

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

RUMINAL FUNGI OF CONFINED SHEEP FED WITH CORN OR PEARL MILLET DIETS, WHOLE OR GROUND

Luis Henrique Curcino BATISTA*¹, Thiago Dias da SILVA², Ronaldo Fabiano NETO²,
Karine Dalla Vecchia CAMARGO¹, Flávia Oliveira Abrão PESSOA²

*corresponding author: luishenrique_94cb@hotmail.com

¹Universidade Estadual Paulista Julho Mesquita Filho, Jaboticabal, São Paulo, Brasil

²Instituto Federal Goiano, Ceres, Goiás, Brasil

In order to maximize herd productivity, the type of diet offered to ruminants has been altered with the inclusion of more and more concentrate. Few studies report the occurrence of fungi in the rumen of sheep reared under diets with no bulky. The microbiota characterization of these animals, with good field performance, may contribute to the selection of important fungal isolates in grain starch degradation in high concentrate diets. In this context, the objective of this work was to quantify the population of ruminal fungi of confined sheep receiving only concentrate composed of corn or millet, ground or whole. Twenty-four Santa Inês lambs were sampled in a completely random design. Four experimental diets containing two types of grain (corn x pearl millet) and two forms of grain processing (ground x whole) were evaluated. Samples of ruminal contents of the animals were collected after slaughter. One mL of the ruminal content collected in the ventral region of the rumen of each animal were used in a direct examination to detect ruminal fungi and for the cultivation and quantification of facultative anaerobic fungi. The quantification of fungi in Colony Forming Units per mL (CFU mL⁻¹) was compared by non-parametric Kruskal-Wallis and Mann-Whitney tests (P = 0.05). In the direct examination for the detection of strict anaerobic fungi in the ruminal environment the result was negative for all treatments. Demonstrating that this important group of microorganism does not survive in diets without bulky. It was observed the development of facultative anaerobic fungi in all treatments (1.6x10³, 1.8x10³, 1.16x10², 1.6x10¹ CFU mL⁻¹) of mycelial fungi and (3.5x10⁴, 1.7x10³, 9.1x10⁴ and 7.5x10³ CFU mL⁻¹) of yeasts, respectively in the treatments: Whole corn grains, ground corn grains, whole millet grains and ground millet grains. The mean CFU mL⁻¹ did not differ between treatments (p>0.05) for filamentous fungi and nor for yeast fungi. There was also no statistical difference (p>0.05) between filamentous fungi and yeasts compared within each treatment. Lambs confined with a diet composed of maize or millet, whole or ground without bulky, do not have strict anaerobic fungi in their ruminal environment. Facultative anaerobic fungi are present in the rumen of lambs fed a high grain diet and the quantification of these microorganisms do not differ among the diets evaluated in this experiment.

Keywords: high grain, rumen microorganisms, starch

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