

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## FEEDLOT PERFORMANCE OF LAMBS FED DIETS CONTAINING EITHER SOYBEAN OIL OR RESIDUAL FRYING OIL OR PALM OIL

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With the search for solutions to reuse the by-products of agro- and/or food processing industries, the need for low cost nutrients, and the lack of research on the use of frying residual oil and palm oil as an alternative to increase the energy density of sheep feed, the present study aimed to evaluate the effects of diets containing different lipid sources – soybean oil, residual frying soybean oil, palm oil – on the feedlot performance of lambs. Thirty Santa Ines male uncastrated lambs, approximately 150 days old and mean body weight of  $29 \pm 2$  kg were randomly assigned to three treatments with ten replicates per treatment. The animals were housed in individual stalls equipped with drinking fountains and feeders at the Federal Institute of Education, Science and Technology of Pará (Instituto Federal de Educação, Ciência e Tecnologia do Pará - IFPA/Campus Castanhal). The diets (17.86% CP) were composed of 40% elephant grass silage (*Pennisetum purpureum*), 23% milled corn, 16.3% soybean meal, 15% wheat meal, 4% one of the evaluated lipid sources, 0.6% limestone and 1.1% urea, considering the dry matter. The 50-day experimental period comprised eight days of adaptation and 42 days of data collection, and the animals were weighed at the beginning and every 21 days, after 14-hour fasting. The animals were fed twice a day for 50 days at 8 am and 4 pm and the leftovers were recovered the next morning to adjust the amount offered to the animals to approximately 10% leftovers and to calculate consumption. The results were subjected to analysis of variance and the means were compared by the Tukey's test at 5% probability. The treatments did not affect the intake of dry matter, crude protein, neutral detergent fiber, etheral extract and non-fibrous carbohydrates ( $p>0.05$ ), and the daily mean values per animals were 1.156 kg DM; 0.214 kg CP; 0.412 kg NDF, 0.080 kg EE and 0.392 kg NFC. Likewise, the different oil sources did not affect the average daily weight gain (0.241 kg) and the feed conversion (4.8 kg on average) ( $p>0.05$ ). It can be inferred that although the different lipid sources have different fatty acid profiles, at 4% concentration they do not affect the feedlot performance of lambs. Considering the results, the residual frying oil can be a valuable alternative source of lipids for finishing lambs in feedlot.

**Keywords:** intake, lipids, Santa Ines, weight gain

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