

The influence of stocking rate & cattle type on the condition of the herbaceous layer in the Camel Thorn Savannah of Namibia

by

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Abstract

Research was done in the Camel Thorn Savannah of Namibia over the period 1984-1992 with four fixed stocking rates (45, 35, 25 & 15 biomass per hectare) & two cattle types (small-framed Sanga & large-framed Simmentaler crossbreeds), with the view to determine the influence of these treatments on the condition of the herbaceous layer.

Considerable changes occurred in the percentage basal cover of the perennial grass component over the experimental period. From 1984 (baseline survey), the percentage basal cover of the perennial grass component decreased considerably from 1.11% for the small-framed treatments & 1.18% for the large-framed treatments component again increased to 1.16% and 1.10% for the small framed and large framed cattle types respectively. No significant differences occurred in the change in percentage basal cover of the perennial grass component between stocking rates and cattle types. Rainfall between years had a significant influence on the change in the percentage basal cover of the perennial grass component.

In terms of botanical composition, grass species tend to react quite differently to rainfall and treatment. The "highly desirable" grass component decreased in percentage frequency, irrespective of cattle type and stocking rate. Just the opposite happened with the "desirable" grass component over the same period. The percentage frequency of the "desirable" grass component tended to increase over all the different treatments and years, with only minor difference between treatments. The "less desirable" grass component reacted again differently, in that it seems to be much more directly affected by the variation in rainfall. The "undesirable" component also decreased considerably over the project period.

Although these data represent changes over a relatively short period of time, it is clear that changes in rainfall had a much stronger influence on both botanical composition and basal cover than either stocking rate or cattle type. It should, however, be stated that these results were obtained under above average management and the veld condition at the start of the project was excellent, as compared to the average condition of veld in the adjacent commercial areas. It is anticipated that the influence of cattle type and stocking rate might increase as the project continues. During extremely dry years, the influence of cattle type and stocking rate might be more visible in animal production and reproduction parameters, than in veld parameters.