Eight Pelibuey hair sheep (45 ±2.2kg body weight), cannulated in the rumen and kept in metabolic stalls in a roofed building, were used to determine the effect of the incorporation of corn oil in a concentrate upon dry matter (DM) intake, rumen fermentation of DM, organic matter (OM) crude protein (CP) and neutral detergent fiber (NDF), as well as microbial N supply to the small intestine. Sheep were fed low-quality Guinea hay (Panicum maximum) grass ad libitum and 300g daily of a commercial concentrate to which 0, 4, 8 and 12% of corn oil was added. Voluntary DM intake was measured and rumen fermentation of DM, OM, CP and NDF neutral detergent fiber were estimated with the nylon bag technique, after hay incubation in the rumen for 6, 12, 24, 48, 72 and 96h. Urinary excretion of purine derivatives was determined. As oil concentration was increased, DM intake of hay decreased (P<0.05). Rumen fermentation (a, b and a+b fractions) of DM, OM, CP and NDF showed no significant differences (P>0.05) between treatments, but rates of digestion (fraction c) were higher for DM, OM and CP when oil was not included in the supplement (4.9, 14.5 and 10.4%/h, respectively). Digestion rate of NDF was higher (5.71%/h; P<0.05) with 8% corn oil. Microbial N supply to the small intestine showed no significant differences (P>0.05) between treatments; however, addition of 8% oil decreased (5.11 ±0.29 gd) microbial N supply with respect to 4% (6.18 ±0.29), and N supply was lower when the oil was not added (4.73 ±0.27) than when it was added at 4, 8 and 12% (6.18 ±0.29, 5.11 ±0.29 and 5.19 ±0.29, respectively). Corn oil in the concentrate fed to sheep tended to decrease DM intake of low-quality tropical hay without effects on rumen degradability and microbial N supply to the small intestine.

Keywords
Corn Oil / Rumen Fermentation / Pelibuey Hair Sheep / Microbial Nitrogen / Low-quality Grass.