

## EFFECT OF HORMONAL TREATMENT ON ESTRUS RESPONSE AND FERTILITY IN ANESTRUS BUFFALOES

R. S. BISLA, U. SINGH<sup>1</sup>, S. S. CHAUDHRI and A. S. DAHIYA<sup>2</sup>

Regional Research Station, Veterinary Unit, Karnal  
CCS Haryana Agricultural University, Hisar-125 004

### ABSTRACT

Two hundred and eighty non-cycling post-partum buffaloes and heifers maintained by individual farmers were used in the present study that was conducted during breeding season during the years 2002 to 2004. Treatment of buffaloes either with single or two injections of 20 µg GnRH, 1000 I.U. eCG and 25mg PGF<sub>2α</sub> resulted in induction of estrus in 82, 55 and 66% of the treated animals with first service conception rate of 52%, 32% and 66%, respectively. Thus, it is concluded that treatment of anestrus buffaloes with GnRH, eCG and PGF<sub>2α</sub> could be helpful in induction of fertile estrus in anestrus buffaloes under field conditions.

**Key words:** Hormonal treatment, anestrus buffaloes

Major problems of the buffaloes are silent estrus, delayed puberty, long post-partum ovarian inactivity and on the whole poor fertility (Madan, 1998, Singla *et al.*, 1996). Moreover, seasonality and factors like nutrition and suckling also result into long calving interval (Porwal *et al.*, 1981). The signs of estrus are less intense in buffaloes than cattle and are even weaker during low breeding season (Raizada and Pandey, 1981). Various hormones have been used to induce cyclicity in acyclic buffaloes but with variable results (Dabas *et al.*, 1989, Shah *et al.*, 1992, Rohilla, 2003). Moreover, most of the available information on estrus induction pertains to buffaloes maintained under farm conditions and very little is known about induction of estrus in buffaloes maintained under field conditions, where management is entirely different from farm conditions. Therefore, the present study was conducted to determine the effect of hormonal treatment on fertility response of anestrus buffaloes maintained under varied managemental conditions in rural areas.

### MATERIALS AND METHODS

The present study was conducted during October to February months of the years 2002 to 2004. A total of 280 post-partum buffaloes including heifers maintained by individual farmers at two adopted villages of Krishi Vigyan Kendra, Panipat, were selected at random. The population under study was genetically heterogeneous with Murrah and non-descript buffaloes.

All the animals were in good health and had apparently normal genitalia. The animals had a history of anestrus with no observation of vaginal discharge and mating for the last 6-9 months. Ovarian status was confirmed by rectal palpation carried out at 10 days interval, which revealed presence of either smooth ovaries or a corpus luteum (CL). Animals were fed according to their individual requirement by respective owner. Based on observations of ovarian palpation, these animals were divided into two categories. In the first category (C1), animals having smooth ovaries (n=220) were included, whereas the second category (C2) consisted animals having a CL (n=60) on either of the ovaries. Out of the total 220 animals having smooth ovaries, 100 buffaloes (C1) received 1000 I.U. eCG (Folligon, Intervet) i/m. The remaining 120 animals (C1a)

<sup>1</sup>Corresponding author, Dept. of ARGO, COVS, CCS HAU, Hisar-125 004

<sup>2</sup>KVK Panipat, CCSHAU, Hisar-125 004

