



## Carcass traits of crossbred Dorper lambs finished in feedlot with diets containing sucrose

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Sucrose is a water-soluble carbohydrate which, unlike starch, not affects the ruminal pH. In this condition, fiber degradability on rumen is increased, which may improve the performance and carcass quality of feedlot lambs fed with high-grain diets. The aim of this study was to evaluate the effect of diets containing sucrose on the carcass traits of lambs finished in feedlot. The experimental procedures were approved by the Animal Care and Use Committee of UFPR, Palotina Campus, under protocol number 043/2016-CEUA/Palotina. Twenty-four non-castrated male crossbred Dorper lambs with four months of age and  $26.06 \pm 3.78$  kg of body weight (BW) were used. The trial was set out in a completely randomized design with four treatments and six replicates. The treatments consisted of a diet without sucrose (Control) and the inclusion of 1.5, 3.0, and 4.5% of sucrose in the concentrate feed, on a dry matter (DM) basis. The diets were composed of 40% Tifton 85 hay (*Cynodon* spp.) and 60% pelleted concentrate feed, and contained 17.7% crude protein and 62.3% total digestible nutrients, on a DM basis. Lambs were fed *ad libitum* in individual pens for 56 days, and slaughtered with  $43.43 \pm 4.58$  kg BW. After slaughter, the hot carcass weight (HCW) was recorded and the carcasses were cooled in cold room at 4 °C for 24 hours. After cooling, the cold carcass weight (CCW) was recorded and the hot carcass yield (HCY), cold carcass yield (CCY) and the cooling losses (CL) were calculated. The data were analyzed by regression in which the sucrose level in the concentrate feed was the independent variable, and the lambs BW at the start of the trial was included as covariate. The covariate was maintained in the model only if had a significant effect ( $p < 0.05$ ). The regression analysis was carried out up to the quadratic level. Sucrose inclusion in the concentrate feed not affected ( $p > 0.05$ ) the slaughter weight and HCW, CCW, HCY, and CCY. There was recorded mean values of 19.83 kg for HCW, 19.32 kg for CCW, 45.62% for HCY, and 44.45% for CCY. Sucrose led to a quadratic effect ( $P = 0.040$ ) on CL ( $CL = 2.5003 + 0.2679S - 0.0680S^2$ ;  $R^2 = 0.212$ ), for which the maximum value (2.76%) is reached with the inclusion of 2.0% DM of sucrose in the concentrate feed. The high CL may be related with the heterogeneity of covering fat on the carcass, which was high among the carcasses obtained with 1.5 and 3.0% DM of sucrose. The inclusion of sucrose up to 4.5% DM of concentrate feed does not promote an increase in weight, yield and quality of carcass from crossbred Dorper lambs finished in feedlot.

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