INDUCTION OF ESTRUS IN DRY TOGGENBURG GOATS WITH DIFFERENT PROTOCOLS

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Introduction

Domestic population of goat has growth intensively in the last decade and in the early 21 century, particularly in developing countries (MORAND-FEHR & BOYAZOGLU, 1999). In Brazil, goat milk and meat production are expanding their frontiers from the northeast to other regions, like southeast. To reach more efficient production systems, some regional peculiarities should be considered. Because in Brazilian southeast conditions, goats are typically seasonal breeders, estrus induction and synchronization may be employed to attend consume demand during the year. Only a few studies of estrus synchronization have been reported in Brazil. In the southeast, FONSECA (2002) reported one study in Alpine goats. Commonly, synchronization is induced by association of progestagens, gonadotropins and prostaglandins. Progestagens are administered by vaginal devises or sponges for 10 to 18 days. It can be interesting to decrease this time of exposition to facilitate management and possibly minimize vaginal discharge and infection. The objective of this study was to check if the reduction in exposition period to progestagen can be efficient to induce estrus synchronization in Toggenburg goats.

Material and Methods

Nineteen goats were assigned to two groups (A and B) and tested alternately in two treatments (T1 and T2). In T1 (n=19) and T2 (n=19), animals received intravaginal sponge (day 0) containing 60 mg of medroxyprogesterone (Progespon®,Tecnopec ,Brasil) for six days and nine days, respectively, plus 200 IU of pregnancy mare serum gonadotropin (PMSG-Novormon®, Syntex, Argentina) and 22.5 µg of d-cloprostenol (Prolise®, Tecnopec, Brasil) 24 h before sponge removal. Females were breed only in second estrus and received 22.5 µg of d-cloprostenol seven days later to prevent pregnancy. Percentages of animals in estrus were compared between treatments by using qui-square test. Average interval from sponge removal and onset of estrus and duration of estrus were submitted to analysis of variance and compared by SNK-test using a SAEG program (System for Statistical Analysis; Ribeiro Júnior, 2001).

Results and Discussion

Percentages of animals in estrus did not differ (P>0.05) between T1 (89.5 %) and T2 (84.2 %). Interval from sponge removal and the onset of estrus (IE) did not differ (P>0.05) between T1 (46.1±15.0 h) and T2 (53.6±16.1 h). From 33 females in estrus (T1 + T2), 28 (84.8 %), 2 (6.1 %) and 3 (9.1 %) were identified in estrus at 6, 12 and 18 hours of the day, respectively. Additionally, 6 (18.2 %), 0 (0.0 %) and 27 (81.8 %) finished estrus at 6, 12 and 18 hours of the day, respectively. Estrous duration did not differ (P>0.05) between T1 (30.0 ± 12.0 h) and T2 (27.2 ± 11.2 h).

Conclusion

Both protocols were efficient to induce estrus in dry goats. The onset and end of the estrus relative to hour of the day should be considered in estrous detection, natural breeding and artificial insemination in goats.

References

FONSECA, J.F. *Controle e perfil hormonal do ciclo, estro e performance reprodutiva de cabras Alpinas e Saanen.* Tese (Doutorado) - Departamento de Zootecnia, Universidade Federal de Viçosa, Laboratório de Reprodução Animal, Viçosa, Brasil.

MORAND-FEHR, P., BOYAZOGLU, J. Present state and future outlook of the small ruminant sector. *Small Rumin. Res.*, v.34, p.175-188, 1999.

RIBEIRO JÚNIOR, I. *Análises estatísticas no SAEG.* Viçosa: Editora UFV, 301p. 2001.

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