NORTH WEST DEPARTMENT OF
AGRICULTURE AND RURAL DEVELOPMENT
AGRICULTURAL DEVELOPMENTAL SERVICES

Evaluation of growth performance of Nguni Steers finished off veld and in the feedlot

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2030 NDP

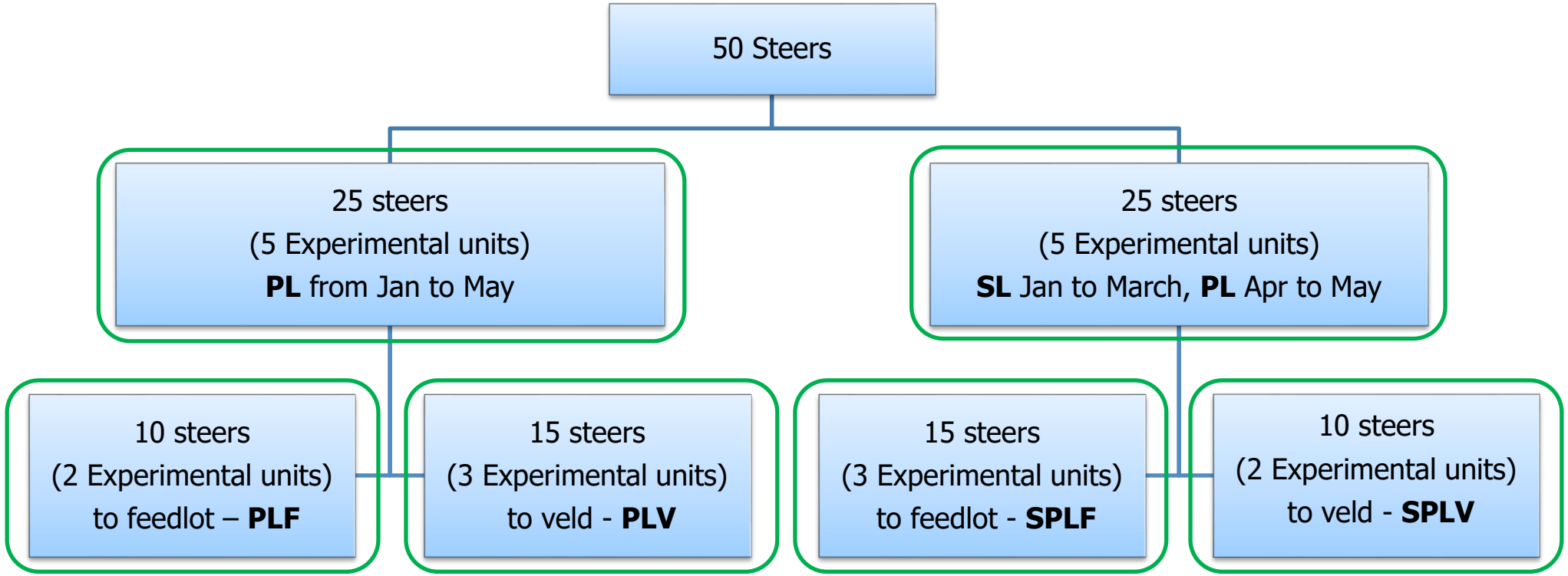
Introduction & objectives

- ✓ Beef cattle farmers tend to use a single channel marketing strategy – feedlot
- ✓ The challenge for the Nguni cattle producer discrimination -- the weaner calf market and beef classification system
- ✓ The objective of the trial was to compare growth performance of Nguni steers in different finishing systems
- ✓ Specific objectives
  - To measure the growth performance of Nguni steers supplemented with summer and/or production lick.
  - To measure the growth performance of Nguni steers finished off the veld and on the feedlot.
  - To determine the influence of different finishing systems on meat grading.

Materials & methods

- ✓ **Research site:** Potchefstroom Livestock Improvement Centre
- ✓ **Trial animals and treatments**

Figure 1: Treatment structure



Experimental unit = 5 Steers
PL – Production lick
SL – Summer lick

PLF – Production Lick steers in Feedlot
PLV – Production Lick steers on Veld
SPLF – Summer + Production Lick steers in Feedlot

SPLV – Summer + Production Lick steers on Veld

RESULTS AND DISCUSSIONS

1. Diet composition for Phase 1 and Phase 2

Table 1: Composition of the lick supplements

Phase 1

Ingredients	Production Lick	Summer Lick
Salt	30%	50%
Di Calcium Phosphate	7.5%	50%
Urea	6%	--
Maize meal	44%	--
HPC	12.5%	--
Recommended intake	1000g/animal/day	100g/animal/day
Cost per 100kg	R 447-12	R 702-16

Table 2: Composition of the finishing rations

Phase 2

Feedlot ration		Additional ration on veld	
Beef fat 33+	14.6%	Beef fat 33+	16%
Maize Meal	73.4%	Maize meal	84%
Silage	12%	Roughage	Ad lib

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Table 3: Growth performance of the steers receiving different lick supplements

	Summer+Production lick	Production lick
Start Mass (kg)	158[a]	156[b]
End Mass (kg)	278[c]	266[d]
Gain (kg)	120	110

Row means with different superscripts differ significantly (P <0,05)

ADG – Average Daily Gain

Table 3: Growth performance of the steers receiving different lick supplements

	Summer+Production lick	Production lick
Start Mass (kg)	158[a]	156[b]
End Mass (kg)	278[c]	266[d]
Gain (kg)	120	110
ADG (g/day)	785[e]	719[f]
Ave Lick intake (g/steer/day)	SL – 51, PL– 254	229
Cost for 1kg gain	R 20-48	R 35-59

Row means with different superscripts differ significantly (P <0,05)

ADG – Average Daily Gain

Figure 2: The growth performance of steers receiving different lick supplements

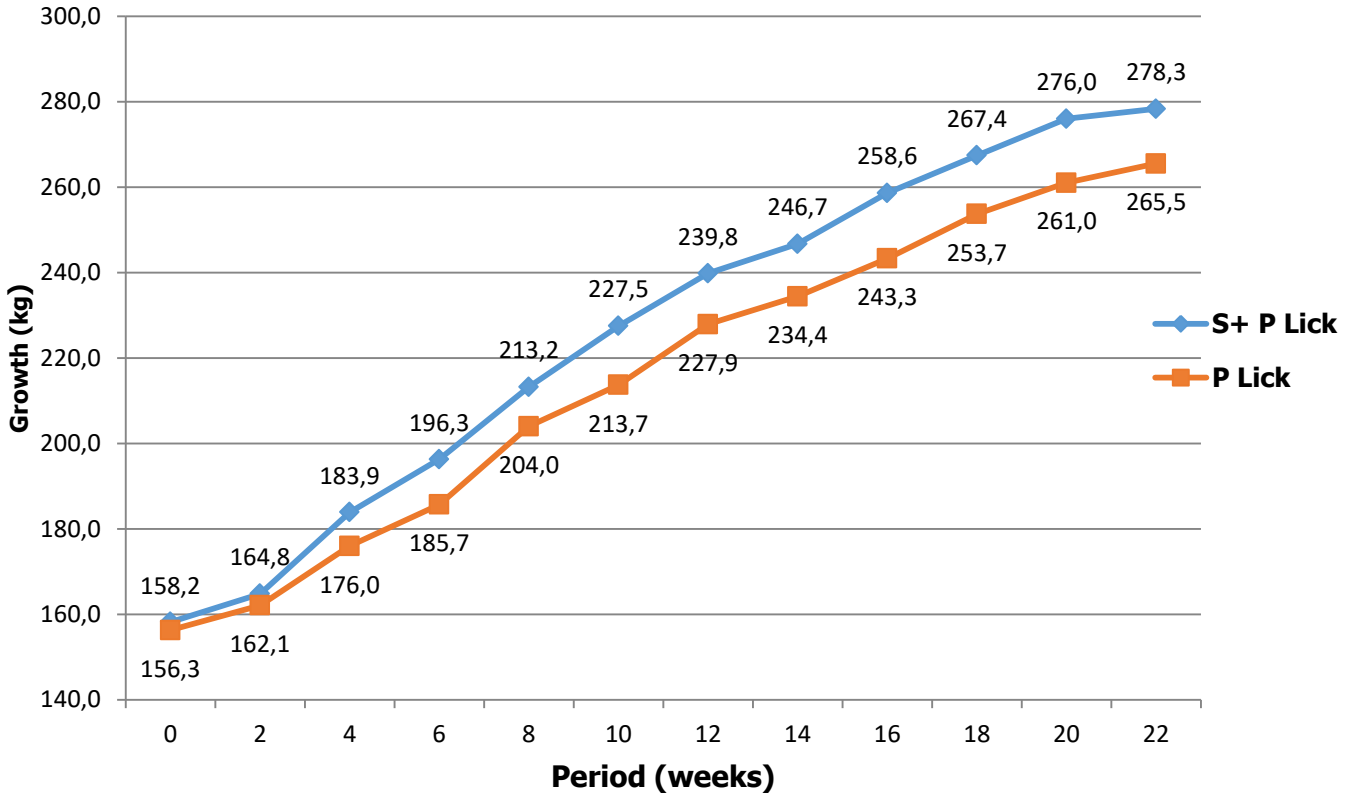

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Figure 5: Growth performance of steers finished off the veld with additional feeding or in the feedlot

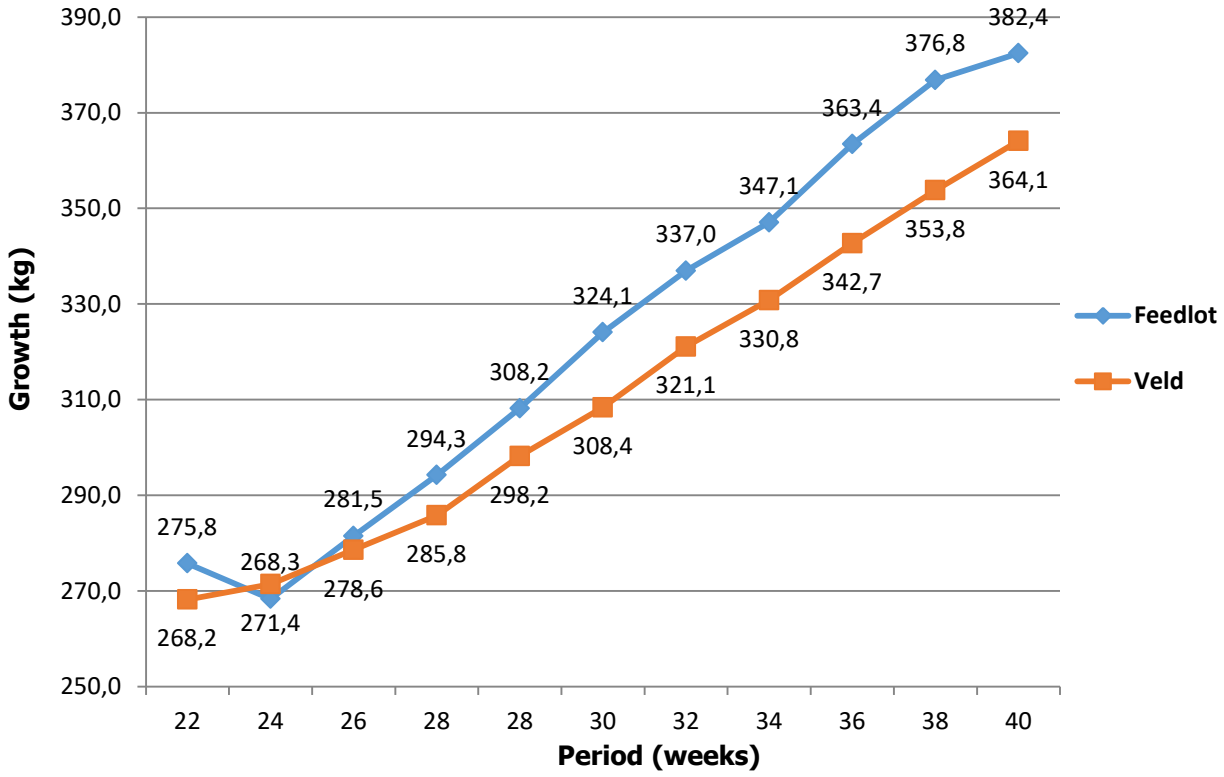

Table 4: The feed intake and growth performance of steers

	Finishing System	
Intake (in kg)	Feedlot	9.88[a]
	Veld	7.44[b]
ADG (g/steer/day)	Feedlot	873.10[c]
	Veld	724.83[d]

Column means with different superscripts differ significantly (P <0,05)

ADG – Average Daily Growth

Figure 6: The steers at the start of the trial

Figure 7 : Steers finished off veld

Steers finished in the feedlot

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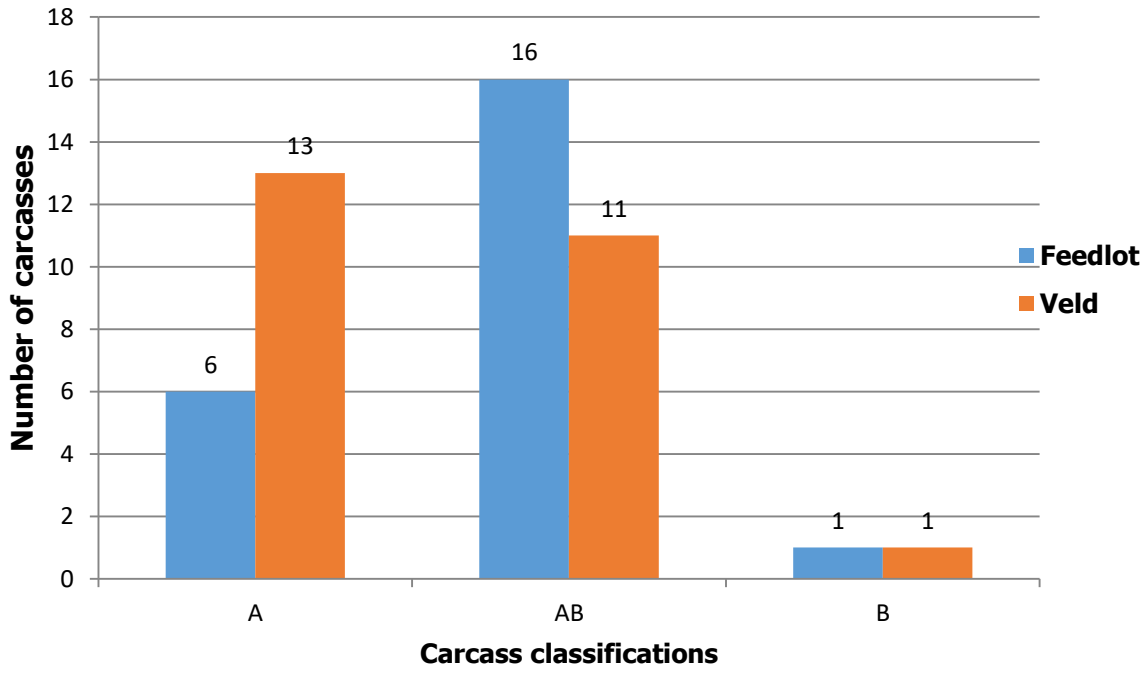
Effect of finishing systems on the carcass characteristics

- ✓ No significant difference in the carcass characteristics namely warm carcass, dressing % and carcass grade score from both finishing systems.
- ✓ Carcasses classified based on physical and compositional attributes which include **age** (age categories are: **A** – no permanent incisors, **AB** – 1 to 2 permanent incisors, **B** – 3 to 6 permanent incisors and **C** - > 6 permanent incisors), **carcass fatness** (codes: 1 – very lean to 6 – excessively fat) and **carcass conformation** (codes: 1 – very flat to 5 – very round).
- ✓ No carry-over of the subsequent licks fed was realised in all the carcass characteristics.

Figure 8: Carcass classification from the finishing systems



Conclusions

- ✓ Growth performance of the summer+production steers was significantly better than those that received production lick only
- ✓ The feedlot steers performed better than those finished off the veld & no significant carry-over effect of the preceding lick given to the steers on the finishing system.
- ✓ There was no significant difference in the carcass characteristics from both finishing systems and the subsequent licks fed to the animals.

Thank you!!!

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Re a leboga!!!