

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

ENTEROBACTER AS DIARRHEA CAUSER IN RUMINANTS FED WITH FORAGE PALM

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The use of large amounts of palm in the feed of ruminants has caused diarrhea in the animals. The high content of non-fibrous carbohydrates of the palm can favor the growth of pathogenic bacteria during the permanence of the same in the manger of the animals. Thus, the objective was to compare the effect of time, variety and processing of the palm, on the bacterial growth in the forage palm. The forage palm was used for miúda and baiana cultivar, two kilos were chopped into 4 cm² particles. Another two pounds were manually chopped into 8 cm² particles. Four replicates of each palm variety were made with each particle size, and at each time, distributed in a completely randomized experimental design in a 2x2x4 factorial arrangement (two cultivars of palm, two size of particles and e four times). The experiment was conducted at Forage Sector of the UFPB, with controlled temperature of 25°C. The microbiological evaluation was performed at 0, 6, 12 and 24 hours, in which colony forming units (CFU) of enterobacteria (ENT) and lactic bacteria (LB) were counted. Statistical analyzes were performed using the GLM procedures (general linear model) and the means compared by the T test and regression at 5% probability. There was no interaction between the factors for ENT growth in LB. They have higher CFU growth in miúda (5.14 CFU g⁻¹) than in baiana cultivars (4.68 CFU g⁻¹). However, there was no effect of the cultivar on LB growth. In relation to the particle size, there was higher growth of both ENT and LB in the samples of smaller particle size. In the palm with a mean particle size of 4 cm², 5.97 CFU g⁻¹ and 3.17 CFU g⁻¹ were observed, while the palm with a mean of 8 cm² in size was observed 3.85 CFU g⁻¹ and 1.28 CFU g⁻¹ for ENT and LB, respectively. This is due to the smaller particle size providing greater surface area and carbohydrate exposure for fermentation of the microorganisms. There was an increasing linear time effect (P<0.05), demonstrating that the longer the palm exposure time in the environment, the greater the microbial growth. It is concluded that the processing and exposure of the forage palm stimulates the growth of enterobacteria, which may represent a health risk to the animals, especially when processed in a smaller particle size and in a longer time of exposure to the environment.

Keywords: cactaceae, microorganisms, non-fiber carbohydrate, pathogens

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