

This Standard Operating Procedure (SOP) is applicable to all UniSQ Research Workers who care for and use Animals for Scientific Purposes. The procedure must only be performed by those persons who have been deemed competent, and who believe they remain competent to do so. Access to supervision by suitably qualified staff whilst undertaking this procedure is encouraged, where required.

Species

- Cattle (Bovine - Bos indicus and bos taurus)

Purpose

The purpose of this SOP is to describe the procedures of moving, handling and working with cattle in yards, in accordance with the Australian Animal Welfare Standards and Guidelines for cattle (2016), and in compliance with the industry animal welfare requirements for handling and managing livestock (2021) using low-stress stock handling (LSSH) procedures (Grandin 1990).

Definitions

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|------------------|--|
| Flight zone | The area surrounding an animal that if encroached upon by a potential predator or threat, including humans, will cause alarm and escape behavior. Herd animals usually turn and face a potential threat when it is outside of their flight zone, but when it enters the flight zone, the animal turns and moves away. An approximation of the flight zone can be made by approaching the animal and noting at what distance the animal moves away. The size of the flight zone will gradually diminish if they are handled calmly and have frequent contact with people. |
| Point of balance | Is a factor related to flight zone, and working with a cow's point of balance will also help you move a cow more safely. The point of balance is located at the cow's shoulder. |
| LSSH | Low Stress Stock Handling Procedures. |
| Forcing pen | A pen used to aid the movement of cattle into the race leading to the crush. They may be automatic and/or designed with curved panels to improve the safety and flow of cattle. |
| Crush | A stall for holding cattle safely and stationary while general management procedures are carried-out, such as a reproductive examination and/or the administration of veterinary treatment(s). |
| Drafting | The act of selecting and separating cattle for a certain purpose. Usually refers to separating cattle into different groups for purposes such as branding, or treating and/or into different categories such as gender, weight, or age. |

Linked SOPs

| SOP ID number | SOP title |
|---------------|-----------|
| N/A | N/A |

Potential hazard to Research Workers

| Potential Hazard | Management Strategy |
|-----------------------|--|
| Crush injury | Only persons trained and supervised adequately are to work in the forcing pens. Do not stand behind gates when moving animals. If operating a crush, ensure the instructions from the operation manual are followed. |
| Slip and fall hazards | Inspection of all yards for foreign objects, trip hazards, mud and sticks before use. |

| | |
|--------------------------|--|
| Kick and strike injuries | Personnel trained in LSSH procedures. Maintain safe distance from the animals to avoid being kicked. |
| Disease risk | Mandatory Q-fever vaccination. Handlers must wash hands thoroughly before and after handling animals and wear gloves when necessary. Personnel to work with vaccinated animals. |

| UniSQ Risk Management Plan ID number | UniSQ Management Plan title |
|--------------------------------------|---------------------------------|
| RMP 2022 (Draft) | Livestock handling competencies |

Personal Protective equipment required

- Appropriate covered foot protection must be worn (E.g., work boots).
- Appropriate clothing must be worn (E.g., Coveralls or long pants such as jeans and long-sleeved collared shirt).
- Hat and sunscreen protection (E.g., 30-50+).

Animal wellbeing considerations

| Perceived stressors | Management strategy |
|---------------------|---|
| Handling | The chances of this will be minimised by the implementation of LSSH procedures. Where movement has caused over exertion, cattle should be rested before drafting or handling. |

The overall perceived level of risk to an animal undergoing this procedure is:

☐ High

☐ Medium

☒ Low

Substances to be administered

| Substance | Dose | Route | Purpose |
|-----------|------|-------|---------|
| N/A | N/A | N/A | N/A |

Equipment/ materials required

- Appropriate yard facilities (yards, race and crush).

Site specification or location requirements

At locations outlined in the USQ AEC approved application that includes the use of the Standard Operating Procedures.

Waste disposal

N/A

Duration of the procedure

| | |
|-------------------------------|--|
| Pre-procedure and preparation | 30 minutes – pre-operational safety checks |
| Procedure | 1 hour (teaching LSSH procedures). |
| Post procedure and monitoring | 30 minutes |

Procedure

Pre-operational safety checks:

1. Check that all guards, gate latches, chains, gate handles and safety gates are in place, properly secured, and functional.
2. Check all gates are swinging freely and chains lock correctly.
3. Inspect all yards for foreign objects, trip hazards, mud and sticks before use.
4. Set up work area with wash down of area if required.
5. Faulty equipment must not be used.
6. You should not perform any duties in the yards until adequate competency has been confirmed. If you have NOT been assessed as competent – DO NOT PROCEED (refer to section; Training, qualifications or competencies required).

Operational safety checks:

1. Ensure all workers understand the workflow, drafting and operations required prior to commencing.
2. Work slowly and carefully with livestock in the yards.
3. Always keep a firm footing and identify safety points for quick exit if required.
4. Always make animals aware of your position in the yards.
5. Maintain safe distance from the animals to avoid being kicked.
6. Only persons trained and supervised adequately are to work in the forcing pens.
7. Do not stand behind gates when moving animals.
8. If operating a crush, ensure the instructions from the operation manual are followed.
9. Stand and work in the yards to help maintain a good flow of animals to the crush.
10. Do not put hands through gates, the race or crush sides.

General work environment checks:

1. Keep work area clean and free of accumulation of manure, dirt or debris.
2. Keep the work area and implements in a clean and tidy condition.
3. Wash down as required.

Procedures:

To instruct students in the appropriate methods of training cattle to regular human handling in existing yard facilities. The use of low stress handling and techniques are necessary for this procedure:

- Stay within the animal's field of vision, and at the edge of the flight zone.
- Position yourself relative to its point of balance to move the animal in the desired direction.
- Create a flight path for cattle. Do not stand in their way, or too close to them as they may move quickly.
- Make note of the exit points from each pen. These are openings in the corners of the pens that a person, but not a cow, can get through.
- Work in pairs, or within sight of another person.
- Move slowly and quietly around the cattle, and demonstrate an awareness of their flight zone at all times (as depicted in Figure 1) . Avoid making loud noises to frighten them into moving.

To move cattle forward, you should be positioned behind their shoulder. See Figure 1.

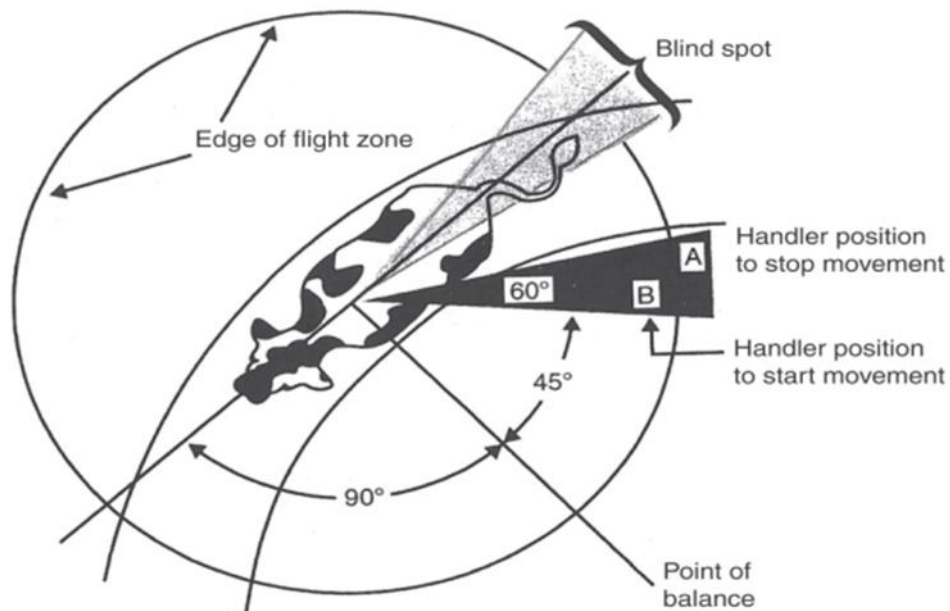


Figure 1: Flight zone diagram showing the most effective handle positions for moving an animal forward.

Moving cattle into the yards

1. Consider the geography of the paddock, gateways and direction of travel, so that cattle will move in the direction chosen.
2. Stock generally move better up-hill than down and prefer to move in an anti-clockwise direction.
3. Allow cattle to gather together in a loose bunch before attempting to move them in the required direction.
4. As depicted in Figure 2, it is important that the handler moves far enough out to the side so that they come into the field of vision of the leaders.

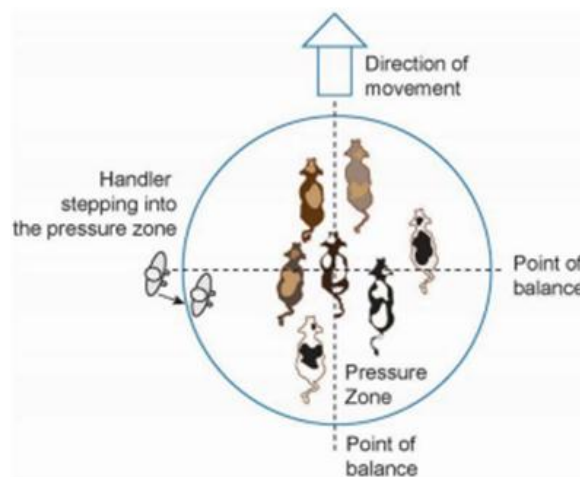


Figure 2: Moving a mob.

Drafting and working with cattle in the yards

1. Cattle to be rested and acclimated to the yards for up to 30 minutes before further drafting and handling.
2. Cattle should always enter yards via the same entry point and leave by a separate exit gate at the other side of the yards. This will encourage cattle to enter the yard themselves.
3. Docile cattle should be moved through the yards with the stock person on foot.
4. Cattle should be moved in the yards with an understanding of the pressure zone and point of balance as depicted in Figure 3.
5. Utilise the “follow the leader” instinct and don’t overcrowd them in the yards.
6. Drafting should be performed in specially designed drafting yards (bud box, pound box) or through gates between yards.
7. The drafted animal must be able to see where it is to go (ie its “escape route”).
8. Visual driving aids such as flags can be used to direct cattle or block movement.

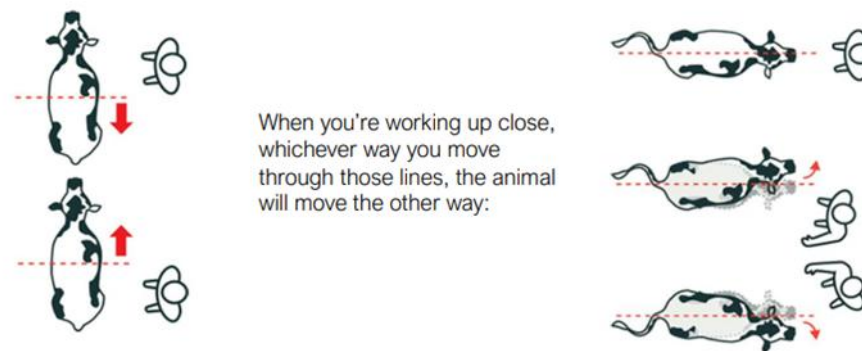


Figure 3: Cattle have two balance lines. One runs across the shoulders and the other runs along the backbone.

Moving cattle along the race

To get an animal to move forward or backward along the race:

1. Walk past the animal in the opposite direction to the way you want them to go
2. As you cross the animals point of balance, it will begin moving either forward or backward (As depicted in Figure 4).

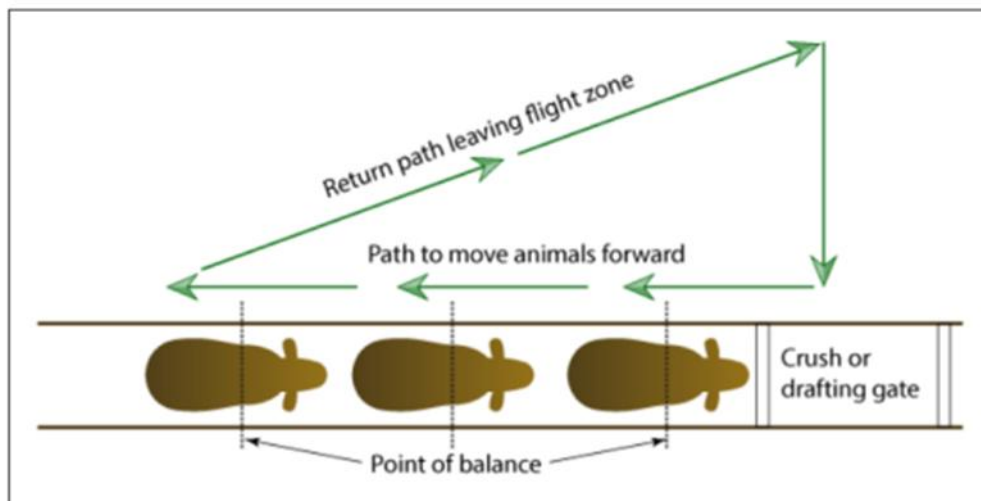


Figure 4: Moving an animal along the race.

Training, qualifications or competencies required

Personnel (Academic staff, researchers etc.) with relevant experience, training and qualifications may undertake this SOP to complete the required procedures. Students must receive appropriate training and supervision in accordance with this SOP.

References

Animal Care and Protection Act 2001

<https://www.legislation.qld.gov.au/view/html/inforce/current/act-2001-064>

Animal Welfare Standards – Australian Animal Welfare Standards and Guidelines for Cattle

<https://www.animalwelfarestandards.net.au/files/2011/01/Cattle-Standards-and-Guidelines-Endorsed-Jan-2016-061017.pdf>

Grandin, T., 1990. Design of loading facilities and holding pens. Appl. Anim. Behav. Sci., 28: 187-201.

<https://www.grandin.com/references/design.loading.facilities.holding.pens.html>

<https://www.grandin.com/design/non.slip.flooring.html>

Licences and permits

Ensure any required (if required) licences and permits are obtained prior to undertaking the activities covered within this Standard Operating Procedure.

| SOP approval and review history | | | |
|---------------------------------|---------|----------------|-------|
| Date | Version | Review Pathway | Notes |
| 01/09/2022 | 0.0 | UniSQ AECV | |
| 05/06/2025 | 0.1 | UniSQ AEC | |
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