



## SOP 4.03 Vaccination - Cattle

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**Written by:** Chris Petzel  
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### Purpose

- (1) To administer the appropriate vaccine in a manner which will cause minimal pain and distress to the animal while maintaining food quality.

### Scope

- (2) This procedure applies to any person who is involved in AEC approved projects involving vaccination of cattle.
- (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

#### Vaccination of cattle:

- (4) Stock should be restrained in a crush, head-bail or race.
- (5) Vaccination of stock should be avoided if wet from rain.
- (6) Appropriate needle length and gauge should be used. Needles should be disinfected between injections and replaced as required (see vaccine label directions).
- (7) Product label instructions should be followed for best route of administration.
- (8) Subcutaneous injections are best located just forward of the shoulder or behind the shoulder whichever is safest for the operator.
- (9) To avoid injection site residues and damage to prime cuts of meat, intramuscular injections should be administered into the neck. No more than 10mL should be administered intramuscularly into any one site.

### Drugs, chemicals, or biological agents

- (10) Specific vaccine for intended purpose. Use only vaccines recommended for cattle.

### Impact of procedure on wellbeing of animals

- (11) The use of low stress handling and restraint techniques are necessary for this procedure.



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### Animal care

(12) Normal not required.

### Pain relief

(13) Minimal pain is apparent if carried out as recommended.

### Reuse and repeated use

(14) Vaccination should only be carried out at the frequency specified on the label. If a “skills” mob is used for student training purposes, stock should only be vaccinated once per week, and then only with sterile saline.

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

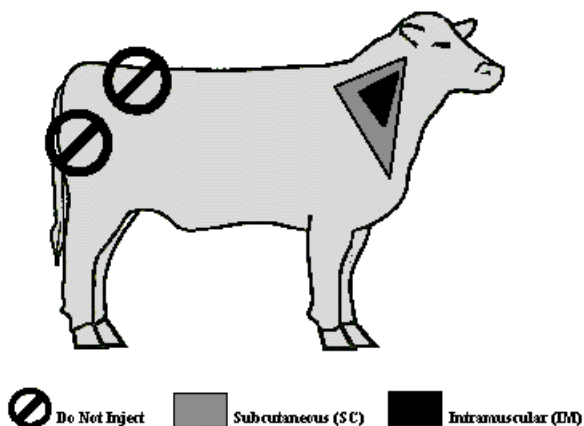
- (15) **Demonstrator:** Veterinarian or experienced stockperson. S4 drugs may only be administered under the direction of a registered veterinarian.
- (16) **Students:** Basic understanding of anatomy, familiarity with the technique using non-living material, familiarity with handling cattle and the safe operation of restraint mechanisms (e.g. crushes, head bails).

### Record requirements

(17) Vaccination records (include animal identification, date of administration, chemical/medication and route of administration details and any relevant withholding periods)

### Associated documentation (including pictures if available)

(18) Recommended vaccination sites in cattle





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### Glossary

- (19) **5-in-1 vaccine:** A vaccine that protects against five common clostridial diseases in beef cattle, including tetanus, malignant oedema, enterotoxaemia, black disease, and blackleg.
- (20) **7-in-1 vaccine:** A vaccine that protects against clostridial diseases and leptospirosis.
- (21) **IBR/BVD/PI3/BRSV:** A vaccine that protects against infectious bovine rhinotracheitis, bovine viral diarrhea, parainfluenza3, and bovine respiratory syncytial virus.
- (22) **Intramuscular injection:** An injection intended to administer medication deep into the muscle.
- (23) **Pestivirus vaccine:** A vaccine that prevents reproductive losses like abortions, stillbirths, and return to service.
- (24) **Pinkeye vaccine:** A single dose vaccine that protects against three of the seven strains of the bacteria *Moraxella bovis*, which is the primary cause of pink eye in cattle.
- (25) **Leptospirosis:** A vaccine that can be given to future replacement heifers and bulls.
- (26) **Subcutaneous injection:** An injection intended to administer medication between the skin and muscle.

### References and relevant links

- (27) *Vaccination for beef cattle in northern Australia.* (n.d.).  
<https://www.mla.com.au/contentassets/e196543ebe564287b54de6993fafd518/mla-vaccination-for-beef-cattle-in-northern-australia-0922-web.pdf>
- (28) *Vaccination for beef cattle in southern Australia.* (n.d.).  
<https://www.mla.com.au/globalassets/mla-corporate/research-and-development/program-areas/animal-health-welfare-and-biosecurity/210517-vaccination-for-beef-cattle-in-southern-australia.pdf>