



Australian Government

AHCLSK335A Conduct dropped ovary technique procedures for spaying cattle

Release 1

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Modification History

Release	TP Version	Comment
1	AHC10v6	Initial release

Unit Descriptor

This unit of competency describes the skills and knowledge necessary to plan, prepare and conduct Dropped Ovary Technique (DOT) procedure for controlling fertility in females in extensive beef herds where alternative options for the management of cull heifers and cows, other than spaying, have been evaluated but deemed unsuitable or not available.

The unit defines the standard required to confirm pre-operative evaluation outcomes, prepare appropriate sites, facilities and equipment in line with infection control and animal welfare standards, carry out DOT procedure and monitor animals' behaviour post-spaying for health and well-being.

Application of the Unit

This unit is intended for cattle producers and contractors in the livestock industry who normally operate under limited supervision. It is essential that candidates who undertake this unit have at least one year's prior experience working with cattle; skills in either bovine pregnancy diagnosis and/or artificial insemination procedures are desirable.

In addition to complying with legal and ethical responsibilities, handlers are to work with animals gently and calmly. The spay technician is required to exhibit appropriate care for animals so that stress, discomfort and pain are minimised. At all times the spay technician must consider the welfare of the animal and act appropriately.

Licensing/Regulatory Information

Candidates should confirm the regulatory requirements that apply in their relevant State or Territory before undertaking this unit. Regulations in some States and Territories restrict the conduct of the DOT procedure to registered veterinarians. There is a direct link between this unit of competency and approval for lay operators to perform the DOT procedure in some State/Territory jurisdictions.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Conduct pre-DOT evaluations	1.1 Relevant State/Territory legislation, regulations, codes of practice and animal welfare standards and guidelines are identified and complied with 1.2 Alternatives to ovariectomy (spaying) are discussed with cattle manager and carefully considered prior to undertaking DOT procedure 1.3 Pre-operative evaluation of cattle submitted for ovary dropping is confirmed with cattle manager 1.4 Risks associated with DOT procedure are identified and discussed with cattle manager
2. Prepare for DOT operations	2.1 Weather conditions are monitored to determine optimal conditions for operation 2.2 Time of day for operation is selected to minimise animal stress 2.3 Adequate numbers of skilled workers are engaged 2.4 Appropriate holding yards, forcing yards, race and settling yards are selected 2.5 Low-stress stock mustering, movement and handling procedures are followed 2.6 Cattle are allowed to settle and cool after yarding
3. Select, maintain and use appropriate equipment	3.1 All equipment is well-maintained and in a clean and hygienic condition to reduce the risk of infection and cross-infection 3.2 Cattle crush used for procedure is maintained in good working order and operated to ensure minimal risk to the operator and animal, especially when loading and unloading 3.3 Wash-down, soaking and disinfecting containers are prepared and positioned ready for use 3.4 Disinfectant solution is prepared in accordance with the label and Material Safety Data Sheet (MSDS) directions 3.5 Ovariometer is sharpened regularly and disinfected before use and between each procedure 3.6 All equipment is cleaned and disinfected at the end of operations and stored appropriately to minimise contamination
4. Conduct DOT procedures	4.1 All procedures are conducted in accordance with animal welfare considerations and workplace health and safety standards 4.2 A high standard of hygiene is maintained throughout the procedures in relation to facilities, hands, handling and equipment 4.3 Cattle are handled quietly in the holding yards, forcing yards and race so that they are relatively calm when they reach the crush 4.4 Common DOT procedural impediments are identified and

ELEMENT	PERFORMANCE CRITERIA
5. Follow post-spay management procedures	remedial actions planned 4.5 Pain management is provided in accordance with legislative requirements 4.6 <i>DOT procedures are performed in accordance</i> with industry best practice standards and processing rates 4.7 Upon completion of procedures, <i>identification earmarks or ear tags</i> are applied to cattle in accordance with relevant State/Territory legislative requirements 4.8 Ovariectomised animals are released and allowed to settle on to feed and water in the settling yards for several hours, before moving quietly to pasture 5.1 Spayed cattle are put onto good quality and quantity feed and water without having to travel long distances in between 5.2 Cattle manager is advised on the <i>post-spay management requirements</i> to assist with rapid convalescence 5.3 Required <i>documentation and records</i> are maintained and updated

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit

Required skills include:

Ability to:

- apply effective cattle identification techniques
- apply effective ovarian palpation techniques
- apply a high degree of skill in transrectal ovarian manipulation
- apply interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities
- clean, disinfect and maintain equipment to ensure efficient and safe working standards
- communicate effectively with others, including questioning, active listening, asking for clarification and consulting with or seeking advice as required
- comply with animal welfare legislation, animal welfare standards and guidelines, State and Territory veterinary surgeons' or practitioners' legislation and regulations and relevant codes of conduct
- employ safe, humane and environmentally responsible systems and procedures when working with and handling livestock
- follow sequenced written instructions
- record information collected accurately and legibly
- maintain the highest standards of hygiene and infection control at all times to reduce the risk of infection and cross-infection
- consider zoonotic and exotic disease possibilities (biosecurity)
- operate equipment effectively and with due consideration to the potential hazards associated with using equipment on cattle
- use numeracy skills to estimate, calculate and record routine workplace measures
- use safe manual handling techniques and equipment
- use safe, hygienic and environmentally friendly waste handling and disposal procedures
- work as a member of a team

Required knowledge includes:

Knowledge of:

- alternative options available to control fertility in cows
- Australian Animal Welfare Standards and Guidelines for Cattle (handling and management)
- basic reproductive anatomy of the cow and stages of pregnancy diagnosis
- body condition score (BCS) system for cattle
- basic cattle nutrition and husbandry
- cattle crush design and safety requirements
- disinfectant label and relevant Material Safety Data Sheet formats
- grazing industry biosecurity manual and related strategies
- guidelines for the proper selection and management of cattle for ovariectomy

- industry recognised best practice DOT procedure and processing rates
- relevant legislation, regulations and codes of practice, including those relating to WHS, animal welfare, veterinary practitioner/surgeons' Acts, stock diseases and waste disposal
- principles of animal welfare
- safe operating procedures for use of all equipment including veterinary crush, ovariator, earmarking and ear tagging pliers
- weather and other conditions and impacts on safe and effective DOT operations
- workplace hygiene standards including: disinfectants, cleaning agents and techniques, cleaning and appropriate disinfection of equipment and materials

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit. Assessors should ensure that candidates can:

- assess alternative strategies and confirm key indicators for the use of DOT procedures in consultation with cattle manager
- understand optimal conditions for carrying out DOT procedures
- conduct pre-operative evaluation of cattle submitted for ovary dropping and risk assessment in consultation with cattle manager
- prepare appropriate sites, facilities and equipment in line with infection control, workplace health and safety and animal welfare standards including pain management in accordance with legislative requirements
- follow low-stress stock mustering, movement and handling procedures
- carry out DOT procedures in accordance with industry recognised best practice DOT procedure and processing rates, impediment remedial actions and hygiene standards
- communicate post-spay management requirements to cattle manager
- accurately document and maintain appropriate records

The skills and knowledge required to conduct DOT procedure for spaying cattle must be transferable to a range of work environments and contexts and include the ability to deal with unplanned events.

Context of and specific resources for assessment

Assessment for this unit is to be practical in nature and will be most appropriately assessed in an on-farm workplace situation with access to appropriate female cattle, facilities and equipment to enable one to demonstrate competence.

Method of assessment

To ensure consistency of performance, competency must be demonstrated to industry recognised standards, over a number of assessment activities, taking into account appropriate processing rates, procedural impediment remedial actions and hygiene standards.

Assessment must take place over a period of time in order to cover a variety of circumstances, cases and responsibilities.

	The assessment strategies must include practical skills assessment. Suggested strategies for this unit are: • written and/or oral assessment of candidate's required knowledge • observed, documented and firsthand testimonial evidence of candidate's application of practical tasks • simulation exercises that reproduce normal work conditions • portfolio records that provide evidence of practical skills This unit may be assessed in a holistic way with other units of competency relevant to the industry sector, workplace and job role.
Guidance information for assessment	Assessment methods should reflect workplace demands (e.g. literacy and numeracy demands) and the needs of particular target groups (e.g. people with disabilities, Aboriginal and Torres Strait Islander people, women, people with a language background other than English, youth and people from low socioeconomic backgrounds).

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Alternatives to ovariectomy (spaying)</i> for management of heifers and cows may include:	• lot feeding • alternative selling options • breeder segregation • heifer-safe paddocks • bull removal • pregnancy diagnosis of heifers by veterinarians or accredited testers, with on-selling of empty heifers • use of prostaglandins for heifers that are less than 4 months gestation prior to transport to a feedlot/live export depot • therapeutic pregnancy control when available
<i>Pre-operative evaluation</i> of cattle submitted for ovary dropping should include:	• selection of cattle that are: • surplus wet cows and heifers • at least 4 weeks postpartum • preferably well handled • accustomed to being worked in yards and races • empty or early pregnant (less than 4 months gestation) • strong and present with a good BCS (greater than 2.5 out of 5) • generally at or above a 180kg live weight (lower limit) • not affected by heavy tick burdens • not scheduled for dehorning within 4 weeks before or after spaying • feed only curfewed for a minimum of 12 hours prior to the procedure but have continuous access to water • identifying animals showing signs of disease, weakness or emaciation which should not be spayed by any technique
<i>Risks associated with DOT procedures</i> may include:	• fractious animals and those with poor temperaments • animals with poor BCS • extreme environmental conditions, for example: heat, cold, rain • operator limitations for example: fatigue, hand size,

	lack of experience • anaemia due to heavy worm or tick burdens • pneumorectum (sucking air into the rectum) • lack of feed curfew • water curfew, dehydration • poor equipment, yards and other necessary infrastructure • inadequate spelling facilities Where such risks exist, it is recommended that the overall risks be assessed and risk mitigation put in place in the interests of animal welfare. In some cases the situation will be significant enough to be unmanageable and require deferral of the procedure.
<i>Weather conditions</i>	Weather conditions for operations should be a fine, mild day. Weather conditions to be avoided include: • excessively hot conditions which can increase bleeding and stress on cattle • cold weather conditions which place additional stress on cattle • wet or dusty conditions which increase the risk of contamination
<i>Equipment</i> may include:	Essential equipment for performing DOT includes: • cattle crush and race • ovariotomes x 3 sizes (heifer, cow and large cow) plus spares • disinfectant and wash buckets preferably with a lid to reduce dust contamination • chlorhexidine or centrimide disinfectant • shoulder-length gloves • lubricant • overalls/aprons • safety boots and glasses • earmarking pliers • ear tagging pliers and tags • diamond sharpener • paper towelling Extra equipment may include: • table and chair • knives • waterbottle/pannikin

	• counter • electric prodder (use should be kept to a minimum) • hat/sunscreen
Cattle crush must include:	• a rear kick gate featuring: • a recommended average height of 800mm • the gap between the bottom of the kick gate and the floor of the crush and the bottom of the side gate and the floor of the crush should be no more than 20 mm • side gates that are sheeted or closely railed up to 1 metre • head bail • solid non-slip floor • squeeze • a wide area that is dust and mud free around the crush • effective protection for operators from cattle in same yard as crush
Animal welfare considerations will include:	• complying with relevant legislation, regulations concerned with: • animal welfare (eg. Australian Animal Welfare Standards for Cattle (handling and management) • the prevention of cruelty to animals • adopting best practice recommendations as relevant in the Australian Animal Welfare Standards and Guidelines for Cattle (handling and management) and in industry documents such as: • industry codes of practice • industry standards and protocols
WHS standards may include:	• applying appropriate manual handling techniques when handling loads, including livestock and equipment • following safe operating procedures for: • cleaning, disinfecting and sharpening instruments • following personal and workplace hygiene procedures • hazard identification and risk minimisation, including handling, use, storage, transport and disposal of chemicals and handling and disposal of biological wastes • livestock catching, handling, controlling and restraining methods • using materials and equipment in accordance with manufacturers' instructions

	• using infection control procedures to minimise risks associated with: • zoonotic diseases • release of infective agents (both animal and human) • chemical spillage • using personal protective equipment (PPE) including: • clothing of a protective nature • eye protection • gloves • items for sun and other protection • safety footwear and leg protection • surgical mask
A high standard of hygiene will require:	• equipment to be thoroughly cleaned and disinfected before initial use, between procedures and each time they are changed for cleaning and sharpening • disinfectant to be used in accordance with label instructions (MSDS) • appropriate reprocessing of reusable equipment • personal hygiene practices especially washing and drying hands (e.g. before and after animal contact) • safe handling and disposal of clinical, related and general waste • surface cleaning and management of blood and bodily fluid spills • techniques to limit contamination • use of personal protective equipment
Common DOT procedural impediments may include, but are not limited to:	• excessive animal movement • the head of the ovariator becoming caught in vaginal folds and deep vaginas • difficulty in penetrating the vaginal wall • the head of the ovariator becoming caught in broad ligament (membrane obstructions) • pneumorectum (wind sucking, ballooning of the rectum) • difficulty locating one ovary or both ovaries after the ovariator is in place • difficulty severing the ovary • small intestinal entanglement in the spay tool
DOT procedures include:	• administration of pain relief, where available • appropriate restraint of the cow, avoiding where possible the use of electro-immobilisation as a form of restraint for the procedure (only to be used when

	beneficial to the health and wellbeing of the animal and/or the operator) • a gloved hand being inserted in the rectum to manipulate the reproductive tract • the ovariator being introduced into the vagina and placed against the vaginal wall above the cervix • the vaginal wall being pierced with the spearhead end and the ovariator passed into the abdomen • each ovary then being manipulated per rectum and placed in the oval hole of the ovariator • each ovary then being cut off by a slow backward pull on the ovariator which draws the ovary into the cutting slot
Identification earmarks or ear tags requirements include:	• completed spay • incomplete spay • untoward event; should a mishap occur this needs to be identified that may require veterinary referral or humane euthanasia
Post-spay management requirements include:	• monitoring spayed cattle for a minimum of three days after the procedure for indications of complications such as: pain, haemorrhage, rectal perforation, intestinal lacerations, sepsis • identifying situations requiring veterinary referral or humane euthanasia • providing appropriate treatment for complications which may include antibiotics, analgesia, supportive care or euthanasia • avoiding using paddocks with no shelter, little feed, or long distances to walk to water • moving spayed cattle gently and calmly and avoiding walking them long distances (more than 5km) to paddocks • familiarising cattle with a watering point • avoiding forced walks or trucking long distances for approximately 10 days after the procedure • organising/conducting post-mortems in deceased animals to determine the cause of death for continuous improvement of the technique
Documentation and records may include:	• accurate animal counts • earmark and tagging system identifying spayed animal and operator • Material Safety Data Sheets (MSDSs)

Unit Sector(s)

Livestock