

**NORTH WEST DEPARTMENT OF  
AGRICULTURE AND RURAL DEVELOPMENT.  
AGRICULTURAL SUPPORT SERVICES.**

**Growth and Economic performance of Nguni steers supplemented with  
phosphate and productions lick on old cultivated pasture under dry land  
conditions**

**By**

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REPUBLIC OF SOUTH AFRICA



# Introduction

- Nguni is farmed by most emerging farmers
- Protein and energy supplementation is required
- Nguni not well received by most feedlots
- Nguni does well under extreme conditions
- The beef sector contributes food security to almost 1.3 billion people.



# Aims and Objectives

- To evaluate the finishing and supplementation of Nguni steers on cultivated pastures under dry land conditions.
- ❖ To evaluate the effect of different lick supplements on growth performance and carcass characteristics.
- ❖ To determine which supplementation is needed to produce market ready steers from the cultivated pasture under dry land conditions.
- ❖ To determine whether small frame cattle can be fattened economically without strategic supplementation

# Materials and Methods

- ❖ The study was conducted at Melton Livestock improvement centre.
- ❖ The long term average rainfall is approximately 430 mm per year.
- ❖ Most rainfall occurs during summer and late summer months.



## Materials and Methods Cont . . .

Treatments	Description	Number of animals
Control	No Lick supplementation	9
Treatment 2	Mineral licks (phosphate/Salt <i>ad lib</i> )	9
Treatment 3	Production licks (protein/energy/mineral – <i>adlib</i> )	9



# Slaughter procedure

- ❑ The steers were slaughtered at 30 months of age.
- ❑ On the day prior to slaughter, animals were weighed after being fasted over night at the abattoir holding pens.
- ❑ Animal slaughter and dressing was done following standard procedures at the Vryburg abattoir.



# Results and Discussion

**Table 2.** Average daily gain, live weight, and carcass characteristics of Nguni steers slaughtered at 30 month of age (900 days).

<b>Treatments</b>	<b>Weanin g weight (kg)</b>	<b>Initial BW (kg)</b>	<b>Final body weight (kg)</b>	<b>Body Weight Gain (kg)</b>	<b>Average daily gain (g)</b>
Control	142	216	303	87	139
(T1)Phosphate	142	217	358	141	224
(T2) Production	142	216	333	117	201



# Results and Discussion

**Table 3.** Average carcass characteristics of Nguni steers finished on cultivated pasture under dry land conditions at 30 months of age (900 days).

Treatments	Slaughtering weight (kg)	Warm CW	Cold CW	Dressing %	Fat Thickness (mm)
Control	285	152	147	51.5	2.2
Phosphate	335	185	179	53.4	2.4
Production	318	173	171	53.7	1.8





# Results and Discussion

**Table 3.** Economic returns of the trial.

Treatments	Grade	Price/kg	Total carcass yield kg	Overall total income	Variable costs	Profit
Control	AB 2 X2 B2 X7	R31 R29	147*9 = 1323	R39 222.70	R0	R39 222.70
Phosphate	AB X 1 B2X 8	R31 R29	179*9 = 1611	R46 533.40	R13 950.00	R32 583.40
Production	B2 X 8	R29	171*8 = 1398	R39 147.10	R15 080.00	R24 067.10

# Conclusion

- ❖ The performance of the animals for the entire period was poor.
- ❖ The animals were never in good condition from different stages (birth to weaning) and that was due to poor rainfall.
- ❖ The weight of the animals could not reach at least 420 kg



# Thank you



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