



RESEARCH  
ARTICLE

# Effect of $\text{PGF}_{2\alpha}$ and $\text{PGF}_{2\beta}$ along with vitamin and phosphorus combination on fertility parameters of postpartum subestrous surti buffaloes as well as Ca: P ratio

■ A.S. REDE, C.T. KHASATIYA<sup>1</sup>, D.K. SONI<sup>1</sup>, M.D. PATEL<sup>3</sup>, S.P. KATKAR<sup>1</sup>  
AND S.S. CHAUDHARY<sup>2</sup>

#### Members of the Research Forum

##### Associate Author :

<sup>1</sup>Department of Veterinary  
Gynaecology and Obstetrics,  
Navsari Agricultural University,  
Navsari Campus, NAVSARI  
(GUJARAT) INDIA

<sup>2</sup>Department of Physiology and  
Biochemistry, Navsari Agricultural  
University, Navsari Campus,  
NAVSARI (GUJARAT) INDIA

<sup>3</sup>Livestock Research Station,  
(NAU) NAVSARI (GUJARAT)  
INDIA

#### AUTHOR FOR CORRESPONDENCE :

##### A.S. REDE

Department of Veterinary  
Gynaecology and Obstetrics,  
Navsari Agricultural University,  
Navsari Campus, NAVSARI  
(GUJARAT) INDIA

**Abstract :** Postpartum suboestrous surti buffaloes of an organized farm confirmed by twice per-rectal palpation 11 days apart from 45 days post-partum were treated with 2 ml (500 µg) of inj. cloprostenol sodium I/M route in first group (n=6) and 2 ml (500 µg) of inj. cloprostenol sodium I/M route along with 5 ml inj. Vit. AD<sub>3</sub>E preparation and 15 ml inj. Toldimphos sodium preparation I/M route in second group (n=6) on 55 days postpartum after confirmation of ovarian cyclicity. Six animals of same status were kept as control to see the oestrus induction response and conception rate including evaluation of serum mineral profile, just before (0 day) treatment and 24 hr, 48 hr and 72 hr after treatment. The service period and oestrus induction interval in days was found significantly lower in  $\text{PGF}_{2\alpha}$  treated ( $T_1$  and  $T_3$ ) groups as compared to  $T_2$  and control ( $T_4$ ) group clearly showed the luteolytic effect of  $\text{PGF}_{2\alpha}$  on ovaries and earlier resumption of ovarian activities as compared to treatment ( $T_2$ ) and control ( $T_4$ ) groups. The serum Ca: P ratio of suboestrous surti buffaloes in different treatment and control groups at different time intervals was found to be ranging from 1.44:1 to 1.63:1. The ratio of serum Ca: P should be between 1.5:1 and 2.5:1 for efficient reproduction in dairy bovines.

**Key words :** Sub-oestrus buffaloes, Hormone therapy, Vitamin and phosphorus, Postpartum period, Ca: P ratio

**How to cite this paper :** Rede, A.S., Khasatiya, C.T., Soni, D.K., Patel, M.D., Katkar, S.P. and Chaudhary, S.S. (2016). Effect of  $\text{PGF}_{2\alpha}$  and  $\text{PGF}_{2\beta}$  along with vitamin and phosphorus combination on fertility parameters of postpartum subestrous surti buffaloes as well as Ca: P ratio. *Vet. Sci. Res. J.*, 7(1) : 66-71.

**Paper History :** Received : 15.12.2015; Revised : 07.03.2016; Accepted : 27.03.2016