

**Abstracts - 35th Annual Meeting of the Brazilian Embryo Technology Society (SBTE)**

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## Splitting the eCG dose during synchronization of ovulation for TAI in suckled beef cows

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### Resumo

We aimed in this study to test the hypothesis that the splitting the administration of eCG in two moments (two days before the removal of the P4 device [Day 7] and on the day of removal [Day 9]) increases the conception rate in suckled Nelore cows submitted to timed-AI (TAI). Multiparous (n=800; Experiment 1) and primiparous (n=934; Experiment 2) Nelore cows, with a mean of 38 days postpartum and BCS of 3 (scale:1 to 5) were submitted to a hormonal protocol for TAI. On the first day of the protocol (Day 0), cows received 2mg of estradiol benzoate (i.m., Gonadiol, Zoetis) and an insertion of a P4 intravaginal device (0.5g, DIB, Zoetis). On Day 7, 12.5mg of dinoprost tromethamine (i.m., Lutalyse, Zoetis) was administered, and cows were randomly divided into 2 groups: eCG-7/9 group: received 150IU eCG (Novormon, Zoetis) on Day 7 and 150IU on Day 9 (multiparous, n=404; primiparous, n=470) and eCG-9 group: received a single dose of 300IU eCG on Day 9 (multiparous, n=396; primiparous, n=464). On Day 9, the P4 device was removed and 0.6mg estradiol cypionate (i.m., E.C.P., Zoetis) was administered in all cows. A marker stick at the insertion of the animal's tail was used for estrous detection. A subgroup of animals (n=111-127/group) were evaluated by B-mode ultrasonography on Days 7, 9 and 11 for determination of dominant follicle diameter. TAI and estrous detection were performed on Day 11. Pregnancy diagnoses were determined between days 40 and 50, and between days 90 and 130 after TAI. Variables were evaluated by ANOVA using PROC MIXED or logistic regression using PROC GLIMMIX of SAS software. No significant difference ( $P>0.1$ ) in the dominant follicle size on Days 7, 9 and 11 was detected between groups in multiparous; whereas in primiparous, the dominant follicle was larger ( $P=0.02$ ) on Day 9 in the eCG-7/9 group ( $10.2\pm0.02$  mm vs.  $9.4\pm0.02$  mm). No significant difference ( $P>0.1$ ) in the rate of estrous detection was detected between groups in multiparous or primiparous. In multiparous cows, the conception rate observed at the first and second pregnancy diagnoses did not differ ( $P>0.1$ ) between the eCG-7/9 group (59% and 55%) and eCG-9 group (57% and 54%). In primiparous, a greater conception rate was observed at the first ( $P=0.02$ ) and second ( $P<0.01$ ) pregnancy diagnoses in the eCG-7/9 group (63% and 60%) than in the eCG-9 group (59% and 55%). No difference ( $P>0.1$ ) in the rate of pregnancy loss was observed between groups in multiparous (5% vs. 6%); whereas in primiparous, a lesser ( $P<0.01$ ) rate was observed in the eCG-7/9 (4%) than in the eCG-D9 (7%). In conclusion, splitting the dose of 300UI eCG had no impact on follicle growth, estrous expression or conception rate in multiparous; but it is an interesting alternative to increase the size of dominant follicle at the P4 device removal as well as pregnancy success in primiparous Nelore cows submitted to TAI.

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