

**Afr. J. Agric. Res.**[Vol. 1 No. 3](#)**Viewing options:**

- [Abstract](#)
- [Full text](#)
- [Reprint \(PDF\)](#) (144K)

Search Pubmed for articles by:

[Kozloski G](#)
[Harter C](#)**Other links:**[PubMed Citation](#)[Related articles in PubMed](#)

African Journal of Agricultural Research Vol. 1 (3), pp. 038-046, October 2006
ISSN 1991- 637X© 2006 Academic Journals

Full Length Research Paper

Nutritional value of diets based on a low-quality grass hay supplemented or not with urea and levels of cassava meal

G. V. Kozloski^{a,b}, D. P. Netto^a, L. M. Bonnacarrère Sanchez^a, L. D. Lima^a, R. L. Cadorin Júnior^a, G. Fiorentini^a, C. J. Härter^a

^aDepartamento de Zootecnia (Animal Science Department), Universidade Federal de Santa Maria, Campus Camobi, Santa Maria, RS, Brazil, 97105-900.

*Corresponding author's E-mail: kozloski@smail.ufsm.br.

Accepted 11 October, 2006

Abstract

Ten Polwarth × Texel lambs (30±1kg live weight (LW)), housed in metabolic cages and fed *ad libitum* a low-quality grass hay (*Cynodon ssp.*) were used in a replicated 5 × 5 Latin Square experiment to evaluate effects of non-protein N (NPN) and levels of a non-fibre carbohydrate (NFC) source (cassava meal) supplementation (0, 5, 10 and 15 g/kg of LW) on intake, digestibility, N retention, microbial protein synthesis and rumen fermentation. Hay intake and digestibility were not affected by NPN addition. Organic matter, N and digestible energy intake, as well as rumen microbial protein synthesis and N retention increased linearly ($P < 0.05$) but, fibre intake and digestibility, decreased linearly ($P < 0.05$) as NFC supplementation increased. Rumen pH, as well as rumen concentrations of ammonia, sugars, amino acids and peptides was significantly affected by supplementation and time after feeding ($P < 0.05$). Hay utilization was not improved by N addition showing that it was not limited due a lack of N for rumen bacteria. Supplementing both NPN plus a NFC source improved nutrients intake but reduced forage use by ruminants. Although variations of rumen pH and sugars concentrations play an important role, the detailed mechanisms by which fibre digestibility is negatively affected by NFC supplementation needs to be elucidated.

Key words: Digestibility, Intake, Non-fibre carbohydrate, Non-protein nitrogen, Rumen fermentation, Tropical grass.

Powered by


Search

jn WWW jn AJAR

[Email Alerts](#) | [Terms of Use](#) | [Privacy Policy](#) | [Advertise on AJAR](#) | [Help](#)

Copyright © 2006 by Academic Journals