

THE PERFORMANCE OF ORGANIC
AND INORGANIC FERTILIZER ON
THE PRODUCTION OF *Anthephora*
pubescens UNDER DRYLAND
CONDITIONS

BY

CHOSHI N. E

PROF C. S.DANNHAUSER

Introduction

- Calving percentage and weaner growth is low in communal farming systems is low (Mc Crindle *at al.* 2004).
- Studies estimated the calving percentage of beef cattle in communal farming system in South Africa is between 14% and 40%
- Poor winter feed is responsible for low animal production in SA in general.

Introduction

- Poor winter feed is responsible for generally low animal production in South Africa.
- In the lower rainfall (sweet veld) areas, winter feeding is less problem because of better quality veld.
- Drought resistant perennial fodder crops can play also a role (foggage)



OBJECTIVES

- To improve animal production the winter feeding strategy should be improved
- In the lower rainfall (sweet veld) areas, winter feeding is less problem because of better quality veld.
- Drought resistant perennial fodder crops can play also a role (foggage)

Aim of the study



- To investigate the improvement of the condition of existing and degraded *A. pubescens* swards
- *A. pubescens* is one of the recommended grass species for low rainfall areas: palatable foggage

Materials and Methods

- The University of Limpopo's experimental farm (Syferkuil)
- \pm 10km northwest of Mankweng
- An existing sward of *Antheophora pubescens*, which was established in 1985 was used for this research.

Material and Methods

Sources of fertilizer:

- Organic fertilizer (Green Gain)
- Inorganic fertilizer (Urea, Supers, KCL)

N and K levels:

- 0 kg N + 0 K ha⁻¹
- 50 kg N + 6 kg K ha⁻¹
- 100 kg N + 12 K ha⁻¹

Phosphate fertilization

- 0 kg Super phosphate (10.5%P) ha⁻¹
- 100 kg Super phosphate (10.5%P) ha⁻¹
- 200 kg Super phosphate (10.5%P) ha⁻¹
- 300 kg Super phosphate (10.5%P) ha⁻¹



Results (Dry matter (t/ha))

Source	N+K kg/ha	Superphosphate kg/ha	Total DM t/ha
Organic	0	0	2.5
	0	100	2.5
	0	200	2.3
	0	300	2.5
	50+6	0	3.2
	50+6	100	3.3
	50+6	200	2.6
	50+6	300	3.0

Results

Source	N+K kg/ha	Superphosphate kg/ha	Total DM t/ha
Inorganic	0	0	2.3
	0	100	2.9
	0	200	1.8
	0	300	2.3
	50+6	0	3.7
	50+6	100	4.3
	50+6	200	3.9
	50+6	300	4.1

Results

Source	N+K (kg/ha)	Superphosphate/h a	Total DM t/ha
Organic	0	0	1.9
	0	100	1.5
	0	200	1.6
	0	300	1.9
	100+12	0	2.3
	100+12	100	2.3
	100+12	200	2.4
	100+12	300	2.2

Results

Source	N+K (kg/ha)	Superphosphate kg/ha	Total DM t/ha
Inorganic	0	0	1.4
	0	100	1.6
	0	200	1.8
	0	300	1.8
	100+12	0	2.8
	100+12	100	3.5
	100+12	200	3.1
	100+12	300	2.4

Conclusions

- 50 kg N + 6 kg K performed better
- 100 kg Superphosphate
- Inorganic produced more dry matter than organic

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