

SOP No:	ATT 07
SUBJECT:	Artificial Insemination in Cattle
POLICY:	This procedure may only be performed by or under the supervision of skilled operators in the technique
PRECAUTIONS:	Proper restraining facilities limiting animal movement are required to ensure operator's safety and speediness of the procedure
EQUIPMENT:	Scissors Straw-holding forceps Paper towel Styrofoam baby bottle-warmer Thermometer Semen Straws Cassou Insemination Gun Universal Split Sheath Protective eye-wear Cold resistant gloves
PROCEDURE:	Artificial Insemination involves the use of either frozen or fresh semen. The technique described covers AI using frozen semen. <ol style="list-style-type: none"><u>Thawing Procedure:</u> the frozen straw is removed from the liquid nitrogen tank using forceps such that excessive pressure is not applied to the straw. The straw is immediately deposited into the bottle-warmer which should contain water between 36 - 37°C. 0.25mL straws are thawed for 15 seconds; 0.5mL straws are thawed for 30 seconds.<u>Loading procedure:</u> once the straw is removed from the water, it should be handled only by the ends It is wiped dry with tissue or paper towel. The Factory end is then rolled between the fingers to loosen the plug. Printing on the straw should be read to confirm the semen identity. The straw is loaded into the Cassou gun. Once loaded into the gun, approximately 0.5 cm of straw is cut from the Laboratory end using scissors. The end is cut square to allow the straw to seat neatly into the green universal adapter of the sheath. With the straw in the gun and the laboratory end cut, the universal split sheath is applied. When removing the sheath from the packet, be careful to only handle the sheath by the end near the green adapter so that the other end which enters the cow's uterus is kept clean. Slide the sheath on to the barrel of the gun slipping the O-ring over the sheath before the O-ring gets down to the bevel on the gun. Once the sheath is completely seated onto the base of the gun, lock it on firmly with the O-ring. Ensure the stillette of the Cassou gun slides smoothly into the barrel and can easily push the Factory-end plugs forward by pushing a small bleb of semen into the tip of the sheath to confirm that the loaded gun is functioning correctly. This small amount of semen fills dead-space which may otherwise collect

epithelial and bacterial cells as the loaded gun is passed through the vagina

3. **Insemination Technique:** Identify the animal to confirm she is the correct one to be inseminated. Insert the gloved palpation arm and grasp the cervix. Wipe the vulval lips free of faeces. Insert the Cassou gun through the vulval lips and up into the vestibule at an angle of approximately 45 degrees to the horizontal. To avoid the urethral opening. Push the cervix cranially to straighten out the vagina and advance the gun to the cervix. Traverse the cervix and place the tip of the gun into the body of the uterus. Slowly depress the stillette (count to 5 as it is pushed in), to place all of the semen into the uterine body. Smoothly withdraw the gun. Massage the clitoris for a number of seconds.

RECOMMENDATIONS:

Liquid nitrogen is a volatile substance; therefore extra care should be taken when removing straws from the tank. Protective gloves and safety goggles should be considered.

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REFERENCES

1. Norman S.T. 2005 Artificial Insemination: Equipment and Semen Thawing. Practical notes for VETS4003 Veterinary Reproduction. School of Veterinary Science.