In vivo embryo production in Brazilian naturalized goats

Produção in vivo de embriões em cabras brasileiras naturalizadas

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Multiple ovulation and embryo transfer (MOET) is one of the most interesting reproductive biotechniques to be used in order to allow a rapid progression in the number of offspring per female. However, it is an underutilized reproductive biotechnology due to the variability of superovulatory response found and the high cost (Baldassare e Karatzas, 2004. AnimReprod Sci, 82/83:255-266). Brazilian naturalized breeds have socio-economic regional importance, but there is no studies reporting the effectiveness of *in vivo* embryo production on these animals. Thus, the aim of this study was to assess the efficiency of superovulation and viable embryo yield in Canindé and Moxotó goats raised and managed in different places. From September to October of 2018, 15 Canindé and 15 Moxotó goats were subjected to embryo recovery after a superovulation protocol that consisted of insertion of acetate medroxyprogesterone intravaginal sponge (60 mg of MAP, Progespon®, Syntex, Buenos Aires, Argentina), which was maintained for six days. On the MAP sponge insert was administrated i.m. d-cloprostenol (37.5 µg, Prolise®, Agener União, Brazil). Superovulatory treatment was initiated 60 h prior to MAP sponge withdrawal, with six decreasing doses (25-25-15-15-10-10%) of p-FSH (133 mg - Folltropin V®, Vetoquinol, Brazil) injected i.m. every 12 h. Goats also received three administrations i.m. of flunixin-meglumine (24.9 mg; Banamine®, MSD, São Paulo, Brazil) on Days 2, 3 and 4 after MAP sponge withdrawal (D0). Females were monitored for estrous response and naturally mated with fertile male goats. Embryo recovery was performed six days after estrous manifestation, by the transcervical technique (Fonseca et al., 2013. SmallRuminRes, 111:96-99). Because of divergent production systems, comparisons between breeds were not recommended and data are presented in a descriptive form. Estrous response rate was 73.3% (11/15) for Canindé and 80% (12/15) for Moxotó goats. The recovery was possible in all Moxotó goats and in 10 Canindé goats, when only one animal was not collected due to vestibular stenosis. The average number of corpora lutea found by breed was 9.6±1.4 and 13.9±1.0 for Canindé and Moxotó goats, respectively. Recovery rates were 35% (37/106) and 53% (88/167) and the embryonic viability rates were 92% (34/37; 18 morulae, 16 blastocyst, one degenerated embryo and two unfertilized eggs) and 89% (78/88; 37 morulae, 39 blastocyst, two eight cell embryos and ten unfertilized eggs) for Canindé and Moxotó goats, respectively. The recovery rate is according to other studies using the same technique (Fonseca et al., 2016. Theriogenology, 86:144-151). It is concluded that the *in vivo* embryo production is feasible in Brazilian naturalized goat breeds. Because of MOET protocol was developed in dairy goats, further studies considering breed special related features should be done to improve embryo yield and recovery, specialy in the Canindé breed.
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***Palavras-chave**: caprinos, recuperação de embriões, PIV.*