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Comparison of reproductive efficacy of shortened Ovsynch protocol with Ovsynch and Heatsynch protocols based on corpus luteum and follicular size determined by ultrasonography

A Badiei¹, G Gnemmi², N Abdolmalekian³, P Pooladzadeh⁴, G Imam⁵ and M Sami⁶

¹Islamic Azad University, Iran

²BovineVet Studio Veterinary Associations, Italy

³University of Tehran, Iran

⁴General practitioner, Varamin, Tehran, Iran

⁵Idenofarmed Co., Iran

⁶Ferdowsi University of Mashhad, Iran

The objective of this study was to compare the reproductive efficacy of Shortened Ovsynch (SOv) protocol in terms of service rate, conception rate and pregnancy rate with Ovsynch (OS) and Heatsynch (HS) protocols. A randomized field trial was conducted in 4 commercial dairy farms in Tehran province of Iran. Cows (n=1974) were randomly selected among those which determined non-pregnant 30 to 37 d after artificial insemination or cows which weren't inseminated until 60 days after parturition. The animals then were randomly assigned to treatment or control groups. Cows assigned to the treatment group, followed SOv protocol (n=891) (D-0: PGF2α, Day-2: GnRH, 16-18 hours later TAI). Whereas Cows in control group were randomly assigned to OS (n=422) (D-0: GnRH, D-7: PGF2α, Day-9: GnRH, 16-18 hours later TAI) or HS (n=661) (D-0: GnRH, D-7: PGF2α, Day-9: Estradiol Benzoate, AI based on estrus detection) protocols. All cows had a CL larger than 20 mm, and a follicle between 10 and 20 mm prior initiation of the treatment. Otherwise, they would recheck 3-7 days later, until having the right size follicle and CL on their ovaries prior the initiation of the protocols. Pregnancy status of all cows was checked 30 to 37 d after AI by Ultrasonography; cows determined non-pregnant after initial enrollment, were again enrolled in the experiment, and randomly assigned to the treatment groups. Service rate (SR), conception rate (CR) and pregnancy rate (PR) was calculated for all 3 protocols. The PR of SOv-treated cows (33.67%) were higher compared to control groups (PR in OS and HS protocols were 28.67% and 27.68% respectively). The SR was significantly higher in SOv protocol, compared to HS. The CR was higher in SOv compared to both OS and HS protocols. Conclusively, the SOv protocol showed to be more reproductive and efficient compared to protocol, in terms of PR, CR and SR. It also showed higher CR and PR compared to OS protocol. The SOv protocol also could be more cost beneficial when compared to the other 2 protocols, due to shorter duration, lesser hormone injections, higher reproductive performance and being TAI based, which needs detailed economic evaluations to confirm.

Biography

Arya Badiei has been working as an Assistant Professor in the Department of Clinical Sciences Faculty of Veterinary Medicine, Islamic Azad University, Iran.

abadiei2000@yahoo.com

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