

CHAPTER - 14

Detection of estrus/heat through visual examination

Objectives

To learn about visual method of estrus detection.

Introduction

Effective heat detection is often the most limiting factor in an artificial insemination program. Heat,” or estrus, is the period of time that occurs, on the average, every three weeks (18–24 days) in sexually mature, non-pregnant female cattle. They are receptive to mounting or riding actively by a bull or other cows. As an egg develops in the cow’s ovary, the sex hormone estrogen (produced by the ovary) causes changes to the animal’s reproductive, circulatory, and nervous system. Physical mounting, or “standing heat,” occurs within the first 12–18 hours after the onset of heat. Several methods of heat detection can be implemented. Some involve using heat detection aids. Out of all the heat detection method, visual observation is most commonly used method.

Points to remember

1. Visual observation is a commonly used method of heat detection. It involves a trained observer’s recognizing and recording signs of heat.
2. Observable signs of heat include mounting or attempting to mount other cattle, standing to be mounted by other cattle, smelling other females, trailing other females, bellowing, depressed appetite, nervous and excitable behaviour, mud on hindquarters and sides of cattle, roughed up tail hair, vulva swelling and reddening, clear vaginal mucous discharge, and mucous smeared on rump.
3. The surest sign of heat is when a cow or heifer allows other cattle to mount her while she remains standing. This is called standing heat. Cattle may be willing to

mount others but may not stand to be mounted when outside of standing heat. This usually indicates she is either coming into or going out of standing heat.

4. This method requires observation of cattle at least twice daily, typically early in the morning and late in the evening for best results. More frequent observation of cattle for heat improves accurate detection of heat. Nearly 20 percent more cattle will be observed in heat when checked four times per day versus checking twice daily.
5. Check cattle as often as practical. Each observation period must be sufficiently long, usually at least 30 minutes, to be effective.
6. Standing heat can occur any time in a 24-hour period. However, the most likely time for a cow or heifer to show heat signs is at night.
7. The season of the year can influence this, with more cows showing heat at night in hot weather and more showing heat during the day in cold weather. Housing conditions can also have an effect on the distribution of heat during a 24- hour period. Hot weather, high production, crowded conditions, and high stress environments may reduce mounting activity.

Estrus detection in buffaloes

Estrus behaviour in buffalo is less pronounced than in cows. Therefore it is difficult to detect. Acceptance of male is considered as the most reliable estrus signs in buffalo. Some of following the sign they may show during estrus.

1. Restlessness, bellowing, vulva lips appear moist, red, swollen, turgid and stands prominently.
2. Wrinkles on the vulva disappear, clear, shiny, stringy odourless mucous discharge sometimes extending from vulva to feet.
3. Inappetance, nervousness, riding on other buffaloes or allow other buffaloes to mount on her.
4. Reduction in milk yield, standing alone with frequent micturition with raised tail and crutching the back and lumber region etc.



Fig. 14.1. Mucus discharge from vulva is a certain sign of estrus



Fig. 14.2. Standing to be mounted by others is indication of estrus in cows



Fig. 14.3. Standing to be mounted by the teaser bull indicates estrus in buffaloes



Fig. 14.4. Frequent urination and reddening of vulval mucus membrane during estrus in buffaloes

Sample questions

1. Write the different symptoms of estrus in cattle and buffaloes.
2. What do you mean by standing heat?