

Anestrous in Buffaloes

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INTRODUCTION

Anestrous is a functional disorder of the reproductive cycle which is characterized by absence of overt signs of estrus manifested either due to lack of expression of estrus or failure of its detection. The scrutiny of scientific literature on reproductive disorders reveals that anestrus is the most common single cause of infertility in buffaloes. A large variation from 9.1% to 82.5% in incidence of Anestrous has been reported in Indian literatures depending upon breed, parity, season, level of nutrition, management conditions and geographic environment.

Anestrous can be classified into two types, i.e. Class I–female with a normal functional corpus luteum and Class II–female with no functional corpus luteum. Class I Anestrous includes (i) Anestrous due to pregnancy, (ii) Anestrous due to persistent corpus luteum (CL), (iii) Anestrous due to ‘weak’ or ‘silent’ estrus, and (iv) Anestrous due to unobserved estrus. Class II Anestrous includes Anestrous due to small or inactive ovaries with no functional corpus luteum palpable per rectum and it is termed as ‘true Anestrous’.

Factors responsible for Anestrous in buffalo

- Endocrine factors
 - ✓ Prolactin
 - ✓ Melatonin
 - ✓ Follicle stimulating hormone
 - ✓ Luteinizing hormone
 - ✓ Thyroid hormones
 - ✓ Ovarian hormones
 - ✓ Corticosteroids
- Environmental Stress
- Extreme body condition score
- Genotype
- Level of milk production
- Managerial factors

- Parasitic Infestations
- Parity
- Periparturient Diseases
- Poor nutrition
- Suckling

Anestrous is diagnosed based on history and clinical examination., progesterone profile, laparoscopy and ultrasasonography. However, transrectal palpation still remains the most used and inexpensive tool to diagnose the ovarian cyclicity and pregnancy status of the buffalo.

Most of the true anestrous cases are due to nutritional deficiencies. In most cases, Anestrous resolves spontaneously with the arrival of more favourable climatic conditions and adequate feeding. Several workers with varying degree of success have used various therapeutic agents including hormonal and non-hormonal compounds extensively for the restoration of cyclicity in Anestrous buffalo. Many plants such as *Murraya koenigii*, *Nigella sativa*, *Abroma augusta*, *Saraca asoca*, *Trigonella foenumgraecum*, *Bambusa aruninacea*, *Carica papaya*, *Asparagus*

recemosus, *Leptadenia reticulata*, *Courupita guianensis*, *Pergulacia daemia*, *Semecarpus anacardium* cucumber, and jute plants either alone or in combinations have been fed to treat the Anestrous animals with variable response on induction of estrus. Utero-ovarian massage is the oldest, simplest, cheapest and effective method to induce estrus in Anestrous cattle and buffaloes. Estrus induction in cattle and buffalo varies between 40 to 80% following utero-ovarian massage daily/on alternate day/weekly for 3-4 weeks. Hormonal treatments based on understanding of physiology have been used successfully to resolve anestrous in buffaloes. Prevention of Anestrous is preferable over treatment and can be achieved by maintaining the healthy status of the animals by adopting efficient farm managemental practices.