



GnRH and Prostaglandin



CIDR with Apparatus



Insertion of CIDR



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Estrus Synchronization Protocol for Fixed Time Insemination in Mithun



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Introduction

The productivity of livestock can be improved through exploitation of reproductive processes. Continuous ovarian activity is necessary to produce oocytes in order to produce sufficient offspring. Correct detection of the estrus is one of the keys for successful reproduction and can be performed by close observation of the animal for clinical signs, using teaser bulls, ultrasound and measurement of hormonal levels. However, in some animal it is very difficult to detect estrus as it expresses silent estrus. Failure to detect estrus can affect AI program and result in significant economic losses.

Mithun (*Bos frontalis*) is a polyestrous animal but under semi intensive system the detection of heat in female is not as easy as this animal very often expresses silent heat. Regulation of estrus is one of the potential tools for overcoming this kind of reproductive problem as well as economic losses.

Synchronization of estrus

Synchronization of estrus can be useful for augmenting reproductive efficiencies in mithun. It is the manipulation of reproductive process so that female can be bred at predetermined time.

Advantages of estrus synchronization

- Artificial insemination may be implemented more precisely if the detection of estrus is proper.
- Enabling more cows to be artificially inseminated to a genetically superior bull.
- Creating a more uniform calf crop.
- Allows more uniform management of cows and calves.
- Reducing the length of the breeding season.
- It reduces and in some cases eliminates labour of detecting estrus.
- It allows the producers to schedule the breeding.

Estrus synchronization programme

Two shot PGF₂ protocol

Option 1 - Two Prostaglandin Injections



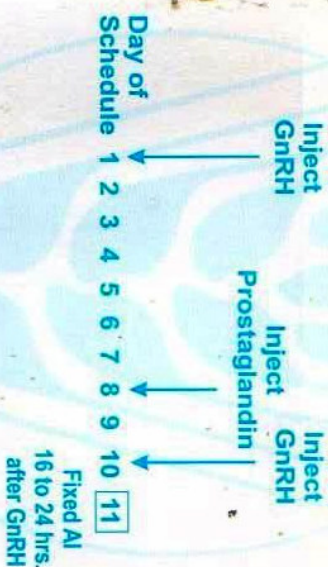
Option 2 - Estrous Detection with Two Prostaglandin Injections



Option 3 - Estrous detection with two Prostaglandin



Ovsynch protocol



CIDR protocol

