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Effect of injectable progesterone (Sincrogest injetável® or Progecio®) on puberty induction in Nelore heifersClodo Aldo Rodriguez Machuca¹; Villalba, M. M.R.¹; Ibarra, J.J.M.²; Ortiz, T. J.²¹ RG- Reprogen Reproducción y genética (4TO CANAL COTOCA SANTA CRUZ BOLIVIA),² Facultad de Ciencias Veterinarias UAGRM SCZ-BOLIVIA**Resumo**

The aim of this study was to compare the effect of pre-synchronization (Pre-Synch) with two distinct commercial injectable progesterone (P4i) thirty days before E2-P4 based protocol on cyclicity rate at the beginning of TAI protocol (puberty induction) and conception rate. Non-cycling Nelore heifers (n = 606; anestrus) from two commercial herds localized in Santa Cruz / Bolivia, with 22 months, 3.0 BCS (1-5 scale) and 350.9 ± 35.2 kg were randomly assigned to one of two groups: 1) Sincrogest Injectable : heifers were treated with 150mg of Sincrogest injetável® (i.m.; Ourofino Saúde Animal, Brazil; n=304); 2) Progecio: Heifer were treated with 140mg of Progecio® (i.m.; Agener União Saúde Animal, Brazil; n=301). D-30 was considered the beginning of the Pre-Synch program. On D-30, ultrasound examination (SonoScape S6V, Shenzhen, China) was carried out to identify the cyclic and non-cyclic heifers, based on the presence of corpus luteum (CL). Cyclic heifers on D-30 evaluation were excluded of the experiment. On D-20 (10 days after performing the pre-synchronization), all heifers were treated with 0.5 mg of EC [(Estradiol Cypionate); Cipiotec®, Agener União, Brazil]. On D0, TAI protocol has been started, and all heifers received an intravaginal P4 device [(0.5g of progesterone); Primer® Monodose, Agener União, Brazil] and 2 mg of EB [(Estradiol Benzoate); RIC-BE®, Agener União]. On D8, 1 mg of EC, 530mg of sodic cloprostenol [(PGF-2α); Estron®, Agener União, Brazil] and 250IU of eCG (Novormon®, Zoetis, São Paulo, Brazil) concomitant to P4 device withdrawal. FTAI was performed 48h after P4 device withdrawal and at the same time all animal received 10µg of buserelin acetate [(GnRH), Gestar®, Over, Santa Fe, Argentina)]. Ultrasonography was performed on D-30 and D0 for cyclicity evaluation. Pregnancy diagnosis was evaluated 30 days after of artificial insemination. Statistical analyses were performed using Chi-Square Test Calculator (Software Social Science Statistics). The overall cyclicity rate was 45.2% (274/606). Sincrogest injectable group heifers showed higher cyclicity rate at beginning of TAI protocol [Sincrogest injectable=50.1% (155/304); Progecio=39.4% (119/302); P=0.004]. The overall pregnancy rate was 52.3% (292/558). Similar pregnancy rate between groups was observed 30 days after TAI [Sincrogest=51,6% (145/281); Progecio=53.1% (147/277); P=0.73]. In conclusion, the pre-synchronization with 150mg of Sincrogest injetável® thirty days before E2-P4 based TAI protocol demonstrated higher cyclicity rate, however similar fertility in Non-cycling Nelore heifers.