



A051 TAI/FTET/AI

Administration of HCG seven days after estrous onset increases the pregnancy rate in Toggenburg goats subjected to induction of synchronized estrus and natural mating

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The dominant follicle reaches its maximum diameter on the sixth day after ovulation or seven days after the onset of estrus (Castro et al., *Theriogenology*, 52: 399-411, 1999). This study investigated the effect of hCG administration on the seventh day after the onset of estrus (D7) on pregnancy rate in Toggenburg goats. The study was conducted during December and January in Piau, MG, Brazil (latitude 21°35'S and longitude 43°15'W). A total of 86 Toggenburg goats was used, with a mean body weight of 49.2 ± 10.5 and body condition score of 2.8 ± 0.4 (1 to 5 scale). For estrus synchronization, all the animals received a vaginal sponge containing 60 mg of medroxyprogesterone acetate (Progespon; Syntex S.A., Biochemical and Pharmaceutical Industry, Buenos Aires, Argentina) for six days. Both 200 IU eCG (Folligon; Intervet International B. V., Boxmeer, Holanda) and 30 µg of d-cloprostenol (Prolise; ARSA S.R.L., Buenos Aires, Argentina) i.m. were administered 24 h before sponge removal. After sponge removal, the estrus detection and breeding were performed every 12 h with males previously submitted to andrological examination. Both experimental groups were formed according to their order of entry into estrus, where the animals in the control group received 1 mL of saline solution and 300 IU hCG (Vetecor, Laboratorios Calier S.A., Barcelona, Spain) i.m., both in D7. Pregnancy diagnosis was performed on the D30 through transrectal ultrasonographic evaluation (Mindray[®] M5Vet, Shenzhen, China), with a linear transducer of 5.0 MHz. For statistical analysis, the chi-square test was used with a significance level of 5%. The pregnancy rate of the animals receiving hCG was superior (P=0.047) than those receiving saline [90.7% (39/43) and 74.4% (32/43)]. We conclude that the use of hCG seven days after hormonally induced-estrus is an efficient strategy to increase the pregnancy rate in dairy goats.

Financial Support: Minas Gerais Research Support Foundation (Fapemig, Project CVZ-PPM 00201-17).