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Use of Melengestrol Acetate in nutritional blocks for heifers under extensive pastures

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The objective of this study was to evaluate the supply of Melengestrol Acetate (MGA®, Zoetis, Brazil) added in nutritional blocks (Tecnoblock®) to Nellore heifers kept under extensive management on the estrus and pregnancy rates after natural breeding and AI. The experiments were carried out at Pantanal, in Fazenda São Bento, Corumbá/MS, Brazil. In the experiment 1, 413 heifers with BCS 4.2±0.7 (1-9), age from 22 to 24 months, mean of 302 kg and no previous cyclicity (absence of CL in two evaluations with 11-day interval) were divided: T1-Control [supply of nutritional protein-energy blocks throughout the experiment (12 days)]; T2-BlockMGA (2.28g/day MGA for 12 days, added to the same block of T1); T3-Protein MGA (2.28g/day MGA for 12 days, added to dry supplement); and T4-Implant P4 [9 days with intravaginal device (Primer®, Agener União, Brazil) of 2nd use + 2 mg IM of BE (Gonadiol, Zoetis, Brazil) on the day of insertion of Primer]. At the end of treatments, the heifers were mated with bulls (1:33) in breeding season (BS) of 118 days. In the experiment 2, 301 heifers with BCS 3.8±0.4 were divided: T1-Control, T2-Block MGA for 12 days, T3-Block MGA for 12 days + application of 0.5 mg ECP (2 days after the end of supply of MGA). Heifers were inseminated after estrus observation for 10 days, and then mated with bulls in 90-day BS. The evaluation of cyclicity, presence of CL and pregnancy diagnosis (PD) were performed using ultrasound (DP 2200 VET, Mindray, China). Statistical analysis was performed by PROC GLIMMIX of the SAS followed by Tukey Test (P<0.05). In the experiment 1, the diameter of the dominant follicle at the end of treatments was similar among T2 (11.2mm), T3 (11.8mm) and T4 groups (11.2mm), which were greater (P<0.0001) than T1 (9.7mm). The daily estrus rate was similar (P>0.05) between T1 (1.92%) T2 (2.94%) and T4 (2.77%), which were higher (P=0.032) than T3 (1.02%). Pregnancy at 60 days of BS was higher (P=0.008) for T2 (57.84%) than for T1 (40.8%) and T4 (36.4%), but all of these groups were similar (P>0.05) to T3 (51.0%). There was no difference (P=0.344) between treatments in the final PD (70.95%, averaged). In experiment 2, the estrus rate in 10 days was higher (P<0.0001) in T2 (45.5%) and T3 (57.8%) compared to T1 (22.7%). There was no difference between groups (P=0.86) for the post-AI pregnancy (35.66%, averaged). The pregnancy rate at 60 days of BS of the T1 group (56.6%) was lower (P=0.04) than T3 (74.4%), but both did not differ (P>0.05) from T2 (67.7%). Pregnancy at the end of BS was similar (P=0.757) between groups (T1: 84.7%; T2: 89.1%; T3: 88.2%). The use of MGA added in nutritional blocks was satisfactory in heifers because it provided higher pregnancy rates at the beginning of BS, besides facilitating management in the supplement supply and in the corral, therefore it represents a new alternative of reproductive management in the conditions of extensive breeding.

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