



A077 FTAI, FTET and AI

### **Heat score assessed with aid of tail-chalk influences pregnancy rate of suckled *Bos indicus* beef cows subjected to P4/estradiol TAI-based protocols**

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It is known that cows that express estrus submitted to TAI protocols, have better pregnancy rates (Borges et al. 2011). So the goal was to test alternative to visual estrus observation, evaluating the effect of estrus expression with the assistance of tail-chalk on pregnancy rates and the pre-ovulatory follicle diameter in beef cows submitted to TAI protocols with use of two ovulation inducers: estradiol benzoate (EB) and estradiol cypionate (ECP). 3830 multiparous or primiparous cows in early post-partum were submitted to TAI protocols and evaluated for estrus expression at the time of TAI, in 4 properties in MS (Planalto and Pantanal). The animals received 2 mg EB (RIC-BE®, Agener Union, Brazil) and an intravaginal device with 1 g of P4 (Primer®, Agener Union, Brazil), in random day of the estrous cycle (Day 0). On Day 8, the animals were divided into two treatments: BE (n = 1624) P4 device removal and application of hormones in the afternoon D8 - 1mg of BE; and ECP (n = 2206) P4 device removal and application of hormones in the morning D8 - 1 mg of estradiol cypionate - (ECP®, Zoetis, Brazil), and all yet received 150µg of d-cloprostenol (Prolise®, Arsa, Argentina) and 300 IU eCG (Folligon® 5000 IU, MSD, São Paulo, Brazil). At the time of P4 removal, all cows were painted in sacral region with tail-chalk (Raider-Maxi; RAIDEX GmbH, Dettingen / Erms, Germany). On day 10, 44 and 50 hours (for BE and ECP) after implant removal, the cows received bulls semen with known fertility distributed in the treatments, and a subset (n = 300) had preovulatory follicle measured at TAI. The estrus expression, evaluated at TAI was classified in scores according to paint removal on sacral region (ESCT): 1 - no paint removal = without estrus expression; 2 - poor paint removal = low estrus expression; 3 - total paint removal = high expression of estrus. Pregnancy diagnosis was performed 35 days after TAI by ultrasound. Data were analyzed by PROC GLIMMIX of SAS (SAS / STAT® 9.2). There was a difference in pregnancy for IA according to the paint scores (ESCT) (1 (n = 995) = 40.0%; 2 (n = 709) = 49.7%; 3 (n = 2126) = 60.9%; P < 0.001), but there was no difference between inducers (BE = 53.8%; ECP = 53.1%; P = 0.46), neither interaction between inducers and ESCT (P = 0.41), however there was a difference between bulls (P < 0.001). A difference was found in preovulatory follicle diameter (cm) at TAI according to the ESCT (1 = 1.05b; 2 = 1.13 b; 3 = 1.38 a; P < 0.001), nevertheless there was no difference between inducers (BE = 1.20 cm; ECP = 1.29 cm; P = 0.33). Therefore, the use of estrus evaluation scores (ESCT) with tail-chalk at TAI, is a simple strategy, inexpensive and useful to identify cows with greater estrus expression and consequently betters pregnancy in TAI. That strategy provides the basis for further studies of pregnancy increase in cows with low estrus expression in TAI protocols.

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