Dietary energy intake and reproductive performance of Toggenburg goats.

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Abstract / Resumo:

In order to evaluate the reproductive performance of Toggenburg goats fed with different dietary energy, 32 kids in reproductive age and free of any reproductive pathology were divided in 3 groups according to the dietary treatment. Group 1, maintenance (M) (n=11); Group 2, supplied energy 1.5 times energy maintenance (1.5M) (n=10); and Group 3, supplied energy 2.0 times energy maintenance (2.0M) (n=11). The estrus cycles of all kids were induced and synchronized by insertion of an intravaginal sponge impregnated with 60mg Medroxyprogesterone Acetate. The pattern of follicular development was examined daily from day 1 to 6 of the synchronized estrus cycle using an ultrasound scanner fitted with an 8.0-MHz linear transducer, adapted for small ruminants. After sponge removal the examinations were made twice daily to determine time of ovulation. Animals ovulating, time between sponge removal and ovulation, ovulation rate and ovulatory follicle diameter were measured. Results were analyzed by the Duncan test. Groups 1 and 3 had all animals ovulating (100%) while group 2 had 9 kids ovulating (90%). Time between sponge removal and ovulation was similar ($P>0.05$) in groups (Group 1: 56.28 ± 12.58; Group 2: 57.66 ± 8.7; Group 3: 45.22 ± 7.96 hours). Ovulation rate had no difference ($P>0.05$) between groups (Group 1: 1.27 ± 0.47; Group 2: 1.00 ± 0.47; Group 3: 1.18 ± 0.40). High energy level group (group 3) had ovulatory follicle diameter smaller (62.64 ± 7.43 X 63.18 ± 6.31 mm – $P <0.06$) than low energy groups (group 1: 72.64 ± 7.61 X 73.54 ± 8.88 mm; group 2: 69.29 ± 14.01 X 68.11 ± 12.26 mm) that had no difference between results ($P>0.06$). We conclude that animals supplied with high energy diet ovulates faster after sponge removel and therefore follicles of smaller sizes.