<b>434</b>	<b>187</b>	<b>43</b>

The last line indicates the average weights of 9 cows and calves at an average age of 5.5 months

From Table 2 it is clear how the returns from veld can differ with different types of cattle. Take note that no vaccines and management costs were taken into account. More calves can be produced per

ha with a smaller framed dam line and the end result of more profit in the farmer's pocket will be substantial.

#### VELD PRODUCTION

**Table 2: Comparison of breeds on 1 000 ha with grazing capacity of 60 tons per year**

	<b>CHAROLAIS</b>	<b>BRAHMAN X</b>	<b>NGUNI</b>	<b>NGUNI X <i>Bos taurus</i></b>
<b>Cows weight in kg</b>	600	520	370	370
<b>Total number of cows</b>	100	115	162	162
<b>Calf weaning %</b>	65%	75%	85%	83%
<b>Number of calves</b>	65	86	138	134
<b>Average weaning weight</b>	300	240	180	215
<b>Total kg produced</b>	19 500	20 640	24 840	28 810
<b>R per kg (2008)</b>	R 20.50	R 20.30	R 19.50	R 20.30
<b>Total R</b>	R 399 750.00	R 418 992.00	R 484 380.00	R 584 843.00
<b>Difference in Rand</b>		R 19 242.00	R 84 630.00	R 185 093.00
<b>Difference in profit %</b>		(4.8%)	(21%)	(64%)

*Bos taurus* breeds like Simmentaler, Charolais, Hereford and Angus.

Data in table provided by Piet Warren.

It is extremely important to keep using a pure Nguni cow in order to exploit the full benefits of the Nguni's good qualities such as hardiness, fertility, longevity and adaptability. Our heifers are allowed to produce two calves from a purebred Nguni bull before being mated to a Simmentaler. This gives her a chance to become fully grown before a crossbred calf is born. We also select bulls with a negative birth weight index to ensure that the calf's birth weight is as low as possible. Other positive attributes such as the ability to inhibit the foetus' size, ease of calving and good mothering ability make the Nguni cow the most perfect dam for crossbreeding.

Other breeds boast with size while we can boast with more cows per hectare that calve each year, good rearing of the calves and continued calving up to the age 16 years or more.