

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

MEAT PHYSICOCHEMICAL COMPOSITION OF SHEEP FED WITH BURITI OIL

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Buriti oil is obtained by the mechanical extraction of buriti pal three (*Mauritia flexuosa L.*) that has significant concentrations of lipids changing the ruminal microorganism ecosystem, impairing the ruminal biohydrogenation process and improving physicochemical composition of meat. This study was conducted to determine the best level of buriti oil in the diet of sheep to improve physicochemical composition of the meat. Forty intact males with an initial BW of 28.0 ± 1.94 kg and an age of four months were distributed in a completely randomized design with five treatments and eight replicates (sheep). The buriti oil was included in diets at concentrations of 0, 1.2, 2.4, 3.6 and 4.8% total dry matter (DM). The sheep received 40% Tifton-85 hay to 60% g/kg concentrate in their diet. Before the experiment, the ingredients and concentrated mixture composed of ground corn, soybean meal, mineral premix, and buriti oil offered twice per day (09.00 and 16.00 h) formulated diets met the NRC (2007) guidelines for an average diary gain (ADG) of 250 g. After 12 h of fasting from solids, the slaughtering procedure were realized. The carcasses were cut and the *longissimus muscles* (LMs) were used to evaluate the meat quality. The pH was evaluated at slaughter and 24 h after in the *longissimus muscle* (LM), which was measured using a Mettler M1120x pH meter (Testo, 205 Gerate-Set, Lenzkirch, Alemanha). The cooking weight loss (CWL) was determined using two samples (2.5 cm thick) without subcutaneous fat and connective tissue, and cooked on an electric grill (Philco®, Philadelphia, United States). Samples (triplicate) were brought to room temperature prior to Warner–Bratzler Shear Force (WBSF) analysis. The meat color was evaluated using a transverse cut of muscle by coordinates luminosity (L^*), redness (a^*) and yellowness (b^*) were evaluated. Polynomial contrasts were used to determine the effects of the buriti oil inclusion amount. P -values less than 0.05 were considered significant. The inclusion of buriti oil in the sheep diet did not affect pH at 0 ($P = 0.52$) and 24 hours ($P = 0.64$), the color indexes L^* ($P = 0.28$), a^* ($P = 0.39$), b^* ($P = 0.31$), CWL ($P = 0.34$) and WBSF ($P = 0.68$) of sheep meat. Therefore, the use of the buriti oil for the diets of the lambs is recommended at the levels that were studied because they do not negatively affect the meat quality.

Keywords: color parameter, *Mauritia flexuosa L.*, pH and shear force

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