

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

AEROBIC STABILITY AND PH OF *PANICUM MAXIMUM* CV MOMBAÇA SILAGES WITH MICROBIAL AND ABSORBENT ADDITIVES

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The objective of this experiment was to evaluate the effects of microbial and absorbent additives on aerobic stability and pH of *Panicum maximum* cv Mombaça (Guinea grass) silages. The experiment was carried out at UNESP, Ilha Solteira, São Paulo, Brazil. A randomized block design with four treatments and four replications was used. The treatments corresponded to silages with: CP, 10% of citrus pulp on organic matter; inoculants, PL, homofermentative (*Pediococcus pentosaceus* + *Lactobacillus plantarum*), and LB, heterofermentative (*L. buchneri*), in addition to control without additives was used. The Guinea grass was harvested at sward height of 130 cm on February 15, 2016 and chopped into pieces of 2 cm length. The microbial inoculants were mixed with pure distilled water and sprayed onto the forage, resulting in an application volume of 2 L ton⁻¹. The mini experimental silos (plastic buckets of 15 L) were opened 92 days after sealing and silage samples were used to determine aerobic stability and pH. The aerobic stability was calculated as the duration of exposure to air required for a 2 °C increase above the ambient temperature, recorded using a mini temperature data logger (Mod. DHT5012 2Way, Perceptec) programmed to record the temperature every 10 min for 10 days. Silage samples were pressed in a manual screw to extract the juice and the pH was measured immediately. Statistical analyses were performed using SAS, with a model appropriate for a completely randomized block design with four replicates, and the differences were considered significant at p<0.05 by Tukey's test. The lowest pH value was observed in CP treatment (4.3; p<0.05) while the other treatments were similar (average of 4.8; p>0.05). There was no heating of the silages after 10 days of exposure to air and the maximum temperature of the silages was 25.7 ° C. It is possible that tropical grass silages do not heat up, for the following reasons: during their metabolism, aerobic bacteria do not produce heat as efficiently as yeasts and fungi and higher water content requires more energy for heating. The adsorbent additive provides greater reduction in the pH of the Guinea grass silage than the microbial additive.

Keywords: lactobacillus, megathyrus maximus, microbial inoculant, tropical grass

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