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CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

RUMINAL DEGRADATION KINETICS OF THE PINEAPPLE CULTURE RESIDUE *IN NATURA* OR ENSILED WITH ADDITIVES

Deborah Alves FERREIRA*[1], Maria Paula Balduíno JORGE[1], Leonardo Vaz BURNS[1], Pedro de Almeida Rezende FUMAGALLI[1], Márcio Gianordoli Teixeira GOMES[1]

*corresponding author: deborah.alvesferreira@gmail.com
[1]Universidade Federal do Tocantins, Araguaína, Tocantins, Brasil

The pineapple culture residue are used in ruminants diets empirically, in regions where fruit production have great economic importance, as in northern Brazil. The objective of this study was to evaluate the fermentation kinetics and effective dry matter rumen degradability (ED) *in vitro*, by the Hohenheim Gas Test technique, of the pineapple culture residue *in natura* and ensiled with additives. Six treatments were arranged in randomized blocks with four replicates: forage *in natura*; silage without additive; silage with corn meal; silage with rice bran; silage with bacterial inoculant (Silobac® - *Lactobacillus plantarum* and *Pediococcus pentosaceus*); and silage with bacterial inoculant (Silobac 5® - *L. plantarum*). The forage was harvested and sampled (*in natura*) and was ensiled in experimental silos during 75 days. Corn meal and rice bran were added in 100 g kg^{-1} of fresh matter and inoculants according to the manufacturer's instructions. The gas production was measuring at 3, 6, 9, 12, 24, 48, 72 and 96 hours. The model of France et al. (1993) was used to adjust the cumulative gas production curve and the equations were compared by the parallelism and identity tests ($P<0.05$). The equation also proposed by France et al. (1993) was used to calculate the ED at rates of 2, 5 and 8% h^{-1}. The maximum potential for gas production was higher in silage with corn meal (281.1 ml g MS^{-1}), followed by forage *in natura* (269.6 ml g MS^{-1}) and the lowest was observed in silage with rice bran (234.2 ml g MS^{-1}) ($P<0.05$). The silages with inoculants had similar values ($P>0.05$), being superior only to silage with rice bran ($P<0.05$). The gas production rate (ml g h^{-1}) and *lag time* (h) were higher in silage with corn meal and lower with rice bran. The silage with corn meal and forage *in natura* presented higher values of ED at the rate of 2% h^{-1} (693.0 g kg^{-1}). However, in the higher passage rates, forage *in natura* had higher values of ED (669.8 g kg^{-1} and 647.2 g kg^{-1}, for 5 and 8% h^{-1}, respectively) in relation to the all silages. The pineapple residue has potential for use as an alternative feed in the ruminant diets due to its high ruminal degradability, both *in natura* and silage form. The ensiling process leads to the reduction of degradable constituents, with a small negative impact on the maximum potential of gas production and ED.

Keywords: *Ananas comosus*, by-products, forage, inoculants, ruminants

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