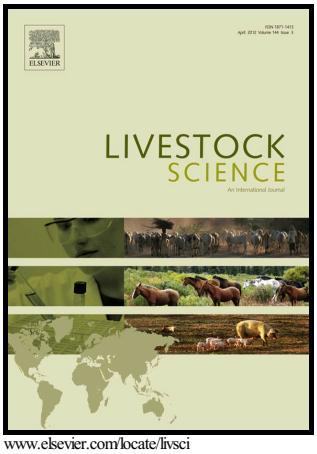

www.elsevier.com/locate/livsci

Effect of tannins-rich extract from *Acacia mearnsii* or monensin as feed additives on ruminal fermentation efficiency in cattle

F. Perna Junior, E.C.O. Cassiano, M.F. Martins, L.A.S. Romero, D.C.V. Zapata, L.A. Pinedo, C.T. Marino, P.H.M. Rodrigues

PII: S1871-1413(17)30191-9
DOI: http://dx.doi.org/10.1016/j.livsci.2017.06.009
Reference: LIVSCI3246

To appear in: *Livestock Science*

Received date: 30 August 2016
Revised date: 16 June 2017
Accepted date: 17 June 2017

Cite this article as: F. Perna Junior, E.C.O. Cassiano, M.F. Martins, L.A.S Romero, D.C.V. Zapata, L.A. Pinedo, C.T. Marino and P.H.M. Rodrigues, Effect of tannins-rich extract from *Acacia mearnsii* or monensin as feed additive on ruminal fermentation efficiency in cattle, *Livestock Science* http://dx.doi.org/10.1016/j.livsci.2017.06.009

Effect of tannins-rich extract from *Acacia mearnsii* or monensin as feed additives on ruminal fermentation efficiency in cattle

F. Perna Junior[a,*], E. C. O. Cassiano[a], M. F. Martins[a], L. A. S. Romero[a], D. C. V. Zapata[a], L. A. Pinedo[a], C. T. Marino[b], P. H. M. Rodrigues[a]

[a]*Department of Animal Nutrition and Production, University of Sao Paulo (FMVZ-USP), 13635-900, Pirassununga, Sao Paulo, Brazil.*

[b]*Brazilian Agricultural Research Corporation (Embrapa) - Beef Cattle, 79106-550, Campo Grande, Mato Grosso do Sul, Brazil.*

*Corresponding author. fpernajr@usp.br

Abstract

Methane, a powerful greenhouse gas, is considered to be a significant loss of productive potential in ruminants. The objective was to evaluate the effect of monensin and *Acacia mearnsii* tannins on ruminal fermentation efficiency in cattle. Six rumen-cannulated cows were distributed three diets, each of which differed in the additive used, in a replicated 3x3 Latin square experimental design. Treatments were the Control, Monensin (300 mg per animal and day or about 18 mg/kg of dry matter - DM) and a tannin-rich extract from *Acacia mearnsii* (100 g per animal and day or about 0.6% of DM). Each experimental period consisted of 21 days; the first 15 days were used for diet adaptation and the last 5 days for data collection. On experimental day 21, ruminal pH was analyzed by a continuous measurement probe. In order to quantify short-chain fatty acids (SCFA), methane (CH_4), NH_3-N (ammonia nitrogen)