



## Fertility parameters and Ca: P ratio of postpartum surti buffaloes having inactive ovaries

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**Abstract :** Total 18 post-partum acyclic buffaloes were randomly divided into three equal groups consisting 6 surti buffaloes in each group *viz.*, T<sub>1</sub>, T<sub>2</sub> and control (T<sub>3</sub>) group. The buffaloes in T<sub>1</sub> group were treated with 5ml of inj. Buserelin acetate (20 µg, GnRH analogue, I/M route); the buffaloes in T<sub>2</sub> group were treated with 5ml of inj. Buserelin acetate (20 µg, GnRH analogue, I/M route) + [inj. Vit. AD<sub>3</sub>E preparation (5 ml, I/M route) + inj. Toldimphos sodium preparation (15 ml, I/M route)] and the buffaloes in T<sub>3</sub> group were kept as anoestrus control. Number of animals responded to the treatment were 6, 6 and 4 in T<sub>1</sub>, T<sub>2</sub> and control (T<sub>3</sub>) groups, respectively. The service period and treatment to oestrus induction interval and conception rate of the inactive ovarian condition of surti buffaloes in T<sub>1</sub> (71.17±4.42; 12.67±1.11 days and 100%) and T<sub>2</sub> (70.83±3.80; 12.33±1.11 days and 100%) treatment groups differed significantly (p<0.05) from T<sub>3</sub> control (94.50±5.43; 30.75±3.95 days and 66.66 %) groups. It was observed that service period in the GnRH treated (T<sub>1</sub> and T<sub>2</sub>) groups has been minimized up to 23 to 24 days *i.e.* one cycle earlier in treatment groups than that of control (T<sub>3</sub>) group. However, slightly lower service period and oestrus induction interval in days was found in T<sub>2</sub> group as compared to T<sub>1</sub> group, which might be attributed to the influence of exogenous inorganic phosphorus and vitamins along with GnRH given to the animals in T<sub>2</sub> group. The serum Ca: P ratio of acyclic surti buffaloes under study in different treatment and control groups at different time intervals was found to be ranging from 1.61:1 to 1.72:1. The ratio of serum Ca: P should be between 1.5:1 and 2.5:1 for efficient reproduction in dairy bovines.

**Key words :** Acyclic surti buffaloes, Hormone therapy, Vitamin, Phosphorus preparation, Postpartum period, Ca: P ratio

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