

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## DEVELOPMENT OF YOUNG MALE GOATS FEED WITH UREA: PRELIMINARY RESULTS

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Feeding costs can reduce Brazilian goat production profitability. Therefore, non-protein nitrogen (NPN), as urea, has been used not only as an alternative to fill protein requirements in ruminants but also to reduce production costs. Nevertheless, there is a lack of studies evaluating urea impacts on body development in young male goats. So, the objectives of the current study were to analyze the influence of diets containing urea or not on body volume, body compacity and perimeter and area of L. dorsi by ultrasonography. Additionally, the correlations of body measurements and ultrasonographic measurements were calculated. The experiment was conducted at Seropedica-RJ. Nineteen Saanen male goats with 5 months of age and average of  $21.3 \pm 0.5$  kg of body weight. The animals were divided in two groups: 0% (control) and 2% urea on dry matter basis for 77 days. The diets were composed by tifton hay, corn meal, and minerals for both groups, soybean meal in control group and urea in urea group. Both diets present 12% crude protein and 65% total digestible nutrients on dry matter basis. The animals were evaluated at 77<sup>th</sup> day for body weight (kg) using a platform mechanic balance, thoracic perimeter (cm) and body length (cm) using a tape measure and perimeter (mm) and area (mm<sup>2</sup>) of *Longissimus dorsi* muscle by ultrasonography between 12<sup>th</sup> and 13<sup>th</sup> ribs. Moreover, body volume (BV=TP.BL) and body compacity (BC=BW.BL<sup>-1</sup>) were calculated. The data were expressed as mean  $\pm$  standard deviation mean and evaluated for normality by D'Agostino-Pearson test. The comparison between the two groups was by Student t test and the correlation of body volume and body compacity with perimeter and area of L. dorsi by Pearson method ( $p < 0,05$ ). There was no differences of body volume ( $4766 \pm 156,1$  vs  $4901 \pm 113,6$ ) and body compacity ( $0,42 \pm 0,0$  vs  $0,43 \pm 0,0$ ) between urea and control groups ( $p > 0,05$ ). Besides, it was not also observed differences of perimeter ( $119,1 \pm 1,8$  vs  $117,2 \pm 1,8$ ) and area ( $701 \pm 38,5$  vs  $737 \pm 32,1$ ) of *L. dorsi* by ultrasonography ( $p > 0,05$ ). There was not observed correlations of body volume or body compacity with perimeter and area of *L. dorsi* ( $p > 0,05$ ). In conclusion, the substitution of soybean meal for 1% urea on the diet of young male goat does not modify the development from 5 to 8 months.

**Keywords:** ultrasonography, *Longissimus dorsi*, body volume, body compacity, Saanen goats

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