

Event : **Farmers' Study Group Training Day**

Presenter : N.P. Bareki

Title : Effects of overstocking on weaning weight of beef cattle

Location : Amalia in Mamusa

Date : 16 August 2022

Requesting Agric advisor : Mr A.C. Mallo

Aim : Training of selected study group farmers.

Purpose : To enhance farmers' knowledge on the effects of overstocking on weaning weight of beef cattle.

Importance : With increasing global concern regarding ecological and economical sustainability of production systems, it is imperative to understand the impacts of stocking rates on the profitability of extensive grazing beef cattle.



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Effects of overstocking on weaning weight of beef cattle

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16 August 2022
Amalia



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INTRODUCTION & BACKGROUND

- ✓ **Wesselsvlei farm (900 ha) – Kuruman NC**
- ✓ 260 Bonsmara Cows were randomly allotted to **4 treatments** under different stocking rates:
 - TRT 1: **50% Overstocking** on continuous grazing
 - TRT 2: 100% Overstocking on **continuous** grazing
 - TRT 3: 100% Overstocking on **two camp** system
 - 1 Camp rested for the whole year
 - TRT 4: 100% Overstocking on a **three camp** system
 - Two camps grazed and 1 rested for the whole year



Table 1 Descriptive statistics for the traits analyzed with data from **benchmark above diagonal** and data from **overstocked herds, below diagonal** row wise.

Trait	<i>n</i>	Mean ± SE	SD	Min	Max
BWT	111	36 ± 0,44	4,60	25	50
	148	34 ± 0,38	4,62	20	50
WWT	106	258 ± 3,27	33,70	140	345
	121	200 ± 3,44	37,80	85	300
YWT	84	274 ± 3,66	33,56	135	380
	98	227 ± 4,09	40,52	120	330
EWT	65	398 ± 3,97	32,00	335	475
	73	349 ± 5,30	45,30	250	465

BWT = Birth weight, WWT = Weaning weight, YWT = Yearling weight, EWT = Eighteen months'

RESULTS

Table 2 Mean birth weight (BWT) by treatment, with the benchmark herd in italics

Trait	BWT	WWT	YWT	EWT
Treatment				
Cont. (50%)	34.20^{ab}	223.11 ^b	249.58 ^b	360.24 ^b
Cont.(100%)	34.29^{ab}	198.15 ^a	233.41 ^b	347.19 ^{ab}
2-Paddock	32.84^a	196.24 ^a	228.57 ^{ab}	371.20 ^b
3-Paddock	33.91^{ab}	186.21 ^a	205.13 ^a	324.52 ^a
<i>Stud</i>	<i>35.87^b</i>	<i>258.51^c</i>	<i>273.93^c</i>	<i>398.42^c</i>

^{abc} Means with different superscripts within column differed significantly at the 0.05 level.

RESULTS

Table 2. cont...using 08/07/2022 prices - R37,10/kg

Trait	WWT	R-Value	Diff kg	R-Value loss
TRT				
Cont. (50%)	223.11 ^b	R8 277,38	35.40	R1 313,34
Cont.(100%)	198.15 ^a	R7 351,37	60.36	R2 239,36
2-Paddock	196.24 ^a	R7 280,50	62.27	R2 310,22
3-Paddock	186.21 ^a	R6 908,39	72.30	R2 682,33
<i>Stud</i>	<i>258.51^c</i>	R9 590,72		
Average			57.58	R2 136,22

abc Means with different superscripts within column differed significantly at the 0.05 level.

Conclusion

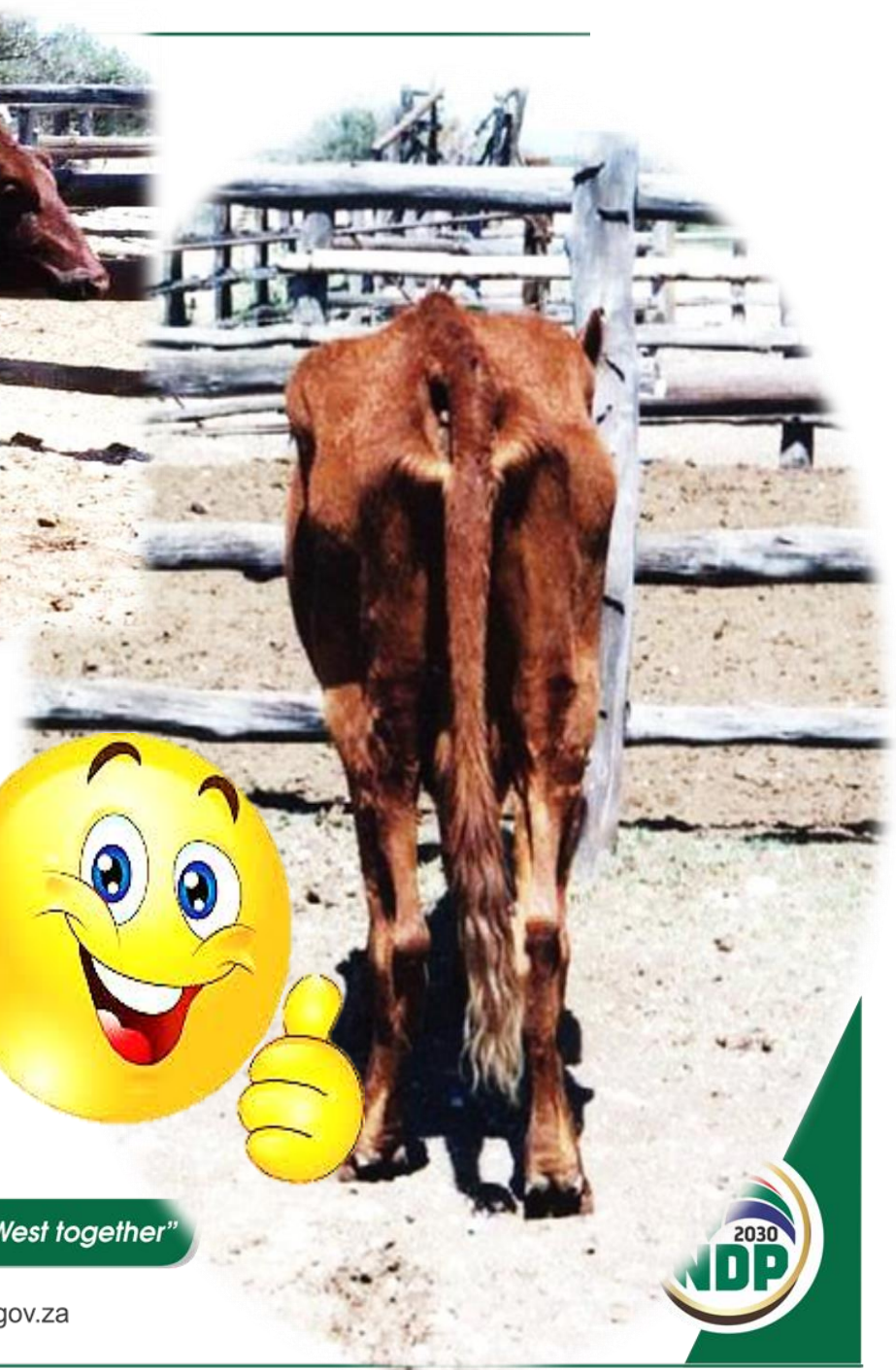
✓ Using the ABSA weekly (08/07/2022) live weaner calf price of R37,10/kg, the difference of 58 kg on WWT translates to -R2 136,22 per weaned calf as a consequence of **overstocking.**

R2 136,22 x 15 weaners = -R32 043,30 So,

Overstocking has a negative effect on profitability of cow-calf production systems.

Defying the character of Climate Smart Agriculture





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