

## **Forage–sheep relationships in communally managed moist thornveld in Zululand, KwaZulu-Natal, South Africa**

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### **Abstract**

Communal rangelands have a wide range of vegetation communities that sustain livestock. Limited information exists on forage availability and quality in communal areas and how it influences Nguni sheep foraging behaviour. A study spanning almost three years was conducted to determine the seasonal variation in herbaceous biomass, chemical composition of forage, sheep performance and blood metabolites in a communal area of KwaZulu-Natal. A study was also implemented to evaluate the feeding behaviour of sheep. The dry months had low biomass compared to the wet months. Higher values of crude protein were observed in the wet seasons compared to lower values in the dry seasons. Neutral detergent fibre was high in all the seasons. Overall forage quantity and quality were poor relative to commercial farming standards. There was no significant difference in sheep weights between seasons. Blood urea N concentration was lower in the dry season than the wet season and was below the normal range. Cholesterol concentration was higher in the wet season than the dry season and was generally high relative to the normal range. Seasonal differences in creatinine concentration were not observed, but it was generally within the normal range. Foraging time was higher during the late dry season than the early wet season and bite size was higher in the dry season. Simulated bites were found to have substantially higher crude protein and lower fibre concentrations than the average forage on offer. It was therefore postulated that although communal areas may provide generally poor forage, Nguni sheep are able to maintain their body weight through selective feeding.