Congresso Brasileiro de Reprodução Animal, 19, 2011, Recife, PE, *Anais*... Belo Horizonte: CBRA, 2011. (CD-ROM). ISSN: 1984-8471.

Progestogen and progesterone supplementation after artificial insemination in postpartum beef cows

Suplementação progesterônica ou progestogênica após a inseminação artificial de vacas de corte no pós-parto

R. Machado[1,4], M. Zorzenon[2], L.C. Ferreira[2], L.S. Leal[2], R.M. Guiesi[3], M.A. Bergamaschi[1], M.J.Sudano[3]

[1]Embrapa Pecuária Sudeste, São Carlos, SP; [2]Unicastelo; [3]UNESP.
[4]E-mail: rui@cppse.embrapa.br

Introduction

This study aimed to determine pregnancy rate (PR) of cows submitted to the fixed time artificial insemination (FTAI) and supplemented with norgestomet or progesterone on day 12 post-AI.

Material and methods

Crossbred beef suckled cows (n=176; ½ Nelore and ½ either Simental or Aberdeen Angus) from Embrapa Pecuária Sudeste (Body Condition Score= 6.2 and 68 days postpartum, on average) were randomly assigned to group NOR– received 3 mg norgestomet/5 mg estradiol valerate IM and an auricular implant with 3 mg norgestomet (day 0), on Day 9 implant was withdrawn and 0.5 mg of estradiol cipionate (EC) was given IM; and group PRO - received (day 0) one progesterone (1g) intravaginal device (P4D) associated with 2mg benzoate estradiol IM, on day 7 cows received 0.25mg of $PGF_{2\alpha}$ analogue IM and on day 9 device was removed and 0.5 mg of EC was given IM. All cows were artificially inseminated 48 hours after implant or P4D removal. Twelve days after FTAI, cows from NOR were re-implanted with one once-used norgestomet implant (NOR-rei; n = 34) or remained untreated (NOR-con; n=42); and cows from PRO were re-inserted with one once-used P4D (PRO-rei; n=40) or remained untreated (PRO-con; n=40). Devices and implants were withdrawn 9 days after insertion. Cows were examined by rectal ultrasonography 30 days after FTAI and PR data were analyzed by chi-square analysis.

Results and Discussion

Pregnancy rate did not differ ($P>0.05$; $\chi^2_{GL=3}=5.90$) among treatments (79.4%, 61.9%, 52.5% and 65.0% respectively for NOR-rei, NOR-con, PRO-rei and PRO-con). The second norgestomet implants increased ($P<0.05$; $\chi^2_{GL=1}=5.84$) PR as compared with P4D re-insertion. NOR-rei tended ($P<0.10$; $\chi^2_{GL=1}=2.73$) to increase PR as compared to NOR-con. Post-AI supplementation with norgestomet[1] or progesterone[2] intends to enhance embryo survival in cows with premature corpus luteum regression or with short luteal phases. The present trial did not show difference amongst treatments. Control cows achieved high PR for FTAI, which may indicate that only few cows could benefit from treatments[2]. Even though, PR after the supplementation with NOR was promising. Further studies on this matter are encouraged.

References

1. Favero RJ, Faulkner DB, Kesler, DJ. Norgestomet implants synchronize estrus and enhance fertility in beef heifers subsequent to a timed artificial insemination. J Anim Sci, v.71, p.2594-2600, 1993.
2. Van Cleeff J, Drost M, Thatcher WW. Effects of post-insemination progesterone supplementation on fertility and subsequent oestrus response of dairy heifers. Theriogenology, v.36, p.795-807, 1991.

Keywords: cattle, estrus synchronization, norgestomet progesterone.
***Palavras-chave**: bovino, norgestomet, Progesterona, sincronização do estro.*