



A083 FTAI, FTET and AI

GnRH application in cows with low or no estrus expression evaluated with tail-chalk increases the pregnancy rate in beef cows submitted to TAI

E. Nogueira¹, W.B. Rodrigues¹, A.S. Silva², J.C. Borges¹, K.C. Silva³, N.A. Anache³, A.O. Bezerra³, B.C.S. Leão⁴, N.A.S. Rocha-Frigoni⁴, G.Z. Mingoti⁵

¹EMBRAPA CPAP, Corumbá; ²Genesis Tecnologia e Reprodução Animal, Campo Grande; ³UFMS-Mestrado CIVET, Campo Grande; ⁴Centro Universitário Católico Salesiano, Aracatuba; ⁵Laboratório de Fisiologia da Reprodução- FMVA/UNESP, Aracatuba.

Keywords: tail-chalk, GnRH, heat.

The objective was to evaluate the GnRH application in cows with low or poor estrus expression evaluated using tail chalk removal Score (ESCT) to increase TAI pregnancy rates. Nelore multiparous and primiparous cows (n = 1750) in MS Planalto (ECC (1-6): 3.67) and Pantanal (ECC (1-6): 2.90) who had ESCT 1 and 2 at TAI were randomly distributed in two treatments: control or GnRH (100 of gonadorelin at TAI- Fertagyl®, MSD, São Paulo, Brazil). The animals were evaluated in random day of the estrous cycle (D0) and received intravaginal P4 device (Cronipress® Mono Dose M-24, Biogenesis Bagó, Paraná, Brazil) and administration of 2 mg EB (Estrogin, Biofarm, São Paulo, Brazil). On Day 8, the implant was removed and cows treated with 1 mg cypionate estradiol (ECP®, Zoetis, Brazil), 150µg of D-cloprostenol (Prolise®, Arsa, Argentina) and 300 IU eCG (5000 IU Folligon®, MSD, São Paulo, Brazil). At the time of P4 removal, all cows were painted in sacral region with tail-chalk (Raidex-Maxi; RAIDEX GmbH, Dettingen / Erms, Germany). On 10, 50 hours after implant removal, cows were inseminated. The estrus expression, evaluated at the time of TAI, was classified according to Silva et al. (Animal Reproduction, 2016): 1- without estrus expression; 2 = low heat expression; 3 high heat expression. In half of the cows ESCT 1 and 2 was applied GnRH at TAI (GRRH 1 and GNRH2). The other half of the cows with ESCT 1 and 2, was assigned control group, and was applied 1 ml of saline. The follicle diameter was evaluated in 300 cows at FTAI. The pregnancy diagnosis was performed 35 days after TAI ultrasound. Data were analyzed by PROC GLIMMIX SAS (SAS / STAT® 9.2). There was difference in diameter (cm) of the preovulatory follicle at TAI according to ESCT (1,02c = 1; 2 = 1.14 b, 3 = 1.44a; P < 0.001). The pregnancy per AI (P/AI) in animals ESCT3 was 46,4% e 59,6% in Pantanal and Planalto, respectively (P < 0,001). There was a difference in P/AI according ESCT in the Control animals (Control1-23.45%b; Control2-39.5%a P < 0.05), but this difference did not exist in animals that received GnRH (GnRH1-52,0%; GnRH2- 49.3%; P = 0,97). When evaluated together groups that received GnRH or did not (control), results demonstrated the positive effect of GnRH application at TAI (Control (n = 369) - 36.0% b; GnRH (n = 415) - 50.3% a; P < 0.001). The local influenced PAI (P < 0.001) and there was interaction between treatment and location (P = 0.010) (Control x Pantanal- 35.1%b; control x Planalto- 37.0% b; GnRH x Pantanal- 41.7% b; GnRH x Planalto- 61.6% a). In conclusion, the use of GnRH application in cows with low ESCT is a simple strategy, low cost to raise the TAI pregnancy rates in lacting beef cows.