

Accepted Manuscript

Title: The effects of feeding cut plantain and perennial ryegrass-white clover pasture on dairy heifer feed and water intake, apparent nutrient digestibility and nitrogen excretion in urine

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PII: S0377-8401(17)30135-9
DOI: <http://dx.doi.org/doi:10.1016/j.anifeedsci.2017.04.023>
Reference: ANIFEE 13775

To appear in: *Animal Feed Science and Technology*

Received date: 30-1-2017
Revised date: 31-3-2017
Accepted date: 26-4-2017

Please cite this article as: Cheng, L., Judson, H.G., Bryant, R.H., Mowat, H., Guinot, L., Hague, H., Taylor, S., Edwards, G.R., The effects of feeding cut plantain and perennial ryegrass-white clover pasture on dairy heifer feed and water intake, apparent nutrient digestibility and nitrogen excretion in urine. *Animal Feed Science and Technology* <http://dx.doi.org/10.1016/j.anifeedsci.2017.04.023>

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SHORT COMMUNICATION: The effects of feeding cut plantain and perennial ryegrass-white clover pasture on dairy heifer feed and water intake, apparent nutrient digestibility and nitrogen excretion in urine

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Highlights:

- The feed digestibility was similar between plantain and pasture.
- The intake was similar between plantain and pasture.
- Plantain-fed heifers had lower urinary nitrogen concentration.
- Plantain-fed heifers had higher water intake.
- Plantain feed heifers has the potential to reduce environmental pollution.

ABSTRACT¹

Urinary nitrogen concentration (**UN_{cc}**) and urinary N excretion (**UN**) are directly associated with the nitrogen (**N**) leaching potential of soil and greenhouse gas emissions from grazing ruminants' urine patches. This study was carried out to examine the effects of feeding

¹ *Abbreviations*: **BW**, body weight; **DM**, dry matter; **MPS**, microbial protein synthesis index; **N**, nitrogen; **NDF**, neutral detergent fibre; **NUE**, N use efficiency; **PL**, plantain; **PUN**, plasma urea N; **PW**, perennial ryegrass-white clover pasture; **SD**, standard deviation; **UN**, urinary nitrogen excretion; **UN_{cc}**, urinary nitrogen concentration; **UV**, urine volume; **WSC**, water soluble carbohydrate

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