



## SOP 9.08 Non-surgical artificial insemination in Ewes

**Version and Date of Issue:** Ver 2, April 2024  
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**Review due date:** March 2027

### Purpose

- (1) The objective of this standard operating procedure is to provide guidance to the Charles Sturt University staff on:
  - a. Artificial insemination in ewes

### Scope

- (2) This procedure applies to any person who is involved in AEC approved projects involving artificial insemination techniques performed in the ewe.
- (3) All researchers and teaching staff using animals for scientific purposes must be competent. For definition of competency refer to Charles Sturt University's Policy on 'Animal Care Competency Training and Assessment'

### Details of procedure

#### Synchronisation of oestrus:

- (4) See SOP 9.15

#### Artificial insemination:

- (5) Cervical Insemination/Over the rail (OTR method):
  - a. A small volume of diluted semen is inserted just inside the external os of the cervix.
  - b. The ewe's hindquarters are elevated, usually by placing them over a fence rail
  - c. The ewe's vulva is cleaned using paper towel/cotton wool.
  - d. The duck-billed speculum is cleaned using a non-irritating antiseptic solution and allowed to dry prior to use (and between use in ewes)
  - e. The lubricated speculum is inserted into the vagina with the jaws closed and parallel to the vulval lips.
  - f. Once inserted to a depth of 12-15 cm, the speculum is rotated through 90 degrees and then the jaws are opened to visualise the cervix.
  - g. Using a head lamp, the inseminator guides the inseminating pipette into the cervix.
  - h. The semen is deposited no more than 10-20 mm inside the cervical canal.
  - i. With two catchers, a skilled operator can inseminate 100 ewes per hour by this method.
- (6) Vaginal insemination/Shot in the dark (SID Method):
  - a. Semen is deposited 'blind' into the cranial vagina of sheep standing in a race. This is also known as the 'shot-in-the-dark' (SID) method. In this case a larger volume of



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diluted semen containing more sperm is required to obtain fertility comparable with that obtained with the cervical method.

### **Drugs, chemicals, or biological agents**

- (7) Drugs for synchronisation only (SOP 9.15)

### **Impact of procedure on wellbeing of animals**

- (8) The procedure is well tolerated with minimal impact on wellbeing.

### **Animal care**

- (9) Ewes are normally held in a large holding yard during the day to save re-mustering. After insemination, quietly move the ewes to a holding paddock close to the shed and away from daily traffic and disturbance. Then carefully and slowly return them to their paddock. Avoid unnecessary disturbance and stress for 10-14 days over the critical period of embryo development.

### **Pain relief**

- (10) None required.

### **Reuse and repeated use**

- (11) Each ewe can be used twice for AI in any one session. Each session must be for no longer than five minutes for OTR. Ewes should not be used more than two sessions in any one 14 day period.

### **Qualifications, experience or training necessary to perform this procedure**

- (12) Operators should be familiar with the correct techniques and the anatomy and physiology of the ewe before attempting this procedure.

### **Record requirements**

- (13) Completion of AEC approved daily monitoring forms.

### **Associated documentation (including pictures if available)**

- (14) None required.



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### Glossary

- (15) OTR – Over the rail
- (16) SID – Shot in the dark

### References and relevant links

- (17) Miller, SJ (1995) 'Artificial breeding techniques - Sheep' in Compendium of Approved Procedures, CSIRO Division of Animal Health, Armidale pp. 58:71-58:83.
- (18) <https://www.dpi.nsw.gov.au/animals-and-livestock/animal-welfare/animal-care-and-welfare/livestock/livestock-files/national-model-codes-of-practice-for-the-welfare-of-livestock>
- (19) <https://www.dpi.nsw.gov.au/animals-and-livestock/animal-welfare>