

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

APPARENT DIGESTIBILITY OF LAMBS FED DIETS CONTAINING EITHER SOYBEAN OIL OR RESIDUAL FRYING OIL OR PALM OIL

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Lipid sources can be used to feed ruminants and provide high dietary energy density, lower caloric increment and reduced production of enteric methane; however, different lipid sources with different sources of fatty acids may alter microbial fermentation and reduce fiber degradation in the rumen. The present study aimed to evaluate the effects of different lipid sources – soybean oil, residual frying soybean oil, palm oil – on the apparent digestibility of finishing lambs. Thirty Santa Ines male uncastrated lambs, approximately 150 days old and mean body weight of 29 ± 2 kg were randomly assigned to three treatments with ten replicates per treatment. The animals were housed in individual stalls at the IFPA-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 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. Samples of the roughage, concentrate, leftovers and feces of each animal were collected for three consecutive days at day 19 and day 40. The apparent digestibility coefficients of the DM, OM, CP, NDF, ADF, NFC and EE were determined by estimating the fecal production using the internal marker indigestible NDF. The apparent digestibility coefficients of nutrients were calculated by subtracting the amount of nutrients in the fecal matter from the amount of ingested nutrients and dividing the result to the amount of ingested nutrients and multiplying by 100. The results were subjected to analysis of variance and the means were compared by the Tukey's test at 5% probability. The apparent digestibility of DM (63.64%), OM (66.75%), CP (73.28%), NDF (38.43%), ADF (37.84%) and NFC (87.81%) for the three different oils were not statistically different ($p > 0.05$). The palm oil had a higher EE digestibility (85.22%) than the soybean oil (77.96%), the oil sources with the highest variation in the fatty acid profile, the soybean oil being the most unsaturated; but there was no difference to the residual frying soybean oil (81.40%). Our results show that although the different lipid sources have different fatty acid profiles, at 4% concentration, they do not affect the digestibility of lambs in feedlot.

Keywords: feedlot, lipids, Santa Ines

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