



SOP 9.20 Small ruminant confinement in pens or stalls

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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. Housing and management of sheep or goats in pens or stalls.

Scope

- (2) This procedure applies to any person who is involved in AEC approved projects involving sheep or goats.
- (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

Procedure:

1. Food. Persons undertaking intensive small ruminant management should consult with a qualified animal nutritionist to obtain the most up-to date advice on suitable rations and feeding regimes. Incorrectly formulated rations can predispose small ruminants to laminitis, rumenitis, acidosis or gastrointestinal upsets. If concentrated rations are fed, small ruminants should be vaccinated against Clostridial diseases. Except during drought feeding, small ruminants should be fed at intervals to ensure that feed is not unavailable for periods of more than 36 hours. The palatability of the ration should be high. Pellets should be firm and should not contribute to a dust problem by crumbling excessively during handling. "Shy-feeders" should not remain in other established groups, but as they are identified and segregated over several days, they should form a separate group. When new small ruminants are introduced into a group the reaction varies from bullying to isolation. Stress is usually indicated by continuous agitation, movement, panting and high-water consumption. Small ruminants which refuse to eat or are less thrifty should be segregated for special treatment. If they do not respond to treatment they should be moved back to pasture, agisted or humanely destroyed on site. Trough space or trails fed on ground should be sufficient for the feeding system to minimise bullying and allow all animals to feed. Where maintenance, rather than ad libitum feeding is used, trough length should be sufficient for all animals to feed at the same time.

2. Water. Fresh drinking water in clean troughs should be available in sufficient quantities at all times. Small ruminants in feedlots may drink up to 10 L per head per day in hot weather. Where nipples or automatic drinkers are used, there should be at least two to each pen. Copper piping is not to be used for water. When an enterprise for the intensive husbandry of small ruminants is first established, or a new water source obtained, the water should be



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tested for salt content and microbiological contamination and advice obtained on its suitability for small ruminants. As the composition of water from bores, dams or water holes may change with changes in flow or evaporation, the water may require more frequent monitoring for suitability for small ruminant. An allowance of at least 15 mm of water trough length per small ruminant should be made, provided sizes and water pressure are sufficient to keep water in troughs no matter how fast the small ruminants drink, otherwise the trough length should be increased accordingly. A minimum trough length of 300 mm is recommended. Water supplies should be checked each day to ensure that pipes tapes and ball valves do not become blocked.

3. Accommodation The accommodation provided for small ruminant should not be the cause of injury, distress or predisposed to disease. AEC approval for confinement is required to account for the size of stall and its effect on restricting small ruminant movement. Small ruminants kept in groups require sufficient space for each to rest, feed and exercise. They should have a clean, dry place on which to lie. Small ruminants accommodated individually in pens or stalls should be able to stand and lie normally, stretch and turn around. Where a tether is used, it should be loose fitting around the neck and have swivels to prevent entanglement. It should be well clear of other objects and should be of sufficient length and attached to a running wire, to allow for normal activities and body functions e.g. Lying down, stretching and standing. Small ruminants should not be tethered in isolation and are to be released as soon as the demonstration or experiment is completed. Regular inspection of the tether is necessary to ensure there is no damage to the neck or entanglement. Floors should be constructed and maintained so as to be well-drained and to minimise the risk of injury or disease. If small ruminants are to be kept on concrete, approval should be given if pens are sufficiently large to provide a dry area. Woolly small ruminants should not be kept on concrete. Slatted or mesh floors should not allow the feet of small ruminants to be trapped but should allow excreta to pass through readily. Deep litter systems are suitable for housing small ruminants, provided they are dry and correctly maintained. All surfaces in pens and fittings to which small ruminant have access should be made of materials that can be adequately cleaned. However woolly small ruminants should not be kept in areas that are hosed frequently. Small ruminants are social animals and should only be individually housed if essential. If necessary, then they should be housed in pens that provide indirect social housing with sight, scent, and auditory contact with other individuals. Environmental enrichment should be provided and may take the form of straw, rubbing posts, trees or play objects as appropriate, and the importance of this increases when social contact is removed.



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Space allowances (metres squared per head)

Single pens	Minimum space allowance (m ²)
Wether or dry ewe	0.9
Ram, pregnant ewe or heavy wether	1.0
Lamb	0.6
Ewe with lamb	1.5
Group pens	
Less than 8 sheep	0.9
8-15 sheep	0.8
16-30 sheep	0.6
31 or more sheep	0.5
Outdoor feedlots	
Lambs up to 41 kg	100
Adult sheep	1.3
Heavy wether	1.5
Ewe and lambs	1.8

Source - Australian Animal welfare Standards and Guidelines for Sheep (2016)

4. Equipment All equipment to which small ruminant have access should be designed and maintained so as to avoid injury or pain. Small ruminants require ready access to food and water and the equipment provided should allow such access for all small ruminants. Food and water troughs should be sited and constructed to prevent contamination by faeces and/or urine. Essential mechanical equipment should be inspected regularly and kept in good working order. Alternative ways of providing food and water and of maintaining a satisfactory environment should have an alarm system to warn of equipment failure. All electrical installations at mains voltage should be inaccessible to small ruminants and properly earthed.

5. Environment. When small ruminants are housed, the rate of air exchange should be provided for respiration, removal of excess heat and waste, gases, and minimisation of the effects of dust and excess moisture. Sufficient lighting should be available to enable proper inspection of all small ruminants. Faeces and urine should not be allowed to accumulate and present a risk to the health or welfare of the small ruminants.

6. Protection. All reasonable steps should be taken to minimise the effects of climatic extremes that may cause either cold stress or heat stress, particularly in recently-shorn small ruminants and young animals (e.g. shade should be available if animals are penned during hot weather (> 25°C;). In areas where predation by dogs is known to be a problem, a dog-proof perimeter fence should be placed around the facility. Dogs which bite small ruminants when working should be either muzzled or not permitted to work small ruminants. Dogs should be kennelled or otherwise controlled at all times. Feedlots should be sited in a place considered to be safe from the effects of fire and floods. During periods of high fire danger, firebreaks may need to be constructed. Adequate fire-fighting equipment should be available and provision for rapid escape of threatened animals. Fire hoses should be capable of



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delivering sufficient water volume and pressure to control a fire in any building or part of any building.

7. Health. All small ruminants should be checked by an experienced stockman at least once each day for signs of injury, inappetence, illness or distress. When problems are noted, appropriate action should be taken to establish the cause and correct the situation. Where the stockman can identify the cause of ill-health, they should take immediate remedial action. If the cause is not obvious, or if the stockman's action is not effective, veterinary advice should be obtained as soon as possible. Any small ruminants with a debilitating illness or injury which does not respond quickly to treatment, or a painful deformity, should be humanely destroyed. Preventative measures should be taken against diseases common in the district or which may have become endemic in the facility. Management should keep adequate records on the source of small ruminant entering the facility, management practices, disease outbreaks, control measures taken and response to treatment so that this information is available to assist disease investigations. Dead small ruminants should be removed promptly and disposed of in a hygienic manner. Post-mortem should be conducted on small ruminant dying of unknown causes.

Drugs, chemicals, or biological agents

(4) None.

Impact of procedure on wellbeing of animals

(5) Low impact.

Animal care

(6) No special requirements.

Pain relief

(7) Not required.

Reuse and repeated use

(8) Animals may be maintained in appropriate conditions for prolonged periods.

Qualifications, experience or training necessary to perform this procedure

(9) Experience in animal handling and an understanding of animal behaviour.

Record requirements

(10) N/A



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Associated documentation (including pictures if available)

(11) N/A

Glossary

(12) N/A

References and relevant links

(13) Australian Animal welfare Standards and Guidelines for Sheep (2016)

(14) www.animalwelfarestandards.net.au