Fixed-time AI pregnancy rate following insemination with frozen heterospermic semen
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This study aimed to evaluate the effects of conventional or heterospermic frozen semen on pregnancy rates in fixed-time artificial insemination (FTAI) protocols for post-partum Nelore cows with suckling calves. The trial was conducted on four farms at Mato Grosso do Sul in Brazil. We used 459 cows (50-110d post partum) with body score condition between 2.5 and 4.5 (scale of 1 to 5). Animals received estradiol benzoate (EB; 2.5 mg, i.m., Estrogin® Farmavet, Brazil) and an intravaginal device containing progesterone (1.9g progesterone, CIDR® Pfizer Animal Health, Brazil) in a random stage of the estrous cycle (D0). At D7 animals were treated with dinoprost trometamine (12.5 mg im; Lutalyse® Pfizer Animal Health). At D9 the CIDR® was removed and the animals were treated with eCG (300 IU, Novormon® Intervet/Schering-Plough Animal Health, Brazil), and estradiol cypionate (0.5 mg, i.m, ECP® Pfizer Animal Health). At D11 animals were inseminated with either: conventional semen from Nelore bull A (group 1, n=119), conventional semen from Nelore bull B (group 2, n=114), conventional semen from Nelore bull C (group 3, n=111), or with heterospermic semen from bull A + B + C in the same straw (group 4, n=115). Pregnancy was diagnosed by ultrasonography (Mindray DP 2200 vet) 32d after FTAI. Data were analyzed using Chi-Square test. There was no effect of farm on pregnancy rate (P ≥0.05). Pregnancy rate of group 1, 2, 3 and 4 were 57.2%, 48.5%, 57.2%, and 56.9%, respectively (P≥0.05). We conclude that the use of frozen heterospermic semen did not improve the pregnancy rate of Nelore cows inseminated with a fixed-time AI protocol.

Keywords: Heterospermic semen, Nelore, fixed-time artificial insemination, pregnancy rate