



A045 TAI/FTET/AI

### **Synchronization of estrus with two doses of cloprostenol at different intervals and Artificial Insemination in dairy goats**

**G.C. Bonato<sup>1</sup>, J.M.G. Souza-Fabjan<sup>2</sup>, L.R. Côrtes<sup>2</sup>, T.A. Oliveira<sup>3</sup>, A.M. Arrais<sup>4</sup>, A.L.R.S. Maia<sup>2</sup>, J.F. Prates<sup>5</sup>, M.O. Veiga<sup>6</sup>, J.F. Fonseca<sup>6</sup>**

<sup>1</sup>UFV - Universidade Federal de Viçosa, Viçosa, MG, Brasil; <sup>2</sup>UFF - Universidade Federal Fluminense, Niterói, RJ, Brasil; <sup>3</sup>UNIPAC - Universidade Presidente Antônio Carlos, Juiz de Fora, MG, Brasil; <sup>4</sup>UFRRJ - Universidade Federal Rural do Rio de Janeiro, Departamento de Reprodução e Avaliação Animal, Instituto de Zootecnia, Seropédica, Rio de Janeiro, Brasil; <sup>5</sup>IF Sudeste MG - Instituto Federal de Educação Ciência e Tecnologias Sudeste de Minas Gerais Rio Pomba, MG, Brasil; <sup>6</sup>Embrapa Caprinos e Ovinos, Embrapa Gado de Leite, Núcleo Regional Sudeste, Coronel Pacheco, MG, Brasil.

The present study evaluated the efficacy of two protocols for estrus synchronization with different intervals in order to use them in artificial insemination (AI) in Saanen and Alpine multiparous goats in June (end of the natural mating season). The animals were allocated into two groups, according to breeding, parity, and body condition score to receive two doses of 37.5 µg d-cloprostenol (Prolise<sup>®</sup>, ARSA SRL, Buenos Aires, Argentina) latero-vulvar 7.5 (n=23) and 11.5 (n=25) days. The first dose was administered between 0600 and 0700 a.m. and the second between 1700 and 1800 p.m. Estrus was observed every 12 h from the second d-cloprostenol dose to 96 h after. The AIs were performed with commercially frozen semen, thawed for 30 s at 35 °C, after 18 and 24 h (T7.5) and 10 and 24 h (T11.5) as earlier proposed (Maia et al., Anim. Reprod. Sci., 181:16-23, 2017). Non-parametric data were checked by chi-square test while parametric data (mean ± SD) were submitted to analysis of variance, all tests at a significance level of 5%. Estrus response was 78.3% (18/23) for T7.5 and 80.0% (20/25) for T11.5 (P> 0.05). From animals in estrus, 77.7% (14/18) and 80.0% (16/20) started estrus in morning for T7.5 and T11.5, respectively. Three animals from each group were submitted to natural mating (NM) because they presented a frequent history of estrus repetition and the rest were submitted to AI. The estrus interval was shorter (P <0.001) in T7.5 (40.0±9.2 h) than in T11.5 (51.6±11.7 h). The intervals of the second dose of cloprostenol to AI and the onset of estrus to AI were, respectively, 64.4±1.4 and 26.1±3.7 h for T7.5 and 68.8±2.8 and 16.6±7.6 h for T11.5 (P <0.001). Two animals died in T7.5 within 60 days from AI until the diagnosis of gestation. No animal became pregnant after NM. In AI animals, conception rate was 69.2% (9/13) for T7.5 and 70.6% (12/17) for T11.5 (P> 0.05). Even at the end of the breeding season, the protocols were able to synchronize a significant percentage of animals in a short window of time, resulting in a high conception rate after AI.

Financial Support: CNPq (Projects 310166 / 2012-8 and 479826 2013-7), Fapemig (Project CVZ-PPM 00201-17), and EMBRAPA (Project 02.08.02.005.00.04).