

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

CORTISOL AND TESTOSTERONE LEVELS OF TEXEL LAMBS SUPPLEMENTED WITH DIFFERENT PROBIOTIC ADDITIVES FINISHING WITH HIGH CONCENTRATE

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Although sheep are docile animals, the frequent management in intensive breeding and the high contact with humans can lead to stressful reactions which compromise the performance of them. Nutrition also influences hormone production, because steroid hormones (cortisol and testosterone) are derived from a common substrate, cholesterol. The objective of this study was to evaluate the levels of cortisol and testosterone in confined Texel lambs that were supplemented with probiotic with and without organic selenium and chromium (Beef Sacc® and Yea Sacc®, respectively). In this research were used 24 entire Texel lambs, aged 90 days, divided into three groups, G1 (control) without addition of probiotics, G2 animals individually received 3 g probiotic (yeast *Saccharomyces cerevisiae*) plus organic selenium and chromium; G3 received 5 g of probiotic containing only the yeast *Saccharomyces cerevisiae*. The commercial diet (80%) contained 18% crude protein (CP), 4.6% ethereal extract (EE), 19% crude fiber (CF) and 74% total digestible nutrients (TDN) and the Coast Cross hay was used as how source of forage (20%), with chemical composition (8.3% CP, 1.6% EE, 34% CF and 55% TDN) and mineral salt *ad libitum*. Three blood samples were collected, at 30, 60 and 120 days of experiment, to obtain the plasma, concomitant to the weighing of the animals. The plasma was maintained at -20°C until the testosterone and cortisol were dosed by the radioimmunoassay method, using commercial kits (MPBiomedical®). The analyses of variance were processed by statistical package R and differences were considered significant with 5% of probability. There was no effect ($P > 0.05$) of experimental diets on testosterone and cortisol levels of lambs. The mean weights at 30, 60 and 90 days of experiment were 34.8 ± 3.8 kg; 38.1 ± 4.1 kg and 54.8 ± 3.5 kg, respectively. Regardless of the experimental group, the mean plasma testosterone level was 0.89 ± 0.69 ng/mL (30 days), 1.62 ± 1.31 ng/mL (60 days) and 3.52 ± 3.0 ng/mL (90 days). Cortisol concentrations at 30, 60 and 90 days were 0.09 ± 0.10 µg/dL, 1.62 ± 0.17 µg/dL and 0.13 ± 0.15 µg/dL, respectively. The probiotic additives did not influence the concentration of cortisol, possibly because the animals were adapted to the management conditions. Testosterone did not show differences, but it increased along of the periods evaluated according to age, since puberty is reached between 5 and 9 months of age.

Keywords: animal nutrition, *Saccharomyces cerevisiae*, sheep, steroid hormones

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