

VALIDATION OF OVSYNCH AND HEAT SYNCH PROTOCOL IN POST PARTUM ANOESTRUS COWS

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ABSTRACT

Thirty anoestrus postpartum crossbred cows were randomly selected and equally divided into three groups. Group I and II animals were treated with ovsynch and heat synch protocol along with supplementation of Mineral bolus, Phosphorus inj and Dewormer (Fenbendazole), respectively and groups III control groups administered with Mineral bolus, Phosphorus inj and Dewormer (Fenbendazole). The cows in Group I and II showed the conception rate of 60 % and 50 % at induced estrus as against 20 % in control groups. It is concluded that Ovsynch protocol along with mineral mixture supplement has improved the conception rate in postpartum cows.

Key words: Ovsynch, heat synch, Anestrous, Postpartum and cow

The mineral supplementation with calcium, phosphorus and deworming are very important in female reproduction. Area based minerals play an intermediate role in the action of hormone and enzymes of sub cellular level in an integrated fashion in the initiation of estrus in animals (Ali *et al.*, 1991). The imbalance or deficiency of trace elements leads to inactive ovaries and cause of repeat breeding, anoestrus of crossbred dairy cows.

Thirty anestrous postpartum crossbred dairy cow located in different villages of Jehanabad district were randomly selected and subjected to treatment with Ovsynch, heat synch protocol and control group, respectively. Group I animals were administered with Busereline 4mcg/ml (Gynarichinj) 2.5 ml I.M. on day 0, followed by Cloprostenol (Pregma) 250 mcg/ml, 2 ml inj I .M. on day 7 and again Busereline 4mcg / ml (Gynarichinj) 2.5 ml I.M. on day 9, then at induced estrus i.e., day 10, fixed time insemination was performed. Group II, animals were administered with Busereline 4mcg / ml (Gynarichinj) 2.5 ml I.M. on day 0, followed by Cloprostenol (Pregma) 250 mcg / ml, 2 ml inj on day 7, estradiol benzoate @ 1 mg on day 8 then at induced estrus i.e., day 10, fixed time insemination was performed. Control group were administered with mineral (Minotas) bolus @ one bolus daily for one month & Fentas XP (4.5g) bolus single dose orally and Phosphorus (Novizac) inj 15 ml alternate day for 10 day and at observed estrus animals were inseminated along with assessment of reproductive tract by rectal palpation. Pregnancy was confirmed by rectal palpation at 60 to 90 days post insemination.

Estrus induction response in group I, II and control in crossbred post-partum cows treated with Ovsynch and

heat synch protocol were 80, 80 and 40 %, respectively. The overall conception rate was 6/10 (60%) in group I; 5/10 (50%) in group II and 2/10 (20%) in control group. Synchronization of estrous and fertility with a combination of GnRH and prostaglandin F₂α is good for cyclic females and this combination especially in cows with postpartum anoestrus (Prusley *et al.*, 1995). GnRH injection for bovine estrus cycle causes regression or ovulation of the dominant follicles and initiates emergence of a new wave of follicular growth (Pursley *et al.*, 1995a). Atresia or ovulation of the dominant follicle depend upon the status of dominant follicle at the time of GnRH injection reported by Silcox *et al.*, (1993) and Twagiranmugu *et al.*, (1994). The calcium, phosphorus and iron levels are important and its deficiency causes malnutrition stress resulting in normochromic anemia, decreased response of ovarian receptors to estrogen hormone (Daheriya *et al.*, 2004).

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