

Ovulation and oestrus synchronization using fluorogestone acetate vaginal sponges in nulliparous Serrana goats

R Valentim¹, J Azevedo², JC Almeida², T Correia¹, R Mascarenhas³, P Fontes², J Simões²

¹ESA-IPB, Bragança, Portugal; ²CECAV-UTAD, Vila Real, Portugal; ³INIAP, Santarém, Portugal

In order to determine the time of induced ovulation and oestrus after progestagen use in nulliparous Serrana goats, 9 females aged between 2 to 3 years and located at latitude 41° N, were used. In May, an intravaginal sponge impregnated with 45 mg of fluorogestone acetate was applied for 12 days. The administration (i.m.) of 500 UI of eCG and 50 µg of cloprostenol at sponge withdraw time. Oestrus was detected using a vasectomized buck. Plasma samples were collected, from the jugular vein of each goat, every 4 hours, during the first 24 hours after the onset of oestrus for LH determination. A transrectal ultrasound scanning of both ovaries was also performed every 4 hours until 48 hours after oestrus beginning, for ovulation detection through the disappearance of large follicles. Corpora lutea (CL) were counted by ultrasonographic observation, 7 to 10 days after ovulation. Oestrus were detected 33.4 ± 2.7 h (mean \pm sd; n = 9) after sponge withdraw. The interval between sponge withdraw and LH preovulatory surge was 37.0 ± 3.6 h. Interval between sponge withdraw and ovulation was 56.7 ± 3.6 hours with a minimum of 51.3 and a maximum of 62.3 hours. The interval between LH preovulatory surge and ovulation was 20.0 ± 3.1 hours. The mean number of CL observed per goat was 3.3 ± 0.7 . In conclusion, after the progestagen treatment, a low variation of the time of ovulation was found what is in favour of one-time artificial insemination. The great number of CL suggests a small dose of eCG could be used in nulliparous Serrana goats during seasonal anoestrus.