

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

**HIGH LEVELS OF COPAIBA OIL IN FEEDLOT LAMBS DIET: CARCASS TRAITS,
SUBPRIMAL YIELD AND MEAT QUALITY**

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The aim of this study was to evaluate the copaiba oil levels and monensin inclusion in lamb finished diet on carcass traits, subprimal yield and meat quality. Sixty Crossed White Dorper lamb with 4 ± 1.2 months and average body weight (BW) of 22 kg ± 1.35 were housed in individual pens, with ad libitum access to feed and water. The animals were allocated in five groups according treatments: 1) Monensin (MON 25mg kg⁻¹ DM); 2) Control (CON); 3, 4 and 5) with inclusion of 0.5, 1.0, and 1.5g kg⁻¹ DM of copaiba oil respectively. The lambs were fed twice daily, at 0700 h and 1300 h, a chopped *Cynodon* spp. hay-based diet, with a 53:47 forage to concentrate ratio. Diets were offered for *ad libitum* intake. Lambs were transported to a commercial slaughter house and humanely slaughtered after 16 h fast. Hot carcass weight (HCW) weighed at slaughter. At 24 h postmortem, the cold carcass weight (CCW) was recorded, and measures were taken: the carcass length, leg length, rump perimeter, leg circumference, chest girth, chest width, chest depth and carcass compactness. Samples of *Semimembranosus*, *Gluteo biceps*, *Longissimus* and *Triceps brach* muscle were taken to meat quality measures. Meat pH and temperature inside the meat at 24h after slaughtering. Meat color was measure using a Minolta CR 400 in the L*, a* and b* system. Steaks were sample (1.5 cm thick) from all muscles, of each animal, and frozen at -18 °C for posterior analysis of cooking loss (CL), Warner Bratzler Shear Force (WBSF), and centesimal muscle composition. Data were analyzed using polynomial regression by PROC MIXED SAS version 9.0. The positive control (MON) was compared with copaiba oil levels using LSMEANS and analyzed by Dunnett's test. There was no oil effect on carcass traits. The fat thickness was decreased as MON was included compared with 0, 0.5 and 1.0 g of oil inclusion, with no changed for 1.5g of oil inclusion. There was no oil effect on subprimal yield. Evaluating the muscle centesimal composition, there was a quadratic effect on *Gluteos biceps* fat content, with no oil or MON effect on moisture, ash and protein contents. For *Longissimus* and *Semimembranosus* muscle, the centesimal compositions have no change by treatments. However, there was a linear effect on moisture content in *Triceps bach*, for every 1g of oil inclusion. The meat quality was not change by oil inclusion or MON on *Gluteos biceps* and *Triceps brach*. The inclusion of copaiba oil in feedlot lambs diet not influenced the meat quality, carcass traits and subprimal yield.

Keywords: antibiotics free, cerrado byproducts, functional oil, rumen modulator

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