

## ESTRUS BEHAVIORAL SIGNS AND ITS DETECTION IN HORMONAL TREATED SUMMER ANESTRUS BUFFALOES

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### ABSTRACT

Fifty anestrus buffaloes (over 3 months post-partum) maintained by individual farmers at village Jharli (Jhajjar, Haryana) were treated with various combinations of melengesterol acetate or hydroxyprogesterone with equine chorionic gonadotrophin (eCG) and prostaglandin  $F_{2\alpha}$  ( $PGF_{2\alpha}$ ) during summer months. The anestrus status of the animals was also determined by per rectal palpation of ovaries, twice at 10 days interval. All the treated and untreated control animals were observed for estrus signs twice daily for 14 days from the day of last treatment, both visually as well as by presentation to a fertile bull for mating. The visual signs of estrus observed, included vulvar swelling, hyperemia of vaginal mucosa, vaginal mucus discharge, bellowing, restlessness and response to vulvar massage. In addition, behavioral responses of the bull towards the female including sniffing of vulva, following the female, resting chin on female's rump and mounting and mating were also considered. There was a wide variation in frequency of signs within and between groups. In all the treated groups, almost all the signs of estrus were recorded on the day of mating. Vaginal mucus discharge and sniffing of vulva were the most commonly recorded signs in all the groups. Vulvar hyperemia, bellowing, restlessness, response to vulvar massage and resting chin on female rump were the most commonly recorded signs only around standing estrus in all the groups. Thus, the results of estrus signs in the present study suggest that estrus detection in buffaloes being a difficult problem can be overcome by careful observations of number of sexual behavioral parameters along with female's response to a male and vice versa.

**Key words:** Anestrus buffaloes, estrus signs, hormonal treatment, summer

In buffaloes, signs and symptoms of estrus are neither well defined nor properly explained by the animal husbandry practitioners. Consequently, a large number of otherwise cycling buffaloes, remain classified as anestrus both at farms and with individual owners in the rural areas (Anonymous, 1995, Yash Pal *et al.*, 1999). This calls for a closely monitored study of the expression of estrual behavioral signs and symptoms in buffaloes, either spontaneous or following estrus induction therapy. Moreover, most of the available information on estrus induction and signs of estrus pertains to buffaloes maintained under farm conditions. Keeping in view the above facts, the present study was undertaken to study the signs of estrus in hormonal treated anestrus buffaloes in rural area.

### MATERIALS AND METHODS

The study was conducted during summer months (May-July) on 50 anestrus buffaloes (over 3 months post-partum) maintained by individual farmers of village Jharli, district Jhajjar, Haryana. The population under study was genetically heterogeneous with a majority of Murrah breed followed by non-descript buffaloes. All the animals were in good health and with apparently normal genitalia. The animals had a history of anestrus with no observation of vaginal discharge and mating since calving. Since no proper records were being kept by the farmers, post-partum interval was stated in months. Acyclicity was confirmed by per rectal ovarian palpation carried out twice at 10 days interval, which revealed smooth ovaries on both the occasions. Animals were kept chained in covered sheds during day time and in open yards

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