

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## **EFFECT OF SYNTHETIC GnRH ON PREGNANCY OF COWS THAT DID NOT PRESENT OR PRESENTED LOW-INTENSITY HEAT IN FIXED-TIME ARTIFICIAL INSEMINATION**

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The synthetic GnRH is a gonadotropin-releasing hormone used in the treatment of infertility in cows, the hormone induces ovulation by stimulating the release of luteinizing hormone (LH) and follicle stimulating hormone (FSH). In this way, the aim with this study was to evaluate the effect of synthetic GnRH on pregnancy rate of beef cows when they did not present heat or presented low intensity heat during the FTAI protocol. The study was conducted on Seriema Ranch, in Miranda-MS, Brazil, from September 2016 to January 2017. In order to identify and classify heat, a cow marker was placed on the same day that the intravaginal device was removed. Subsequently, on the day of the artificial insemination (AI), heat was classified on a scale of 1 to 3, as follows: 1 - presented intense heat, 2 - presented low intensity heat, and 3 - did not present heat. The cows that presented heat classified as 2 and 3 were used in the present experiment, totaling 335 females with heat 2 and 3 out of the 1602 females initially evaluated. One hundred ninety-seven cows with average body condition score (BCS) of 2.65 (scale from 1 to 5) were treated with 0.1 mg of gonadorelin (synthetic GnRH) was applied via intramuscular on the AI day, and 138 cows with average BCS of 2.70 did not receive Gonadorelin (control). Pregnancy diagnosis was performed 30 days after the IA. Data was analyzed with GLIMMIX procedure in SAS University. Body condition score, category (heifer, primiparous, multiparous), technician who performed the AI, and number of uses of the progesterone implant were included as random variables in the statistical model. Pregnancy rate for females that received Gonadorelin when they did not present heat or presented low intensity did not differ from the control cows ( $P = 0,86$ ). Average pregnancy rate for cows that presented heat 2 and received the treatment was  $35.87\% \pm 10.62$  and for the cows that presented heat 2 and did not receive the treatment was  $37.29\% \pm 11.32$ . Similarly, cows that presented heat 3 and received the treatment had  $25.49\% \pm 11.45$  pregnancy rate and the cows that presented heat 3 and received no treatment had  $24.27\% \pm 12.02$  average pregnancy rate. We concluded that synthetic GnRH for cows with 2.7 average BCS when they did not present heat or presented low intensity heat during the FTAI protocol has no effect on pregnancy rate.

**Keywords:** females, gonadorelin, hormone, infertility

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