

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## RELATIONSHIP BETWEEN BODY COMPONENTS OF GOATS AT DIFFERENT AGES AND FEED REGIMEN

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Quantitative aspects of non-carcass constituents influence carcass yield, maintenance requirements and weight gain of animals. In this context, the objective of this study was to compare the body components of goats at three, five and seven months of age fed *ad libitum* (AL) or at maintenance level (L). We used thirty-six castrated males Saanen goats subdivided into three age groups (three, five and seven months) with twelve animals each, of which, six were fed AL and six at L. The diet was composed by corn silage and concentrated in a 50:50 ratio. Recorded body weight (BW) at slaughter was  $13.3 \pm 0.53$ ,  $15.2 \pm 0.53$ ,  $22.0 \pm 0.53$  for goats aging three, five and seven months, respectively. The average dry matter intake was 3.16% and 2.77% of BW for AL and L groups, respectively. Before slaughter, goats were fasted of solids and liquids for 24 hours. At slaughter, the goats were stunned with a captive bolt pistol, followed by severing the jugular vein and carotid artery. Thus, blood was collected and weighed, skinning and evisceration was performed. Afterwards, the gastrointestinal tract (GIT), gallbladder and bladder were removed and weighed, filled and empty, to determine empty BW (EBW). All others non-carcass components were also weighed. The experiment was completely randomized in factorial 2x2, with age and level as fixed effects. Tested variables were GIT, EBW and fat ( $\text{kg}^{-1}$  and %). All those variables were affected by age ( $P < 0.01$ ) indicating that the increase in age was followed by weight gain. The EBW% also rised with advancing age ( $73.2 \pm 1.38$ ,  $76.2 \pm 1.38$ ,  $80.1 \pm 1.38$  in goats aging three, five and seven months, respectively;  $P < 0.01$ ). However, GIT% decreased with age ( $9.3 \pm 0.19$ ,  $8.7 \pm 0.19$ ,  $7.8 \pm 0.19$  in goats aging three, five and seven months, respectively;  $P < 0.01$ ), this relative percentage increase for the younger animals is due to the metabolic importance of these organs accompanying the exponential growth in the body at that stage. The inverse situation occurred for interaction of age and level in FAT%. As animals grew there was an increase in adipose tissues proportion ( $1.6 \pm 0.19$ ,  $2.2 \pm 0.19$ ,  $4.0 \pm 0.19$  in goats aging three, five and seven months, respectively;  $P < 0.01$ ), what was expected as fat is deposited late in relation to bone and muscular tissues. In conclusion, it shows that age and level directly influence slaughter weight and consequently the final marketable product.

**Keywords:** non-carcass components, slaughter, small ruminant

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