

## The use of a recombinant equine chorionic gonadotropin (reCG) in fixed-time AI programs in beef cattle

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## Resumo

An experiment was designed evaluate the effect of the addition of a recombinant eCG (reCG, Zoovet, Argentina) on pregnancy rates to AI (P/AI) in suckled beef cows submitted to an estradiol (E2)/progesterone (P4)-based FTAI protocol. In Experiment 1, Angus and Angus x Hereford beef cows (n=1244), with 45 to 60 d post-partum and a BCS of 2.6±0.4 (1 to 5 scale) were used. On Day 0, all cows were scanned by ultrasonography (289, 23% had a CL, 684, 55% had a follicle >8 mm in diameter, and 271, 34% had follicles < 8 mm diameter) and were randomly assigned to 1 of 3 treatment groups, to receive two dosages of reCG [105 IU (1.5 mL) or 140 IU (2 mL)] at the time of P4 device removal or no reCG treatment (control). On Day 0, all cows received 2 mg of estradiol benzoate (EB, Zoovet) i.m. and a device containing 0.75 g of P4 (Prociclar, Zoovet). On Day 7, P4 devices were removed, and all cows received 150 µg of D+cloprostenol (PGF2a, Zoovet), 1 mg of ECP (Zoovet) i.m, had their tail painted for estrus detection and received reCG or no further treatment. All cows were Al 48 to 54 h after P4 device removal and those with >50% of their tail paint intact also received 10 µg buserelin (GnRH, Zoovet) at the same time. In Experiment 2, cross-bred (Bos taurus x Bos indicus) beef cows (n=905), with 40 to 90 d post-partum and a mean BCS of 2.6±0.4, were used. Cows were examined by ultrasonography on Day 0 (182, 20% had a CL, 509, 56% had a follicle >8 mm in diameter, and 215, 24% had follicles < 8 mm diameter) and were randomly assigned to 1 of 4 treatment groups, to receive three dosages of reCG [84 UI (1.2 mL), 105 UI (1.5 mL) or 126 UI (1.8 mL)] at the time of P4 device removal or no reCG treatment. All cows were synchronized and AI as those in Experiment 1. Pregnancy was diagnosed by ultrasonography 30 days after AI and P/AI was analyzed by GLMM for binary data with a logit link. In Experiment 1, P/AI was greater (P<0.05) in cows treated with reCG than in those in the control group (105 UI reCG: 52.3%, 216/413; 140 IU reCG: 53.5%, 224/419 and control: 44.4%, 183/412). There was a significant (P<0.01) effect of ovarian structure on Day 0 (CL: 60.2%, 174/289; follicles >8 mm: 49.7%, 340/684 and follicles <8 mm: 40.2%, 109/271); but no interaction. In Experiment 2, although differences among groups only tended to differ (84 IU reCG: 38.6%, 78/202; 105 IU reCG: 38.5%, 100/260; 126 IU reCG: 36.8%, 84/228 and control: 27.9%, 60/215; P=0.1), there was a significant effect of giving or not reCG, regardless of dose, on P/AI (reCG: 38%, 262/690 vs control: 27.9%, 60/215; P<0.01). There was a significant (P<0.01) effect of ovarian structure on Day 0 (CL: 41.8%, 76/182; follicles >8 mm: 36.9%, 188/509 and follicles <8 mm: 27.1%, 58/214); but no interaction. In conclusion, the results confirm those previously reported (Villarraza et al., Theriogenology, 172: 223-229, 20221) in which treatment with reCG increased P/AI in suckled cows submitted to E2/P4-based FTAI protocols.