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Repeat Breeding in Buffaloes

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INTRODUCTION

Repeat breeding is one of the major causes of infertility in buffaloes. Animals are said to be repeat breeder if they have normal oestrus, oestrus cycle, as well as reproductive tract and, has been bred three or more times by a fertile bull or semen yet, failed to conceive. The incidence of repeat breeding appears to be low in buffaloes compared to cattle and ranged from 0.61-29.8%.

Many risk factors for repeat breeding have been described for buffaloes and includes calving season, lactation, nutrition, parity order, peri-parturient and metabolic disorders and season. The causes of repeat breeding in buffaloes can be broadly classified as failure of fertilization and early embryonic deaths. The possible causes of fertilization failures in buffaloes may be associated with female buffaloes, buffalo bulls and the breeding management factors however establishing a definite etiology in repeat breeding is often difficult as concomitant and overlapping causes are often existent.

Failure of fertilization

Factors related to buffaloes

- Chromosomal abnormalities
- Endometritis
- Immunological incompatibility of the sperm and oocyte
- Poor oocyte quality
- Oviductal obstructions and adhesions
- Ovulatory disturbances

Bull factors

- Age of buffalo bull
- Breed of buffalo bull
- Infectious diseases such as Campylobacter
- Poor quality of semen
- Season of semen collection
- Semen type (liquid or frozen)

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Breeding management factors

- Incorrect inseminations relative to estrus were
- Nutritional Inadequacies
- Skill of the inseminator

Early embryonic deaths

- Infectious agents
- Low luteal progesterone
- Poor corpus luteum development

Diagnostic Methods

A variety of methods can be used to establish repeat breeding depending on the etiology suspected and includes record analysis, tubal patency testing, hormone assays, visual, recto-genital palpation, vaginoscopy, uterine health evaluation tests, metabolic profiles, ultrasound, immunological tests and endoscopy.

Strategies to reduce incidence of repeat breeding

- Accurate heat detection.
- Administration of Gonadotropin-releasing hormone at insemination in problematic animals.
- Administration of human chorionic gonadotropin following artificial insemination in problematic animals.
- Combining of artificial insemination and natural service in in problematic animals.
- Correction of nutritional inadequacies.
- Use of embryo transfer in problematic animals.