

Do's and Don'ts for using sexed semen



Please follow the following while using sexed semen

Do's

Don'ts

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| <p>Target Animals (Sexed semen should not be used in all animals)</p> | <p>Best suited animal for use of sexed semen are Heifers followed by pupiparous animals in 1st lactation followed by 2nd lactation in the same order of preference.</p> <p>Selected animals should be reproductively clean</p> | <p>Not for every animal.</p> <p>Not to be used in aged, beyond 3rd lactation and repeat breeders.</p> <p>Don't use in animals with reproductive pathology (issues) – history of dystocia, cervicitis, metritis, pyometra or retained placenta etc.</p> |
| <p>Minimum Body weight in Heifers</p> | <p>Heifer should be bred by weight and not by age. Heifer should be of minimum 300 Kg body weight for use of sexed semen</p> <p>Heifer should have exhibited at least two natural estrus cycles before AI</p> | <p>Don't use in under weight heifers</p> <p>First few cycles in heifers are short non ovulatory cycles</p> |
| <p>Heat</p> | <p>In standing heat, preferably morning or evening Fig 1.</p> <p>Best results using sexed semen can be achieved in breeding season of September to April in most parts of India due to comparatively low temperature and availability of fodder</p> <p>Cervical mucus should be clear, transparent and ropy Fig 2.</p> | <p>Don't use in animals reporting heat stress score of 2 and above. Don't use in hot and humid months. Heifers /cows panting due to high heat or high humidity undergo pathophysiological changes that prevents conception.</p> <p>High ambient temperature and high humidity is a deadly combination which compromise the ability to impregnate cows.</p> |
| <p>Packaging</p> | <p>Each goblet is packed with 10 straws. For sub-distribution, transfer the entire goblet. Avoid multiple handling of straws.</p> | <p>Don't give loose straws while distributing to smaller dispensaries. This leads to multiple exposure to straws and impact quality and conception</p> |
| <p>Identification of Straws</p> | <p>Identify bull with a canister tag or the marker strip. Each vasotube/Goblet is identified by a marker strip of yellow color having the bull name Fig 5.</p> <p>After removal of the desired straw, canister should be replaced at its original position as early as possible</p> | <p>Don't lift the straw/ goblet above the frost line to identify the bull Fig 3.</p> |

Fig : 1 Standing Heat



Fig : 2 Cervical discharge



Fig : 3 Don't lift the canister above the frost line.

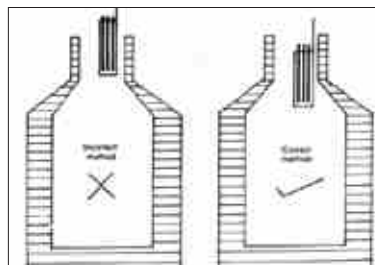


Fig : 4 Placement of semen in the Uterine Body.



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| Semen Transfer | All semen transfers between nitrogen tanks or retrieval of semen from a nitrogen tank should be done as quickly as possible | Don't let the straws be exposed to higher temperature. Multiple counts and loose straw distribution may expose/thaw semen , reducing quality |
| Semen Straw Handling | Semen Straw to be handled essentially by tweezers. | Don't use hand while transferring a straw for thawing. |
| Thawing | At 37 degrees for 30-60 seconds, Use thaw monitor for checking temperature of water Fig 6 . Thaw only One straw at a time even if animals are synchronized. Give a gentle jerk to the straw immediately after removal. During thawing, entire straw should be immersed in water Shake the straw to move the air bubble towards the crimped end of the straw before cutting. | Don't thaw multiple straws at a time Don't judge the temperature with fingers. Use of thaw monitor is must |
| Insemination | Prepare the animal, AI gun, sheath and gloves etc before thawing so that AI is done immediately after thawing Push the plunger slowly to allow semen to be deposited in drops in the body of the uterus Fig 4 . As the average conception rate is around 40% hence be prepared for 2-3 consecutive inseminations using sexed semen to achieve desired results | Don't thaw and then prepare the animal or AI equipment. Avoid placing semen in cervix or uterine horn Don't push semen like a jet Avoid palpating the ovaries /follicle |
| Nutrition | Please make sure that animals are in positive energy balance. It is recommended to check whether the animal is dewormed at a regular interval and fed with good quality mineral mix for at least 2 months period before insemination | Don't select the animals which are in negative energy balance. The chances of conception even with unsexed semen is generally low in under fed animals Fig 7 . |
| QC Testing (Post Thaw Motility) | Sexed Semen Post thaw motility should be performed on IVOS II (CASA) Fig 8 . | Sexed Semen post thaw motility test should not be perform on regular Phase contrast Microscope |

Fig : 5 Goblet and Marker strip for straw identification.



Fig : 6 Thaw Monitor



Fig : 7 NEB



Fig : 8 Casa IVOS II

