Animal Reproduction

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FTAI/FTET/AI

Use of PGF at the beginning of the protocol does not change the conception rate in Bos taurus multiparous beef cows

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Resumo

The aim of the study wasevaluating the dominant follicle size and rates of estrus expression and pregnancy in primiparous beef cows submitted to 7 days or 8 days FTAI protocol using a P4 device (0.5g). A total of 284 suckling Bos taurus and crossbred (Bos taurus x Bos indicus) multiparous beef cows with a mean body condition score (BCS) of 2.82± 0.15 (1=lean and 5=obese). Females were distributed in experiment used a 2 x 2 factorial arrangement of four treatments. The two factors were: 1) time of exposure to progesterone (P4) (7 and 8 days); 2) prostaglandin treatment: one PGF (PGF at removal P4) and two PGF (PGF at D0 and moment of P4 removal). Thus, the treatments were PGFd0d7 (n=70), PGFd7 (n=70), PGFd0d8 (n=72) and PGFd8 (n=72). The hormones used were all from the same company (Zoetis) - estradiol benzoate (2mg) i.m. (Gonadiol®), P4 intravaginal device (DIB® 0.5mg), estradiol cypionate (0.6mg) i.m. (ECP®), equine chorionic gonadotropin (300 IU) i.m. (Novormon®) and PGF (25 mg Dinoprost Tromethamine) i.m. (Lutalyse®). at P4 device withdrawal (d7 o d8), at moment the tail was painted to estrus identification. The follicular diameter was measured at moment of P4 device removed and AI. Artificial insemination was performed 48h after P4 device removal using a semen of single sire. The pregnancy diagnosis was performed 30 d after AI using a transrectal B-mode ultrasound. Analyses of binomial outcome variables (expression of estrus and P/AI) and continuous outcomes (follicle diameter on P4 device withdrawal and FTAI) were performed using the Fit Mixed Effects Model procedure. Values are presented as percentage (%; binomial variables). The results of continuous outcome variables are expressed as means ± standard error of the mean.The follicular diameter(mean ±SE mm) at moment of device withdrawal (PGFd0d7=11.4±0.19; PGFd7=10.7±0.18; PGFd0d8=12.8±0.26; PGFd8=11.56 ± 0.26; Protocol P<0.0001; PGF P=0.0001; Protocol*PGF= 0.0001). The follicular diameter (mean ±SE mm) at the FTAI (PGFd0d7 =13.6± 0.2; PGFd7 = 13.1± 0.18; PGFd0d8 = 15.02 ± 0.3; PGFd8 =14.38 ± 0.23;Protocol P=0.0001; PGF P=0.001; Protocol*PGF=0.044). The estrus rate (PGFd0d7 =78.6%; PGFd7= 62.8%; PGFd0d8=76.4%; PGFd8 66.6%; Protocol P=0.84; PGF P=0.018; Protocol*PGF=0.1). The pregnancy rate (PGFd0d7 = 47.1%; PGFd7 = 42.8%; PGFd0d8 =55.6%;PGFd8=52.7%; Protocol P=0,3; PGF P=0.55; Protocol*PGF=0.7).The results indicate that prostaglandin analogue administration at the beginning of the protocol using 0.5g P4 device is associated with an increased dominant follicle size and estrous expression at FTAI in suckling Bos taurus and crossbred (Bos taurus x Bos indicus) multiparous beef cows. There was no difference in conception rate between the protocol of seven and eight days of exposure to P4 device (0.5g) with one or two PGF dosis, but further studies with a large number of animals are indicated.