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Research Article

# Incidence of reproductive disorders in buffaloes under field conditions of Andhra Pradesh*

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## ABSTRACT

The data of 8,193 infertility camps conducted from 1997 -2002 were analyzed to study the incidence of various reproductive disorders in 4, 51, 344 buffaloes of Andhra Pradesh. The percentage of various reproductive disorders recorded were inactive ovaries (55.79), silent heat (9.44), repeat breeding (7.57), endometritis (19.40), cystic ovaries (1.48), persistent corpus luteum (0.59), underdeveloped genitalia (3.23), hypoplasia of ovaries (0.001), salphingitis (0.20), pyometra (0.25), cervicitis (1.28), kinked cervix (0.01), vaginitis (0.71) and others (0.05) in buffaloes under field conditions.

**Key words:** Reproductive disorders, Incidence, Buffaloes

## INTRODUCTION

Infertility has been recognized as an important factor that impedes the progress of dairy industry. Hence, the present paper is aimed to discuss the incidence of different reproductive disorders. The remedial measures should be taken up as per the etiology to reduce the incidence of reproductive problems in order to enhance the reproductive and productive performance of livestock.

## MATERIALS AND METHODS

The data on 4, 51,344 buffaloes treated in 8,193 infertility camps conducted in various districts of Andhra Pradesh during the period from 1997 – 2002 were utilized for the present study.

## RESULTS AND DISCUSSION

It was evident from the data that the incidence of inactive ovaries (55 .79 %) was a major reproductive disorder. Similar reports of smooth ovaries were reported by Rao and Sreemanarayana (1982). But higher incidences of smooth ovaries in buffaloes were recorded by Singh *et al.*, (1985). The smooth ovarian condition was due to qualitative and quantitative deficiencies of nutrition (Iyer *et al.*,1992), suckling (Hafez, 1980), decreased thyroid activity (Zdlear *et al.*,1989), parasitic infestation (Singh *et al.*,1986) and climatic stress (Morrow, 1980).

Incidence of endometritis was the second most (19.40 %) commonly encountered reproductive disorder after inactive ovaries. The incidence of endometritis was almost in line with the studies of Rao and Sreemanarayana (1982). But, Pateria *et al.* (1991) observed higher incidence (60 %) in buffaloes. Murugeppa and Dubey (1997) and Prasad and Prasad (1998) noticed lower incidence than the present study. The higher incidence of endometritis might be due to parity (Tomar and Tripathi, 1991), breed (Sreemannarayana and

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Rao, 1997), Season (Tomar *et al.*, 2002), heritability (Tomar and Tripathi, 1991) and type of recording systems.

The silent heat was observed in 9.44 % of buffaloes. The incidence of silent heat ranged from 5.13 (Rao and Kotayya, 1976) to 59.85 % (Purbey and Agarwal, 1982) in buffaloes. Possible causes of silent heats were age, debility (Iyer *et al.*,1982), heritability, nutritional deficiency and suckling (Arthur *et al.*,1989). All the mentioned causes might have altered functional relationship of hypothalamus, pituitary and ovarian axis which is necessary to produce nervous signs in certain individual buffaloes at certain times (Kharache and Gautam, 1991).

The incidence of repeat breeding was 7.57 % in buffaloes. Repeat breeding was reported to be ranged from 8.06 to 28.84 % (Hussain, 1987 and Singla and Verma, 1994). The repeat breeding might be due to lack of appropriate managerial practice and proper technical know how as it was influenced by non genetic factors (Morrow, 1980).

Other disorders like cystic ovaries (1.48 %), persistent corpus luteum (0.59 %), underdeveloped genitalia (3.23 %), and hypoplasia of ovaries (0.001), salphinigitis (0.20 %), pyometra (0.25 %), cervicitis (1.28 %), kinked cervix (0.01 %), vaginitis (0.71 %) and other miscellaneous disorders (0.05 %) were also noticed at lesser frequency.

Similar incidence of cystic ovaries in buffaloes was recorded by Sreemannarayana and Rao (1997) in rural buffaloes of Andhra Pradesh. The lesser incidence might be due limited ovarian activity. Singh and Sahani (1995) recorded persistent corpus luteum in buffaloes. The condition might be due to interference in the production and release of endogenous luteolysin from the uterus (Arthur *et al.*, 1989). The increased continuous production of progesterone suppresses gonadotropin releasing hormone from hypothalamus.

Underfeeding, adverse environment and genetic factors were contributing factors (Sharma *et al.*, 1993). But it was reversible when livestock received liberal feeding in many cases (Bearden and Fuquay, 1997). Hypoplasia was also reported by Sharma *et al.* (1993) in buffaloes and was due to complete arrest in the development of ovaries due to recessive autosomal genes with incomplete penetration.

The salpingitis was secondary to uterine infection. Khasatiya *et al.*, (1998) recorded cases of salphingitis in buffaloes. Singala and Verma, (1994) and Sreemannarayana and Rao (1997) recorded cervicitis in buffaloes. The condition may cause infertility by obstructing the passage of sperm by creating spermicidal environment (Morrow, 1980). The vaginitis was a localized disorder and has little transient effect on fertility (Rao, 1997).

In inflammatory reproductive disorder, there was increased production of opioids which are found to inhibit the release of gonadotrophin releasing hormone from nerve terminals and there was not subsequent production of FSH and LH. Likewise, opioids inhibit release of oxytocin from posterior pituitary which prevent transport of gametes to the site of fertilization. Specific opioid inhibitor like Naloxone can cause release of gonadotrophin hormone (Bearden and Fuquay, 1997).

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