

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

MACROMINERALS REQUIREMENTS FOR THE GROWTH OF HAIR SHEEP IN A TROPICAL CLIMATE

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The mineral recommendations suggested by the international systems are based on studies with sheep raised in temperate regions and may not represent the actual requirements for hair sheep. A study was carried out to estimate macromineral requirements of calcium (Ca), phosphorus (P), magnesium (Mg), potassium (K) and sodium (Na) for the growth of hair sheep. Thirty-eight Santa Ines lambs (13.0 ± 1.49 kg initial body weight (BW) and 2 months old; 18 non-castrated and 18 castrated males), and thirty-one Morada Nova lambs (14.5 ± 0.89 kg initial BW and four months old; 16 non-castrated and 15 castrated males) were distributed in a completely randomized study of 3×2 factorial arrangement with three levels of feeding (*ad libitum*, 30% and 60% feed restriction) and two sex classes (non-castrated and castrated males). The remaining lambs were slaughtered when the animals fed *ad libitum* reached an average BW of 28 kg. The initial empty body weight (EBWi) was estimated using the data from the reference group of 16 animals. The net requirements of the minerals for gain (NMg) was estimated by equation $NMg = EBWG \times (a \times b \times EBW^{(b-1)})$, where EBWG = empty body weight gain; a and b = are regression parameters. The genetic group and sex classes did not influence the parameters of the equations to estimate the net requirements of gain. The macromineral requirements for gain (200 g day⁻¹ of average daily gain (ADG)) decreased from 6.03 to 5.37 for Ca, 4.40 to 3.60 for P, 1.09 to 0.99 for K and 0.78 to 0.69 g for Na, when BW increased from 10 to 30 kg. It suggests that the requirements of these macrominerals reduce as the animals grow and that lambs have greater demands than adult animals. However, the net requirement of Mg for gain increased from 0.31 to 0.35 g as the animal grows, but in a less proportion than animal growth. The study contributes to the formulation of diets more precise levels of macromineral for hair sheep in tropical conditions.

Keywords: gain, morada nova, santa ines, small ruminant

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