

Diet quality of cattle grazing grass or Leucaena-grass pastures in Central Qld

Stuart Buck^{A,D}, Craig Thornton^B and Rob Dixon^C

^ADept of Employment, Economic Development and Innovation, Biloela, Qld 4715. ^BDept of Environment and Resource Management, Biloela, Qld 4715. ^CThe University of Queensland, Queensland Alliance for Agriculture and Food Innovation, Rockhampton, Qld 4701.

Introduction

Beef production from Leucaena-grass pasture can be double that from grass-only pasture due to both increased amount and nutritive value of the forage. However limited information is available on diet selection and nutrient intake of cattle grazing Leucaena-grass or grass-only pastures.

Methods

Two drafts of weaner cattle grazed paddocks of either nominally buffel grass (n = 8 and 5) or a Leucaena-buffel grass pasture (n = 9 and 25) on the Brigalow Research Station in central Qld from May 2008 to May 2009 and June 2009 to June 2010 respectively. Faecal samples collected each 6 weeks were analysed by faecal NIR spectroscopy to measure diet selection and quality.

Results

In the buffel pasture diet non grass was consistently <26%, and was likely woody browse species. Leucaena generally contributed 8-35% of the diet in the Leucaena-grass pasture during spring and summer, but increased to 83% during autumn when grass quality was rapidly declining. Similar seasonal changes in digestibility and crude protein occurred in both pastures. Digestibility was predominately >50%, and was consistently high (>65%) late summer in the Leucaena-grass pasture. Diet crude protein was likely limiting in cattle grazing the buffel grass between July to December 2009, but was not likely limiting in cattle grazing Leucaena-grass pasture (Fig. 1).

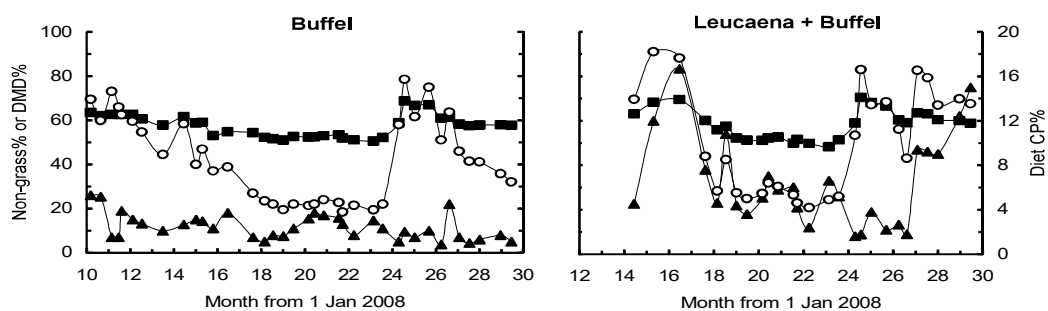


Fig 1. The diet non-grass (▲), crude protein (CP) (○) and digestibility (DMD) (■) of steers grazing buffel or Leucaena + buffel pastures.

Discussion and Conclusions

In this study when stocking rate matched feed availability, beef production increased from 51kg/ha.yr on buffel to 103kg/ha.yr on Leucaena + buffel (Thornton and Buck 2011). This is attributable to an increased amount and nutritive value of the forage in Leucaena-grass pastures.

Reference

Thornton C and Buck S (2011) Beef production from buffel grass pasture compared to leucaena-buffel grass pasture in the brigalow belt of Central Queensland. *Proceedings of the Northern Beef Research Update Conference, Darwin, 2-5 August 2011.*

^DCorresponding author stuart.buck@deedi.qld.gov.au