



SOP 4.09 Collecting semen: Electroejaculation (EEJ) method for bulls

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Purpose

- (1) The objective of this standard operating procedure is to provide guidance to the Charles Sturt University staff on:
 - a. Semen collection from bulls using an electro ejaculator.

Scope

- (2) This procedure applies to any person who is involved in AEC approved projects involving semen collection from bulls using the electroejaculation method.
- (3) All researchers and teaching staff using animals for scientific purposes must be competent in animal handling and semen collection using EEJ. For definition of competency refer to Charles Sturt University's Policy on 'Animal Care Competency Training and Assessment'

Details of procedure

- (4) The bull should be restrained so that he cannot move from side-to-side or back-and forth, preferably not in a head bail with choke bars which may place too much pressure on the cervical spine. The crush must be able to be opened at the sides to permit the bull to regain his feet or be released if he becomes recumbent. (Ideally a chest strap support should be used if available). The ground surface of the crush should provide good footing. The following protocol is recommended:
- (5) Begin with a transrectal examination of the bull's internal organs and a gentle massage which will relax most bulls.
- (6) Using the largest rectal probe that can be comfortably accommodated (usually 75mm or 90mm) ensuring the electrodes are directed ventrally, and keeping hold of it, commence stimulation at the lowest possible power setting (some probes have devices that assist in keeping the probe correctly aligned).
- (7) Deliver a rhythmic stimulus - generally, on for 2-3 seconds, then off for about one second.
- (8) Gradually increase the power setting until the bull's penis protrudes or commences to expel seminal fluid. The power may then be increased more rapidly to the point of ejaculation.
- (9) If the bull shows signs of discomfort, stop stimulation, and increase the power more slowly.
- (10) If a representative sample of semen is not collected, a further attempt may be made after a 5-15-minute interval.

Drugs, chemicals, or biological agents

- (11) Typically, none required.



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Impact of procedure on wellbeing of animals

- (12) Although the immediate impact may appear severe, with muscle contraction and even recumbency, there is minimal impact after completion, providing due care is taken of the bull as per the protocol.

Animal care

- (13) During the procedure, provide shade, separate fractious bulls and keep dogs away. Do not continue stimulation if the bull shows sign of discomfort. After the procedure, provide shade, feed and water and observe for 12-24 hours.

Pain relief

- (14) None usually required. If the bull develops muscle soreness within the next day or two, a non-steroidal anti-inflammatory drug may be administered.

Reuse and repeated use

- (15) Bulls may be used once a day for teaching and research but not more than twice a week.

Qualifications, experience or training necessary to perform this procedure

- (16) Demonstrator: experienced in animal handling and competent in the procedure.
(17) Students: aware of bull behaviour, familiar with reproductive anatomy, and experience in handling cattle.

Record requirements

- (18) Appropriate monitoring and recording of the use of animals must occur.

Associated documentation (including pictures if available)

- (19) None required.

Glossary

- (20) EEJ: Electro-ejaculator

References and relevant links

- (21) Australian Association of Cattle Veterinarians (1995). The Veterinary Examination of Bulls.
(22) Coffman, E.A., Whitlock, B.K., Daniels, J.A., Coetzee, H.C. (2012). Effect of electroejaculation on behavioral and hormonal indicators of stress and nociception in beef bulls. Clinical Theriogenology



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- (23) Palmer CW. Welfare aspects of theriogenology: Investigating alternatives to electroejaculation of bulls. *Theriogenology*, 64, 469-479, 2005
- (24) Relevant Link - <https://www.dpi.nsw.gov.au/animals-and-livestock/animal-welfare/general>
- (25) <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>
- (26) <https://www.dpi.nsw.gov.au/animals-and-livestock/animal-welfare>