Physical aspects of *Longuissimus dorsi* of lambs are affected by levels of concentrate and tropical forage species

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Lamb meat has greater consumer acceptability compared to other age categories of sheep. In this sense, there is a trend to develop feeding strategies that allow greater yields and anticipated ages of slaughter. This study was carried out to evaluate the effect of different levels of concentrate and different tropical grass species on physical aspects of lamb meat (*longuissimus dorsi* muscle). We used 36 male, intact, crossbred lambs (predominantly Suffolk type), settled in two types of forage (*Brachiaria Brizantha* cv. Marandu and *Panicum Maximum* cv. Aruana) and three levels of concentrate (0%, 1.5% and 3% of live weight). Animals were grouped according to a completely randomized experimental design (3x2) with 6 repetitions per treatment. We evaluated *longuissimus dorsi* muscle of lambs that were slaughtered after achieving a 2.5 body score or seven months of age. After slaughter, and 24 hours in a cooling room (2ºC), all carcasses were sectioned into commercial cuts and the *longuissimus dorsi* muscle from the left side of the carcass was selected for analysis. The independent variables under observation were: pH, colour (intensity of red and yellow, luminosity, saturation index and hue angle (tonality)), water-holding capability, cooking loss and shear force. Analysis was developed in the Laboratório de Produtos Agropecuários based in the Universidade Federal da Grande Dourados. The results showed no evidence of the effect of concentrate on pH. Higher levels of concentrate were associated to lower luminosity of meat, lower saturation index and higher intensity of red. The intensity of red was higher regardless of the type of grass. Higher levels of concentrate were also associated to lower cooking loss. However, concentrate and grass species were not associated to water-holding capability, tonality and the intensity of yellow ($P>0.05$). Regarding share force, there was evidence of interaction between concentrate and grass type ($P<0.05$). All samples were considered to be tender but values of share force were below the customer perception index.

Key-words: colour, meat quality, shear force, sheep meat, tenderness.

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