Title: Use of monensin in lactating crossbred dairy cows (Holstein × Gyr) raised on tropical pastures with concentrate supplementation

Authors: Noemila D. Kozerski, Ricardo D. Signoretti, Júlio C. Souza, Veridiana L. Souza Daley, José A. Freitas

PII: S0377-8401(16)30324-8
DOI: http://dx.doi.org/doi:10.1016/j.anifeedsci.2017.08.007
Reference: ANIFEE 13838

To appear in: *Animal Feed Science and Technology*

Received date: 5-7-2016
Revised date: 31-7-2017
Accepted date: 3-8-2017

Please cite this article as: Kozerski, Noemila D., Signoretti, Ricardo D., Souza, Júlio C., Souza Daley, Veridiana L., Freitas, José A., Use of monensin in lactating crossbred dairy cows (Holstein×Gyr) raised on tropical pastures with concentrate supplementation.Animal Feed Science and Technology http://dx.doi.org/10.1016/j.anifeedsci.2017.08.007

Use of monensin in lactating crossbred dairy cows (Holstein × Gyr) raised on tropical pastures with concentrate supplementation

Noemila D. Kozerski[a], Ricardo D. Signoretti[b], Júlio C. Souza[a],

Veridiana L. Souza Daley[c], José A. Freitas[d,*]

[a] *Department of Veterinary Science, Federal University of South of Mato Grosso, Paranaíba, MS, 79500000, Brazil*

[b] *Agribusiness Technology Agency* (*APTA*)*, Colina, SP, 14770000, CP 35, Brazil*

[c] *Department of Dairy Science, Virginia Tech, Blacksburg, VA, 24061*

[d] *Department of Animal Science, Federal University of Paraná, Palotina, PR, 85950-000, Brazil*

* Corresponding author. Tel: 55 **(44) 3211 8528** EM: freitasjafufpr@gmail.com

Submitted to Animal Feed Science and Technology in July 2016

Highlights

- Monensin supplementation increased dietary *fiber digestibility.*
- Cows fed monensin *showed* lower nonesterified fatty acid (NEFA) in blood.
- Monensin could be beneficial to reduce fat mobilization in crossbred dairy cows.

Abstract

Monensin is a feed additive produced by a strain of *Streptomyces cinnamonensis* that has been used to improve milk production and feed efficiency by a mechanism linked to rumen fermentation of lactating dairy cows. Evaluation on performance, digestibility and blood parameters of crossbred dairy cows supplemented with monensin is still scarce. Thus, the objective of this study was to determine the effects of monensin supplementation on intake, digestibility of nutrients, lactational performance and blood parameters in crossbred dairy cows grazing tropical pasture subjected to rotational stocking and supplemented with concentrate. Sixteen crossbred Holstein-Gyr cows (initial