

A preliminary study comparing pregnancy rates and live foal rates using individually sheathed or nonsheathed insemination pipettes

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Sterile, disposable, plastic equipment is often recommended for artificial insemination of the mare.¹ Once utilized, these plastics are discarded contributing to landfill waste and possibly increasing environmental pollution. Objective was to investigate if the amount of plastic waste generated during the artificial insemination of mares could be decreased without negatively affecting pregnancy rate.

Twenty eight Standardbred mares were bred over 40 estrous cycles. Mares were randomly assigned to the following 2 groups: high plastic (HP); individually sheathed insemination pipette or low plastic (LP); nonsheathed insemination pipette. Mare reproductive cycles were routinely monitored by transrectal palpation and ultrasonography. Deslorelin acetate was administered when a mare was in estrus with a preovulatory follicle greater ≥ 35 mm in diameter. Each mare was inseminated with a minimum of 500×10^6 progressively motile sperm from 1 Standardbred stallion. Pregnancy diagnosis (transrectal ultrasonography) was performed between 14 and 16 days after ovulation and repeated on days 28 and 45 of pregnancy. Live foal rates were recorded. First and per cycle pregnancy rates for HP were 50.0 and 64.3%, respectively and for LP were 56.5 and 70.5%. Live-foal rates were 92.3% (12/13) for HP compared to 83.3% (10/12) for LP. Data were analyzed using two tailed Fishers Exact tests for small counts, with significance defined at $p < 0.05$. There were no differences between HP and LP groups for first cycle ($p = 0.704$) or per cycle ($p = 0.512$) pregnancy rates, or live foal ($p = 1.0$) rates. We concluded that nonsheathed pipettes (less plastic waste) can be used without negatively affecting pregnancy.

Keywords: Equine, breeding management, artificial insemination, pregnancy rates

References

1. Brinsko SP: Semen collection techniques and insemination procedures. In: McKinnon A, Squires E, Vaala W, et al: editors. Equine Reproduction. 2nd edition, Ames: Wiley Blackwell; 2011. p. 1268–1277.

