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PREGNANCY RATE IN TOGGENBURG GOATS AFTER SHORT, MEDIUM OR LONG-TERM PROTOCOLS FOR INDUCTION OF SYNCHRONIZED ESTRUS AFTER NATURAL MATING OR ARTIFICIAL INSEMINATION IN DIFFERENT SEASONS

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The study was conducted in the city of Piau (21° 35'S latitude and 43° 15'W longitude), Zona da Mata, Minas Gerais, Brazil. The aim was to evaluate the pregnancy rate of Toggenburg goats in the anestrus, transition and breeding season after the use of short, medium or long-term protocols to induce synchronized estrus after natural mating (NM) or artificial insemination (AI) with frozen semen after 52 h of device removal. A hundred and seventy eight Toggenburg goats were homogeneously allocated among three treatments according to the reproductive season studied: anestrus (n=61), transition (n=49) and breeding season (n=68). In each of them, the same three treatments were given, varying on the time of maintained the intravaginal device (CIDR-G[®], Pfizer Animal Health, São Paulo, Brazil), for 6 (T6), 9 (T9) and 12 (T12) days. At the time of device insertion all animals received 12.5 mg dinoprost (Lutalyse[®], Pfizer Animal Health, São Paulo, Brazil) paravulvar and 24 h before implant removal, 200 IU eCG (Novormon[®], Schering Plough Animal Health, São Paulo, Brazil) i.m. was administered and two forms of mating were used: NM or AI. Statistical analysis was performed using BioStat 2.0[®] software with 5% significance. The χ^2 test results showed no difference among anestrus season (62.3% - 38/61), transition (68.2% - 30/49) or breeding season (48.5% - 33/68). As to the form of used mating, no difference (P>0.05) was detected in NM (54.5% - 48/88) or AI (58.9% - 53/90) nor among treatments (P>0.05) T6 (48.8% - 29/60), T9 (57.9% - 33/57) or T12 (63.9% - 39/61). The results show that pregnancy rate was not influenced by the anestrus, transition or breeding seasons when using short, medium or long-term protocols, to induce synchronized estrus regardless of the form of mating. Therefore, the protocols used in this study could be indicated for the induction of synchronized estrus, regardless of permanence of the device, reproductive season and form of mating. However, a shorter period may be a more interesting option, since it decreases the possibility of device losses, as well as the occurrence of implant adhesions. Acknowledgements: CNPq, FAPEMIG, EMBRAPA and Pfizer - Animal Health.

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INFLUENCE OF THE INTERVAL FROM TIMED ARTIFICIAL INSEMINATION TO OVULATION ON THE CONCEPTION IN NELORE COWS USING SEX-SORTED SEMEN

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The identification of most appropriate moment to perform the timed artificial insemination (TAI) using sex-sorted semen following synchronization protocol can be important to improve the fertility of sex-sorted semen and increase the use sexed semen technology in commercial beef farms. The aim of this study was evaluated the better interval to perform the TAI relative to synchronized ovulation in suckled cows. A total of 339 suckled multiparous Nelore cows from an experimental farm (APTA), in Colina-SP, were evaluated in this study. The protocol started between 30 and 60 days post-partum. Cows received one synchronization protocol using an intravaginal device containing 1.0g of progesterone (Sincrogest[®], Ouro Fino) plus an i.m. injection of 2.0mg of EB (Sincrodio[®], Ouro Fino). Eight days later, the device was removed and 0.25mg i.m. injection of cloprostenol sodium (Sincrocio[®], Ouro Fino) and 300IU of eCG (Folligon[®], Intervet-Shering Plough) were administered. Cows were homogeneously assigned to receive TAI using sex-sorted semen from a single sire (2.1 millions of sperm cell per straw) at 36, 48 or 60 hours after device removal. The TAI to ovulation interval of synchronized cows was determined and the analysis was performed to compare the pregnancy for TAI performed at various intervals before ovulation using 12 hours time intervals. Ovarian ultrasonographic examinations (CTS-3300V, SIUI, China) were performed twice daily from day of the device removal to 96 hours afterwards, to evaluate ovarian follicular dynamics and interval from device removal to ovulation. All females were examined for pregnancy 30 days after AI. The data were analyzed using the SAS program. Incidence of ovulation after the estrous synchronization protocol was 92.0 % (312/339). Diameter of ovulatory follicle was 14.7 ± 2.3 mm and the interval between the P4 device removal and synchronized ovulation occurrence was 71.8 ± 7.7 hours. The distribution of the synchronized ovulation relative to the device removal was: 48 hours (6.73%; 21/312), 60 hours (0.64%; 2/312), 72 hours (80.77%; 252/312), 84 hours (11.22%; 35/312), and 96 hours (0.64%; 2/312). The pregnancy per artificial insemination (P/AI) was increased (P < 0.001) when the TAI was delayed 36 hours (5.8%; 5/86)^a, 48 hours (20.8%; 27/130)^b and 60 hours (30.9%; 38/123)^a. Higher P/AI was achieved on TAI performed closer to ovulation (0 to 12 hours before ovulation = 37.9 %; 35/95) than TAI performed on 12.1 to 24 hours (19.4%; 21/108; P = 0.05) or > 24 hours (5.8%; 5/87; P = 0.0001) before the synchronized ovulation. In conclusion, P/AI is increased when the TAI using sex-sorted is performed closer to synchronized ovulation in suckled Nelore cows.