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Reduction of prostaglandin (Ciosin®) dose during timed artificial insemination protocols in cyclic nelore heifers and suckled Nelore cows

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Two experiments were designed to evaluate effect of reduction of sodium cloprostenol dose (Ciosin®) on the pregnancy rates in in cyclic Nelore heifers and suckled Nelore cows subjected to synchronization of ovulation protocol for timed artificial insemination (TAI). In Experiment 1, heifers (n = 457) received one of three different doses of sodium cloprostenol (500µg vs. 375µg vs. 250µg). In Experiment 2, lactating Nelore cows (n = 626; 30 to 60 days postpartum) were randomly assigned to received one of two doses of cloprostenol (375µg vs. 250µg). On Day 0, all animals received 2.0 mg im estradiol benzoate (EB, Gonadiol®, MSD Animal Health) and norgestoment ear implant (heifers, P4, Crestar®, MSD Animal Health) or an intravaginal device containing progesterone (cows, P4, DIB®, MSD Animal Health). On day 8, exogenous P4 were removed and 300 IU eCG i.m. (Novormon®, MSD Animal Health) plus estradiol cypionate im (EC, heifers = 0.5 mg and cows = 1.0 mg, ECP®, Pfizer Animal Health) were administrated. Animals were randomly assigned in experimental groups: Experiment 1 – heifers [500µg (2.0 mL) or 375µg (1.5 mL) or 250µg (1.0 mL) im cloprostenol (PGF, Ciosin®, MSD Animal Health)] and Experiment 2 – cows [375µg (1.5 mL) or 250µg (1.0 mL) im of cloprostenol]. All animals were submitted to TAI 48h after P4 device removal. The data were analyzed by Glimmix procedure of the SAS. No differences were found between treatments on the pregnancy rate in suckled cows [375µg = 55.1% (173/314); 250µg = 59.3% (185/312), P = 0.88] or in cyclic heifers [500µg = 60.8% (93/153); 375µg = 50.2% (76/151); 250µg = 59.5% (91/153), P = 0.14]. In conclusion, it is possible to reduce the dose of prostaglandin (250µg of cloprostenol) on synchronization of ovulation for TAI in cyclic Nelore heifers and suckled Nelore cows, with no detrimental effects on pregnancy outcomes.

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