

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

TRUE PHOSPHORUS ABSORPTION: COULD *Trichostrongylus colubriformis* INFECTION AND RESTRICTION HANDLE?

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The objective of the study was to evaluate the true absorption coefficient in Santa Ines lambs infected with *Trichostrongylus colubriformis* and restricted of phosphorus (P). The experiment was conducted in the Animal Science Laboratory facilities located in the Centre for Nuclear Energy in Agriculture. The project was approved by the Ethics Committee on Animal Uses (n° 004/2015). Eighteen castrated male Santa Ines lambs (BW = 22.4 ± 2.70 kg; mean ± SE) were studied in a completely randomized design in a factorial arrangement 2x2, with two P requirements (Adequate and Restricted) and two infection condition (Infected or Not). Therefore, the four groups tested was: AN (adequate P and not infected; 4 animals); RN (restricted P and not infected; 4 animals); AI (adequate P and infected; 5 animals); and RI (restricted P and infected; 5 animals). The animals were infected in a simple dose of 40,000 L₃ larvae stage of *T. colubriformis*. The diet was calculated for 100 g day⁻¹ gain, and based of forage, using Tifton-85 hay (*Cynodon* spp.) and concentrate, using cassava meal, glutenose 60, sodium chlorite, urea and soy oil. The diet forage: concentrate ratio was 60:40 and the feed and water were provided *ad libitum*. To reach the adequate requirement of P, the treatments was supplemented with dicalcium phosphate. After infection the animals were housed individually during 51 days, seven days before slaughter the animals were submitted to a radioactive ³²P injection. For the radioactive phase, 0.5 mL of a ³²P solution (7.4 MBq of activity) was injected in each animal and the blood and feces sample were collected five minutes after injection and once a day during seven days. The endogenous P in feces was calculated based on the specific activity of blood and feces, and the absorption of P (g day⁻¹) was calculated as (P_{intake} - (P_{feces} - P_{fecal endogenous})). The data was statistically tested by Tukey (P<0.05) for the fixed effects of P restriction, Infection and the interaction. No interaction effect was observed in the P absorption (P = 0.76), neither for infection (P = 0.80). However, considering the P restriction (P = 0.07), lambs consuming adequate P absorbed (52%) 14% more P compared to restricted ones (38%). Therefore, the source of P intake could interfere in the absorption coefficient of P in lambs.

Keywords: Digestion, Lambs, Metabolism, Macromineral, Nematode

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