

HEAT DETECTION

Heat detection is a crucial exercise for a successful Artificial Insemination project and should be done accurately. Several methods can be combined to improve heat detection rates and accuracy. These include visual observation and/or use of heat detectors. It is important that cows to be bred are held on heat observation kraals or pasture where they can be observed.

ESTRUS SYNCHRONISATION

Estrus synchronisation in cattle is a management technique used to coordinate and control the reproductive cycles of female cattle within a herd to facilitate the use of artificial insemination for breeding. This process involves manipulating the timing of estrus (the period when a female is sexually receptive and can conceive) in a group of cows or heifers so that they all enter estrus at approximately the same time. Overall, estrus synchronisation in cattle breeding with AI is a valuable tool that enhances reproductive efficiency while reducing the labour and uncertainty associated with natural mating or less controlled breeding methods.

NB: Only Veterinarians are allowed to procure, keep and oestrus synchronisation drugs in Botswana

SEMEN HANDLING

Semen is stored in a flask containing liquid nitrogen. The Liquid Nitrogen Flask should be handled with care. For example

- Use both hands when lifting it up;
- Set it down squarely and gently;
- Do not drag, tilt, bang or drop it down on edges;
- During transportation, secure the liquid nitrogen container to avoid physical contact ;
- Always carry them in wooden boxes;

**FOR MORE INFORMATION ON
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ARTIFICIAL INSEMINATION (AI) INFORMATION



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WHAT IS ARTIFICIAL INSEMINATION (AI) IN CATTLE?

It is the reproductive technology process of collecting sperm cells from a male animal and manually depositing them into the reproductive tract of a female.

BENEFITS OF ARTIFICIAL INSEMINATION

Genetic Improvement - the major advantage of AI is that it permits the extensive use of outstanding cattle breeds to maximise genetic improvement because it enables the widespread use of these breeds and dissemination of valuable genetic material even to small farmers.

Preservation of Germplasms - AI deep frozen semen donors can still be used even if those bulls are dead thus aid in conservation of selected lines. The germplasms can be stored for a longer period i.e., for over 50 years.

Promotes Good Herd Management - use of AI gives the farmer the correct information of date of service, breed and bull used and even a clue on the expected calving date thus enables availability of breeding records.

Control of Reproductive Diseases - AI reduces the risk of spreading sexually transmitted diseases because the semen used is from disease free bulls and is processed and stored under hygienic conditions.

Cost Effective - AI facilitates cross breeding at low costs compared to natural breeding. It enables small farmers to use high quality genetic materials at affordable charges than having to buy expensive bulls.

OTHER THINGS TO NOTE IN CATTLE ARTIFICIAL INSEMINATION

BODY CONDITION SCORE

Cattle body condition scoring is directly linked to the reproduction performance. Cattle body condition scoring is a management tool used to assess the nutritional status of cattle. It involves visually and/or physically evaluating the amount of body fat and muscle on a cow. Cows that are too thin or too fat can experience reproductive problems. Therefore, it is important to introduce artificial insemination to cows and heifers that have ideal body score to release benefits of artificial insemination.



PREGNANCY TEST

Conducting pregnancy test before artificial insemination is a critical step to confirm the absence of an existing pregnancy, optimize timing, ensure safety, and avoid unnecessary costs and emotional stress. It is a fundamental part of the comprehensive assessment and planning that goes into assisted reproductive techniques to increase the likelihood of a successful outcome.